American University of Armenia
Center for Health Services Research and Development

Nork Marash Medical Center

A FOLLOW-UP SURVEY OF ADHERENCE TO INTERNATIONAL HOSPITAL STANDARDS AT NORK-MARASH MEDICAL CENTER

SUMMARY REPORT

Yerevan, 2005

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Acknowledgements

The clinical, administrative and support staff at Nork-Marash Medical Center are acknowledged for the time they spent providing information and critically assessing the changes occurred in the level of adherence with the JCAHO standards. It is impossible to list all of the NMMC personnel who provided assistance. The major contributors include Meruzan Galstyan, Gegham Sharazyan, Ashkhen Baghinyan, Aida Avagyan, Ira Bakunts, Gagik Movsisyan, Hrair Hovakimyan, Eleonora Mnatsakanian, Liliana Kazaryan, Nazeli Stepanyan, Inessa Nazaryan, Gajane Mehrabyan, Anush Poghosyan, Greta Abrahamyan, Naira Liloyan, Mher Sasouni, and Aida Yeritsyan. It is also important to mention the work of the intern Liya Manukian in technical revisions of several functions.

The sponsor of the American University of Armenia / Nork Marash Medical Center Project, Mr. Edward Avedisian, is acknowledged for his support to the project.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

ACC	Access to and continuity of care (function)
ANP	American University of Armenia – Nork Marash Medical Center Project
AOP	Assessment of patients (function)
AUA	American University of Armenia
CABG	Coronary arterial bypass graft
CHSR	Center for Health Services Research
CIS	Commonwealth of Independent States
COP	Care of patients (function)
DS	Discharge summary
EKG	Electrocardiogram
FMS	Facility management and safety (function)
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
GLD	Governance, leadership and direction (function)
ICP	Infection control program
ICU	Intensive care unit
MOH	Ministry of Health
MOI	Management of information (function)
NIS	Newly Independent States
NMMC	Nork Marash Medical Center
OR	Operating room
PCI	Prevention and control of infections (function)
PFE	Patient and family education (function)
PFR	Patient and family rights (function)
QA	Quality assurance
QI	Quality improvement
QMI	Quality management and improvement (function)
RRC	Republican Radiology Center
SEF	Structured encounter form
SES	Sanitary-Epidemiology Station
SQE	Staff qualifications and education (function)

EXECUTIVE SUMMARY

Introduction

This report presents the results of the follow-up survey on adherence of Nork-Marash Medical Center (NMMC) to the international hospital standards set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). The baseline survey was conducted during 2000 by the Center for Health Services Research (CHSR) at the American University of Armenia (AUA). The goal of the follow-up survey was to reevaluate the compliance of NMMC with the Joint Commission International Accreditation Standards for Hospitals and to assess the changes that took place since the baseline survey. During the period between the first and the second assessments, a collaborative project between AUA and NMMC was implemented. Thus, the survey may indirectly assess also the results of the AUA/NMMC Project (ANP).

Methods

Eleven hospital functions of the NMMC were evaluated in terms of their compliance with the standards for hospital care and management outlined by the "Joint Commission International Accreditation Standards for Hospitals". ANP team conducted the assessment survey. Data collection techniques used in the follow-up survey were similar to the one's used during the initial assessment: on-site observations and extensive interviews with the NMMC personnel. For a given function, the measurable elements (ME) of the standards selected during the initial survey were reassessed. Each of the selected MEs was then assigned an evaluation score (1-4 scores meaning correspondingly: standard not met, standard met minimally, standard met partially, standard met satisfactorily). The assigned evaluation scores represent the best judgment of the ANP and NMMC team but they have a considerable subjective component.

Results

According to the results of the reevaluation, some of the NMMC functions improved more notably: Patient and Family Rights function improved significantly as the Patient and Family Rights policies and procedures were developed, approved, and implemented. The Prevention and Control of Infections function improved with the establishment and performance of the Infection Control Committee. The Governance and Leadership function improved with the establishment of the Hospital and Medical boards. Some of Patient-centered functions like Access and Continuity of Care, Assessment of Patient, Care of Patient remained almost unchanged. However, they scored higher by the initial assessment as compared with the other functions.

The main positive changes that occurred at NMMC during 2000-2005 were the following:

- Establishment of managerial bodies at NMMC: Hospital board and Medical board, which resulted in shift of decision-making from individual to collective level and better coordinated relationship between managerial and clinical services. Besides, the managerial bodies directly carry the responsibility for the quality of care at NMMC on clinical and institutional level.
- Development and implementation of a number of polices and procedures (Hospital board policy and procedures, Medical board policy and procedures, Patient and Family Rights policy and procedures, Medical and other data use/provision policy and procedures, Hiring policy and procedures, Firing policy and procedure, Employee regulations) with active involvement of ANP project coordinators. The active discussion of policies and procedures and further approval and implementation became possible with the establishment of Hospital and Medical boards that carry also the responsibility for internal policies' and procedures' development and implementation.
- Improvement in overall data management: several new paper and computerized databases were created in different departments/services. Structured Encounter Forms (SEFs) were developed by ANP coordinators for NMMC clinics. Several computerized databases were created in different

departments (accountancy, admission, blood bank, human resource, wound, EUROscore, appointment databases, etc) that improved the usability and value of the collected data.
- Implementation of several monitoring activities by ANP coordinators to evaluate indicators of quality of care in different areas of the institution.

The main limitations encountered by the survey were the following:
- Lack of documentation for different functions of the hospital was reported by the initial survey. Although an improvement was noted in that several policies/procedures were developed, they regulate limited number of areas. The center still needs to document or to develop several policies/procedures for various areas, to establish criteria for its daily functions. Hopefully, with establishment of the managerial bodies the center will take necessary steps to close this gap gradually.
- The "Quality improvement philosophy" is intruding more and more into daily life and staff mentality at the Center. As a result of ANP project efforts along with NMMC efforts, several indicators of quality of care were monitored during the last 4 years. Some of the findings were used to implement necessary measures to make improvements in the recommended areas. However, a successful mechanism for continuous quality monitoring and improvement was not yet established at NMMC.
- As it was mentioned above, the data collection activities and overall value and quality of the collected data have improved during the last years significantly. However, successive steps should be made to use the collected data more effectively, to improve the quality of the collected data, and to establish mechanisms for continuous monitoring of the latter.

Conclusion

Generally, patient-centered functions were the ones less changed as they had higher compliance with the standards at the time of the initial assessment. The majority of the management-centered functions improved more extensively as they were underdeveloped and grew more rapidly than the well-developed clinical areas. In some extent, this could be explained by the fact that the baseline survey recommendations were taken as a guide for clinical and managerial bodies at NMMC to prioritize and target mainly those areas that were not compliant with the international hospital standards.

INTRODUCTION

Purpose of the report

During 2000, a team from the American University of Armenia (AUA), with the joint efforts of the Nork Marash Medical Center (NMMC) conducted a comprehensive survey to assess the adherence of the NMMC to International Hospital Standards set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (1,2). Thereafter, a multi-facet Quality Assurance Project (ANP) was launched at the NMMC as a collaborative effort of the latter and the AUA Center for Health Services Research and Development. The baseline survey on compliance of the hospital with the selected Joint Commission International Accreditation (JCIA) standards served as a comprehensive resource of information for this effort and provided a convenient structure for the program. Thus far ANP implemented different quality assurance and related activities at the center. The main purpose of the present work was conducting a follow-up survey to evaluate the changes that took place at NMMC during the years of the ANP implementation. The results of the re-evaluation could be used for not only evaluating the state of current situation and indicating future directions for continuous quality improvement at the Center, but also for assessing the effectiveness of activities undertaken in the scope of the ANP project.

Basis for assessment

The NMMC functions were evaluated based on international standards for hospital care and management that are outlined in the first edition of the Joint Commission International Accreditation Standards for Hospitals ("Manual"; Joint Commission International Accreditation, 2000). The Joint Commission International Accreditation is a division of the international subsidiary of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). JCAHO is an American organization that is a leader in providing accreditation to healthcare organizations in the United States.

Based on the Manual, different hospital areas are divided into two main categories (patient-centered functions and management-centered functions). The various hospital aspects are divided into following 11 functions:

Patient-centered functions

- ACC (Access to and continuity of care)
- AOP (Assessment of patients)
- COP (Care of patients)
- PFE (Patient and family education)
- PFR (Patient and family rights)

Management-centered functions

- FMS (Facility management and safety)
- GLD (Governance, leadership and direction)
- MOI (Management of information)
- PCI (Prevention and control of infections)
- QMI (Quality management and improvement)
- SQE (Staff qualifications and education)

Each function involves a large number of standards and each standard - one or more measurable elements (MEs) described in the Manual along with intent statement for each standard.

Assessment technique

The follow-up survey has been conducted by ANP coordinators. Qualitative research methods were used to assess different functions of the hospital. Generally, excessive interviews were conducted with key

informant staff of NMMC. Observations, documentation and research paper review were carried out in addition to interviews.

Report format

The Report design of the follow-up survey is similar to the baseline assessment report. The standards and measurable elements (MEs) assessed by the follow-up survey were the same as selected during the initial assessment to insure the consistency of evaluation and to make apparent the changes if any.

The format of the follow-up survey report is slightly different from the initial assessment report. The former lacks detailed evaluation of each standard (only the conclusion is available as in the baseline report). Rather it is more focused on the changes that occurred after the baseline survey: for each measured standard, there are additional sections in the follow-up report where the changes and areas for improvement/recommendations are noted. Aside from textual evaluation of MEs, each of the MEs is then assigned an evaluation score (the baseline assessment scores of MEs are also available to compare the changes in scores).

The same scoring system as in the baseline survey is used to evaluate MEs: 1 ("standard not met"), 2 ("standard met minimally"), 3 ("standard met partially"), or 4 ("standard met satisfactorily"). The assigned evaluation scores represent the best judgment of the ANP and NMMC team. These scores, however, have an admitted subjective component. It is important to mention that the team of the follow-up assessment sometimes was disagree with the scores assigned at the baseline evaluation. Generally, a tendency was noted by the follow-up evaluators of assigning higher than real scores at the baseline survey. In order to indicate the positive changes that occurred in some measured areas, the higher than perceived baseline scores were marked in this report with asterisks that show a probable exaggeration in scoring.

This evaluation could be considered as "internal" (i.e., self-assessment by NMMC staff), because ANP team was well integrated in the NMMC staff during this multi-year project and, based on the interviews with NMMC staff, generally expressed their point of views in the report. Thus the survey carries all the limitations that are inherent to self-evaluations. An outside evaluation would tend to be more objective. It is important also to mention that more objectivity could be reached if evaluation of each function or a subgroup of functions were conducted by experts in that particular area. Since the expertise of the ANP coordinators was limited, their evaluation was mainly based on NMMC staff perceptions. While the great majority of assessments were based on the data obtained from interviews with NMMC personnel, some of the evaluations were based on the data from research or observations conducted by ANP team during the last four years.

The Report could serve as a potential source for NMMC managerial bodies to set priorities and plan/shape interventions and strategies for further improvement. The Report would be a valuable source in case if NMMC applies to obtain JCAHO accreditation.

AUA/NMMC PROJECT

The initial assessment report presents information on the NMMC, describing the setting where the assessment was conducted. The provided information was more than enough and there is no much to add after the follow-up evaluation aside from information that is already involved in the evaluation text. Thus, the follow-up report would present the AUA/NMMC Project (ANP).

ANP was formally established in March 1, 2000. The initial phase of the project (2000-2001) was focused on assessing/evaluating different aspects of the NMMC functioning. This phase included the initial assessment of the degree to which international standards of hospital care and management are met at NMMC, the feasibility of establishing a patient follow-up center at NMMC, and a needs assessment for business administration and marketing at NMMC. The recommendations obtained from these activities assisted to plan subsequent activities to support and enhance the effort of NMMC leadership and staff to convert NMMC into a modern hospital emphasizing quality assurance.

The second phase of ANP was mainly focused to introduce a quality assurance system at NMMC, to address almost every function of the hospital. The descriptions of the main subprojects (Internship, Quality Assurance, Patient Follow-up Center Establishment, Marketing, Business Administration, Establishment of Internationally Recognized IRB for Invasive Interventions, and Development of a Combined Surgical and Catheterization Database) functioning during the 4 years of the ANP implementation phase are presented below.

Internship project for cardiologists from NIS countries

The Internship project provided 4-month internship either in children or adult cardiology to cardiologists from NIS countries. The primary goal of the Internship project was to expand the network of cardiologists who are acquainted with NMMC and who may refer cardiac surgical patients that cannot be treated at their facilities to NMMC, as well as to improve the quality of cardiology in the home countries of interns. Eleven cardiologists from different NIS countries attended the internship program and made noticeable progress in their studies. All the interns were uniform in their praise of the project. The program started in March 2000 and ended in February 2004 because of several difficulties encountered during the project implementation (connected mainly with recruiting appropriate candidates and receiving patient referrals from the institutions of former interns). In addition, the 4-month duration of the internship was considered insufficient to adequately prepare specialists in current cardiology, meaning that the second aim of the project (improving the quality of cardiology in the NIS) could not be fully met.

Quality assurance: Improvement of medical care and management at NMMC

The Quality assurance project aimed to establish a Quality Assurance System at NMMC to reach sustainable improvement in all functional areas of the center and to improve patient health outcomes. The successful undertakings of the project were the following:

- Establishment of the two governing bodies at NMMC: the Hospital Board and the Medical Board;
- Development of numerous policies and procedures to guide different aspects of NMMC functioning;
- Completion of numerous assessment surveys/studies to identify deficiencies and guide improvements;
- Monitoring of several quality and performance indicators to introduce the culture of quality assurance at NMMC;
- Initiation of staff educational activities involving both nurses and physicians;
- Development of standard operating procedures for all lab tests conducted at NMMC;

- Introduction of structured medical record forms for in- and out- patient departments;
- Creation of a series of educational booklets for patients, etc.

The Quality assurance project was viewed as the central subproject from the both sides of the partnership.

Establishment of mechanism to follow surgical patients over time at NMMC

The subproject aimed to create all the prerequisites to establish a Patient Follow-up Center (PFUC) at NMMC. The project reached its goal through the following successive key steps:

- Conduction of a feasibility study to identify a cost-effective, reliable approach to operating the PFUC;
- Development and validation of the PFUC instruments (a specific questionnaire for post-surgical patients of NMMC and the Armenian official validated translation of SF-36, a quality of life instrument);
- Development of the software needed to automate much of the PFUC operations.

However, the implementation of patient follow-up center was postponed by NMMC until the other databases will be improved to satisfactory level to support the data collection by PFUC.

Development and implementation of marketing plan at NMMC

This project aimed to implement recommendations from the "Report on Marketing Issues at NMMC" developed by the AUA Center for Business Research and Development during the first phase of the collaborative project. Owing to Marketing project NMMC was widely advertised through different radio channels and inter-NIS newspapers in Armenia and Russia. Series of health educational and informational articles were periodically published in the "Azg" newspaper under the heading of NMMC. All significant events at NMMC were widely publicized through different mass media means; a brochure introducing NMMC was developed in two languages (English and Russian) and published. Patient satisfaction surveys were periodically conducted at NMMC and analyzed. A monitoring system was introduced to monitor the referrals of patients from NIS countries through a structured questionnaire and the data was entered into the database. The project was terminated in 2004, because NMMC gradually assumed the responsibility (financial and administrative) for its own marketing activities.

Improvement of systems of business administration at NMMC

The project was aimed to help NMMC leadership to establish an inventory control system, a computer-based accounting program, and a patient-tracking system at the Center. During the period of project implementation the following tasks were completed:

- Medical inventory management system was developed and introduced;
- The paper-based system of the registration of acquisition, storing and distribution of drugs from pharmacy to the departments was transferred into a computerized model;
- A shift was made from suppliers located in USA to those located in Armenia, CIS or Europe;
- The real operating cost of two main types of operations (CABG and valve surgeries) was calculated;
- Indicators (ratios) for financial statements analysis were developed.

The project was stopped at the end of 2002, because NMMC undertook the responsibility of implementing the project on its own through creating a new position of financial advisor and hiring an advisor with western education.

Establishment of an Internationally Recognized Institutional Review Board (IRB) for Clinical Interventions

This project was aimed to plan and organize an IRB responsible for both invasive and non-invasive interventions. A consensus was reached between AUA IRB members, NMMC leadership, and OHRP (Office for Human Research Protection) officials to establish this body at AUA as its second IRB dealing with clinical trails and invasive research. The new IRB has been formally established and its establishment approved and recognized by OHRP. Both AUA faculty and NNMC staff were included in the list of the AUA second IRB board members. The IRB could provide ethical committee services not just to NMMC but other local healthcare and research institutions as needed. In parallel with these steps, an on-line course on ethical issues of research conduct was prepared in Armenian, Russian, and English languages. Several presentations on the topic of "Biomedical Research and Ethics: human subjects protection" were provided by the subproject coordinator to NMMC staff members, MPH students, and a broader audience with an aim to introduce the culture of research ethics in health care institutions of Armenia.

Development of a Combined Surgical and Catheterization Databases at NMMC

The aim of the project was to develop a combined database (surgical and catheterization databases) that would serve to improve the quality/accuracy of the data, to minimize discrepancies in redundant data entry, and to facilitate analysis/use of the datasets. The software for the combined surgical and catheterization databases has been developed by ANP programmer and NMMC staff. Currently it is in the phase of implementation at NMMC.

FUNCTION: ACCESS TO CARE AND CONTINUITY OF CARE (ACC)

Follow-up evaluation highlights

Patient screening is initiated at the first contact with a patient and the care is organized based on the screening results. The process of general admission, as well as admission of emergency patients is based on verbally established rules and regulations. The decision about the urgency of provision of care at NMMC is based on the estimation of patient's status. Patients/families receive information about the admission process, proposed treatment, expected results, and treatment-associated costs. Currently, patients receive educational brochures developed by the ANP coordinators. The brochures provide the needed information on care options, expected outcomes, primary/secondary prevention, etc. NMMC physicians determine patients' needs for intensive care, surgery, transfer, or discharge based on verbally established criteria. Each patient has his/her case-manager who is responsible for coordinating the patient care across different departments. Medical records also serve as a tool to share the patient information between departments. The record contains information on the reasons of admission, significant findings, diagnosis, conducted procedures, prescribed medications, and patient condition at the transfer. A policy was developed and approved by the Hospital board on provision and use of patient data both by the NMMC staff members and outside professionals/organizations.

The processes of patient discharge and referral have become more organized and patient/family concerns are considered in these processes. All patients/families are provided with comprehensive information on follow-up care, lifestyle issues, timetable of follow-up visits, as well as with discharge summary at the time of patient's discharge from NMMC. The summary contains brief information about the reasons for admission, significant findings, diagnosis, procedures performed, and the patient's status at discharge. A copy of the discharge summary is kept in the medical record. All transferred patients are provided with discharge summary and referral document. The reasons for transfer and the contacts of the receiving institution are noted in the medical record of the transferred patient.

Based on the follow-up evaluation the following recommendations are made:

- Advertise the center through mass media means on a regular basis;
- Develop policies/procedures to standardize the admission process of both planned and emergency patients;
- Develop written criteria for prioritizing patients with immediate needs;
- Set criteria for selecting screening and diagnostic procedures before admission;
- Develop written criteria for patient's entry to intensive care or specialized services, patient's transfer within the center, and patient's discharge.
- Establish a process of periodic review/update of the criteria and train staff to use those;
- Establish a patient rehabilitation department at the center;
- Develop structured discharge summary form to assure the completeness of the recorded information;
- Increase the cooperation of NMMC with other centers; increase the cooperation of NMMC staff with regional specialists and specialists from CIS countries for assuring the continuity of care after patient discharge;
- Establish a follow-up care center at NMMC to assure the continuity of care;
- Establish an ambulance service at NMMC.

Evaluation Score:

1 = Standard not met; **2** = Standard met minimally; **3** = Standard met partially; **4** = Standard met satisfactorily; **N/A** = Standard is not applicable to NMMC or cannot be measured from available information.

***** The score seems to be over-estimated at the baseline survey.

^ The score is underestimated at the baseline survey.

ACCESS TO CARE AND CONTINUITY OF CARE

Standard ACC.1:

Patients have access to the health organization's services based on their identified health care needs and the organization's mission and resources.

Measurable element:

1. *Screening is initiated at the point of first contact.*
2. *Based on screening, the patient is matched with the organization's mission and resources.*
3. *Information on services, hours of operation, and the process to obtain care are provided to agencies and referral sources in the community.*

Changes

Information on services is provided now through NMMC website (www.nmmc.am). People could obtain the phone numbers of the center through informational agencies. Information on the center is available now in some registries like Expert registry. During recent years, mainly due to efforts of the ANP Marketing subproject, NMMC was advertised many times through local and Russian radio channels and newspapers. Recently, NMMC Marketing Brochure was developed in Russian and English languages that contains information on services provided at NMMC and the contact information of the Center.

Areas for improvement

NMMC is suggested to advertise its services through mass media means on a regular basis.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**2**	**3**

Follow-up conclusion

Screening is usually initiated at the first contact with the patients either in ambulatory clinics or emergency room. Further patient care is organized based on the screening results and/or additional exam tests. Compared to the baseline survey, NMMC currently uses additional sources for provision of information to the community: Internet, informational agencies, registries, Mass Media, and the Marketing Brochure.

Standard ACC.1.1:

The organization has a process for admitting patients to the organization.

Measurable element:

1. *Policies and procedures are used to standardize the admitting process.*
3. *The policies and procedures address admitting emergency patients.*
4. *Policies and procedures address holding patient for observations.*

Changes

No major changes. The admission process at NMMC is based on verbally established rules.

Evaluation Score:
1 = Standard not met; **2** = Standard met minimally; **3** = Standard met partially; **4** = Standard met satisfactorily; **N/A** = Standard is not applicable to NMMC or cannot be measured from available information.
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Areas for improvement
Since the baseline, an improvement is noted it the admission process of emergency patients: Emergency room was opened at NMMC. All emergency patients are admitted there based on an established procedure. AUA/NMMC Project (ANP) team developed a policy and procedure to regulate patient admission process, but the policy was neither reviewed nor approved by the NMMC leadership. Although the verbally established procedure of admission is functioning over many years, it is important to document the procedure and to evaluate the compliance to it.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 3	**3**	**3**
Measurable Element 4	**3**	**3**

Follow-up conclusion
The process of admission at NMMC is based on verbally established rules and regulations. Policies and procedures exist for admission of emergency patients.

Standard ACC.1.1.1:

Patients with emergency or immediate needs are given priority for assessment and treatment.

Measurable element:
1. *The organization has established criteria to prioritize patients with immediate needs.*
2. *Staff is trained to use this criteria.*
3. *Patients are prioritized based on the urgency of their needs.*

Changes
No major changes.

Areas for improvement
It is suggested to establish written criteria/guidelines to prioritize patients with immediate needs.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion
NMMC uses verbally established criteria to prioritize patients based on their condition. Staff receives trainings to accurately assess the urgency of patient's condition. The urgency of provision of care is based on the estimated need of the patient in urgent care.

Standard ACC.1.1.2:

Patient needs for preventive, palliative, curative and rehabilitative services are prioritized based on the patient's condition at the time of entry to the organization.

Measurable element:

Evaluation Score:
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1. *The screening assessment helps staff understand the type of preventive, palliative, curative and rehabilitative services needed by the patient.*
2. *The setting of care to meet these needs is appropriate.*

Changes
No major changes.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**N/A**	**N/A**

Follow-up conclusion
The primary patient assessment serves as the basis for prescription of specific care based on patient's needs. NMMC does not have separate settings for some of these services, such as rehabilitation services.

Standard ACC.1.2:

At admission, the health care organization provides the following information to the patient and appropriate family members or decision-makers: information on proposed care, the expected results of that care, and any expected cost to the patient for the care.

Measurable element:
1. *There is a process to provide patient/family with information at admission.*
2. *The process includes information on the proposed care.*
3. *The process includes information on the expected results of care.*
4. *The process includes information on any expected costs to the patient or family.*
5. *Patients receive sufficient information to make knowledgeable decisions.*

Changes
ANP coordinators developed and published patient educational brochures during 2004. The brochures provide information on the proposed care and expected results of it, thus helping patients and families to make an informed decision. Besides, consent form was developed and approved recently ensuring that the patient is informed on the risks of the proposed intervention.

Areas for improvement
No limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**

Evaluation Score:
1 = Standard not met; **2** = Standard met minimally; **3** = Standard met partially; **4** = Standard met satisfactorily; **N/A** = Standard is not applicable to NMMC or cannot be measured from available information.
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Follow-up conclusion

Patients/families receive comprehensive information about the admission process, course of proposed treatment(s), expected results, possible drawbacks, and treatment-associated costs. Currently, in addition to oral counseling, patients receive educational brochures that provide the needed information on the proposed care, expected results, etc. The updated costs of procedures are largely available on the announcement desks in different departments of the center.

Standard ACC.1.4:

Diagnostic tests for determining patient needs are completed and used as appropriate to determine whether the patient should be admitted, transferred or refused.

Measurable element:

1. *There is a process to provide the results of diagnostic test to those responsible for determining if patient is to be admitted, transferred or refused.*
2. *Criteria are used to determine which screening and diagnostic are required before admission.*
3. *Patients are not admitted, transferred or refused before the test results are available.*

Changes

No major changes.

Areas for improvement

No major limitations were identified in the area. Nevertheless, there is a need to develop written criteria for choosing the right screening or diagnostic methods.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**3**	**3**
Measurable Element 3	**N/A**	**N/A**

Follow-up conclusion

Patients undergo different mandatory tests at the first assessment (e.g. all patients initially undergo ECHO and ECG tests). Additional tests are recommended based on the clinical and instrumental test results. Verbally established criteria are used to indicate which screening and diagnostic tests are required before admission. The results of tests serve to determine further treatment plans. The admission needs of urgent patients are usually obvious, that is why the test results of these patients are often available after admission.

Standard ACC.1.5:

Entry or transfer to units providing intensive or specialized services is determined by established criteria.

Measurable element:

1. *The organization has established entry or transfer criteria for its intensive and specialized services.*
3. *Staff is trained to apply the criteria.*
5. *Patients who no longer meet the criteria are transferred or discharged.*

Evaluation Score:

1 = Standard not met; **2** = Standard met minimally; **3** = Standard met partially; **4** = Standard met satisfactorily; **N/A** = Standard is not applicable to NMMC or cannot be measured from available information.

***** The score seems to be over-estimated at the baseline survey.

^ The score is underestimated at the baseline survey.

Change
No major changes.

Areas for improvement
Written criteria for entry and transfer to intensive or other services should be developed/documented at NMMC. A specific procedure should be established to update criteria and to train the staff regularly.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**
Measurable Element 3	**2**	**2**
Measurable Element 5	**3**	**3**

Follow-up conclusion
NMMC physicians generally follow verbally established criteria to determine when a patient needs intensive care, surgery or other specialized treatment, as well as transfer or discharge (e.g. all patients after surgery are transferred to ICU, patients are transferred to ICU when they have borderline indicators of blood urea nitrogen, blood pressure, arrhythmias, etc.). The staff is trained on those criteria. Sometimes, the criteria are not well followed when there is a shortage of space in ICU or wards.

Standard ACC.2:

The organization designs and carries out processes to provide continuity of patient care services in the organization and coordination among health care professionals.

Measurable element:

1. *The leaders of services and settings design and implement processes that support continuity and coordination of care.*
2. *Established criteria or policies determine the appropriateness of transfer within the organization.*
4. *Care is coordinated between emergency services and inpatient admission.*
5. *Care is coordinated between diagnostic and treatment services.*
6. *Care is coordinated between surgical and non-surgical services.*
8. *Individuals responsible for coordination are identified.*

Change
Recently developed admission database improved the coordination of care at NMMC. The unique patient identifiers are entered into database and attached to all paper forms of inpatients.

Areas for improvement
Policies to determine the appropriateness of transfer within the organization need to be established. The follow-up forms and their recording should be improved at the center. It is suggested to establish a patient follow-up center at NMMC to improve the continuity of care. The initial steps to establish the follow-up center were carried out by ANP project (planning the process, developing and validating the tools, etc). However, the establishment of the center was postponed.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**3**	**3**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**
Measurable Element 6	**4**	**4**
Measurable Element 8	**3**	**4**

Follow-up conclusion
NMMC has established processes that support the continuity and coordination of care. Verbally established policies determine the appropriateness of transfer within the organization (e.g. ICU postoperative patients without complications are discharged from ICU after 36 hours). Care is coordinated between different departments. Each patient has his/her case-manager that is identified and serves to coordinate the care between departments.

Standard ACC.2.1:

During all phases of care, there is a qualified individual identified as responsible for the patient's care.

Measurable element:

1. *The individual responsible for the patient's care is identified.*
2. *The individual is qualified to assure responsibility for the patient's care.*
3. *The individual is identified to the organization's staff.*

Change
No major changes.

Areas for improvement
No actions were identified for further improvement.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
Generally, a case-manager is assigned to each patient at the time of initial assessment. Usually adult or children cardiologists manage cases and carry the overall responsibility for care of patients at NMMC except the cases when they share the responsibility with surgeons or other specialists depending on the type of intervention/treatment provided to the patient. The case manager is identified in the patient's record.

Standard ACC.2.2:

Information about the patient's care and response to care is shared among medical, nursing and other care providers during each shift, between shifts, and during transfer between units.

Measurable element:

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1. *There is a process to transfer patient information between the care providers on an ongoing basis or at key times in the care process.*
2. *Information exchanged includes the patient's health status.*
3. *Information exchanged includes a summary of the care provided.*
4. *Information exchanged includes the patient's progress.*
5. *When a transfer occurs, the reason for transfer is communicated.*

Change

No major changes. The only improvement is the implementation of more informative and better completed structured record forms that allow sharing more inclusive information between different departments and providers through these forms.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**

Follow-up conclusion

The patient medical record is the main way to transfer the information between departments and providers. The patient record is moved from one department to another simultaneously with the patient. The record includes information on patient's health status, the care provided, and the patient's response to care. The provided and planned care is also exchanged between different shifts through special journals, Medical order forms, patient condition summaries, and also verbally.

Standard ACC.2.3:

The patient's record(s) is available to the care providers to facilitate the exchange of information.

Measurable element:

1. *Policy establishes those care providers who have access to the patient's records.*
2. *The patient record(s) is available to those providers.*
3. *The records are up to date to ensure transfer of the latest information.*

Change

Since the baseline survey, policies and procedures on data provision and use were developed and approved at NMMC. According to those policies, the patient record is available to the all care providers of the particular patient.

Areas for improvement

No major limitations.

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	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
Written policy was approved on the provision and use of data at NMMC by local staff and outside professionals/organizations. The patient records are updated at each department with defined frequency to ensure the transfer of latest information.

Standard ACC.2.4:

Information related to the patient's care is transferred with the patient.

Measurable element:

1. *The patient's records or summary of patient care information is transferred with the patient.*
2. *The summary contains the reason for admission.*
3. *The summary contains significant findings.*
4. *The summary contains any diagnosis made.*
5. *The summary contains any procedures performed.*
6. *The summary contains any medications and other treatments.*
7. *The summary contains the patient's condition at transfer.*

Change
No major changes.

Areas for improvement
No major limitations were identified.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**
Measurable Element 6	**4**	**4**
Measurable element 7	**4**	**4**

Follow-up conclusion
As it was mentioned above, the patient record is transferred along with patient when he/she is moved to another department, and is transferred to the next care provider when the shift changes. The record contains all the necessary information on reasons for admission, significant findings, diagnosis, procedures, medications, and patient's condition at transfer.

Standard ACC.3:

There is a process to appropriately refer or discharge patients.

Measurable element:

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1. *There is an organized process to refer and/or discharge patients.*
2. *The referral and/or discharge are based on the patient's needs for continuing care.*
3. *Criteria are used to determine readiness for discharge.*

Change

Patient concerns about his/her discharge are considered at NMMC now: a patient can stay in the clinic until he/she accepts that he/she is ready for the discharge. There is an approved written form at NMMC, which is signed by the patient if he/she wants to be discharged early against medical advice. The appropriateness of patient discharge process is evaluated regularly by the "Discharge questionnaire". The referral process has been improved since the baseline evaluation. The chief of staff manages the process based on established rules.

Areas for improvement

It is suggested to develop written criteria to determine the readiness of a patient for discharge.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**3**	**3**

Follow-up conclusion

A verbally established process of patient discharge and referral is in place at NMMC. The referral and discharge of a patient are decided based on his/her needs. The decisions are generally made during rounds. The patient/family concerns are considered in making those decisions.

Standard ACC.3.1:

The organization cooperates with health care practitioners and outside agencies to ensure timely and appropriate referrals.

Measurable element:

1. *The discharge planning process considers the need for both support services and continuing medical services.*
4. *Referrals are made, when possible, for support services.*

Change

The cooperation with cardiologists from CIS countries has been improved. There is an established practice at NMMC of signing contract with CIS cardiologists according to which they obtain a right to receive incentive for each patient referred by them to NMMC. One of the conditions of the contract is that NMMC provides 3-month duration free training to the CIS cardiologist. Another condition states that the CIS cardiologist is responsible for providing follow-up care for the patient referred by them to NMMC and operated there. The ANP "Internship" subproject sponsored the 4-month trainings of eleven CIS cardiologists. Some of them refer patients to NMMC for cardiac surgery and provide the follow-up care of these patients at their home countries.

Areas for improvement

The continuity of care for patients from remote areas of Armenia has flaws because of the lack of cooperation with local specialists. It is important to create collaboration with cardiologists in the

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regions to support the follow-up care of local patients (by organizing trainings for them, by making contract with them similar to the one developed for cardiologists from CIS countries, etc). Cooperation should be established with outside agencies to ensure timely and qualified referrals of patients. It is important to develop support services involving dietitians, social workers, psychologists, etc. at the center or to cooperate with outside agencies providing such services.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 4	**3**	**3**

Follow-up conclusion

The planning of continuity of care is done before discharge. The patient is counseled when to come to the clinic for follow-up visits. However, patients from remote areas of Armenia are at disadvantage because of poor cooperation of NMMC with regional specialists. There is also a poor cooperation with support services, although they are not well developed in Armenia.

Standard ACC.3.2:

Patients and, as appropriate, their families are given understandable follow-up instructions at referral or discharge.

Measurable element:

1. *Follow-up instructions are provided in an understandable manner.*
2. *The instructions include any return for follow-up care.*
3. *The instructions include when to obtain urgent care.*
4. *Families are also provided with instructions as appropriate to the patient's condition.*

Change

According to the data collected by "Discharge questionnaire", about 100% of all inhospital patients receive appropriate instructions about follow-up care. In addition, recently developed patient educational brochures contain information about further diet, medication, physical activity, and need of follow-up visits. Information on when to obtain urgent care is also included in the brochures.

Areas for improvement

It is suggested to establish a patient follow-up center at NMMC. This would further enhance the follow-up care of patients.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**2**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion

All patients are provided with understandable information on follow-up care, lifestyle issues, and time of follow-up visits. Families are also provided with instructions relative to patient's

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conditions. In addition to oral counseling, patients receive educational brochures that contain all above mentioned information, as well as instructions when to obtain urgent care.

Standard ACC.3.3:

Patient records contain a copy of discharge summary.

Measurable element:

1. *A discharge summary is prepared at discharge.*
2. *The summary contains the reason for admission.*
3. *The summary contains significant findings.*
4. *The summary contains any diagnosis.*
5. *The summary contains any procedure performed.*
6. *The summary contains any medications and other treatments.*
7. *The summary contains the patient's condition at discharge.*
8. *The summary contains discharge medications and follow-up instructions.*
9. *When organization or practice dictates, the patient is given a copy of discharge summary.*

Change

No major changes.

Areas for improvement

Discharge summaries rarely contain information on received medication and other treatment (except surgical treatment, invasive procedures). The medications prescribed at discharge are not uniformly recorded in all summaries. More structured discharge summary forms can be developed, which will ensure the recording of the field not completed now.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**
Measurable Element 6	**2**	**2**
Measurable Element 7	**3**	**3**
Measurable Element 8	**3**	**3**
Measurable Element 9	**4**	**4**

Follow-up conclusion

A discharge summary is completed at the time of patient's discharge from NMMC. The summary contains brief information about reasons for admission, significant findings, diagnosis, procedure performed, and a patient's condition at discharge. The medications received by patients during hospital stay and the ones prescribed after treatment are not always recorded in discharge summaries. Two copies of discharge summary are prepared: one – for patient, another one is placed in the medical record.

Standard ACC.4:

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There is a process to appropriately transfer patients to another organization to meet their continuing care needs.

Measurable element:

1. *There is a process to transfer patients.*
2. *The transfers are based on the patient's need for continuing care.*
3. *The process addresses criteria that define when transfer is appropriate.*
4. *The process addresses who is responsible during transfer.*
5. *The process addresses the situation in which transfer is not possible.*

Change

The process of patient transfer became more coordinated. The Chief of staff is responsible for the coordination of the process. Cardiologists or surgeons decide the need for transfer and evaluate whether the patient is transferable. NMMC has a contract with central ambulance service that carries out the transfer. The responsibility is shared by ambulance service, the chief of staff, and the staff member that evaluates patient as transferable. In case if a patient is not transferable, appropriate specialist is called to provide necessary care at NMMC.

Areas for improvement

It is suggested to develop written policies on the patient transfer processes from NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**3**	**3**
Measurable Element 4	**3**	**4**
Measurable element 5	**3**	**4**

Follow-up conclusion

There is an established process of patient transfer to other institutions. The chief of staff is coordinating the process. Specialists determine the need of transfer based on verbally established criteria. The transfer is accomplished by an outside ambulance service, which carries the responsibility of transfer along with chief of staff and NMMC specialists. There is a process also for patients that are not transferable.

Standard ACC.4.1:

The referring organization determines that the receiving organization can meet the patient's continuing care needs.

Measurable element:

1. The referring organization determines that the receiving organization can meet the needs of patients to be transferred.

Change

As it was mentioned above, the process of referral became more organized.

Areas for improvement

No major limitations.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**

Follow-up conclusion
The staff of the center always confirm with leaders of receiving organizations on their ability to meet the specific patient's needs before referring patients to outside organizations.

Standard ACC.4.1.1:

The organization establishes formal or informal arrangements and affiliations with receiving organizations to ensure continuity of care for its patients.

Measurable element:
Formal or informal arrangements are in place with receiving organizations when patients are frequently transferred to the receiving organization.

Change
No major changes.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**

Follow-up conclusion
Informal arrangements are made with institutions where the center frequently transfers patients.

Standard ACC.4.2:

The receiving organization is given a written summary of the patient's clinical condition and the interventions provided by the referring organization.

Measurable element:
1. *Patient clinical information or a clinical summary is transferred with the patient.*
2. *The clinical summary includes the patient's status.*
3. *The clinical summary includes procedures and other interventions provided.*
4. *The clinical summary includes the patient's continuing care needs.*

Change
No major changes

Areas for improvement
No major limitations.

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	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion
A discharge summary and referral document is provided to any transferred patient. The discharge summary contains patient's status, performed procedures, patient's continuing care needs.

Standard ACC.4.3:
During transfer, a qualified staff member monitors the patient's condition.

Measurable element:
1. *All patients are monitored during transfer.*
2. *The qualification of the staff member is appropriate for the patient's condition.*

Change
An improvement is noted in that NMMC signed a contract with central ambulance service. The qualified staff of the service accompanies patients during transfer.

Areas for improvement
It is suggested for NMMC to establish its own transfer service.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**4**
Measurable element 2	**4**	**4**

Follow-up conclusion
The patients are monitored during transfer by the staff of the specialized ambulance service.

Standard ACC.4.4:
The transfer process is documented in the patient's record.

Measurable element:
1. *The records of transferred patients note the health care organization agreeing to receive the patient.*
3. *The records of transferred patients note the reason(s) for transfer.*

Change
No changes.

Areas for improvement
No major limitations.

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	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion

The reasons for transfer, and the receiving institution's name are noted in the medical records of transferred patients. The "patient history" has a statistical card where the transfer is always noted.

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FUNCTION: ASSESSMENT OF PATIENTS (AOP)

Follow-up evaluation highlights

Assessment of patients is a well-established process at NMMC. Qualified personnel conduct the assessment of patients. Medical, nursing, and other support services collaborate to analyze and integrate patient assessment results. The timeliness of assessment/reassessment and further care initiatives is decided based upon the needs of patient. Standard forms are used in outpatient clinics for documentation of assessment/reassessment results, which are available to all persons involved in patient care. There are in-house laboratory and radiology services that are convenient, regular, and adequate to meet the patients' needs at NMMC on a 24-hour basis. There is an established and regular quality control process within laboratories at NMMC. There is no formal radiation safety program or quality control program in the radiology department at NMMC. The radiation control activities at the center are limited to those enforced by RRC. Several radiation safety devices are available, but their protective effect is not checked regularly. There is no effective equipment management program at NMMC. The equipment is checked only if problems arise.

The following measures are recommended to improve patient assessment at NMMC:

- Develop written requirements/regulations defining the information obtained from the patients;
- Establish the time frames for different types of patient assessments;
- Develop forms for patient's preoperative assessment by anesthesiologist;
- Develop specific policy/guidelines for patient reassessment at the center and establishment of follow-up center;
- Develop more structured secondary visit forms, computerizing the follow-up information of patients in the databases of the clinics;
- Develop a laboratory safety program, organizing staff training on the program at the beginning of employment and periodically thereafter, and regular staff performance evaluations;
- Purchase fume hoods for assuring the safety of laboratory conditions for staff working with hazardous materials;
- Develop a radiation safety program at NMMC and hiring a person responsible for radiation control (a staff member, or a consultant) for regular checks of radiation safety;
- Develop a program for the management and maintenance of medical equipment.

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ASSESSMENT OF PATIENTS

Standard AOP.1:

All patients cared for by the organization have their health care needs identified through an established process.

Measurable element:

1. *Organization policy and procedure define the information to be obtained for inpatients and ambulatory patients.*

Changes

An improvement was noted in the development of an admission database (patient demographic data, diagnosis), which is connected via network with the financial department. Each inhospital patient is assigned an ID, which is printed on labels and attached to all of the patient's documentation. During the last five years, Standard Encounter Forms (SEF) were developed for outpatient clinics and were updated several times. "Quality Assurance" project coordinators studied the completeness and validity of SEFs used at the Adult Cardiology clinic and Pediatric Cardiology clinic. The forms were changed according to the recommendations made by QA project coordinators. New forms were developed and have been in operation since 2004 in the catheterization laboratory (catheterization and stent forms). The new forms have several advantages for risk assessment of patients as compared to the old ones.

Areas for improvement

There are no written policies or procedures for the information to be obtained from patients. However, the existing structured forms for ambulatory patients make clear the information that should be collected. The "patient history" form used for inpatients has many limitations (it is not structured and it is a very generalized form, while NMMC is a specialized center). A better-structured form may be implemented in addition to the "patient history" form, as the "patient history" form cannot be eliminated because it is considered a requirement and is a legal document.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3***	**3**

Follow-up conclusion

Patient assessment is a well-established process both in outpatient clinics and inhospital services. Standard forms are used in outpatient clinics to collect information from patients, where it is clearly defined what information should be obtained from the patient. The "patient history" form, which is required by state laws, is used by inpatient departments. There are no written polices at NMMC on the information to be obtained from patients.

Standard AOP.1.1:

The organization has determined the scope and contents of assessments, based on applicable laws and regulations.

Measurable element:

1. *Only those individuals permitted by licensure, applicable laws and regulations, or certification, perform the assessments.*

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Changes
At the time of baseline survey both nurses and doctors regularly took licensing exams. Currently, the process of periodic licensing stated by laws and regulations is paralyzed in Armenia. Nevertheless, NMMC has established its own standards for hiring new staff (physicians, nurses, and for some other specialists like perfusionists). A new staff physician can be hired by NMMC only after he/she has passed the residency program and/or a fellowship program at the center (two or three years depending on the specialty). In 2005, nurses were hired at NMMC after completing specialized training (an intensive one-month medical education course at NMMC, an exam and the collection of an adequate number of votes from the trainers (more than 70%)). Recently, a list of competencies was developed for pediatric cardiologists, adult cardiologists, and arrhythmologists. Each specialist submits the list of competencies to the Medical Board for approval.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion
Qualified personnel assess patients at NMMC. The personnel meet the standards established by local laws/regulations and also additional standards developed by NMMC (fellowship programs for physicians, special training for nurses, etc.).

Standard AOP.1.3:

Assessments are completed in the time frame prescribed by the organization.

Measurable element:
1. Assessments are completed within the time frames established by the organization.

Changes
No major changes.

Areas for improvement
Time frames for different types of patient assessments should be established at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**2**

Follow-up conclusion
The patient assessment is a well-established process at NMMC. However, formal time frames for assessment are not set at NMMC. The process of initial assessment is done at outpatient clinics on the day of appointment based on the urgency status of the patient and the queue at the clinic. The staff is trained to assess the emergency status in patients. There are also other informal rules for patient follow-up assessment (see AOP 3).

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Standard AOP.1.4:

Assessment findings are documented in the patient's record and readily available to those responsible for the patient's care.

Measurable element:

1. *Assessment findings are documented in the patient's record.*

Changes

The assessment findings are better documented now because of introduction of primary and secondary SEFs.

Areas for improvement

Generally, patient assessment findings are documented in the SEFs and medical records. The archive at the Adult Cardiology clinic is very busy and it is sometimes difficult to find records for specific patients. It would be better to enter the data from the record into a database in order to make retrieval simpler and more accurate.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion

Assessment results are appropriately documented at NMMC in specially designed forms and are available for those involved in patient care.

Standard AOP.2.1:

The patient's medical and nursing needs are identified from the initial assessment.

Measurable element:

1. *The initial assessment results in the identification of the patient's medical needs.*
2. *The initial assessment results in the identification of the patient's nursing needs.*

Changes

No changes.

Areas for improvement

The role of nurses in providing patient care may be strengthened in all units of the center.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**3**	**3**

Follow-up conclusion

Medical needs of the patient are defined at all departments. However, nursing needs are defined mainly at in-patient departments.

Standard AOP.2.1.1:

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The initial medical assessment is documented in the patient's record within the first 24 hours after the patient's entry.

Measurable element:

1. *The initial medical assessment is documented in the patient's record within the 24 hours of admission.*

Changes

No changes.

Areas for improvement

The time frame for documenting assessment findings should be set, as late documenting may introduce recall errors for patient data.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**

Follow-up conclusion

The initial assessment result is documented in all departments at NMMC. Generally, the findings of the initial assessment are recorded during the first 24 hours after a patient's entry (mainly it is done parallel to patient assessment). However, there are no time limitations for documentation.

Standard AOP.2.1.2:

The initial medical assessment is documented before anesthesia and surgical treatment.

Measurable element:

2. *The medical assessment of surgical patients is documented before surgery.*
4. *Surgical patients have a preoperative diagnosis recorded before surgery.*
5. *The anesthesia assessment determines if the patient is an appropriate candidate for the planned anesthesia.*

Changes

In 2000 it was identified that there were "Pre-operative Evaluation" forms filled by anesthesiologists before surgery. Currently there are no such forms.

Areas for improvement

The center should develop forms for patients' preoperative assessment by an anesthesiologist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**3**

Follow-up conclusion

All elective patients are assessed at outpatient clinics first and presented to surgeons as candidates for cardiac surgery. The emergent patients are assessed in the emergency room. The data of

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assessment as well as the diagnosis are recorded into primary visit SEFs. The anesthesiologists assess patients on the same day before surgery but the results of assessment are not recorded.

Standard AOP.3:

All patients are reassessed at appropriate intervals to determine their response to treatment and to plan for continued treatment or discharge.

Measurable element:

3. *Patients are reassessed at intervals appropriate to their condition, plan of care, and individual needs or according to organizational policies and procedures.*
4. *Reassessments are documented in the patient's record.*

Changes

No major changes. The secondary/postoperative visit forms were introduced in the ambulatory clinics. Recently a new addition was introduced into databases of ambulatory clinics: the dates of secondary visits of patients are entered.

Areas for improvement

A specific policy/guideline could be developed for patient reassessment at the center. The secondary visit forms need improvement. Currently, the completeness of secondary visit forms is low and they are not very informative. Generally, the results of repeat exams/visits are put into patient forms. However, they are not attached and may be lost. The follow-up information of patients is not entered into the databases of the clinics (except dates of secondary visits and invasive procedures). The "Quality Assurance" project team has done the initial arrangements for establishing a follow-up center at NMMC. However, the project efforts were not continued by NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 3	**3**	**3**
Measurable Element 4	**4**	**4**

Follow-up conclusion

There are no written guidelines for patient reassessment at NMMC. However, patients are reassessed based on their condition, plan of care, and individual needs. According to the informally applied rules at NMMC, all inpatients are reassessed daily and ICU patients hourly (daily ECHO). There are also other informal rules for patient follow-up assessment (e.g. minimum assessment visits – once in 1 month, then once in 6 months, then once in 12 months after PCI; once in 2 weeks, then once in 1 month, then once in 6 months, then once in 12 months after CABG). The results of reassessment are documented in secondary visit forms.

Standard AOP.5.1:

Clinical pathology services are provided by the organization to meet patient needs or are readily available through arrangements with outside sources.

Measurable element:

1. *Adequate, regular, and convenient laboratory services are available to meet needs.*
3. *Outside sources are selected based on an acceptable record and compliance with laws and regulations.*

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Change
There is no pathology service at NMMC. The center applies to outside services. Regarding laboratories since the baseline evaluation the blood bank and immunology laboratory were created at NMMC. At the time of the baseline survey immunology tests were performed at "Viola". As for outside sources, NMMC now uses only the laboratory services of the Infectious hospital for culture tests and antibiotic susceptibility. As compared to the baseline survey the location of the general laboratory has been changed (moved to the building of outpatient clinics) and is closer and more convenient for patients referred by outpatient clinics. The express-laboratory (serving in-patients) was moved to an area near the ICU and its current location makes the service more convenient. The quality of the bacteriology laboratory (Infection hospital) performing the specimen analysis has improved during recent years (improvement in supplies and staff qualification).

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 3	**2**	**3**

Follow-up conclusion
The in-house laboratory services are convenient, regular, and adequate to meet patients' needs at NMMC on a 24-hour basis. The outside laboratories and pathology services meet applicable regulations and provides accurate and timely results.

Standard AOP.5.2:

A laboratory safety program is in place, followed, and documented.

Measurable element:
1. A laboratory safety program is in place and is appropriate to the risks and hazards encountered.
4. Appropriate safety devices are available.

Change
No changes.

Areas for improvement
A laboratory safety program may be developed. The staff should be trained in the program at admission and periodically thereafter. Staff performance in maintaining workplace safety should be periodically checked. Draft hoods would be an asset in assuring the safety of laboratory conditions for staff members working with hazardous materials.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**
Measurable Element 4	**3**	**3**

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Follow-up conclusion
There is no laboratory safety program at NMMC. The laboratory staff is knowledgeable in the general safety rules and precautions. Different devices are available at NMMC for safety assurance (gloves, masks, dyna-hex solution for disinfecting hands). However, the performance of staff is not uniform and is left to the discretion of staff members and is not supervised.

Standard AOP.5.3:

Individuals with adequate training, skills, orientation, and experience administer the tests and interpret the results.

Measurable element:

2. *Appropriately trained and experienced staff administers the test.*
3. *Appropriately trained and experienced staff interprets.*

Changes
No major changes. A reference book containing the information on all tests performed at NMMC was developed, published and distributed to all health care workers.

Areas for improvement
New activities for improvement are not suggested.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
The laboratory staff members have appropriate and adequate training, experience, skills, and are oriented to their work. The administration and interpretation of tests is conducted by clinical staff that have appropriate knowledge and skills according to state laws and additional requirements of NMMC.

Standard AOP.5.4:

Laboratory results are available in a timely way as defined by the organization.

Measurable element:

1. *The organization has established the expected report time for results.*
2. *Laboratory results are reported within a time frame to meet patient needs.*

Changes
No major changes.

Areas for improvement
It is suggested to establish the maximum time expectations for different test results, and to establish a system to control it.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**3**
Measurable Element 2	**4**	**4**

Follow-up conclusion
The organization has not developed standards for reporting times of results. The laboratories have established some informal rules as to the timeliness of reporting. The time varies depending on the urgency and type of test. However, the results are generally reported the same day within a maximum period of 2 hours. The staff and patients seemed to be satisfied with the timeliness of results.

Standard AOP.5.5:

All laboratory equipment is regularly inspected, maintained, and calibrated, and appropriate records are maintained for these activities.

Measurable element:
1. There is a laboratory equipment management program.

Change
No major changes.

Areas for improvement
The overall equipment management at NMMC should be improved (see Facility management and safety standard FMS 7).

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3***	**2**

Follow-up conclusion
The laboratory equipment is tested mainly if problems arise. No records are maintained by bioengineers on these activities.

Standard AOP.5.6:

Essential reagents and other supplies are regularly available.

Measurable element:
1. Essential reagents and supplies are available.

Changes
There were no changes in the area.

Areas for improvement
No limitations.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**

Follow-up conclusion
The supply of reagents and of other laboratory materials is adequate. Laboratory staff mentioned no cases of shortages of reagents.

Standard AOP.5.8:

Established norms and ranges are used to interpret and report clinical laboratory results.

Measurable element:
1. *The laboratory has established reference ranges for each test performed.*
2. *The range is included in the clinical record at the time test results are reported.*
5. *Ranges are reviewed and updated as needed.*

Changes
The laboratory reference ranges are included on test result sheets. The recorded ranges are based on available literature and instructions of specific methods/reagents used. The reagents and equipment are checked at least monthly by specially designed control plasma (serodos, humatrol, control normal plasma) for the majority of tests performed at NMMC to see whether the results are within reference range. In case of deviations the equipment may be calibrated, method/reagents reviewed. Recently the laboratories, in collaboration with "Quality Assurance" project coordinators, have published a Laboratory Reference book for all clinical staff at NMMC. The book includes the list of all tests performed at the center with the clinical significance of the tests, the range of normal results, and list of diseases and conditions where the results may deviate from normal.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 5	**4**	**4**

Follow-up conclusion
Regular quality control is performed at laboratories of NMMC. Specially designed laboratory sheets include the ranges of test results. The laboratory test result sheet is inserted into SEF. The ranges are reviewed when new reagents/methods are introduced or based on literature.

Standard AOP.5.10:

Quality control procedures are in place, followed, and documented.

Measurable element:
1. *There is a quality program for the clinical laboratory.*
3. *The program includes the validation of test methods.*

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Change
The reagents, tests, and equipment are checked at least monthly by specially designed control solutions (serodos, humatrol, control normal plasma) for the majority of tests performed at NMMC and more frequently if problems arise or staff suspects discordance. The results of quality checks are documented. The laboratory staff, in collaboration with "Quality Assurance" project coordinators, has developed standard operating procedures for all tests performed at NMMC.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
There is an established and regular quality control process in laboratories of NMMC that serves as a tool to assess the validity and reliability of test results.

Standard AOP.6:

Radiology services are available to meet patient needs, and all such services meet applicable local and national standards, laws, and regulations.

Measurable element:
1. Radiological services meet applicable local and national standards, laws, and regulations.

Change
According to laws and regulations, the equipment, settings, and radiation level of the radiology department is observed by the Inspection Committee from the Republican Radiology Center (RRC) once a year in order to renew their license and permission to operate. Each year RRC provides staff working in radiology services with badges (dosimeters). During the last two years staff did not wear those badges, as RRC did not calculate and report the radiation exposure. Instead, the center applied to an outside organization for dosimeters. However, only staff working in the catheterization unit wear those badges and not consistently (during only three months a year).

Areas for improvement
There should be an individual responsible for radiology safety at the center. The limitations of radiology safety are also attributed to the lack of regulation and enforcement of radiology services in Armenia.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Radiological services, depending on their agreement to the existing local and national standards, are provided with a technical passport and a sanitary passport, which are operating permissions for the department.

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Standard AOP.6.1:

Diagnostic imaging services are provided by the organization or are readily available through arrangements with outside sources.

Measurable element:

1. *Adequate, regular, and convenient radiology services are available to meet needs.*
2. *Radiology services are available for emergencies after normal hours.*
3. *Outside sources are selected based on an acceptable record and compliance with laws and regulations.*

Change

No major changes.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**2***	**4**

Follow-up conclusion

The x-ray service is available at the center 24 hours a day, 7 days a week. The x-ray service is provided for both bedridden and ambulatory patients. However, some patients are referred to external organizations for other types of radiological services. The chief of staff chose the outside services from among the most respected organizations and specialists in Yerevan. The list of consultant specialists and organizations is generally consistent if NMMC is satisfied with the quality of services provided. Referred centers are changed in cases of unsatisfactory performance. Patient preferences are also considered in regards to referral of services. All referral sources are in compliance with local laws and regulations.

Standard AOP.6.2:

A radiation safety program is in place, followed, and documented.

Measurable element:

1. *A radiation safety program is in place and appropriate to the risks and hazards encountered.*
5. *Appropriate radiation safety devices are available.*

Change

No major changes in the field. The only positive change is that NMMC has applied to a US institution that provides dosimeters to the staff working in the catheterization laboratory.

Areas for improvement

There is no formal radiation safety program at NMMC. The "Quality Assurance" project coordinators prepared a draft of the program. However, it was not discussed among organization management. There are a limited number of instructions provided by RCC for radiology safety but they cannot be considered as a formal radiation safety program. It is necessary for NMMC to

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have a person responsible for radiation control (a staff member, or a consultant) and regular checks of radiation safety. The shielding available at one of the catheterization laboratories is not sufficient and it is necessary that the laboratory be reorganized.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4***	**2**
Measurable Element 5	**4***	**3**

Follow-up conclusion

There is no formal radiation safety program at NMMC. The radiation control activities at the center are limited mainly to wearing dosimeters and individual safety devices. The RRC provides NMMC with guidelines to assure radiation safety at the setting. Several radiation safety devices are available, but their protective effect is not checked regularly.

Standard AOP.6.3:

Individuals with adequate training, skills, orientation, and experience administer the tests and interpret the results.

Measurable element:

2. *Appropriately trained and experienced staff administers tests.*
3. *Appropriately trained and experienced staff interprets tests.*

Changes

No changes occurred in the standard.

Areas for improvement

No intervention is suggested for further improvement.

	EVALUATION SCORES	
	2000	2005
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion

The staff that administers tests is appropriately trained and has specific skills. An x-ray specialist interprets the x-ray films and cardiologists and surgeons interpret the angiographies. They have all been trained and are experienced in interpreting the test results.

Standard AOP.6.4:

Radiology results are available in a timely way as defined by the organization.

Measurable element:

1. *The organization has established the expected report time for results.*
2. *Radiology results are reported within a time frame to meet patient needs.*

Change

No major changes.

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Areas for improvement
The formal establishment of time frames for reporting exam results is needed.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**2**
Measurable Element 2	**4**	**4**

Follow-up conclusion
The time frames for radiology exams are not formally documented. However, it is a well-established process. Generally, the exams and results are reported to patients within 45 minutes.

Standard AOP.6.5:

All diagnostic equipment is regularly inspected, maintained, and calibrated, and appropriate records are maintained for these activities.

Measurable element:
1. *There is a radiology equipment management program.*
5. *The program includes calibrating and maintaining equipment.*

Change
No major changes in the field.

Areas for improvement
It is essential for NMMC to establish a radiation safety program. The program should also involve equipment management.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4***	**3**
Measurable Element 5	**4***	**3**

Follow-up conclusion
There is no well-established radiology equipment management program at NMMC. Once a year RRC provides checks of the equipment and the setting. The bioengineers are responsible for equipment management, calibration, and maintenance. However, their activities are generally retroactive as opposed to preventative.

Standard AOP.6.6:

X-ray film and other supplies are regularly available.

Measurable element:
1. *Essential reagents and supplies are identified.*
2. *Essential reagents and supplies are available.*

Change
No major changes.

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Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
All essential reagents and supplies are ordered and purchased in advance. Essential reagents and supplies are identified and available at the center.

Standard AOP.6.8:

Quality control procedures are in place, followed, and documented.

Measurable element:
2. *Quality control includes daily surveillance of results.*
5. *Quality control includes documenting results and corrective actions.*

Change
No major changes.

Areas for improvement
There is no formal process of quality control within radiology services.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**4***	**2**
Measurable Element 5	**2**	**2**

Follow-up conclusion
There is no formal process of quality control within the radiology department. However, the results of tests are reviewed daily. If the results are not satisfactory the test may be repeated and, if required, corrective measures are initiated by technicians and bioengineers. The corrective actions are not documented at NMMC.

Standard AOP.7:

Medical, nursing, and other individuals and services responsible for patient care collaborate to analyze and integrate patient assessments.

Measurable element:
1. *Patients' assessment data and information are analyzed and integrated.*
2. *Those responsible for the patient's care participate in the process.*

Changes
There are no changes in the field.

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Areas for improvement
The role of nurses in the assessment of patients may be increased at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**3**	**3**

Follow-up conclusion
Patient assessment data is collected in SEFs and other forms (laboratory sheets, ECG- results, other test results) that are included in patient folders. Each patient is assigned a cardiologist who is responsible for analyzing the integrated data for the patient. The cardiologists are also responsible for organizing care for outpatients. The responsibility of inpatient post-surgical care is divided between cardiologists and surgeons.

Standard AOP.7.1:

The most urgent or important care needs are identified.

Measurable element:

1. *Patient needs are prioritized based on assessment results.*
2. *The patient and his or her family participate in the decisions about the priority needs to be met.*

Changes
There are no major changes. "Quality Assurance" project coordinators have developed agreement forms for surgical and invasive procedures, forms for discharge against doctor's recommendation, and others, which assure patient participation in the decision-making process.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
Generally, the first visit to the outpatient cardiology clinics serves as the basis for an initial assessment. Patients are referred to the clinic based on their emergency status. The initial assessment results also serve to assess the priority needs of patients. Generally, patients and their families participate in the decision-making process.

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FUNCTION: CARE OF PATIENTS (COP)

Follow-up evaluation highlights

CARE DELIVERY FOR ALL PATIENTS

Care delivery is a well-established process at NMMC. This process is based on verbally established policies and procedures. The care provided at NMMC is uniform for all patients initially able to pay for the services. The resources allocated for patient care are decided based on the patients' needs. Daily patient rounds, weekly inter-departmental conferences, integrated patient records, and "case manager" served as means for coordination of care at NMMC. The care for all patients is planned and the plan is revised consistent with changes in a patient's condition. However, those plans are not always recorded. Each department has its own established process for making orders. The received care (procedures, medications, etc.) is always documented in the patient record.

CARE OF HIGH-RISK PATIENTS AND PROVISION OF HIGH-RISK SERVICES

There is a well-established process for provision of high-risk services and for care of high-risk patients at NMMC. The process is generally based on verbally established procedures and criteria. However, since the baseline survey several protocols, guidelines were developed on medication use in ICU. Individual lists with calculated doses of defined medications in case of cardio pulmonary resuscitation (CPR) are attached near the beds of all patients. A EUROscore is used now to define the perioperative risk of mortality for patients undergoing cardiac surgery. Emergency patients referred to NMMC by ambulance are admitted and provided with necessary care at recently opened emergency room and there is an established process for that. All clinical personnel on duty are equipped with pagers now. The telemetry during 24 hours a day is available in all wards, which is also an improvement compared to the baseline. The staffing of nurses is increased for quality of care reasons (3 nurses per 10 patients in wards, at least 1 nurse per patient at ICU). Improvement of conditions for ICU patients on life support was noted. The infection control practices have improved at ICU and generally. Blood bank that follows policies and procedures of the American Association of Blood Banks was established at NMMC during recent years. The donor and patient blood is checked on a list of infections before processing. The blood bank in collaboration with ANP coordinators developed SOPs for all procedures. Recently a database was developed for blood products. Staff of blood bank developed few guidelines for clinicians on the use and handling of blood products.

ANESTHESIA CARE

A qualified anesthesiologist conducts a pre–anesthesia assessment before the induction of anesthesia. The plan of anesthesia is then developed but not documented. Patients/families are informed on the risks and potential complications of anesthesia. Now all patients sign a consent form (developed by ANP team) before surgical/invasive procedures. The form includes also info on risks of anesthesia. The anesthesia used and the anesthesia technique are recorded into special forms and the summary is involved into patient record. The physiological status is continuously monitored and documented during the administration of anesthesia. Recently NMMC received transesophageal echocardiography that allows improving the quality of monitoring. The post-anesthesia monitoring of patients is conducted in the OR by anesthesiologists and surgeons and by reanimatologists at ICU. A patient is removed from OR to ICU based on collaborative decision of the surgeon and anesthesiologist. The discharge of patient from ICU is done based on the verbally established rules.

SURGICAL CARE

Surgical care for each patient is planned but not well documented (the plan is partially documented in consent forms and SEFs at ambulatory clinics). The scheduling for surgeries has limitations, as patients

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often are belatedly informed about changes. Thus, the preparing of a patient to anesthesia and surgery is affected. The physiological status of patients is continuously monitored during surgery and monitoring results are documented. The preoperative and post-operative diagnoses are noted into patients' records. The patients/families are thoroughly educated on the risks and possible complications of surgery and possible complications related to blood and blood product use. The written consent is obtained from patients/guardians before any surgical procedure. Surgical procedures are described in surgical protocols, and their brief summaries included into patients' records. Post-surgical care of patients is planned but not always documented.

MEDICATION USE

Medication use is efficiently organized to meet patient needs at the center. Recently created inventory department collaboratively with the head nurses coordinates the process. The coordination improved during the last years: daily monitoring of the availability of medications, daily inspection of local storehouses in each department, setting required minimum number of available supplies, recording of existing and used supplies into special computerized accounting software. The pharmacy service at NMMC complies with Armenian laws and verbally established internal regulations. There is a list of medications used at NMMC, which are stored in the storehouses or are readily available. The clinical leaders modify the list of used medications based on the quality of care, market, and cost issues. There is a process of obtaining medication not available in the stores and after regular working hours. According to the orally established policies, the minimum required number of emergency medication is always stored at ICU. There is no good process to guard emergency medications from loss or theft. There is a process to supervise medication brought by patients from outside. NMMC has strict policy to provide all patients with medication for 2 days at time of discharge. Verbally established procedures guide the storage, handling and distribution of parenteral and enteral tube nutrition therapy products at NMMC (e.g. the calculation of nutrition is done by physician and nurse). The data on administered nutrition are entered into specially designed forms. Medications prescribed to patients are recorded in the Medication Order Form. The medication orders are reviewed by clinical leaders daily during clinical rounds. Medication effects are monitored and the type and dosage of medication are adjusted as needed. Adverse effects are recorded into patients' records.

FOOD AND NUTRITION THERAPY

There is an improvement in that food is ordered for ICU patients based on patient needs and preferences. Family members or, rarely, cafeteria provide the food for other patients. Ordered food is not recorded. Only the parenteral/enteral nutrition is noted in patient records.

Following measures are recommended to improve the function of care of patient at NMMC:

- Document verbally established policies and procedures for regulated areas of care of patients and develop policies for non regulated areas;
- Develop forms for recording patients' plan of care in those departments where it is not being recorded, document patient care team meetings and discussions;
- Develop order forms for the departments;
- Standardize the provided care further by increasing the use of clinical practice guidelines and pathways;

- Develop formal criteria for differentiation of high risk patients and procedures;
- Develop policies and procedures for care of vulnerable children and elderly;

- Develop anesthesia database, improve anesthesia chart making it more informative;

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- Increase the role of anesthesiologists in providing information to patients/families on the risks, complications, and options of anesthesia;
- Develop forms for pre-anesthesia assessment and documentation of its results, as well as document anesthesia plan in patient records;

- Improve the scheduling system for surgeries;
- Inform all candidates for surgery on the alternatives of blood/blood products;
- Improve the recording at surgical department;
- Develop a special form or location in patient record to record the plan of care after surgery;

- Develop written operating plan for medication management at NMMC;
- Involve the pharmacy and financial department in the process of overseeing the list of used medications;
- Calculate medication items used on the level of local stores of departments;
- Improve conditions at storehouses, develop a system to monitor conditions;
- Adopt the system of required patient identifiers;
- Monitor medication administration by nurses from time to time;

- Develop a system for making orders for food for at least some defined categories of patients;
- Appoint nutritional specialist or a consultant when needed for planning the nutrition/diet of patients;
- Enlarge cafeteria services to provide choice for patients and their families for ordering food of adequate quality at NMMC.

Evaluation Score:
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CARE OF PATIENTS

CARE DELIVERY FOR ALL PATIENTS

Standard COP.1:

Policies and procedures and applicable laws and regulations guide the uniform care of all patients.

Measurable elements

1. *The organization's clinical and managerial leaders collaborate to provide uniform care process.*
2. *When similar care provided in more than one setting, care delivery is uniform.*
3. *Policies and procedures guide uniform care and reflect relevant laws and regulations.*

Change

No major changes.

Areas for improvement

The access to NMMC is restricted to only those patients that are able to pay (exclusion are children under 7 whose treatment is free). The care of patients is a well-established process at NMMC. There are many orally established rules and regulations that are strictly followed. However, it would be nice to document those policies and to develop policies for non-regulated areas.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4***	**3**
Measurable Element 3	**4**	**4**

Follow-up conclusion

After entering the institution, the provided care is uniform. However, the process is not fully described in written policies and procedures and approved by managerial bodies at NMMC. The resources allocated for patient care are decided based on the patient needs. Acuity of patient condition is the basis for allocation of resources and timeliness of care.

Standard COP.2:

There is a process to integrate and coordinate the care provided to each patient.

Measurable elements

1. *Care planning is integrated and coordinated among settings, departments and services.*

Change

No major changes. The databases in several departments were connected with each other via network, which may assist in integrating and coordinating the care.

Areas for improvement

No major limitations.

Evaluation Score:
1 = Standard not met; **2** = Standard met minimally; **3** = Standard met partially; **4** = Standard met satisfactorily; **N/A** = Standard is not applicable to NMMC or cannot be measured from available information.
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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**

Follow-up conclusion
There are well-established proceedings at NMMC to join together and coordinate the care of a patient at NMMC. The daily patient rounds, inter-departmental conferences, integrated patient records serve as a basis for integration of patient care. The assigned cardiologist or surgeon (case-manager) carries the overall responsibility for patient care and integrates all the available resources of different departments in planning the patient care process.

Standard COP.2.1:

The care provided to each patient is planned and written in the patient record.

Measurable elements
1. *The care for each patient is planned.*
2. *The care planned is noted in the patient's record.*
4. *The care providers for each patient are noted in the patient's record.*
5. *Any patient care team meetings are noted in the patient records.*

Change
No major changes.

Areas for improvement
Quality assurance project coordinators studied the completeness of the records in the NMMC clinics. The recording was incomplete, particularly in respect of planned care. The "Prescribed tests/medications/recommendations" part of the standard ambulatory form is intended for documenting the planned care, but this part of the form is often left blank. Patient care team meetings and discussions should also be documented.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**2**	**2**
Measurable Element 4	**4**	**4**
Measurable Element 5	**1**	**1**

Follow-up conclusions
The patient care is an actively planned process at NMMC. Different departments and parties are collaboratively planning the care of patients. However, the planned care is not uniformly documented in all departments and by all providers. The results of care team meetings are also not being documented in patient records.

Standard COP.2.2:

Those permitted to write patient orders write the order in the patient record in a uniform location.

Evaluation Score:
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Measurable elements

1. *Orders are written when required.*
2. *Orders are found in a uniform location in patient records.*

Change

The SEFs at Adult Cardiology clinic were modified: the "Recommendations" part that serves for recording orders was expanded. The list of lab tests was added to save the time of physicians and nurses in coordinating the care and to improve recording. A new Medication Order form is developed for inpatients, which is more structured as compared to the old one.

Areas for improvement

The order forms should be developed at all departments of the center (e.g. the medication orders for patients at ICU are recorded only into a special journal by reanimatologists) and should be found in a uniform location in patient records.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 2	**1**	**2**

Follow-up conclusions

In different departments, orders are generally written in different forms (Medication Order form, SEFs, etc.). The forms that are not a part of the record are generally inserted into patient record. However, there is no uniform location for orders across departments and different forms.

Standard COP.2.3:

Procedures performed are written into the patient's record.

Measurable elements

1. *The results of procedures performed are entered into the patient's record.*

Change

New forms were developed for catheterization laboratory requiring more thorough description of procedures and outcomes as compared to the old ones.

Areas for improvement

Limitations are attributed to general flaws in recording at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions

Patient records contain data on the results of procedures (the SEFs of ambulatory clinics contain: the laboratory sheets with the test results, the conclusions of the radiologist on x-rays, the ECG results, etc.)

Standard COP.2.4:

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Each care provider has access to the patient care notes recorded by other care providers, consistent with organization policy.

Measurable elements

1. There is a method for one care provider to access other provider's care notes.

Change

An improvement is noted in connecting databases of several departments via network. The database delivery and use policy and procedures were developed during the Medical board meetings with assistance of "Quality assurance" project coordinators. The policy was approved by the Hospital board. It anticipates that the active chart of a patient should be available for all parties directly involved in patient care.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions

The patient record is available to all health workers involved in the care of the specific patient.

Standard COP.2.5:

The patient's plan of care is revised when indicated by a change in the patient's condition.

Measurable elements

1. The patient's plan of care is modified as the patient's needs change.

Change

No major changes.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions

As the patient's needs change, the plan of care for a patient is revised/modified.

Standard COP.3:

Clinical practice guidelines, when available and adopted by the organization, are used to guide the patient's clinical care.

Measurable elements

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1. *Clinical guidelines when available and relevant to the organization's patients and sources, are used to guide patients care process.*

Change
Several clinical guidelines were developed by the "Quality assurance" project coordinators, but still not approved by the NMMC staff. There are only few clinical guidelines adopted at NMMC (e.g. infection control practices) during the last years.

Areas for improvement
The clinical guidelines developed by ANP should by modified/adopted by the Center. Adoption of guidelines is the first step in assuring a standard approach to care for all patients.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**N/A**	**2**

Follow-up conclusions
Generally, the patient care at NMMC is not based on the clinical guidelines. However, the health care providers at NMMC are knowledgeable about the evidence-based clinical practice guidelines published in western countries and generally follow their recommendations.

CARE OF HIGH-RISK PATIENTS AND PROVISION OF HIGH-RISK SERVICES

Standard COP.5:
Policies and procedures guide the care of high-risk patients and the provision of high-risk patients and services.

Measurable elements
1. *The organization's clinical and managerial leaders have identified the high-risk patients and services.*
3. *Staff has been trained and uses the policies and procedures to guide care.*

Change
Since the baseline survey, several protocols and guidelines were developed on medication use at ICU (e.g use of dopamine, mesaton). Individual lists are attached near the beds of all ICU patients containing the calculated doses of defined medications in case of cardio pulmonary resuscitation (CPR). There is an improvement that EUROscore is used now to define the perioperative risk of mortality for patients undergoing cardiac surgery.

Areas for improvement
Written criteria for differentiation of high-risk patients and procedures should be established. The orally established procedures guiding the care of high-risk patients should be documented.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 2	**1**	**3**

Follow-up conclusions:
The care of high-risk patients and provision of high-risk services is well established at NMMC. Generally it is based on the orally established procedures and criteria. However, few guidelines were developed for guiding care of high-risk patients. Staff providing care for high-risk patients has been trained (fellowship program, nurse trainings, etc).

Standard COP.5.1:
Policies and procedures guide the care of emergency patients.

Measurable elements
2. Patients receive care consistent with the policies and procedures.

Change
Recently an emergency room was opened equipped with all the necessary devices. Emergency patients referred to NMMC by ambulance are admitted to the above mentioned room, where a cardiologist conducts the assessment of patients (ECG, ECHO and if necessary cardiac catheterization). The further care is decided based on the assessment results.

Areas for improvement
The informal policies and procedures guiding the process of care of emergency patients should be documented.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**3**	**3**

Follow-up conclusions:
Emergency patients receive care according to orally established procedures.

Standard COP.5.2:
Policies and procedures guide the use of resuscitation services throughout the organization.

Measurable elements
2. Resuscitation is provided according to policies and procedures.

Change
One of the positive changes is that all clinical personnel on duty as well as bioengineers and electricians are equipped with pagers on the same wave, which allows to immediately inform all the team in case if there is worsening of a patient condition. At the time of the baseline survey, a 24 hours/day telemetry was available only for limited wards. Currently it is available in all wards, which is also a significant improvement of the quality of provided care. The plan to increase the number of nurses at nurse stations observing the telemetry was approved by the Hospital board and would be implemented in January 2006. Currently, if the patient or family members in the wards have problems, they could call the staff by pressing special buttons. Individual lists are

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available for all ICU patients (see standard COP 5). Besides, the numbers of nurses per patient in the ICU is coordinated according to orally established policies (at least one nurse for each patient, 2 nurses for a patient with open sternum and dialysis, 3 nurses for a patient with assist devices and dialysis).

Areas for improvement
It is suggested to document all verbally established procedures for resuscitation procedures.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**3**	**3**

Follow-up conclusions
Resuscitation services at NMMC are provided according to verbally established procedures.

Standard COP.5.3:

Policies and procedures guide the handling, use, and administration of blood and blood products.

Measurable elements
2. Blood and blood products are administered according to policies and procedures.

Change
Compared to the baseline survey, a Blood bank was established at NMMC. A standard minimum number of blood packages is prepared there for all preoperative patients depending on the type of surgery. In case of necessity there is a blood bank staff that is available 24 hours on an on-call basis. All ICU patients had minimum three blood packages in case of necessity, which are kept in the refrigerator at the operational block. The Blood bank follows policies and procedures of the American Association of Blood Banks. Before procedures, the donor and patient bloods are checked on a set of infections. With assistance of ANP "Quality assurance" project coordinators, the Blood bank staff developed Standard Operating Procedures (SOPs) for all procedures they conduct. Recently a database was developed for blood products. There are also few guidelines developed by the Blood bank staff for the clinical staff on the use and handling of blood products.

Areas for improvement
It is suggested to document orally established policies and procedures that guide handling, use, and administration of blood and blood products.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**3**	**3**

Follow-up conclusions:
The administration of blood products is a well-formed process that is mainly based on verbally established rules and regulations.

Standard COP.5.4:

Policies and procedures guide the care of patients on life support or who are comatose.

Evaluation Score:
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Measurable element:

3. Patients on life support receive care according to the policies and procedures.

Change

An improvement is occurred in that ICU patients on life support are placed on special mattresses preventing from bedsores. The patients who are assessed during their stay at ICU as potentially needing intensive care for more than 36 hours are replaced on to above-mentioned mattresses. The sanitation of oral cavity is done for all patients on life support with hydrogen peroxide. Also, special containers with hydrogen peroxide are placed on the beds of these patients to facilitate appropriate infection control practices of personnel taking care of the patients.

Areas for improvement

It is suggested to document the established policies for the care of patient on life support.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions:

The care of patients on life support is based on verbally established policies and procedures.

Standard COP.5.8:

Policies and procedures guide the care of vulnerable elderly patients and of children.

Measurable element:

2. Frail, dependent elderly patients receive care according to the policies and procedures.

4. Young, dependent children receive care according to the policies and procedures.

Change

Smaller children in ICU are currently placed on beds with mattresses with heating or in incubators. There is stricter policy for calculating the volumes of infusions for children.

Areas for improvement

It is suggested to develop written policies and procedures for care of vulnerable children and elderly.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**1**	**3**
Measurable Element 4	**2**	**3**

Follow-up conclusions:

The NMMC provides the care of children under 7 free of charge. There are several verbal rules for care of vulnerable children or elderly.

ANESTHESIA CARE

Evaluation Score:

1 = Standard not met; **2** = Standard met minimally; **3** = Standard met partially; **4** = Standard met satisfactorily; **N/A** = Standard is not applicable to NMMC or cannot be measured from available information.

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Standard COP.6:

A qualified individual conducts a pre-anesthesia assessment.

Measurable element:

1. *Pre –anesthesia assessment is performed for each patient before anesthesia induction.*
2. *A qualified individual performs the assessment.*

Change

No major changes.

Areas for improvement

The results of pre-anesthesia assessment should be documented in a special form.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusions:

A pre–anesthesia assessment is generally conducted on the same day before surgery for each patient. The pre-anesthesia assessment is performed by anesthesiologist, who has special training and experience in the field.

Standard COP.7:

Each patient's anesthesia care is planned and documented.

Measurable element:

1. *The anesthesia care of each patient is planned.*
2. *The plan is documented.*

Change

No major changes.

Areas for improvement

The anesthesia plan should be documented in the patient record. The major limitation is that the schedule of surgeries is often changed, so that short time for planning is left. Besides, the wards are limited so the presurgical patients are admitted the same day of surgery and the planning and pre-anesthesia assessment is done before the surgery.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**2***	**1**

Follow-up conclusions:

The planning of anesthesia is conducted just after pre–anesthesia assessment.
The anesthesia plan is not documented.

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Standard COP.7.1:

The risks, potential complications, and options are discussed with the patient, his or her family or those who make decisions for the patient.

Measurable element:

1. *The patient and decision-makers are educated on risks, potential complications and options of anesthesia.*
2. *The anesthesiologist or other qualified individual provides the education.*

Change

No major changes. The education is very thoroughly provided by surgeons involving also the risks and complications of anesthesia. Patients sign a consent form confirming that they were informed on the risks of anesthesia.

Areas for improvement

The options of anesthesia are not presented to the patient because there are no many options in terms of cardiac surgery. The role of anesthesiologists should be increased in providing education to patients/families.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**4**	**4**

Follow-up conclusions:

Patients are educated about anesthesia by surgeons and the anesthesiologist who will administer the anesthesia.

Standard COP.7.2:

The anesthesia used is written in the patient record.

Measurable element:

1. *The anesthesia used and anesthetic technique are entered into the patient's anesthesia record.*

Change

No major changes.

Areas for improvement

The anesthesia chart has a room for improvement to become more informative (no fields to document all medications). An anesthesia database could be developed.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions:

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The anesthesia used and the anesthesia technique are documented on special anesthesia-records (which are then attached to the patient's record) and a brief summary of this information is also written in the patient record.

Standard COP.7.3:

Each patient's physiological status during anesthesia administration is continuously monitored and written in the patient's record.

Measurable element:

1. *Physiological status is continuously monitored during anesthesia administration.*
2. *The results of monitoring are entered into the patient's anesthesia record.*

Change

The transesophageal ECHOcardiography (TEE) was performed now for the broader group of patients during surgery.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusions:

The physiological status of all patients is continuously monitored during the administration of anesthesia. The monitoring results are noted into anesthesia records.

Standard COP.8:

The patient's post-anesthesia status is monitored and documented and a qualified individual discharges the patient from the recovery area using established criteria.

Measurable element:

1. *The patients are monitored appropriate to their condition during the post-anesthesia recovery period.*
2. *Monitoring findings are entered into the patient's record.*
3. *Established criteria are used to make discharge decisions.*
4. *Recovery area arrival and discharge times are recorded.*

Change

No major changes.

Areas for improvement

No major limitations.

Evaluation Score:

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	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 5	**4**	**4**

Follow-up conclusions:
Patients are being moved to ICU just after the surgery. The surgeon and anesthesiologist collaboratively decide when to transfer the patient from OR to ICU. Patient post-anesthesia monitoring is conducted by anesthesiologists and surgeons in the OR and by reanimatologists in ICU. Monitoring findings are entered into patient's records. The discharge of patient from ICU is done based on verbally established rules (e.g. non complicated patients are discharged from ICU after 36 hours, the decision on discharge is carried on the rounds). The times of ICU entry and discharge are recorded in patients' histories.

Standard COP.9:

Equipment, supplies and medications recommended by anesthesia professional organizations or by alternative authoritative sources are used.

Measurable element:
a. Recommended equipment is used.
b. Recommended supplies are used.
c. Recommended medications are used.

Change
Since the baseline survey the devices providing anesthesia were replaced with newer, more modern models. The broad use of TEE is improving the quality of provided care.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusions:
There are no organizations in Armenia that make recommendations about equipment, supplies and medications for anesthesia. Anesthesia equipment, supplies, and medications that are used at NMMC have been recommended by visiting international specialists. The equipment, supplies, and medications that are used for administering anesthesia at NMMC are adequate to meet patients' needs.

SURGICAL CARE

Standard COP.10:

Evaluation Score:
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Each patient's surgical care is planned and documented, based on the results of the assessment.

Measurable element:
1. Each patient's surgical care is planned.
4. A preparative diagnosis is documented.

Change
No major changes. The plan of surgical care is now being documented also in recently implemented consent forms, signed by the patient before surgery.

Areas for improvement
The scheduling of surgeries at NMMC has limitations. It is being changed very often. The patients often are belatedly informed about changes. The preparation of patients to procedure is suffering because of these changes in the schedule.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 4	**4**	**4**

Follow-up conclusions:
The surgical care of each patient is planned at NMMC. This plan is documented in the SEFs of ambulatory clinics and in the consent forms. Each patient's preoperative diagnosis is noted in the designated place of patient's record.

Standard COP.10.1:

The risks, benefits, potential complications, and options are discussed with the patients and his or her family or those who make decisions for patients.

Measurable element:
1. *The patient, family and decision makers are educated on the risks, benefits, potential complications and options related to the planned surgical procedures.*
2. *The education includes the need for, risk of, and alternatives to blood and blood product use.*
3. *The patient' surgeon or other qualified individual provides the education.*

Change
Educational brochures developed by ANP coordinators that contain detailed information on the main types of surgeries performed at NMMC are now available for patients. After getting oral and written education, the patients sign a form that assures that they received the necessary information on risks, complications, and options of the surgical procedure.

Areas for improvement
Only the members of religious groups are informed on the alternatives of blood/blood products.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4***	**3**
Measurable Element 3	**4**	**4**

Follow-up conclusions:
Generally the education of patients and decision makers by both verbal and written means starts at ambulatory clinics by cardiologists and then is continued by surgeons (usually second year residents, fellows, etc. who are qualified to provide the education). The patients are also educated on the needs and risks of blood and blood products.

Standard COP.10.2:

The surgery performed is written in the patient record.

Measurable element:

1. *A postoperative diagnosis is documented.*
2. *A description of the surgical procedure, findings and any surgical specimens is documented.*
3. *The names of surgeon and surgical assistants are documented.*
4. *The surgical report is available within a time frame needed to provide post-surgical care to the patient.*

Change
New surgical database software was developed by ANP coordinators and the surgical team. The database is designed to obtain detailed info on patient information, surgical procedure, etc. It is planned to implement the database in the forthcoming year.

Areas for improvement
The recording at surgical department has many flaws. The coordination of documentation needs improvement, as postoperative protocols are often not filled for some patients.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**4***	**3**
Measurable Element 3	**4***	**3**
Measurable Element 4	**4***	**3**

Follow-up conclusions:
A postoperative protocol is filled for patients who underwent surgery. The description of surgical procedure, findings, and postoperative diagnosis is documented there. The summary is also provided in the discharge summary. The names of the surgeon and the surgical assistants are documented in the patient's record. No time frame is established for surgical reports. However, generally the data is documented after the surgery.

Standard COP.10.3:

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^ The score is underestimated at the baseline survey.

Each patient's physiological status is continuously monitored during and immediately after surgery and written in the patient's record.

Measurable element:

1. *The patient's physiological status is continuously monitored during surgery.*
3. *Findings are entered into the patient's record.*

Change

An improvement is noted, that the majority of patients are monitored by TEE during the surgery.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusions:

The physiological status of patients is continuously monitored during surgery. The monitoring includes continuous ECG, ECHO, TEE, arterial pressure, CPB pressure, electrolytes, etc. Anesthesiologists, perfusionists, and nurses document the monitoring results in specially designed forms.

Standard COP.10.4:

Patient care after surgery is planned and documented.

Measurable element:

1. *Each patient's medical, nursing and other post-surgical care is planned.*
2. *The plan is documented in the patient's record.*

Change

No major changes.

Areas for improvement

There should be a special place in the record to note the plan of care after surgery.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**1***	**3**

Follow-up conclusions:

Post-surgical care for each patient is planned based on medical, nursing and other factors. This plan is not documented in the patient's record. The plan of care is partially documented in discharge summaries and often in SEFs at ambulatory clinics, but rarely in patient histories.

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MEDICATION USE

Standard COP.11:

Medication use in the organization is efficiently organized to meet patient needs.

Measurable element:

1. *Medication use is organized throughout the organization so that patient's medication needs are met.*

Change

During the years of ANP, the Inventory Management department was established. The department monitors the availability of medications on a daily basis. The staff of the department and/or the head nurses of each department inspect the local storehouses in each unit to see whether there is a shortage of any item. Required minimum numbers of supplies are set by each unit (the number is calculated as maximum daily number used). The central storage is also monitored. The available and used materials are recorded into special computerized accounting software.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**4**

Follow-up conclusions:

The inventory department collaboratively with head nurses organizes the availability of medications at NMMC.

Standard COP.11.1:

The pharmacy or pharmaceutical service and medication use in the organization comply with applicable laws and regulations.

Measurable element:

1. *The pharmacy or pharmaceutical service and medication use comply with applicable laws and regulations.*

Change

No major changes. Currently NMMC submits a report on the number of used narcotics every three months to the Fourth department. Occasionally, for the reasons of providing quality care, NMMC uses medications approved in western countries but not included in the list of medications defined by Armenian pharmacy inspection (because of no distributors for the particular medication, etc.). However, in the case of using medications out of the list, the center obtains the permission of pharmacy inspection.

Areas for improvement

The operation of medication management system should be described in a special document.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusions:
The pharmacy service at NMMC complies with laws of the Republic of Armenia. The medication management system is functioning satisfactory, but there is no written operation plan for the mentioned system.

Standard COP.11.2:

An appropriate selection of medications for prescribing or ordering is stocked or readily available.

Measurable element:

1. *Medications available for prescribing and ordering are appropriate to the organization's mission, patient needs and services provided.*
2. *There is a list of medications stocked in the organization or readily available from outside sources.*

Change
No major changes.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusions:
Medications that are prescribed and ordered at NMMC are appropriate to the patient needs and the services provided. There is a list of medications present at NMMC or readily available from outside sources.

Standard COP.11.2.1:

There is a method for overseeing the organization's medication list and medication use.

Measurable element:

1. *There is a method for overseeing the medication list.*

Change
Information about the available and used medications is entered into special computerized accounting software.

Areas for improvement

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Pharmacy and financial department should take active part in the process of overseeing the list of used medications.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusions:
The clinical leaders at NMMC modify the list of used medications taking into account the quality of care, market and cost issues. The epidemiologist also participates in decision-making in case if antibiotic list is overseen.

Standard COP.11.2.2:

The organization can readily obtain medications not stocked or normally available to the organization.

Measurable element:

1. *There is a process to obtain required medications not stocked or normally available to the organization.*

Change
No major changes.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions:
There is a well-established process of obtaining medication not available in the stores: Inventory management department upon the request of head nurses of particular department provides (obtain from outside sources) necessary medications.

Standard COP.11.2.3:

There is a process to obtain medications when the pharmacy or pharmaceutical service is closed.

Measurable element:

1. *There is a process to obtain medications when the pharmacy is closed.*

Change
No major changes. Aside from smaller stores in each department, where the medication is available after regular working hours, the pharmacist may be called and requested to provide necessary medication not available in the stores.

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Areas for improvement
No limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions
An established process is functioning at NMMC to obtain medications after regular working hours.

Standard COP.11.2.4:

Emergency medications are available, monitored and safe when stored out of the pharmacy.

Measurable element:

1. *Emergency medications are available in the organization within a time frame to meet emergency needs.*
2. *Emergency medications are protected from loss and theft.*

Change
No major changes.

Areas for improvement
The medication items should be monitored, counted also in local stores of departments.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**2**	**2**

Follow-up conclusions
Emergency medications are stored at ICU. According to the orally established policies, some medications have a minimum required number that should be always available at ICU. There is no recognized process to guard emergency medications from loss or theft.

Standard COP.11.3:

Prescribing, ordering and administration of medications are guided by policies and procedures.

Measurable element:

1. *Policies and procedures guide the safe prescribing, ordering and administration of medications in the organization.*
2. *Documentation requirements are stated.*
4. *Relevant staff is trained in correct prescribing, ordering and administration practice.*

Change
No major changes. A procedure of Incidence reporting was initiated which could function as a controlling and preventing tool for medication errors at NMMC.

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Areas for improvement
The process of prescribing, ordering, and administration should be described in a formal document. The documentation requirements should also be stated in the policies for medication prescribing, ordering, and administration.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 2	**2**	**2**
Measurable Element 4	**4**	**4**

Follow-up conclusions:
The medication prescribing, ordering, and administration are well-established processes at NMMC. The medication is documented in specially designed forms. However, there are no written policies and procedures at NMMC for safe prescribing, ordering, and administering of medications. Training of the staff in the prescribing, ordering, and administration of medications is conducted during fellowship, residency, nurse education programs, and usually thereafter on an informal basis.

Standard COP.11.3.2:

Policies and procedures govern any patient self-administration of medications, the control of medication samples, the use of any medications brought into the organization by the patient or his her family, and dispensing of medications at discharge.

Measurable element:
1. *Policies and procedures govern patient self-administration of medications.*
3. *Policies and procedures govern the documentation and management, of any medications brought into the organization for or by the patient.*
4. *Policies and procedures govern the dispensing of medications at the time of the patient's discharge.*

Change
No major changes.

Areas for improvement
There are orally established procedures that coordinate self-administration of medications brought outside and dispensing medications at discharge that should be documented.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 3	**3**	**3**
Measurable Element 4	**3**	**3**

Follow-up conclusions:
Generally all medication is given to patients by the center. Few exceptions are done for the patients with specific disorders, or medication preferences. In those cases nurse administers the medication brought outside. The NMMC policy requires providing all patients with 2-day

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medications at the time of discharge. All the procedures on this matter are orally established at NMMC.

Standard COP.11.3.3:

Policies and procedures govern the preparation, handling, storage and distribution of parenteral and enteral tube therapy.

Measurable element:

1. *Policies and procedures guide the storage, preparation, handling and distribution of parenteral and enteral tube nutrition products.*

Change

A special form was developed, where the information on parenteral nutrition is recorded.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**

Follow-up conclusions:

Verbally established procedures guide the storage, handling and distribution of parenteral and enteral tube nutrition therapy products at NMMC (e.g. the calculation of nutrition is done by physician and nurse). The information on administration of parenteral nutrition products is recorded in specially designed forms.

Standard COP.11.4:

Medications are stored, prepared and dispensed in a safe and clean environment.

Measurable element:

2. *Medications are stored properly.*
3. *Medications are prepared and disposed in clear and safe areas.*

Change

No major changes.

Areas for improvement

The conditions of storehouses should be improved. The storehouses should have special devices (e.g. thermometers) to monitor conditions there; the monitoring results should be overseen regularly. The supervision of stores should be more coordinated and strict.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**4***	**3**
Measurable Element 3	**N/A**	**N/A**

Follow-up conclusions:

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Generally medications are kept in the storehouses at NMMC based on their specific instructions for storing. The NMMC pharmacy does not prepare any medications.

Standard COP.11.4.1:

An appropriately licensed pharmacist, technician or other trained professional supervises the storage, preparation and dispensing of medications.

Measurable element:

1. A qualified individual supervises all activities.

Change

No major changes.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions

The medications storage and dispensing is supervised by pharmacist in the central storehouse and by head nurses in specific stores at each department. They have necessary qualification and knowledge to carry out the mentioned task.

Standard COP.11.4.2:

Medication prescriptions or orders are verified.

Measurable element:

1. Each prescription or order is reviewed.

Change

No major changes.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1***	**3**

Follow-up conclusions:

The medication orders are reviewed daily during clinical rounds. Clinical leaders review them (surgeons for post-surgical patients and cardiologists for cardiology patients). However, there is no additional requirement of review of prescriptions by pharmacists.

Standard COP.11.4.3:

The organization has a medication recall system.

Measurable element:

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2. *Policies and procedures address any use of medications known to be expired or outdated.*
3. *Policies and procedures address the destruction of medications known to be expired or outdated.*
4. *Policies and procedures are implemented.*

Change
No major changes.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusions
There is a special committee at NMMC that oversees the collection and destruction of expired or outdated medication. The committee members follow verbally established procedures.

Standard COP.11.4.4:

A system is used to dispense medications in the right dose to the right patient at the right time.

Measurable element:
1. *There is a uniform medication dispensing and distribution system in the organization.*

Change
As compared to the baseline the Medication Order form was improved (more structured).

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions
The process of medication dispensing and distribution is uniform at NMMC. For each patient, a special form is filled with all prescriptions and another form for all administered medications. Some medications have verbally established procedures (e.g., medications with crucial effects in case if the usual dosage is changed should be administered by 2 nurses).

Standard COP.11.5:

Patients are identified before medications are administered.

Measurable element:
1. *Patients are identified before medications are administered.*

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Change
The new Medication Order form designed for recording prescribed medications contains the number of ward and the patient name, which ensures giving the right medication to the right patient. According to the existing norms, each 10 patients are served by 2 nurses in each ward (3 nurses starting from January 2006). Thus, generally, the nurses should not have problems with recalling their patients by names. Recently, at least one nurse/one patient ratio was approved for ICU. This policy should minimize the probability of errors at ICU.

Areas for improvement
Even though the current system minimizes the possibility of medication errors, wearing of identifiers by patients could be adopted at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusions:
Medication Order Forms are used by nurses to verify the administration of medication. The care of ICU patients is provided by at least one nurse for one patient. There is a system for passing the medication order forms from one duty team to another. However, patient identifiers could be used additionally at NMMC to minimize the risk of medication errors.

Standard COP.11.5.1:

The right dose of medication is administered at the right time.

Measurable element:
1. *Medications are verified with the prescription or order.*
2. *The dosage amounts of the medication are verified with the prescription or order.*
4. *Medications are administered on a timely basis.*
5. *Medications are administered as prescribed.*

Change
No major changes.

Areas for improvement
A monitoring of administration of medication by nurses should be carried out from time to time.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**

Follow-up conclusions
The Medication Order form is used to verify medications and their dosages before administration to patients. A special list is developed by nurses containing the names of administered medication, dosages and the times of administration, which could ensure that the medication is

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administered at proper time and in proper dosage. The nurse who administrated the medication signs the list. In case if problems arise, the particular nurse is instructed on her further actions.

Standard COP.11.6:
Medication effects on patients are monitored.

Measurable element:
1. Medication effects are monitored.

Change
No major changes.

Areas for improvement
The limitations could be attributed to general flaws of recording at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions:
The type of medication and its dosage are reviewed during the care process as needed (inpatients are evaluated at least daily, outpatients are given necessary instructions when to contact their cardiologists, when to perform laboratory tests, etc.). The patients receiving medications that have high frequency of adverse effects are monitored more carefully (nurse stays in a ward after administration or returns to ward to see the patient more frequently, etc.).

Standard COP.11.6.1:
Medications prescribed and administered are written in the patient's record.

Measurable elements
1. Medications prescribed or ordered are recorded for each patient.
3. Medication information is kept in the patient's record or inserted into his or her record at discharge or transfer.

Change
An improvement is noted in the development of new Medication Order form, which is more structured compare to the old one.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusions:
There is a Medication Order form with all medications prescribed to inpatients and a separate form, where nurses record the administered medications, with dosages, time of administration,

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route of administration, and the name of administering nurse. Both forms are inserted into patient record (patient history). The medication prescribed to outpatients is recorded in the specially designed part of the SEFs.

Standard COP.11.6.2:
Adverse medication effects are noted in the patient's record.

Measurable element:
1. *Monitoring includes observing adverse medication effects.*
3. *Adverse effects are documented in the patient's record.*

Change
No major changes.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusions:
Health care providers at NMMC monitor patients for adverse effects of medications. Adverse effects are recorded in the patient's record (e.g. for inpatients a caution of allergic reaction to specific drug is noted on the title page of "patient history" with red ink).

FOOD AND NUTRITION THERAPY

Standard COP.12:
Food, appropriate for the patient and consistent with his or her clinical care is regularly available.

Measurable element:
1. *Food, appropriate to the patient, is regularly available.*

Change
An improvement is noted in that NMMC provides now ICU patients with food, which allows controlling the quality of the provided food. After 2000, a cafeteria service was established at NMMC. The coordination of infection control in small kitchens near wards, used only for handling and heating food, became much more organized (see standard PCI 3).

Areas for improvement
It is suggested to enlarge the cafeteria services, so that patients and their families have choice for ordering food of adequate quality at NMMC.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusions:
The center provides all ICU patients with food. Generally, the patients' family members provide the food for the patients in wards based on patient and family preferences. Rarely the food is ordered in cafeteria at NMMC.

Standard COP.12.1:

All patients receive an order for food or other nutrients based on their nutritional status or need, including orders for nothing by month, a regular diet, a special diet, or parenteral or enteral tube nutrition.

Measurable element:
1. *All patients have an order for food in their record.*
2. *The order is based on the patient's nutritional status and needs.*

Change
No major changes.

Areas for improvement
A system for making orders for food should be developed at NMMC for at least some defined categories of patients. An appointment of nutritional specialist or a consultant when needed will be an asset for planning the nutrition/diet of patients.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**2**
Measurable Element 2	**4***	**3**

Follow-up conclusions:
The food is ordered for ICU patients based on patient needs and preferences. It is not recorded. Patient record could contain only a physician order for patient to eat and that he ate on his own. Only parenteral nutrition is noted in the patient record. Taking into account the profile of patients treated at NMMC, generally there are no food restrictions for the patients in the wards. That is why physicians do not order food for patient there, patients' families are providing food based on patient and their preferences.

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FUNCTION: PATIENT AND FAMILY EDUCATION (PFE)

Follow-up Evaluation Highlights

There is a continuing process of patient education at the center to meet the ongoing health needs of patients and to achieve their health goals. Knowledgeable staff members often provide the education collaboratively (nurses, physicians). The education is provided in a simple and understandable format. Patients' and families' educational needs are verbally assessed but assessment findings are not documented into patient records. No written policy guiding educational needs assessments, educational process, and knowledge evaluations regulates and coordinates the process of patient and family education at the center. Since 2004, patients or legal guardians sign a special "consent form" before invasive or surgical procedures that identifies that they have received information to give informed consent.

In collaboration with NMMC staff, the ANP team developed series of six educational brochures for patients related to risk factors of ischaemic heart disease, cardiac surgery in adults, cardiac surgey in children, percutaneous coronary angioplasty and stenting, valve surgery, and coronary artery bypass grafting. Several quality indicators of educational activities at NMMC were monitored through ongoing distribution of "Discharge questionnaires" among patients. The data was analyzed and yielded rather satisfactory results in respect to counseling on healthy lifestyle, physical activity, healthy diet, medication after discharge, and smoking cessation.

Based on the follow-up evaluation the following recommendations are made:

- Identify the educational needs of each patient depending on the type of disease and/or planned intervention and record the educational needs of each patient in their medical record;
- Plan educational activities and implement them in a coordinated way.
- Appoint a patient/family education coordinator (e.g. nurse) responsible for educational activities, who will contribute to providing education in a coordinated manner;
- Assess the educational needs of patients periodically and develop new written materials, videotapes, leaflets, and lectures as well as update old materials when needed;
- Establish new communications with community organizations who provide preventive and health promotion services to population;
- Periodically assess the educational activities provided at NMMC: particularly the quality of educational materials in use, knowledge and practices of patients, counseling skills of providers, etc;
- Improve provider counseling and communication skills following the findings of regular assessments.

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PATIENT AND FAMILY EDUCATION

Standard PFE.1:
Education supports patient and family participation in care decisions and care process.

Measurable element:
1. *The organization plans education consistent with its mission, services and patient population.*
2. *There is an appropriate structure or mechanism for education throughout the organization.*

Changes
There were no major changes since the baseline survey. Although the educational process is not well coordinated, recent analysis of the data gathered by "Discharge questionnaires" (June 2004-December 2004) showed that more than 90% of the respondents received counseling from doctors, nurses, or both on healthy lifestyle, physical activity, healthy diet, and medications upon discharge. Among smokers, 97.8% received smoking cessation counseling.

Areas for improvement
The educational process will be more effective if the center identifies minimal educational needs for each patient. Appointing an education coordinator (e.g. nurse) responsible for patient/family education will ensure that education is provided in a coordinated manner.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 2	**3**	**3**

Follow-up conclusion
There is an ongoing process of patient education at the center with satisfactory results. However, this process needs to become more planned, coordinated, and uniform.

Standard PFE.1.1:
Each patient's education needs are assessed and recorded in his or her records.

Measurable element:
1. *The patient's and family education needs are assessed.*
2. *Assessment findings are recorded in the patient's record.*
3. *There is a uniform process for recording patient education information.*

Changes
There are no considerable changes since the baseline survey. The patient's and family education needs are assessed through verbal discussion between health care providers and the patient and family members. Then the needed information is provided (either verbally or by providing written materials).

Areas for improvement
Assessment findings are not recorded and there is no uniform procedure establishing documentation needs. Recording of patients' educational needs will ensure the continuity of patient education by providers.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 3	**1**	**1**
Measurable Element 4	**1**	**1**

Follow-up conclusion
Patients' and families' educational needs are being assessed but the process is not uniform. Assessment findings are not documented into the patient record.

Standard PFE.1.2:

Each patient and his or her family receive education to help them give informed consent, participate in care processes, and understand any financial implications of care choices.

Measurable element:
1. *Patients and family learn about informed consent.*
2. *Patients and family learn about participation in care decisions.*
3. *Patients and families learn about participation in the care process.*
4. *Patients and families learn about any financial implications of care decisions.*

Changes
In 2004, a new "Consent form for invasive/surgical procedures" was approved and is now in use at NMMC. After becoming familiar with the process of treatment, the patients or legal guardians sign that document confirming that they received all the needed information and are aware about the benefits, risks, and potential complications of the suggested care. If something is not clear, an NMMC staff member explains it again. Besides, there are forms "Discharge against physician recommendation" and "Refusal for invasive/surgical procedure against physician recommendation" that ensure that the patient is informed of the consequences of his/her decision to refuse the recommended care.

Areas for improvement
No areas for further improvement were identified.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion
NMMC staff appropriately educates patients and family members about the process of care. Patients or legal guardians sign a special "consent form" before invasive procedures that ensures that they have received information to give informed consent. The financial implications of patient decisions are clearly detailed in pricelists available at NMMC.

Standard PFE.2:

Education and training help meet patient's ongoing health needs.

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Measurable element:

1. *Patients and families receive education and training to meet their ongoing health needs or achieve their health goals.*

Changes

An improvement was noted in the development of written educational materials for patients. The ANP team, in collaboration with NMMC staff, developed six educational brochures related to the following topics: risk factors of ischaemic hearth disease, cardiac surgery in adults, cardiac surgery in children, percutaneous coronary angioplasty and stenting, valve surgery, and coronary artery bypass grafting. The brochures comprehensively cover the aforementioned topics including also follow-up care. They are distributed to NMMC patients depending on their health education needs. The brochures are available in Armenian, and are currently being translated into Russian to better meet language preferences of some patients. Additionally, the Adult Cardiology Clinic provides written materials about cholesterol management and prevention of bacterial endocarditis. Thus, patients and their family members receive both verbal and written educational information.

Areas for improvement

Patients' educational needs should be re-assessed regularly, so that methods to better address those needs are identified. Appointment of a special staff responsible for providing patient education is suggested. Various materials could be used in the patient education process including brochures, booklets, videotapes, and lectures.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**4**

Follow-up conclusion

Along with verbal education provided to patients at NMMC by their caregivers, written educational materials were developed and distributed among patients during last years.

Standard PFE.2.1:

The organization cooperates with available community resources to provide health promotion and disease prevention education.

Measurable element:

1. *The organization identifies and establishes relationships with community resources that support continuing health promotion and disease prevention education.*

Changes

NMMC has been collaborating with the American University of Armenia, Center for Heath Services Research and Development (AUA/NMMC Project or ANP) for the last five years. The ANP assists NMMC in developing and publishing health-related educational materials and promotes other health-related educational activities at the center. Recently, the center began collaborating with pharmaceutical companies in sponsoring the reproduction of educational materials developed for NMMC patients.

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Areas for improvement
It is suggested to establish new collaborations with other organizations (Public Health NGOs, local polyclinics, etc).

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**3**

Follow-up conclusion
NMMC has made a step forward in establishing relationships with community resources promoting health.

Standard PFE.3:

Patient and family education include the following topics, as appropriate to the patient's care: the safe use of medications, the safe use of medical equipment, potential interactions between medications and food, nutritional guidance and rehabilitation techniques.

Measurable element:

1. *When appropriate, patients and families are educated about the safe and effective use of medications and potential side effects of medications.*
2. *When appropriate, patients and families are educated about safely and effectively using medical equipment.*
3. *When appropriate, patients and families are educated about preventing interactions between medications and food.*
4. *When appropriate, patients and families are educated about appropriate diet and nutrition.*
5. *When appropriate, patients and families are educated about rehabilitation techniques.*

Changes
No major changes. Recent analysis of the data obtained from patients at discharge through "Discharge questionnaires" showed that 93.2% of Outpatient Clinic patients received information on their treatment, possible side effects, and alternative treatment options. As mentioned above, the proportions of patients who received counseling on healthy lifestyle, physical activity, healthy diet, and medications upon discharge were also quite high (>90%). The educational brochures (see PFE.2.) include information on follow-up care, potential side effects of medications, diet and nutrition, and the rehabilitation process.

Areas for improvement
It is important to periodically evaluate the needs of patients regarding the use of medication, medical equipment, diet, and rehabilitation. It is also necessary to identify effective methods for covering those needs and facilitating them in a well planned and coordinated way. The performance of NMMC staff in providing education should be evaluated periodically through knowledge/practice/compliance surveys among patients or through direct observations of educational process at NMMC.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion

Patients are generally educated on the safe and effective use of prescribed medications, their potential side-effects and what to do if the side-effects occur, interactions between food and medication, effective use of medical equipment, diet and nutrition, and rehabilitation techniques. Aside from oral education, patients also receive brochures and leaflets that cover the above mentioned topics.

Standard PFE.4:

Education methods consider the patient's and family's values and preferences and allow sufficient interaction among the patient, family and staff for learning to occur.

Measurable element:

1. *Education methods are selected on the basis of patient and family values and preferences.*
2. *Interaction among staff, the patient, and family confirms that the information was understood.*

Changes

In order to further meet patients' educational preferences, it was decided to translate the series of patient educational brochures, developed by ANP in Armenian, into Russian. One of the brochures, entitled "Cardiac surgery in children," is already in use in Russian. Data gathered through patient "Discharge questionnaires" allowed evaluating whether the instructions regarding prescribed medication were clear. The results obtained for the period of June 2004- December 2004 showed that 80.2% of patients considered the instructions quite clear.

Areas for improvement

The effectiveness of patient/family and provider interactions, education offered, and consideration of patient and family values should be periodically evaluated at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion

The educational process at NMMC is generally based on patient and family values and preferences.

Standard PFE.4.1:

The patient and family are taught in a format and language that they understood.

Measurable element:

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1. *The patients and families are taught in a format they understand.*

Changes
According to the study entitled "Evaluation of physician counseling skills in the Adult cardiology clinic," in most cases patients received information in an understandable manner through the explanation of used terms (88% of cases). The educational brochures and other materials distributed to patients are written in a simple and understandable language without the use of medical terminology. It was also decided to translate the brochures into Russian for patients from CIS countries and Armenian residents preferring Russian.

Areas for improvement
According to the abovementioned study, the frequency of visual aid use during counseling was not high (68.4%), which could be increased in order to make information more understandable. Visual aids, including videotapes, could be developed. The assessment of patients' knowledge and practices after they have received education could help to evaluate the counseling skills of providers and facilitate the implementation of necessary interventions.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**

Follow-up conclusion
Generally patients and their families are educated in a simple and understandable format also and language preference of patients are considered. There is a special staff member at NMMC responsible for providing translations for patients from Georgia.

Standard PFE.4.2:
Health professionals caring for the patient collaborate to provide education.

Measurable element:
1. *Patient and family education is provided collaboratively when appropriate.*

Changes
No major changes from the baseline. The “Discharge questionnaire” survey for June 2004-December 2004 indicated that in regard to healthy lifestyle, physical activity, and healthy diet, more than 50% of patients received education from both doctors and nurses.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion
When appropriate, medical staff provides patient education in a collaborative manner. For example, the core aspects of the education of post surgical patients are provided by physicians and, based on physician notes, nurses provide education on topics like the use of medication.

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Standard PFE.4.2.1:

These professionals have the knowledge and skills required for effective education.

Measurable element:

1. Those who provide education have the knowledge and communication skills to do so.

Changes

No major changes from the baseline. In July 2003, ANP staff evaluated physician counseling skills at the Adult Cardiology Clinic of NMMC. Overall, counseling skills were significantly lower than the hypothesized levels in all measured domains (Greet, Tell, Help, Explain, and Return), but were high for some specific items such as explaining and discussing suggested treatments (96%), summarizing important issues (73.3%), and explaining the essence of disease (88.3%).

Areas for improvement

NMMC staff did not receive formal training on patient education. Establishment of a new position for a staff member responsible for patient education could make the educational process more standardized, comprehensive, and effective. Above mentioned activities should be planned and conducted to meet the recommendations based on the study (Evaluation of physician counseling skills in the Adult cardiology clinic) results. The regular evaluation of the counseling skills of providers with subsequent action may be carried out to ensure uniform satisfactory performance.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1 Knowledge	**4**	**4**
Measurable Element 1 Communication Skills	**2**	**3**

Follow-up conclusion

Generally, physicians and nurses who provide education have the appropriate knowledge and satisfactory communication skills.

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FUNCTION: PATIENT AND FAMILY RIGHTS (PFR)

Follow-up evaluation highlights

The most significant change from the baseline evaluation was the development, approval, and implementation of a written policy on Patient and Family Rights. The written policy provides plans and procedures for several important functions in ensuring the rights of patients and families including informed consent, protection of patient belongings, patient participation in research studies, and patient participation in the decision-making process. The leaflets of patient/family rights were distributed to patients, the posters with patient/family rights were placed in all waiting rooms. NMMC has a procedure for obtaining informed consent from patients or their health representatives in the event the patients themselves cannot grant consent. NMMC also has a process for obtaining consent for patients who are minors or incapacitated adults. NMMC PFR policy details individuals (in order) who may grant consent for a patient. Individuals granting consent are noted by name and signature in the patient record. In addition, PFR policy states the services for which specific informed consent is required and events that do not require informed consent. NMMC has an established price list for services and PFR policy identifies financially vulnerable patient groups who are entitled to discounted services. Furthermore, transparency in service pricing affords patients the opportunity to decide whether particular treatments are economically feasible. PFR policy secures the right of patients and family to participate in the service delivery process by being informed of conditions, proposed treatments, alternatives to treatment, consequences of non-treatment, expected outcomes, and possible risks. Patient participation in the health care process also ensures values and beliefs are identified and respected.

NMMC PFR policy states the rights of patients and family to refuse treatment, discontinue treatment, or to be discharged against medical advice. Patients and family members are informed of the consequences of their decisions and are required to sign forms stating that they are making an informed decision to refuse or terminate care against medical advice.

NMMC PFR policy details its level of responsibility for securing patient belongings, protecting patients from abuse, and investigating suspected cases of abuse or neglect. There is a process for patients and family to file formal complaints but the policy is not clear as to how this is accomplished and the level of involvement of the individuals filing the complaint. The policy also does not identify the specific individuals who will receive the complaint and participate in the resolution process.

Patients and physicians must authorize the release of medical records to a third party unless the receiving organization or individual is involved in the continuing care of the patient. Access to patient records is limited to authorized clinical staff, but PFR policy does not identify those individuals by name, title, or professional position.

The following measures are recommended to improve the rights of families and patients of NMMC:

- Formulate, approve, and implement organization-wide and departmental mission statements identifying the objectives, goals, and services provided;
- Consider the use of specific consent forms for the use of anesthesia during surgical and invasive procedures;
- Consider the use of specific consent forms for the use of blood and blood products during surgical and invasive procedures;
- Establish a formal training and orientation program for new employees including issues of patient rights, family rights, identification of values, confidentiality, and privacy;

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- Develop a written procedure for the complaint process possibly including a complaint form available for patients to complete and identification of individuals who are responsible for receiving and addressing complaints;
- Require visitors to register with security services and wear badges identifying them as visitors;
- Create formal visiting hours to ensure the safety of patients and staff;
- Allow patients a single family member who may visit outside of established visiting hours;
- Implement passive programs for patient privacy and confidentiality by posting signs in public areas instructing staff to not discuss patients or other staff related issues in the company of a third party.

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PATIENT AND FAMILY RIGHTS

Standard PFR.1:

The organization is responsible for providing processes that support patients' and families' rights during care.

Measurable element:

2. *The leaders understand patient and family rights as identified in laws and regulations.*
3. *The leaders work collaboratively to protect and advance patient and family rights.*
5. *Staff members can explain their responsibilities in protecting patient rights.*
6. *Policies and procedures guide and support patient and family rights in the organization.*

Changes

Since the baseline evaluation, NMMC has attempted to advance patient and family rights by formally adopting a written policy dictating the plan and procedures for securing patient and family involvement in health care delivery. The Hospital and Medical Boards allow for discussion and collaborative decision-making by organization leaders on matters relating to patient and family rights. Patient and Family Rights (PFR) policy outlines the rights and responsibilities of patients and family while also providing a plan for organization members in issues regarding consent, patient safety, service delivery, and patient involvement in the care process.

Areas for improvement

A formal training program for new hires could be implemented to improve staff understanding of NMMC policy and their responsibility in protecting patient rights. Ongoing education and performance evaluations can also ensure staff maintain adequate knowledge of PFR issues.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**2**	**3**
Measurable Element 3	**3**	**3**
Measurable Element 5	**3**	**3**
Measurable Element 6	**2**	**4**

Follow-up conclusion

NMMC has implemented policies and procedures supporting patient and family rights. The Hospital and Medical Boards allow for the collaborative discussion of issues relating to patient and family participation in the health care process.

Standard PFR.1.1:

The organization informs patients and families about its care and services and how to access those services.

Measurable element:

1. *Patients are provided information on the care and services provided by the organization.*
3. *The information is provided to families, as appropriate.*
4. *Information on alternative sources of care and services is provided when the organization cannot provide the care or services.*

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Changes

The Patient Bill of Rights states that patients have the right to be informed of conditions and participate in the treatment process. Clinical staff discusses treatments and procedures, possible risks, and expected results with patients and family prior to obtaining consent. Patients are required to read and complete the Authorization and Consent to Surgical/Medical Procedures form prior to treatment commencement. Patients also determine the level of involvement of their family members by selecting health representatives. Family members participate in the health care process as requested by patients. Patients are referred to or select NMMC due to the organization's specialized services. In the event NMMC is unable to provide particular services, patients are referred to appropriate organizations.

Areas for improvement

A written organizational plan should accompany the organization's mission statement and clearly define the services provided and the scope of practice. Patients should be issued a copy of their rights and responsibilities in addition to verbal instruction.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion

Patients and family members are provided with all information regarding their health condition, services to be rendered, treatments recommended, and expected results. Patients and family have the opportunity to be involved in the decision-making process and are informed to make appropriate decisions.

Standard PFR.1.2:

Care is considerate and respectful of the patient's personal values and beliefs.

Measurable element:

1. *There is a process to identify and respect patient values and beliefs.*
2. *Staff uses the process and provides care that is respectful of the patient's values and beliefs.*

Changes

PFR policy dictates the patients right to be involved in the decision-making process and the responsibility of providers to obtain informed consent prior to delivery of services.

Areas for improvement

No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion

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Patient and family involvement in the health care process ensures all services provided are considerate of and respectful of personal values and beliefs. Patient consent must be obtained after disclosure of information pertaining to services and prior to treatment commencement.

Standard PFR.1.3:
Care is respectful of the patient's need for privacy.

Measurable element:
1. *A patient's need for privacy is respected for all examinations, procedures, and treatments.*

Changes
There is little change from baseline. Patient confidentiality is not given much attention at NMMC. There are instances where conversations between staff members, staff and patients, and administration and patients take place in public areas of the organization. Patients requesting privacy are accommodated but there is no active attempt made by staff or administration to secure patient privacy and confidentiality.

Areas for improvement
NMMC can initiate both active and passive measures in ensuring patient privacy. PFR policy should include standards of privacy and procedures for staff to follow to support patient rights to privacy. Staff can be formally trained in patient privacy issues and evaluated in their adherence to privacy and confidentiality standards. An example of a passive system is the placement of signs in hallways, elevators, and other public areas reminding staff to not openly discuss issues relating to specific patients or other staff members.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**

Follow-up conclusion
The issue of patient privacy is not the focus of attention at NMMC. Staff members typically do not consider privacy during daily activities and delivery of health services. NMMC provides no formal training in patient confidentiality and PFR policy does not outline procedures to support privacy assurance.

Standard PFR.1.4:
The organization takes measures to protect patient's possessions from theft or loss.

Measurable element:
1. *The organization has determined its level of responsibility for patients' possessions.*
2. *Patients receive information about the organization's responsibility for protecting personal belongings.*
3. *Patient's possessions are safeguarded when the organization assumes responsibility or when the patient is unable to assume responsibility.*

Changes
Newly developed policies and procedures for patient and family rights (PFR) address the issue of organization responsibility for patient property. NMMC PFR policy number 11 (patient visitation/guest relation guidelines) states that NMMC assumes no responsibility for securing

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patient belongings while in the facility. The policy states that family members should protect personal belongings and valuables while patients undergo examinations or procedures. In instances where patients are unable to assume responsibility for their possessions, chief nurses within the departments will collect, list, and secure belongings.

Areas for improvement
NMMC policy does not detail organization responsibility in informing patients of the organization's responsibility for protecting personal belongings. The Patient Bill of Rights, which is accessible by all patients, does not state that the organization assumes no responsibility for protecting personal belongings. A statement should be made within the Bill of Rights explicitly instructing patients of their responsibility in assuring the security of their possessions.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**3**
Measurable Element 2	**1**	**3**
Measurable Element 3	**2**	**3**

Follow-up conclusion
"Quality Assurance" project coordinators drafted policies and procedures relating to patient and family rights that were discussed and approved by organization management. NMMC policy outlines the level of responsibility for patient belongings but does not discuss the organization's responsibility for informing patients of this policy. Patients have access to a Patient Bill of Rights that does not detail responsibility for belongings while within the facility. It does, however, describe the patient's responsibility for respecting the belongings of other patients and staff members of NMMC.

Standard PFR.1.5:
Patients are protected from physical assault.

Measurable element:
1. *The organization has a process to protect patients from assault.*
3. *Individuals without identification are investigated.*

Changes
Patient and Family Rights policy number 3 (protection from physical and mental assault) describes the process NMMC has established for ensuring all patients are protected from physical and mental assault and the procedure for reporting suspected cases of abuse or neglect. All NMMC staff members wear name badges identifying them as employees of the organization. NMMC has no policy for restricting visitors or visitation hours. Individuals may enter the facility at any time but are restricted from certain areas through the use of combination-protected doors. Visitors are required to abide by regulations detailed in the NMMC Visitor Rights form.

Areas for improvement
A formal registration process for visitors should be implemented and all visitors should be required to wear badges identifying them as such. NMMC should also consider limiting visitation to certain periods of the day.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**3**
Measurable Element 3	**2**	**3**

Follow-up conclusion

NMMC has written policies and processes to protect patients form assault and to investigate and report suspected cases of abuse or neglect. There is no formal policy requiring the registration of visitors or limiting visitation hours. NMMC has specified the number of individuals that may visit a patient at any given time. ICU patients are allowed two visitors who may enter the ICU one at a time. Ward patients are allowed unlimited visitors, however, only two individuals may enter the patient's room at a given time.

Standard PFR.1.6:

Vulnerable children, disabled individuals, and the elderly receive appropriate protection.

Measurable element:

1. *The organization identifies its vulnerable patient groups.*
2. *Vulnerable children, disabled individuals, the elderly, and others identified by the organization are protected.*

Changes

PFR policy number 12 (financial issues) and service price lists describe services provided at NMMC and associated charges for each service. Pricing is dictated by citizenship status and discounted rates are available for Armenian citizens. Discounting structure is divided into two classes, those under 15 years of age and those 15 years old and above. Within each of the two classes there are five discount categories with respective pricing for various services and procedures. The organization also identifies vulnerable groups in terms of consent to care and participation in research studies. All patients and research participants are required to give signed consent prior to delivery of care. Minors, the disabled, and adults incapable of giving informed consent are protected through a system of surrogate consenters.

Areas for improvement

No significant limitations exist in the area of vulnerable patient groups.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion

Vulnerable patient groups are identified and policies relating to consent, research, and billing address specific needs of these patients.

Standard PFR.1.7:

Patient information is confidential and protected from loss or misuse.

Measurable element:

2. *Policies and procedures to prevent the loss of patient information are implemented.*

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3. *Policies and procedures to prevent the misuse of patient information are implemented.*

Changes
PFR policy number 9 (medical records confidentiality) defines procedures for access and release of patient records to the patient, family, and a third party. Patients must provide signed authorization prior to the release of medical records or patient information. The treating physician must authorize release of medical records or treatment summaries to the patient or family member. The policy also states circumstances when information may be released without signed authorization. For example, health institutions where patients are transferred may access patient information without written consent. Record archive staff members are responsible for maintaining patient records and verifying signed authorization prior to disseminating information.

Areas for improvement
No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**3**	**4**
Measurable Element 3	**3**	**4**

Follow-up conclusion
NMMC has policies and procedures relating to patient information. Patient consent is required prior to releasing information to family or a third party. Physicians must also approve the release of certain detailed information. Only authorized staff is allowed to obtain and view confidential patient medical records but a defined list of individuals is not detailed in the policy.

Standard PFR.2:
The organization supports patients' and families' rights to participate in the care process.

Measurable element:
1. *Policies and procedures are developed to support and promote patient and family participation in care processes.*
3. *Staff members are trained on the policies and procedures and their role in supporting participation in care processes.*

Changes
PFR policy number 6 (participation in decision-making regarding health care) and the Patient Bill of Rights document the right of patients, families, and guardians to be involved in the health care delivery process. Furthermore, patients or their health representative must sign the Authorization and Consent to Surgical/Medical Procedures form after receiving full information about their condition and plan of care.

Areas for improvement
Staff should receive formal training in organization policy and instructed in their role in protecting and supporting patient rights.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 3	**2**	**3**

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Follow-up conclusion
The Patient Bill of Rights and NMMC policy grant patients and health representatives the right and opportunity to participate in the health care process to the extent they so choose.

Standard PFR.2.1:

The organization informs patients and families how they will be told of medical conditions and treatments and how they can participate in care decisions, to the extent they wish to participate.

Measurable element:

1. *Patients and families understand how and when they will be told of medical conditions.*
2. *Patients and families understand how and when they will be told of planned treatments.*
3. *Patients and families understand the process used to obtain consent.*
4. *Patients and families participate in care decisions to the extent they wish.*

Changes
Patients are involved in the delivery of care to the extent they wish to participate. Consent must be obtained after disclosure of medical status, planned treatments, possible risks, alternatives, and expected results. Patients may not always be informed of the health care process in relation to minor events, assessments, and basic diagnostic procedures. Patients may not always be informed of waiting times, steps in the delivery process, or when they will be served. In relation to major health conditions, surgical procedures, or other invasive treatments the communication process is more clearly defined and better understood.

Areas for improvement
Staff should be made aware that communication with patients in all aspects of the health care delivery process is important to providing quality services. Staff should be trained and evaluated in regards to informing patients of the service process, expected waiting times, and how and when they should inform patients of conditions, treatments, and subsequent steps in the health care process.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**4***	**3**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion
NMMC staff informs patients about medical conditions, proposed treatments, and steps in the care process; however, patients are not initially informed as to how and when they will be informed. In some instances, such as procedures that are seen as routine, patients are not educated about the process. In terms of serious conditions or invasive procedures patients are well-instructed and educated in order to make informed decisions about health care service delivery.

Standard PFR.2.2:

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The organization informs patients and families about their rights and responsibilities related to refusing or discontinuing treatment.

Measurable element:

1. *The organization informs patients and families about their rights to refuse or discontinue treatment.*
2. *The organization informs patients about the consequences of their decisions.*
4. *The organization informs patients about available care and treatment alternatives.*

Changes

PFR policy number 6 (participation in decision-making regarding health care) and the Patient Bill of Rights document the right of patients, families, and guardians to refuse consent for surgical or medical procedures, discontinue treatment, receive a second opinion about planned procedures, and receive services from a different health care provider. Refusal of services for life-threatening or otherwise harmful health conditions requires signed documentation of the patient's decision to refuse care. Patients are informed of the consequences of their decision and required to read and sign the Refusal of Medical or Surgical Procedure Against Medical Advice form. In addition, PFR policy number 7 (leaving hospital against medical advice) describes the patient's right to be discharged against the advice of treating physicians. Patients are informed about the consequences of their decision to leave prior to medical discharge and are required to read and sign the Patient Discharge Against Medical Advice form. Families and health representatives may not at any time request patient discharge against medical advice. All requests and signed forms must be made and completed by the patient. Patients at substantial risk may be held against their will until stabilization of their status.

Areas for improvement

No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion

NMMC policy grants patients and their families the right to participate in all decisions related to health care services to be rendered including the right to refuse or discontinue treatments. Patients are informed of possible treatment alternatives, their consequences, and expected outcomes. NMMC also has a process of obtaining signed refusal from patients and health representatives in the event patients do not consent to treatment or wish to discontinue services delivered.

Standard PFR.2.3:

The organization respects patient wishes and preferences to withhold resuscitative services and forgo or withdraw life-sustaining treatments.

Measurable element:

1. *The organization has identified its position on withholding resuscitative services and forgoing or withdrawing life-sustaining treatments.*

Evaluation Score:
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3. *Policies and procedures guide the process for patients to make their decisions known to the organization and for modifying decisions during the course of care.*
4. *Policies and procedures guide the organization's response to patient decisions.*
6. *Documentation about decisions follows organization policy.*

Changes

PFR policy number 4 (life-sustaining treatment: use, withholding, and withdrawal) identifies patient and family rights in the decision to use, withhold, or withdraw life-sustaining treatments. Patients must read and complete the Authorization and Consent to Surgical/Medical Procedures form and designate a health representative to act on their behalf should the patient be in apposition where they are incapable of making informed decisions. Health representatives may decide to withhold or discontinue life-sustaining treatments in the following circumstances: terminal conditions; permanently unconscious; conditions, in which administration of life-sustaining treatment would not result in the improvement of the patient's medical conditions and would cause permanent or severe pain patient; the patient has a progressive illness in the advanced stage that will be fatal. PFR policy also dictates that changes in patient care including the decision to withhold or terminate life-sustaining treatments must be documented in the patient medical record. The names of health representatives and their signatures are recorded in the Authorization and Consent to Surgical/Medical Procedures form. NMMC also has a formal chart diagramming the process of the decision to use, withhold, or withdraw life-sustaining treatments.

Areas for improvement

NMMC policy should include more specific procedure for discontinuing life-sustaining treatment once they have been implemented.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**3**
Measurable Element 3	**2**	**3**
Measurable Element 4	**2**	**3**
Measurable Element 6	**1**	**3**

Follow-up conclusion

NMMC has established policies that guide the withholding and withdrawal of life-sustaining services and the right of patients and families to participate in discussing and deciding issues relating to life-sustaining services. Documents and formal procedures support the decision-making process.

Standard PFR.2.4:

The organization has processes to assess and manage pain appropriately.

Measurable element:

1. *The organization respects and supports the patient's right to appropriate assessment and management of pain.*
2. *The organization identifies patients in pain during the assessment process.*
3. *The organization communicates with and provides education for patients and families about pain and pain management.*
4. *The organization educates health professionals in assessing and managing pain.*

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Changes

PFR policy number 5 (pain management) addresses the procedures for identifying and addressing patient needs in terms of pain management. This policy states that patients are evaluated for pain upon primary evaluation, upon admission, prior to and during procedures, and after nursing staff changes. Patients and families may also request additional assessment as necessary. Patients and families are educated in pharmacological and non-pharmacological pain management during their stay and prior to discharge.

Areas for improvement

No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**3**	**4**

Follow-up conclusion

Patients are regularly assessed for pain and have the right to ask for reassessment. Patients and families are educated in pain management techniques and the use of pain medication upon discharge. NMMC policy dictates the assessment of pain and staff is educated and trained to handle issues related to pain management.

Standard PFR.4:

The organization informs patients and families about how to gain access to clinical research, investigation, or clinical trials involving human subjects.

Measurable element:

1. *Patients and families are informed about how to gain access to those research, investigations, or clinical trials relevant to their treatment.*
2. *Patients asked to participate are informed about expected benefits.*
3. *Patients asked to participate are informed about potential discomforts and risks.*
6. *Patients are assured that their refusal to participate or withdraw from participation will not compromise their access to the organization's services.*

Changes

PFR policy number 8 (participation in medical research studies) describes the process of voluntary recruitment of patients for medical research studies. The policy states the requirement of informed consent after full disclosure of the research protocol and prior to patient involvement in the study. Minors, the disabled, and adults incapable of providing informed consent are also identified under this policy and unique procedures have been tailored for these groups. Institutional Review Board (IRB) approval is required for all studies involving human subjects. The IRB committee at American University of Armenia has also provided a research plan and procedure for the development of consent forms. The research plan outlines the role of the principle investigator in patient recruitment, disclosure of research methods, addressing risks and benefits, maintaining confidentiality, and obtaining informed consent. The plan also details that all research studies are strictly voluntary and patients may refuse to participate or withdraw from

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studies at any time. Furthermore, refusal or withdrawal will not affect the availability or delivery of services at NMMC.

Areas for improvement
No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 6	**4**	**4**

Follow-up conclusion
Patients of NMMC have the opportunity to voluntarily participate in research studies. Their refusal to participate has no bearing on the quality or types of services delivered. Informed consent must be obtained from all participants after they have been informed about the research methods, possible risks, expected results, and costs associated with participation.

Standard PFR.6:

The organization informs patients and families about its process to receive and act on complaints, conflicts, and differences of opinion about patient care and the patient's right to participate in these processes.

Measurable element:
1. *Patients are aware of their right to voice a complaint and the process to do so.*
2. *Complaints are reviewed according to the organization's mechanism.*
4. *Policies and procedures identify participants in the process.*
5. *Policies and procedures identify how the patient and family participate.*

Changes
PFR policy number 10 (patient complaints and grievances) and the Patient Bill of Rights informs patients of their right to voice complaints and make formal grievances. Issues regarding patient satisfaction with care delivery and complaints against staff members are addressed by the Medical and Hospital Boards. The Patient Bill of Rights is available to all patients at NMMC and describes the rights and responsibilities of patients. The policy does not directly name participants in the complaint process or the role of the family in the review process.

Areas for improvement
The policy and Patient Bill of Rights should clearly define the methods by which patients may voice complaints as well as contact information of individuals within NMMC for receiving and reviewing complaints and grievances. NMMC policy should also define the participants in the complaint process and the roles they play in discussing and addressing complaints.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**2**	**3**
Measurable Element 4	**1**	**2**
Measurable Element 5	**2**	**2**

Follow-up conclusion

The Patient Bill of Rights states the right of patients and family members to voice complaints but does not clearly define the mechanism by which to do so. Complaints are received, reviewed, and addressed by organization administration.

Standard PFR.7:

Staff members are educated about their role in identifying patients' values and beliefs and protecting patients' rights.

Measurable element:

1. *Staff members understand their role in identifying patient and family values and beliefs and how such values and beliefs can be respected in the care process.*
2. *Staff members understand their role in protecting patient and family rights.*

Changes

NMMC staff is well prepared to address the needs of patients and ensure values and beliefs are identified and respected. Patients and family are afforded the opportunity to participate in all aspects of the health care delivery process and specific beliefs and values (e.g. use of blood products) are identified during the course of service delivery. However, staff is not formally trained or evaluated in their capacity to protect patient and family rights.

Areas for improvement

A formal training and orientation program should include the issue of patient and family values and beliefs instructing employees as to the nature of their responsibility in identifying patient beliefs and supporting the protection of patient rights. Performance evaluations could also be instituted to identify staff strengths and weaknesses in this area.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 2	**3**	**3**

Follow-up conclusion

Clinical staff members understand their role in involving patients and family in the health care delivery process in order to ensure specific beliefs and values are identified and respected. Staff receives no formal training or explanation as to their role in protecting patient rights outside of providing health information and including patients in the decision-making process.

Standard PFR.8:

All patients are informed about their rights in a manner they can understand.

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Measurable element:

1. *Each patient receives information about his or her rights in writing.*
2. *The organization has a process to inform patients of their rights when written communication is not effective or appropriate.*

Changes

A Patient Bill of Rights was drafted and implemented after the baseline evaluation. The Bill of Rights states a patient's right to receive quality care, be involved in the decision-making process, receive a second opinion, be free from abuse, select a health representative, access their medical information, and be informed of the treatment process. Patients do not receive individual copies of the Bill of Rights but one is accessible for review.

Areas for improvement

Provide patients with individual copies of the Patient Bill of Rights after verbally informing them of their rights while at NMMC. Information provided verbally should be consistent and documented in a written procedure.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**3**
Measurable Element 2	**2**	**3**

Follow-up conclusion

A Patient Bill of Rights is accessible by all patients, however patients do not receive individual copies. Patients are also verbally informed of their rights during the admission process and have the right to participate in the treatment process while at NMMC.

Standard PFR.9:

Patient informed consent is obtained through a process defined by the organization and carried out by trained staff.

Measurable element:

1. *The organization has a clearly defined consent process described in policies and procedures.*
3. *Patients give informed consent consistent with the policies and procedures.*

Changes

PFR policy number 6 (participation in decision-making regarding health care) describes procedures for which specific informed consent is required (invasive procedures, cardiac surgeries) and two instances for which it is not. Policy states that informed consent is not required for basic screening procedures or during emergency situations where there is implied consent. Health providers are responsible for discussing with patients their condition, planned treatment, possible risks and benefits, alternatives to the planned treatment, and expected outcome. The policy plans the process of obtaining consent for adults, minors, and individuals incapable of providing consent themselves. The policy also describes emergency situations for which consent is implied rather than informed, and the process of obtaining documentation in instances where consent is not granted. All consent, whether informed, implied, or refused, are documented and filed in the patient's medical record.

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Areas for improvement
No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
Informed consent is obtained for all patients prior to service delivery and after the patient and family have been informed about health conditions, planned treatments, alternatives, possible risks, and expected results. Consent is documented in the patient's medical record. NMMC has identified areas and services for which consent is required.

Standard PFR.9.1:

Patients and families receive adequate information about the illness, proposed treatment, and care providers so that they can make care decisions.

Measurable element:

1. *Patients are informed of their condition.*
2. *Patients are informed about the proposed treatment.*
3. *Patients are informed about potential benefits and drawbacks to the proposed treatment.*
4. *Patients are informed about possible alternatives to the proposed treatment.*
5. *Patients are informed about the likelihood of successful treatment.*
6. *Patients are informed about possible problems related to recovery.*
7. *Patients are informed about possible results of non-treatment.*
8. *Patients know the identity of the physician or other practitioner responsible for their care.*

Changes
No significant changes from baseline. Physicians and other health care providers conduct primary assessments and inform patients of their health status, any significant conditions, proposed treatments and alternatives, possible risks, expected results, and costs associated with procedures. Patients and their families are involved in the decision-making process to the extent they wish and give consent to undergo treatments.

Areas for improvement
No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**
Measurable Element 6	**4**	**4**
Measurable Element 7	**4**	**4**
Measurable Element 8	**4**	**4**

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Follow-up conclusion
Patients are informed of their condition, proposed treatments, benefits and possible risks, treatment alternatives, and consequences of non-treatment. Patients are aware of the individuals who will be responsible for their care and treating physicians are noted in the patient's medical record.

Standard PFR.9.1.1:

The information is provided in a way and language understood by those making the care decisions.

Measurable element:
1. The information is provided to the patient in a clear and understandable way.

Changes
No significant changes from baseline. Physicians and providers explain information about medical conditions and planned treatments in various languages to suit the needs of patients and families.

Areas for improvement
No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion
NMMC staff provides patients and family with information in a simplified and understandable way and in a language that is comfortable for the patient. Physicians often use visual aids to assist in the education process.

Standard PFR.9.2:

The organization establishes a process, within the context of existing law and culture, for when others can grant consent.

Measurable element:
1. The organization has a process for when others can grant informed consent.

Changes
NMMC Patient and Family Rights policy identifies instances when informed consent may be granted by an individual other than patients themselves. PFR policy number 6 (participation in decision-making regarding health care) lists the individuals who may grant consent in the event adult patients are unable to do so themselves. Individuals under the age of 18 years are considered under Armenian law to be minors. The policy define the list of individuals who may provide consent in order.

Areas for improvement
No significant limitations exist.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**4**

Follow-up conclusion

NMMC has a defined process for when individuals other than the patient may give consent. Individuals providing consent are noted in the patient record.

Standard PFR.9.2.1:

When someone other than the patient gives the informed consent, that individual is noted in the patient's record.

Measurable element:

1. *Individuals, other than the patient, granting consent are noted in the patient's record.*

Changes

Authorization and Consent to Surgical/Medical Procedures forms are retained in the patient's permanent medical record. Patients also identify the individual to whom they are assigning the responsibility of health representation in the event the patient becomes unable to grant consent. Individuals granting consent are required to sign and be identified in the patient's Authorization and Consent to Surgical/Medical Procedures form.

Areas for improvement

No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion

Individuals who grant consent are noted in the patient's medical record.

Standard PFR.9.4:

Informed consent is obtained before surgery, anesthesia, use of blood and blood products, and other high-risk treatments and procedures.

Measurable element:

1. *Consent is obtained before surgical or other invasive procedures.*
2. *Consent is obtained before anesthesia.*
3. *Consent is obtained before the use of blood and blood products.*
4. *Consent is obtained before other high-risk procedures and treatments.*
5. *The identity of the individual providing the information to the patient and family is noted in the patient's record.*

Changes

Informed consent is obtained prior to all invasive or surgical procedures. However, specific consent is not obtained for the use of anesthesia or blood products. Patients are informed of the use anesthesia and blood products and specific notes are documented in the patient record. The

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signed consent form includes consent for all invasive procedures and consent obtained for the use of blood products and anesthesia is implicit in the consent for treatment. The treating physician and other clinical staff providing information to obtain consent are identified by name, identification number, and signature.

Areas for improvement
No significant limitations exist. Consider the use of specific consent forms for both anesthesia and blood products. The benefits, necessity of use, and possible risks for both anesthesia and blood products should be included in the consent form to explicitly detail informed consent for each procedure.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**1**	**3**
Measurable Element 3	**1**	**3**
Measurable Element 4	**4**	**4**
Measurable Element 5	**3**	**4**

Follow-up conclusion
Signed consent is obtained for invasive and surgical procedures. Specific consent is not obtained for anesthesia or blood products but patients are informed of their use and consent to their use is implicit in the consent for the proposed procedure. Patient refusal of blood product usage, for example, will be noted in their medical record. Patients will be informed of the possible consequences of their decision but their decision will be respected to the extent that is possible.

Standard PFR.9.4.1:

The organization lists those categories or types of treatments and procedures that require specific informed consent.

Measurable element:
1. *The organization has listed those procedures and treatments that require separate consent.*
2. *The list was developed collaboratively by those who provide the treatments and perform the procedures.*

Changes
PFR policy number 6 (participation in decision-making regarding health care) describes procedures for which specific informed consent is required. The following list of services require informed consent:
- Cardiac catheterization
- Coronary Angiography
- Percutaneous Transluminal Coronary Angioplasty
- Coronary Artery Stenting
- Other interventional procedures
- Close-heart surgery
- Open-heart surgery

The Medical Board determines the services to be provided by the organization and is responsible for the oversight of care delivered at NMMC including documentation requirements.

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Areas for improvement
No significant limitations exist in the field.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**4**
Measurable Element 2	**N/A**	**4**

Follow-up conclusion
NMMC has established a list of services for which informed consent is required.

Standard PFR.9.6:

The patient's signature or other indication of all types of consent is documented in his or her record.

Measurable element:
1. *Consent is documented in the patient's record by signature or record of verbal consent.*

Changes
No significant changes from baseline. Patients and other individuals granting consent are noted in the patient's medical record by name and signature.

Areas for improvement
No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion
The patient's name and signature granting consent are noted in the medical record through use of the Authorization and Consent to Surgical/Medical Procedures form.

Standard PFR.10:

The organization provides patient care within business, financial, ethical, and legal norms that protect patients and their rights.

Measurable element:
1. *Organization leaders establish ethical and legal norms that protect patients and their families.*

Changes
NMMC provides patient care within the financial, legal, and ethical constraints by which it is bound. Patients and families are allowed to participate in the health care delivery process to the extent that they wish. This participation ensures the values and beliefs of patients are respected. NMMC operates under a policy of transparent billing meaning that all services have established fees. Patients are aware of the cost of procedures and possible discounts for which they may qualify. A patient advocacy group has been created within NMMC. Their mission is to support

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the rights of patients and family by facilitating the visitation process, addressing patient and family concerns, and providing counselling services for patients and family members.

Areas for improvement
No necessary changes can be identified. Training programs for new employees and ongoing evaluation for all staff members could be implemented to ensure all employees understand their responsibilities in protecting patient rights, supporting patient beliefs, and securing patient confidentiality.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion
NMMC meets the needs of patients and provides care within business, financial, ethical, cultural, and legal norms. NMMC supports patient and family rights through transparent billing, informed consent, and patient participation in the service delivery process.

Standard PFR.10.1:

The organization's mission statement is made public.

Measurable element:
1. *The leaders make public the organization's mission statement.*

Changes
NMMC does not a formal, documented mission statement. A draft mission statement was developed by the marketing project. However, it wasn't discussed or approved by Hospital board. The marketing brochure of NMMC contains the modified parts of the above mentioned statement. such, it is not possible to make public the organization's mission statement.

Areas for improvement
A formal, written mission statement should be developed and approved by the Hospital Board.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**2**

Follow-up conclusion
The organization does not have an approved mission statement to release to the public.

Standard PFR.10.2:

The organization has established and implemented a framework for ethical management that includes marketing, admissions, transfer, and discharge, and disclosure of ownership and any business and professional conflicts that may not be in patients' best interests.

Measurable element:
3. *The organization honestly portrays its services to patients.*
5. *The organization accurately bills for services.*

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6. *The organization discloses and resolves conflicts when financial incentives and payment arrangements compromise patient care.*

Changes

No change from baseline. NMMC has an established price list for services provided and various categories of individuals who are entitled to discounts. Rates for services do not vary and payment is received prior to delivery of care and services. Patients are billed prior to service delivery based on a fixed fee schedule. All services have established price lists. NMMC operated on a managed-care style payment schedule. All services have fixed fees regardless of the actual costs of procedures. Fees are all-inclusive and are final costs for procedures performed. There is no retroactive or itemized billing for services thus patients are aware of the total cost of services prior to undergoing treatment.

Areas for improvement

No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 3	**4**	**4**
Measurable Element 5	**4**	**4**
Measurable Element 6	**N/A**	**N/A**

Follow-up conclusion

NMMC has an established procedure for organization management and health care service delivery. NMMC accurately bills for all services and payment is received prior to service utilization by the patient. Categories of patients are eligible for discounts and other issues of financial difficulty are addressed by organization administration on a per-case basis. Attempts are made to provide needed services to all patients regardless of their ability to pay.

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FUNCTION: FACILITY MANAGEMENT AND SAFETY (FMS)

Follow-up evaluation highlights

There are no internal laws or regulations developed by NMMC for facility safety and management. The center does comply with a number of limited regulations enforced by state agencies. The planning for facility management and safety is not very effective and is problem driven rather than preventative. An improvement was noted in that currently security officers are present at the center 24 hours during day, 7 days a week. Fire extinguishers are placed at each storeroom but there is no fire alarm system. There is no safety exit plan in case of fire or other emergencies. The state fire agencies provide checks (fire extinguishers, etc) once each trimester and make recommendations for NMMC to improve fire safety. There is no written plan on the response of the center to disasters, fires, epidemics, etc. Staff training on their role in emergency situations organized by the Civil Defense Department is rare and staff attendance is low. Smoking is prohibited in all patient care areas but permitted in other areas within the facility. In cases of central water system or electricity provision failure, the center has alternate resources of water and power. Utility systems are regularly checked. The medical supplies are kept in reserve by the Inventory department. Clinical staff members have communication means (pagers or mobile phones). Staff of specific departments manage hazardous materials according to their knowledge and experience (no listing, no labeling). Waste (mainly dry waste) is moved to an outside crematorium in plastic bags. There is no written plan for the management and maintenance of medical equipment. Bioengineers are responsible for equipment checks upon arrival and occasionally thereafter (the frequency is not defined).

The following measures are recommended to improve facility safety at NMMC:

- Develop internal regulations for facility management and safety;
- Develop a documented plan for effective management of the facility;
- Construct universal alarm system responding to fire/smoke;
- Develop an evacuation plan for NMMC and organize regular checks of the plan;
- Assess and reinforce of the educational needs of staff involved in facility management and safety;
- Development of plan for the management and maintenance of medical equipment;
- Develop of a database in the bioengineering department (including the list of all equipment, description, frequency checks, character of maintenance, etc);
- Organize training for clinical staff on appropriate operation and maintain medical equipment at admission and regularly thereafter;
- Develop a plan for organizing formal training on facility response to fire, disasters, and other emergency situations and periodically check the response;
- Develop a plan for the inventory, handling, storage, use of hazardous materials, and the control and disposal of hazardous materials and waste;
- Revise the liquid waste management strategy at NMMC;
- Develop a list of all hazardous materials at NMMC, instructions for their storage and handling, and a labeling system with notes of precaution;
- Test the staff knowledge on their role in facility safety management and documenting results.

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FACILITY MANAGEMENT AND SAFETY

Standard FMS.1:

The organization complies with relevant laws, regulations and facility inspection requirements.

Measurable element:

1. *The organization leaders know what laws, regulations, and other requirements apply to the organization's facilities.*
2. *The leaders implement the applicable requirements or approved alternatives.*
3. *The leaders ensure the organization meets the condition of facility inspection reports or citations.*

Change

As compared to the baseline survey an improvement was noted in that security and safety at NMMC are ensured by security guards. The security guards carry out 24 hours duties (a guard is present at all times).

Areas for improvement

NMMC has not developed internal laws and regulations for facility management and safety.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 2	**3**	**3**
Measurable Element 3	**3**	**3**

Follow-up conclusion

The management leaders coordinate the compliance of facility with state regulations. Several governmental agencies periodically inspect different aspects of facility safety (fire safety, water, hygiene, equipment). There are no written internal laws, requirements for facility safety management at NMMC. Personnel involved in facility safety and management as defined by their job responsibilities (electricians, bioengineers, deputy of director, etc.) follow informal rules accepted at NMMC.

Standard FMS.1.1:

The organization plans and budgets for upgrading or replacing key systems, building, or components.

Measurable element:

1. *The organization plans and budgets for upgrading or replacing the systems, building, or components needed for the continued operation of a safe and effective facility.*

Change

No change.

Areas for improvement

No major limitations.

Evaluation Score:
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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4***	**3**

Follow-up conclusion
The systems, buildings, and other facilities are upgraded according to the budget scope/resources. Priority is given to medical facilities and equipment, which directly affect conditions of the quality of patient care.

Standard FMS.3.1:

The plan includes prevention, early detection, suppression, abatement and safe exit from the facility in response to fires and non-fire emergencies.

Measurable element:
1. *The program includes the reduction of fire risks.*
3. *The program includes the early detection of fire and smoke.*
4. *The program includes the abatement of fire and containment of smoke.*
5. *The program includes the safe exit from the facility when fire and non-fire emergencies occur.*

Change
No changes.

Areas for improvement
A program for fire management should be developed at NMMC. A fire alarm and smoke detection system should be constructed at NMMC in order to facilitate early warning. An evacuation plan should be developed at NMMC for fire and non-fire emergencies, taking into account that buildings were reconstructed (a corridor connecting two buildings was constructed recently).

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**3**
Measurable Element 3	**3**	**3**
Measurable Element 4	**4***	**3**
Measurable Element 5	**3**	**3**

Follow-up conclusion
Although there is no fire alarm system, fire extinguishers are placed throughout NMMC. An on-duty electrician is always present at the center and a bioengineer is present until the end of surgeries. The governmental fire agencies inspect the fire safety of the center once every 3 months and make their recommendations. The plan for evacuation was not updated at the center.

Standard FMS.3.2:

The organization regularly tests its fire and smoke safety plan, including any devices related to early detection and suppression, and documents the results.

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Measurable element:

1. *Fire detection and abatement systems are inspected, tested, and maintained at a frequency determined by the organization.*
2. *The fire and smoke safety evaluation plan is tested at least twice per year.*
3. *Staff is trained to participate in the fire and smoke safety plan.*
5. *Inspection, testing and maintenance of equipment and systems are documented.*

Change

No major changes. The evacuation plan was tested once in 2003. The test was organized by the Civil Defense Agency and evaluated the response of the organization to military attacks using toxic substances.

Areas for improvement

The evacuation plan should be developed. The plan should be tested twice a year and staff should be trained in the fire safety plan. The results of inspection and testing of equipment should be documented by bioengineers.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**N/A**	**1**
Measurable Element 2	**1**	**1**
Measurable Element 3	**1**	**1**
Measurable Element 5	**1**	**1**

Follow-up conclusion

There is no fire alarm system at NMMC. The fire abatement equipment is tested by fire agencies (once every 3 months). There is no evacuation plan at NMMC. Bioengineers, electricians, and others conduct testing and inspection of equipment according to their job responsibilities. However, the results of their inspections are not documented. The "Department of measures" agency annually tests some equipment (blood pressure measuring devices, thermometers, laboratory equipment, etc.).

Standard FMS.3.3:

The organization develops and implements a plan to limit smoking by staff and patients to designated not patient care areas of the facility.

Measurable element:

1. *The organization has implemented a policy and plan to eliminate and limit smoking.*
2. *The plan applies to patients, families, visitors and staff.*
3. *There is a process to grant patient exceptions to the plan.*

Change

No major changes. As compared to the baseline survey smoking is also restricted in the buffet and surrounding areas (signs prohibiting smoking are placed there). Generally, smokers smoke outside the building or in the corridor outside the waiting room.

Areas for improvement

A smoking policy should be developed at the center. Smoking should be prohibited from all areas inside the building.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**3**
Measurable Element 2	**3**	**3**
Measurable Element 3	**3***	**2**

Follow-up conclusion

There is no written policy to limit smoking at NMMC. However, smoking is prohibited in all patient care areas and signs prohibiting smoking are placed in restricted areas. The unwritten rules apply to everybody: staff, patients, family, and visitors. Taking into account the category of patients, everyone is strongly advised to refrain from smoking within the building. There is no special process of granting exceptions to patients. Patients who are for some reason unable to refrain, they are advised to smoke outside the building.

Standard FMS.4:

The organization develops a plan to respond to likely community emergencies, epidemics, and natural or other disasters.

Measurable element:

5. *The organization plans its response to likely community emergencies, epidemics, and natural or other disasters.*

Change

No major changes. A staff member of the Civil Defense Department (Nork-Marash area) organizes training upon the request of the head of the Yerevan Medical Service, which provides the topic of the training. The subject training and tactical training is performed annually. There is also a committee, comprised of NMMC staff and members of other Nork-Marash area hospitals, that acts as a headquarters for staff training in the defense and service of the Nork-Marash area population.

Areas for improvement

It is necessary for NMMC to develop a separate plan of response in case of epidemics, disasters and other emergency situations.

	EVALUATION SCORES	
	2000	2005
Measurable Element 5	**2**	**2**

Follow-up conclusion

There is no written plan for response to community emergencies, epidemics, and natural or other disasters. There is state agency " Civil Defense Department", responsible for training the staff and organizing the response to disasters. The Civil Defense Department rarely and only upon the request of the department superior officer conducts training programs. The staff involvement in the activities organized by the agency is low. There is also a power-generator and water tanks that are used in cases of power or water problems.

Standard FMS.4.1:

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The organization has tested its response to emergencies, epidemics and disasters.

Measurable element:
1. *The plan is tested.*

Change
No major changes. The testing of the evacuation plan in response to military toxic agents was organized in 2003, a training in response to earthquake in 2004, and a training in response to air attack during the same year (2004).

Areas for improvement
A plan for response to emergency situations should be developed at NMMC and regularly checked after implementation.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**1**

Follow-up conclusion
There is no plan for responding to emergencies, disasters, or epidemics at NMMC, and thus it could not be tested.

Standard FMS.4.2:

The organization has access to any medical supplies, communication equipment and other materials to support its response to emergencies, epidemics and disasters.

Measurable element:
1. *Medical supplies are available in emergencies.*
2. *Communication equipment is available in emergencies*.

Change
No major changes exist in the field. The medical inventory department has been in operation as it was during the baseline survey. The purchasing, storing, and distributing of medical supplies became more organized. A required minimum number of available supplies was established by the department and is inspected daily.

Areas for improvement
There is no planning and forecasting of medical supplies and there are no alternate sources of supplies in emergency situations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**4**	**4**

Follow-up conclusion
Medical supplies are purchased in such a way that there is a constant reserve supply. However, calculations for the required reserve amount do not take into consideration supply needs during emergency situations. All clinical staff members (and some administrative staff) carry pagers and

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some carry mobile phones in order to maintain uninterrupted contact with the hospital. There are cardiologists (fellows and staff on home-duty) and surgeons on duty to provide 24-hour care.

Standard FMS.5:

The organization has a plan for the inventory, handling, storage and use of hazardous materials and the control and disposal of hazardous materials and waste.

Measurable element:

1. *The organization identifies hazardous materials and waste.*
2. *Hazardous materials and waste are managed according to the plan.*
3. *The plan includes safe handling, storage and use.*
4. *The plan includes reporting and investigation of spills, exposures and other incidents.*
5. *The plan includes the proper disposal of hazardous waste.*
8. *The plan includes labeling hazardous materials and waste.*

Change

No changes.

Areas for improvement

The center itself and specific departments that work with hazardous materials do not have lists of hazardous materials in use within the facility. There is no formal plan for the management, handling, storage, and use of hazardous materials or the reporting of incidents involving hazardous materials. The hazardous materials and their containers are not labeled. Liquid waste is poured down drains directly into the general sewage system. This practice should be reviewed.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 2	**N/A**	**N/A**
Measurable Element 3	**4***	**3**
Measurable Element 4	**3***	**1**
Measurable Element 5	**3***	**2**
Measurable Element 8	**4***	**1**

Follow-up conclusion

The staff of each department working with hazardous materials identifies the potentially dangerous material (chemicals, reagents in the laboratory, etc). There is no formal plan for managing those materials, however, the staff of specific departments is knowledgeable in the handling, storage, and use of those materials. The hazardous or potentially harmful reagents, wastes, and supplies are not labeled. Special precautions are taken by the staff while working with those materials (wearing masks, gloves, dosimeters, special tubing, etc.). There is no system at NMMC to register spills, exposure, and other incidents with potentially harmful materials. The wastes at NMMC are collected in plastic bags and disposed of through use of the "Armenia" crematorium.

Standard FMS.6:

One or more qualified individuals oversee the planning and implementation of the program to provide a safe and effective physical facility.

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Measurable element:
1. The program oversight and direction are assigned to one or more individuals.
2. The individual(s) is qualified by experience and training.

Change
No major changes in the field.

Areas for improvement
There is no single person directly responsible for facility safety. The planning and overall management of facility safety has limitations and is often problem driven.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**4***	**3**

Follow-up conclusion
The Economic Deputy director is the main individual responsible for facility management and safety. Partially, electricians, security guards, and bioengineers provide facility management and safety. The staff generally has the necessary education and/or experience to carry out job responsibilities.

Standard FMS.7:

The organization plans and implements a program for inspecting, testing, and maintaining medical equipment and documenting results.

Measurable element:
1. *Medical equipment is managed throughout the organization according to the plan.*
2. *There is an inventory of all medical equipment.*
3. *Medical equipment is regularly inspected.*
4. *Medical equipment is tested when new and as appropriate thereafter.*
5. *There is a preventive maintenance program.*

Change
During the five years following the baseline survey the number of bioengineers per equipment has been increased (the number of devices also increased). The inspections of medical equipment became more frequent and more regular. Bioengineers also developed testing instructions for a number of equipment.

Areas for improvement
The medical equipment used at NMMC is mainly second-hand, which creates additional problems and increased workload for bioengineers. The department should develop a plan for medical equipment management. For the effective organization of work, the department could develop a database with all medical devices listed, their descriptions, the minimal frequency of preventive checks, the number of times in repair, etc. The bioengineers are mainly self-taught and formal training may improve their knowledge and skills.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**
Measurable Element 2	**2**	**2**
Measurable Element 3	**4***	**3**
Measurable Element 4	**4***	**3**
Measurable Element 5	**2**	**2**

Follow-up conclusion

There is no written plan for medical equipment management at NMMC. The medical equipment is listed in the general inventory list at the accounting department. There is no separate list developed by bioengineers. The equipment is always tested when new and occasionally thereafter. The checks of equipment are generally problem driven (rarely preventive). There is no preventive maintenance program. There is always a bioengineer on duty (present at the hospital until the end of surgeries and on home-duty) to assist in cases where problems arise with medical equipment outside of office hours.

Standard FMS.8:

Potable water and electrical power are available 24 hours a day, seven days a week, through regular or alternate sources, to meet essential patients care needs.

Measurable element:

1. *Potable water is available 24 hours a day, seven days a week.*
2. *Electric power is available 24 hours a day, seven days a week.*

Change

No major changes in the field.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion

NMMC is generally provided with central potable water and electricity 24 hours daily, seven days a week In cases where central provision of water is stopped there are two water reservoirs in the ICU area, one in the buffet, and other reservoirs placed in bathrooms on each floor. In cases of problems with the central power supply, NMMC switches to generator power (power is available in the ICUs, ORs, nurse centers in wards, laboratories, waiting rooms, etc.).

Standard FMS.9:

Electrical, water, waste, ventilation, medical gas and other key systems are regularly inspected, maintained, and when appropriate improved.

Measurable element:

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1. *Utility systems are regularly inspected.*
3. *Utility systems are regularly maintained.*

Change
No major changes in the field.

Areas for improvement
There is room for improvement in waste management practices at NMMC. The liquid waste is poured directly into the sewage system, which is considered inappropriate. Gemifilters that should be changed every 6 months are changed less frequently because they are costly to replace.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
The electricians supervise the electric system on a daily basis and are responsible for maintaining the power generator. The Infection control committee conducts regular checks of water quality and ventilator quality (monthly checks of the general number of microbes in $1m^3$ and presence of staphylococcus aureus). Bioengineers periodically supervise the ventilation and medical gas systems. Bacteriologic filters for conditioners are changed with defined frequency.

Standard FMS.9.1:
Designated individuals or authorities monitor water quality regularly.

Measurable element:
1. Water quality is monitored regularly.
2. An individual(s) or agency is assigned responsibility for monitoring.

Change
At the baseline survey the quality of source water was checked by the local sanitary epidemiology station. Currently, the members of the Infection control committee are responsible for inspecting the quality of water and they conduct their tests more frequently. Once a month the Infection control committee checks the water for the general number of microbes in $1m^3$, the coli-index, and the coli-titre. The system of reservoirs was reconstructed so that the water is cycled and does not become stagnant while in holding.

Areas for improvement
No major limitations exist in the field

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
Potable water quality is regularly (monthly) checked by the Infection control committee.

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Standard FMS.10:

The organization educates and trains all staff members about their roles in providing a safe and effective patient care facilities.

Measurable element:

1. *For each component of the organization's facility management and safety program there is a planned education to ensure that staff members can effectively carry out their responsibilities.*

Change

No major changes.

Areas for improvement

There are personnel involved in facility management that did not have appropriate knowledge and skills upon admission to NMMC. Some staff members acquire necessary skills and knowledge within specific department and some (e.g. bioengineers) are self-taught. The organization of training for the latter may increase the effectiveness and quality of their work. The clinical staff working with specific medical equipment does not gain formal education in the operation and maintenance of medical equipment.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3***	**2**

Follow-up conclusion

There is no planning to cover educational needs of personnel involved in facility management. The majority of staff members can effectively complete their responsibilities on the basis of their education, skills, and experience. Some staff members are self-taught and have knowledge gaps, which could be improved through specialized training. The MOH annually organizes training sessions on equipment safety in cases of emergency situations.

Standard FMS.10.1:

Staff members are trained and knowledgeable about their roles in the organization's plans for their fire safety, security, hazardous materials and emergencies.

Measurable element:

1. *Staff members can describe and/or demonstrate their role in the response to a fire.*
4. *Staff members can describe and/or demonstrate procedures and their role in internal and community emergencies and disasters.*

Change

No changes.

Areas for improvement

Staff members are rarely trained about their roles in cases of emergency. The training organized by the Civil Defense Department is rare and staff attendance is low.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**2**
Measurable Element 4	**2**	**2**

Follow-up conclusion
The knowledge of staff on their role in the response to fire and disasters was not evaluated. Staff members working at NMMC for many years were probably more exposed to such trainings and thus more knowledgeable.

Standard FMS.10.2:

Staff is trained to operate and maintain medical equipment and utility systems.

Measurable element:
1. *Staff is trained to operate medical equipment.*
2. *Staff is trained to maintain medical equipment.*

Change
No changes exist in the field.

Areas for improvement
The clinical staff working with medical equipment should be provided with formal training on the operation and maintenance of specific equipment. The training could be provided by bioengineers, or more experienced peers upon admission to a particular department and regularly thereafter.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4***	**3**
Measurable Element 2	**3***	**2**

Follow-up conclusion
There is no formal training on the operation and maintenance of medical equipment at NMMC. The staff acquires knowledge and skills informally from peers, supervisors, bioengineers, etc.

Standard FMS.10.3:

The organization periodically tests staff knowledge through demonstration, mock events, and other suitable methods. This testing is then documented.

Measurable element:
1. *Staff knowledge is tested regarding their role in maintaining a safe and effective facility.*
2. *Staff training and testing are documented as to who was trained and tested and the results.*

Change
No changes in the field.

Areas for improvement

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The staff knowledge on their role in facility management and safety should be tested and their performance evaluated. The results of evaluation should be documented.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**
Measurable Element 2	**1**	**1**

Follow-up conclusion

There is no formal process of knowledge or performance evaluation in any department or service at NMMC. The knowledge and performance of staff are informally evaluated by peers or managers. Unsatisfactory performance may result in a more formal evaluation of the knowledge of a staff member. As the staff members are not tested regarding their knowledge on facility safety, the results of testing could not be documented.

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FUNCTION: GOVERNANCE, LEADERSHIP, AND DIRECTION (GLD)

Follow-up Evaluation Highlights

For the purpose of the follow-up evaluation organization governance will be identified as the Chief Director and the Hospital Board. Although NMMC is a state-owned facility, the municipality of Yerevan provides little technical oversight of daily operations, finances, strategic planning, and management. The municipality does receive quarterly and annual financial reports, staff lists, budgets, salaries, and operating plans that require formal approval. This process of approval tends to be a formality, as the municipality and owner of the organization do not actively participate in the formulation of the mission, objectives, strategic plan, operating capacity, or budget. The Hospital Board and the Chief Director, Lida Mouradian, are responsible for managing the daily operations and coordinating administrative and clinical services at NMMC. In relation to the standards and measurable elements of the function of Governance, Leadership, and Direction, the role of governance will be applied to the internal Hospital Board rather than the municipality of Yerevan, the Mayor, or the Ministry of Health.

Since the baseline evaluation the so-called "Politburo" committee has been replaced by two different committees: the Hospital Board and the Medical Board. The Medical Board oversees clinical services and the provision of health care. The Hospital Board is the lead governing body of NMMC and is responsible for providing direction for NMMC and establishing strategies for development of the organization. Both groups work in a collaborative manner to identify problems, assess available resources, and formulate possible solutions. Policies and accountabilities of each group have been defined in writing and an organizational chart has also been drafted.

Human resources issues have been addressed through the creation of job descriptions, developed in collaboration with AUA project coordinators, for all positions within NMMC. Job descriptions have yet to be discussed and approved by the Hospital Board. Recruitment, hiring, probation, evaluation, and dismissal procedures have been documented and are universal with some variation in position-specific policies.

The following measures are recommended to improve the direction of services at NMMC:

- Develop a complete and finalized organizational chart including the names of leadership and Board members;
- Develop/adopt an organization-wide mission statement, package of services, and operating procedure;
- Document department policies, responsibilities, and services offered;
- Establish an in-house QA/QI committee or authority responsible for systematic evaluation of the care delivered;
- Adopt a written, universal training and orientation procedure for new staff;
- Establish a Nursing board to ensure greater activity among nursing staff in QA/QI;
- Establish a formal and enforced requirement for continuing education;
- Document the integration of services and management of patients throughout the organization.

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GOVERNANCE, LEADERSHIP, AND DIRECTION

Standard GLD.1:

Governance responsibilities and accountabilities are described in bylaws, policies and procedures, or similar documents that guide how they are to be carried out.

Measurable element:

3. *The organization's governance structure is described in written documents.*
4. *Governance responsibilities and accountabilities are described in the document.*
5. *There is an organization chart or document.*
6. *Those responsible for governing and managing are identified by title or name.*

Changes

Since the baseline evaluation, NMMC has drafted a written organizational chart that details the governance of the organization and the management structure of the various departments and divisions within NMMC. Furthermore, the multidisciplinary "Politburo" committee has been replaced by two separate entities. The Hospital Board is comprised of representatives from administrative, financial, and clinical branches of NMMC. The Medical Board is comprised of clinical staff represented by physicians and nurses. The Hospital and Medical Boards also have documented policies that highlight each group's responsibilities, procedures, and accountabilities. Each division of NMMC (e.g. human resources, clinical services) has an appointed director and deputy director; the director being the division's representative on the Hospital Board. The Human Resources department possesses documentation of staff names, positions, professional degrees, and leadership titles, however this information has yet to be incorporated into the organizational chart. There continues to be a well-defined organizational structure within NMMC and identification of management has been improved with the addition of a documented organizational chart.

Areas for improvement

The organizational chart should be continuously reviewed and updated to reflect changes within the management and clinical structure at NMMC. The organizational chart should also list the name and title of each individual who occupies the position of leadership listed in the structure.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**4**
Measurable Element 2	**4***	**4**
Measurable Element 3	**1**	**3**
Measurable Element 4	**3**	**4**

Follow-up conclusion

The governing body of NMMC is well defined and documentation exists that describes the responsibility of the body as well as the individuals who are members of the Hospital Board. The Board members hold leadership and management positions within NMMC and are charged with the responsibility of managing the organization's daily activities. Organizational structure has also been charted and describes each department within NMMC and their relation to one another.

Standard GLD.1.1:

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Those responsible for governance approve the organization's mission statement.

Measurable element:
1. Those responsible for governance approve the organization's mission.

Changes
The Marketing project coordinator has developed the mission statement for NMMC. However, it was not discussed/approved by the Hospital Board yet. Organization leaders have individual views and differing opinions as to the specific mission of NMMC but the theme of providing quality cardiac care seems to be consistent. The Hospital Board would be the governing body to formulate and approve a mission statement.

Areas for improvement
A mission statement, defining the goals and objectives of NMMC should be developed and approved by the Hospital Board.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**2**

Follow-up conclusion
The governing body of NMMC is responsible for formulating and approving the organization's mission statement.

Standard GLD.1.2:

Those responsible for governance approve the policies and plans to operate the organization.

Measurable element:
1. Those responsible for governance approve the organization's strategic and management plans and operating policies.

Changes
The Hospital Board bears the responsibility of formulating and approving the organization's strategic plan, management policy, and operating procedure. Many Board meetings are open to all staff members who wish to offer suggestions or who have questions, comments, or concerns. Closed-door meetings are not open to all staff members but individuals may present issues to be placed on the meeting agenda for discussion.

Areas for improvement
A written plan should be formulated and approved that outlines the organization's specific operating policies, and the responsibility of each department in attaining those measures.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**3**

Follow-up conclusion

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The Hospital Board acts as NMMC's lead governing body and bears the responsibility of managing the organization's daily operations and formulating and approving the management plan and operating policy of the facility.

Standard GLD.1.3:

Those responsible for governance approve the budget and allocate the resources required to meet the organization's mission.

Measurable element:

1. *Those responsible for governance approve the organization's budget.*
2. *Those responsible for governance allocate the resources required to meet the organization's mission.*

Changes

The most significant change since the baseline evaluation was the appointment of a financial manager. Some weaknesses in budgeting were addressed by establishing an accountancy database for accumulating inventory and cashier information. The finance department develops projected budgets that are submitted and approved by the Hospital Board but some limitations still exist in the budgeting process. Quarterly and annual reports detailing number of staff, salaries, account balances, total expenditures, and cash flow are sent to the municipality for review and approval. The municipality plays a formal, rather than a technical, role in budget approval and has little input into budget development. The Hospital Board allocates resources required for the daily operation of the organization and requests for additional resources are discussed collaboratively during weekly meetings. Newly enacted Armenian law requires that state owned facilities participate in annual audits carried out by an oversight committee composed of individuals outside the organization. NMMC has yet to establish an oversight committee responsible for annual audits of its budget.

Areas for improvement

An oversight committee should be established to meet the requirement that state owned facilities participate in annual audits. This committee should be made up of individuals from a third-party subcontract to minimize bias and prevent a conflict of interest.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**2**	**3**

Follow-up conclusion

The Hospital Board is the main governing entity at NMMC and is responsible for approving the organization's budget and allocating necessary resources for the daily operation of the facility.

Standard GLD.1.4:

Those responsible for governance appoint the organization's senior manager(s) or director(s).

Measurable element:

1. *Those responsible for governance appoint the organization's senior manager or leader.*

Changes

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There are no significant changes from baseline. The Mayor of the City of Yerevan is the head governing body of NMMC and is responsible for the appointment of the Chief Director. The Hospital Board is made up of senior managers and directors and includes representation from all major departments within NMMC.

Areas for improvement
Hospital Board members should be required or encouraged to attend all meetings in order to ensure organization-wide representation during discussion sessions. Proxies should be elected to represent the department should the Board member be unavailable to attend the meeting.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**

Follow-up conclusion
The Mayor of the city of Yerevan, as the head of the municipality, is the organization's owner and appoints the Chief Director of NMMC. Senior managers and department directors, because of their existing level of seniority and leadership, make up the membership of the Hospital Board.

Standard GLD.1.5:

Those responsible for governance support and promote quality management and improvement efforts.

Measurable element:
1. *Those responsible for governance support and promote quality management and improvement.*

Changes
Organization leaders work collaboratively through the Hospital and Medical Boards in order to ensure high standards in quality management and dissemination of clinical services. Weekly Board meetings also focus on issues relating to resource needs, staffing, management concerns, and general policy. Clinical leadership is particularly supportive for the quality monitoring (improvement initiatives of the ANP Quality Assurance subproject).

Areas for improvement
Board meetings allow collaborative discussion among organization leaders in relation to quality management and quality improvement. However, a committee or an individual should be designated by Board to carry the responsibility for continuous quality monitoring and improvement efforts of the center. Thus, the sustainability of quality management activities after the completion of ANP is not guaranteed.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion
Those responsible for governance at NMMC participate in weekly meetings that address various topics including issues regarding quality management and improvement in both clinical and administrative areas of the organization. However. Because of the lack of an authority

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responsible for day to day monitoring and continuous QI at the center, the sustainability of the QI efforts is questionable.

Standard GLD.1.6:

Those responsible for governance collaborate with the organization's managers and leaders.

Measurable element:

1. Those responsible for governance use processes that provide communication and cooperation between governance and management.

Changes

Thos responsible for governance include the organization managers, leaders, and department directors. They operate collaboratively through the Hospital Board ensuring there is always communication between departments and among governance. The supreme governing body of NMMC is the municipality and the Mayor of the city of Yerevan. The Chief Director of the organization communicates with the municipal health department and is also an active member of the Hospital Board. This role ensures that governance, management, and staff have open lines of communication and work cooperatively in providing clinical and administrative services. The organizational chart defines the lines of communication and diagrams the management structure at NMMC.

Areas for improvement

No significant areas for improvement can be identified.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**4**

Follow-up conclusion

All staff members have the opportunity to participate in weekly meetings of the Hospital and Medical Boards. Members of each board are managers, directors, and leaders within the organization and weekly meetings allow for cooperation and communication among and between departments at NMMC.

Standard GLD.2:

A senior manager or director is responsible for operating the organization and complying with applicable laws and regulations.

Measurable element:

3. *The senior manager or director manages the organization's day-to-day operations.*
4. *The senior manager or director has the education and experience to carry out his or her responsibilities.*
4. *The senior manager or director carries out approved policies.*
5. *The senior manager or director ensures compliance with applicable laws and regulations.*
6. *The senior manager or director responds to any reports from inspecting and regulatory agencies.*
7. *The senior manager or director manages human, financial, and other resources.*

Changes

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There are no significant changes from the baseline evaluation. As noted in the baseline evaluation, the senior manager at NMMC is an experienced health administartor. Dr. Lida Mouradian continues to hold the position of Chief Director of NMMC and works collaboratively with department directors and leaders within clinical and administrative services. The Chief Director is responsible for managing and overseeing the daily operations of the organization and maintains constant communication with NMMC staff through weekly meetings with the Hospital Board. The Chief Director is also responsible for complying with applicable national and municipal regulations. All issues regarding financial and human resources fall under the responsibility of the Hospital Board of which the Chief Director is the senior member.

Areas for improvement
No significant limitations exist. The Chief Director manages the operation of NMMC in collaboration with organization leaders through weekly meetings of the Hospital Board.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**
Measurable Element 6	**4**	**4**
Measurable Element 7	**4**	**4**

Follow-up conclusion
The management of NMMC's daily operations and the organization's compliance with applicable laws fall under the responsibility of the Chief Director who works in collaboration with department leaders through the activity of the Hospital Board. All financial, human, and other resources are allocated by the Hospital Board, of which the Chief Director is the senior member.

Standard GLD.3:

The organization's clinical and managerial leaders are identified and are collectively responsible for defining the organization's mission and creating the plans and policies needed to fulfill the mission.

Measurable element:
1. *The leaders of the organization are formally or informally identified.*
2. *The leaders are collectively responsible for defining the organization's mission.*
3. *The leaders are responsible for creating the policies and procedures necessary to carry out the mission.*
4. *The leaders work collaboratively to carry out the organization's mission and policies.*

Changes
The "Politburo" committee has, since the initial baseline evaluation, been replaced by two new groups: the Hospital Board and the Medical Board. The Hospital Board is comprised of the directors of each division within the hospital while the Medical Board is made-up of clinical staff members including physicians and nurses. Individual representatives are senior staff members and are formally identified as such. The Hospital Board, comprised of senior leadership, provides direction for NMMC and establishes strategies for development of the organization. The Medical Board oversees all clinical services and is responsible for quality control of healthcare

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administered at NMMC. Weekly meetings are held for both groups. The drafted organizational structure describes the relationship of these two committees as they relate to hospital management and operation.

Areas for improvement
Board members are formally identified but a finalized organizational chart must be completed identifying individuals in various positions of leadership as well as the name and title of each Hospital Board member. A formal mission statement should be developed and approved by the Hospital Board.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion
Clinical and Administrative leaders are formally identified and constitute the membership of NMMC's governing body. They are responsible for defining the mission of the organization and creating the policies and within which NMMC operates. Open Hospital Board meetings ensure all staff members who are interested may participate in discussions. Organization leadership, through the capacity of the Hospital Board, work collaboratively and cooperatively to carry out the policies and procedures of NMMC.

Standard GLD.3.1:

Organization leaders plan with community leaders and leaders of other organizations to meet the community health care needs.

Measurable element:
1. The organization's leaders plan with recognized community leaders.

Changes
The existence of a community organization, referenced in the baseline evaluation, that works in cooperation with NMMC leaders could not be verified. The organization is a unique facility in terms of cardiac surgery in the region and all patients requiring cardiac surgical services and coronary interventions are referred to NMMC. Thus, the organization is in the position to offer specialized care not available at other local or regional facilities. Individuals within the organization also work in conjunction with staff members of other facilities in the Nork-Marash area in creating a committee to respond to national emergencies and natural disasters. Several times NMMC staff collaborated with Marash area governance to organize "open-door" (health fair) for the local community. NMMC staff also collaborates with other community leaders to organize on-site charity screening of population.

Areas for improvement
NMMC appears poised to provided health care services that would otherwise be lacking in the region. Long patient waiting lists for accessing some clinical services is one area of concern. Since NMMC is a specialized center and few options exist in the region, it is unclear how the organization can improve on patient waiting lists short of facility and staff expansion.

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Furthermore, services are not accessible by the entire population due to issues regarding the cost of care. Many services, namely surgical procedures, are expensive and outside the financial capacity of many individuals within the population.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**N/A**	**3**

Follow-up conclusion

NMMC responds adequately to the health needs of the region by providing otherwise unavailable specialized health care services. NMMC makes few efforts to screen/examine patients during health fairs or on-site visits of its staff.

Standard GLD.3.2:

The clinical leaders identify and plan for the type of services required to meet the needs of the patients served by the organization.

Measurable element:

1. *The organization plans describe the care and services to be provided.*
2. *The care and services to be offered are consistent with the organization's mission.*
3. *Clinical leaders determine the type of care and services to be provided by the organization.*

Changes

In collaboration with ANP marketing subprojetc, marketing brochure was developed to outline the list of services provided by NMMC, the organization's operating capacity, and also provides background information about NMMC. The types of services provided are consistent with the organization's mission while the Hospital and Medical Boards work collaboratively to define the scope of services to meet the needs of patients. While NMMC has a clear direction and scope of services it provides, it is not well defined or documented. The "modus operandi" tends to drive the daily operation and standard procedures for patient care. No organization-level documents describe operation procedures but a general understanding among staff exists relating to the delivery of care at NMMC. The type of care offered and the services delivered meet the needs of the patients served. Physicians are responsible for deciding the type of services and care delivered and Medical Board meetings provide a forum for collaborative discussion among clinical staff. Management has yet to develop and approve an operating policy for the organization that details NMMC's mission, goals, objectives, purpose, scope of functions, and service capacity.

Areas for improvement

A well-defined written document should be produced based on the marketing brochure that outlines the services that are offered at NMMC and the organization's role and objectives in healthcare. While clinical and administrative leaders ensure that NMMC has a clear plan in meeting the needs of patients and this plan is consistent with the scope of practice, there is no document to describe this.

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	2000	**2005**
Measurable Element 1	**1**	**1**
Measurable Element 2	**4***	**3**
Measurable Element 3	**4**	**4**

Follow-up conclusion

There is no written approved plan at NMMC for the organization's mission, scope of practice, or package of services offered. Marketing brochures have been created that describe the type of care provided at NMMC and partially the mission statement but they have yet to be incorporated into an official operating policy.

Standard GLD.3.4:

The medical, nursing, and other leaders are educated in the concepts of quality management and improvement.

Measurable element:

1. *Medical, nursing, and other leaders are educated in the concepts of quality management and improvement.*
2. *Medical, nursing, and other leaders participate in relevant quality management and improvement processes.*

Changes

Quality management and improvement training is not a part of the formal education of clinical staff. Since the baseline evaluation, a greater focus has been placed on quality improvement and several programs have been initiated that are evidence of this. Some examples of QI include: infection control program, wound infection monitoring, recurrent angina monitoring, refrigeration temperature monitoring, nurse-to-patient ratios in the ICU, and operating room efficiency databases. After the baseline evaluation a Nursing Board was established to create discussion among the nursing staff in addressing issues such as quality of care. Unfortunately, the Nursing Board failed to take hold and is not actively functioning. Quality assurance and improvement plans and processes are weak as there is no internal QA/QI management entity. External collaboration with AUA through the Quality Improvement Project is currently the main method of QA/QI management. Furthermore, the cooperation between AUA project coordinators and NMMC clinical staff in addressing QA/QI is not strong enough.

Areas for improvement

As nurses have more contact hours with patients than other staff, the Nursing Board should reconvene and view quality assurance and improvement as their primary objective. An internal QA/QI department should be established to provide an ongoing, systematic evaluation of the quality of care at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**4***	**3**

Follow-up conclusion

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Quality assurance and improvement plans are limited at NMMC as there is no internal body/authority to continuously monitor QA/QI issues.

Standard GLD.3.5:

Organization leaders ensure that there are uniform programs for the recruitment, retention, development, and continuing education of all staff.

Measurable element:

1. *There is a planned process for staff recruitment.*
2. *There is a planned process for staff retention.*
3. *There is a planned process for staff personal development and continuing education.*
4. *The planning is collaborative and includes all departments and services in the organization.*

Changes

In conjunction with the AUA project, new policies have been formulated that outline the process and procedure for recruiting and hiring new staff members. Although applicant pools and advertisement vary based on the type of position being filled, the hiring process is universal. Physicians are recruited from in-house fellowship and residency programs due to the fact that NMMC is a unique facility in the region providing training in the field of cardiological services. Nursing graduates are offered the opportunity to participate in specialized cardiology training provided by NMMC. Nurses who satisfactorily complete the program are placed on a waiting list for future consideration upon the availability of positions at NMMC. The courses are typically held 3x per year and offer cardiology training and certification. Open positions are first advertised in-house and current employees are given priority during the selection process. External advertisement occurs via Internet postings, newspaper listings, and through bulletins at the National Institute of Health for clinical positions. Applications are received by the Human Resources department and filtered into short-lists of qualified individuals. Hiring committees made up of no fewer than 3 staff members participate in the interview and final selection processes. Hiring committees are specific to each department and members work collaboratively to vote on potential employees. The Human Resources manager participates in all committees but only acts in an advisory capacity and does not have a vote in final selection. Physicians and nurses are required to participate in retraining programs every 5 years, however the training no longer culminates in re-certification or re-licensure. Sufficient enforcement does not exist to ensure all individuals participate regularly, however, new staff are more strictly examined to identify their participation in training programs. Continuing education also occurs regularly in-house through journal clubs, infection control programs for nurses and aids, and through weekly conferences. Staff turnover is not a significant issue at NMMC as the specialization of care delivered attracts both clinical and administrative applicants. Some staff is lost to relocation or marriage and little can be done to retain these individuals. NMMC is a well-known and well-respected organization in the region and it attracts many applicants. It is because of this that only the most qualified and experienced individuals are added to the staff.

Areas for improvement

Many concerns that arose from the baseline evaluation regarding staffing have been addressed as is evident by the new hiring policy and process. The areas of continuing education and personnel development still require some attention. Specialized training in cardiac care for clinical staff, journal clubs, and research seminars do exist but formal continuing education should be implemented focused mainly on issues relating to the delivery of quality health care. Policies should be implemented to retain qualified staff members and deter competition-driven relocation.

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Competitive initial salaries, annual reviews of wages, and performance based salary increases could also be implemented to increase employee satisfaction and build retention programs at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**4**
Measurable Element 2	**2**	**2**
Measurable Element 3	**2**	**3**
Measurable Element 4	**2**	**4**

Follow-up conclusion
New plans and uniform processes have been developed in the area of staff recruitment. The processes of staff recruitment and evaluation are collaborative and are representative of the needs of the organization. Fellowship opportunities for physicians and specialized training programs for nurses are two examples of personnel development and qualification requirements that exist at NMMC. Staff retention is not a major issue as NMMC attracts many applicants and has the opportunity to select from only the finest, most qualified individuals.

Standard GLD.3.6:

The leaders foster communication and coordination among those individuals and departments responsible for providing clinical services.

Measurable element:
1. *Leaders foster communication among departments, services, and individual staff members.*
2. *Leaders foster coordination of clinical services.*

Changes
The coordination of clinical services and communication among clinical departments is made possible through the activity of the Medical Board. Internal procedures coordinate the delivery of care and services between departments. Clinical staff members gather weekly during Medical Board Meetings and clinical leaders bring relevant issues to the Hospital Board. NMMC is a relatively small organization and its size allows for greater coordination of services and delivery of care.

Areas for improvement
No significant limitations exist.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**3**	**4**

Follow-up conclusion
Clinical leaders, through the activity of the Medical Board, ensure continuous communication among and between clinical departments.

Standard GLD.4:

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Medical, nursing, and other clinical leaders plan and implement an effective organizational structure to support their responsibilities and authority.

Measurable element:

1. *There is an effective organizational structure used by medical, nursing, and other clinical leaders to carry out their responsibilities and authority.*

Changes

The relationships between various clinical departments and their management are described in organizational chart and partially by job descriptions (not approved). The organizational structure describes the levels of leadership and management for all NMMC departments. Within each clinical department, there is an understanding of the role of each individual and the hierarchy of leadership.

Areas for improvement

In addition to the formulation of an organization-wide policy manual, each department should begin to document the existing procedures and processes that are in place for daily operation. Job descriptions, individual responsibility, authority, and accountability of staff members are also needed.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**3**

Follow-up conclusion

The organizational chart describes the responsibilities and authority of clinical staff. However, the chart should be more detailed in terms of individual lines of authority. There is also an unwritten understanding of the organizational structure in clinical departments that supports the responsibility and authority of clinical leaders.

Standard GLD.4.1:

The organizational structure and processes support professional communication.

Measurable element:

1. *The organizational structure and processes support professional communication.*

Changes

Professional communication exists and is supported by the Hospital Board and Medical Board. Patient, resource, staffing, finance, and organizational issues are collaboratively discussed during weekly meetings of each Board. All formal decisions are made after group deliberation and cooperation. Journal clubs, Monday conferences, and research seminars are also examples of the support of professional communication.

Areas for improvement

No significant limitations exist in the area of professional communication.

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	2000	2005
Measurable Element 1	**4**	**4**

Follow-up conclusion
Weekly Hospital and Medical Board meeting as well as Monday conferences, journal clubs, and research seminars support professional communication.

Standard GLD.4.3:

The organizational structure and processes support the oversight of professional ethical issues.

Measurable element:
1. *The organizational structure and processes support oversight of professional ethical issues.*

Changes
There is no separate ethics committee at NMMC. However, a committee on human research ethics entitled to deal with relevant issues at NMMC was established at AUA in the scope of ANP. NMMC staff members are involved as IRB members. This makes possible the ethical conduct of clinical research at NMMC. All patient issues are discussed during weekly Medical Board meetings. Clinical staff members collectively address ethical concerns during these meetings. Moreover, an incident reporting systems was developed to record ethical and other clinical issues, but it has not yet been effectively implemented.

Areas for improvement
The incident reporting system should be reviewed and a formal policy for ethical issues should begin to be considered. Also, a formal process for handling ethical issues during the Medical Board meetings.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**3**

Follow-up conclusion
There is no formal written procedure that supports the oversight of ethical issues, but the Medical Board operates in that regard. Also, the newly established clinical IRB at AUA makes possible the ethical conduct of research at NMMC.

Standard GLD.4.4:

The organizational structure and processes support the oversight of the quality of clinical services.

Measurable element:
1. *The organizational structure and processes support the oversight of the quality of clinical services*

Changes

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The organizational structure at NMMC supports the oversight of clinical services through the activity of the Medical Board and its responsibility of maintaining the quality of care delivered at NMMC. Weekly meetings among clinical leaders provide an ongoing process of collaborative discussion to solve quality related issues in health care delivery and support services. Relevant topics discussed during Medical Board Meetings are brought to the Hospital Board creating an organization-wide structure for overseeing and improving clinical services. Patient satisfaction and various other surveys carried out by AUA researchers provided information for management to use in addressing areas for improvement (e.g. patient waiting times). Daily clinical rounds, weekly conferences, mortality and morbidity conferences, department meetings also support the oversight of quality of care.

Areas for improvement

There should be continued efforts of quality improvement by NMMC through monitoring and research studies focused on quality of care and patient satisfaction. Reports should be used by the organization to address quality improvement of clinical services. Moreover, an in-house research department or quality assurance and improvement committee could eventually be established to allow ongoing monitoring and oversight of the quality of care delivered at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**

Follow-up conclusion

The organizational structure at NMMC along with research studies conducted in cooperation with AUA helps to oversee and improve the quality of clinical services. Improvements in quality of care are the primary concern of leadership and governance bodies.

Standard GLD.5:

One or more qualified individuals provide direction for each department or service in the organization.

Measurable element:

1. *An individual with appropriate training, education, and experience directs each department or service within the organization.*
2. *When more than one individual provides direction, the responsibilities of each are defined in writing.*

Changes

Since the baseline evaluation, greater attention was paid to make certain that only the most qualified and experienced individuals provide direction and leadership for each department within NMMC. The appointment of a qualified finance manger is one such example. Furthermore, NMMC receives numerous applications for employment and is in the unique position to select from the finest, most qualified individuals for various positions within the organization. There is no written/approved policy that dictates the specific responsibilities of individuals in leadership roles which results in some vagueness in individual responsibility and oversight. The job descriptions were developed by ANP team detailing the responsibilities of all staff members. However, they were not discussed/approved yet. Final decisions in these instances typically arise through discussion and consensus. Instances of leadership conflict within departments are rare as

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most conflicts of authority occur between parallel departments. Authority in decisions regarding patients falls under the responsibility of the physician charged with their care.

Areas for improvement
Job descriptions should be discussed and approved.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 2	**3**	**3**

Follow-up conclusion
Greater effort has been made in recent years to ensure only highly qualified and educated individuals provide direction and assume roles of leadership or management. No documentation, outside the organizational structure, exists to support the provision of leadership within departments. In instances of conflict most decisions arise out of collaboration and consensus.

Standard GLD.5.1:

Directors identify in writing the services to be provided by the department.

Measurable element:

1. *Documents describe the services provided by each department or service.*
2. *Each department's or service's policies and procedures guide the provision of identified services.*
3. *Each department's or service's policies and procedures address the staff knowledge and skills needed to assess and meet patient needs.*

Changes
A marketing brochure of NMMC was developed/published in the scope of ANP project. The brochure provides information on the services provided by each department. Each department within NMMC is responsible for providing an established and defined set of services. However, a separate written documentation has not been created to describe the services provided by the departments, their individual responsibility, and their relation to one another. Job descriptions establish qualifications and experience required to address the needs of NMMC patients. Job descriptions, while not yet approved, describe the responsibilities and duties of each staff member but department policies and procedures have not yet been drafted. Personnel and temporal issues have hindered the development of thorough policy and procedure manuals for the organization and each department.

Areas for improvement
Department operating policies and procedures need to be formulated to describe the service expectations of each department, their relationship with one another, and the management of patients throughout the organization. Job descriptions should be finalized and submitted to the Hospital Board for approval.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**1**	**3**
Measurable Element 2	**1**	**1**
Measurable Element 3	**1**	**2**

Follow-up conclusion
Although a formal understanding of the responsibilities of each department within NMMC exists, there is no written documentation to support this. The organization and its staff are prepared to meet the needs of patients, but department policies and procedures, staff qualifications, knowledge requirements, and lists of services to be provided are not documented.

Standard GLD.5.1.1:

Services are coordinated and integrated within the department or service and with other departments and services.

Measurable element:
1. *There is coordination and integration of services within each department and service.*
2. *There is coordination and integration of services with other departments and services.*

Changes
The coordination of services within and between departments is seamless and well integrated. There is no duplication of services and written orders from the primary clinical department identify subsequent services that should be delivered. All clinical staff members are charged with the responsibility for patients and department directors and leaders coordinate the services to be provided within their individual departments. Changes from baseline include a more collaborative method of patient care within and between departments and less authoritative direction by individuals.

Areas for improvement
No significant limitations exist. Services and patient care at NMMC are well integrated and interdepartmental coordination is ensured by established procedure.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
The established organizational structure of departments within NMMC suppors the integration and coordination of services delivered within and among departments.

Standard GLD.5.2:

Directors recommend space, staffing, and other resources needed by the department or service.

Measurable element:
1. *Directors recommend staff needed to provide services.*

Evaluation Score:
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2. *Directors recommend other special resources needed to provide services.*

Changes
Requests for additional clinical staff are made during weekly Medical Board meetings and approved requests are brought to the Hospital Board for review and approval. The organization director has the ultimate authority to approve or deny requests brought to the Hospital Board. Requests for other services and additional resources are also brought to Board meetings for discussion. Board members discuss matters and each member casts a vote. All matters relating to organization operation and administration are brought before the Hospital Board while clinical issues are discussed during meetings of the Medical Board. Decisions are made collaboratively by Board members and include input from their staff.

Areas for improvement
No significant limitations exist in the area of recommendations for staffing and resources.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
Individual clinical departments discuss staffing and resource issues. Requests are brought by the department managers to the Medical board. The Medical Board then discusses the issue and clinical leaders bring approved requests to the Hospital Board. The Hospital Board discusses the request and votes on whether to approve or deny the request. Administrative and non-clinical staffing and resource requests are processed in the same manner, however the Medical Board is bypassed.

Standard GLD.5.3:

Directors recommend criteria for selecting the department or service's professional staff and choose individuals who meet those criteria.

Measurable element:
1. *The director develops and when required, submits for endorsement criteria related to the education, skills, knowledge, and experience of professional staff.*

Changes
Criteria for professional staff have been developed and job descriptions have been drafted for clinical and administrative positions. These job descriptions have not been approved and are weak in the area of qualifications required of applicants for various positions. Training requirements for nurses and fellowship participation for physicians are two examples of eligibility requirements for clinical positions. Department leaders are involved in the hiring process through hiring committees consisting of department staff. Initial applicants are short-listed by the Human Resources manager on the basis of qualifications and experience. Applicants selected for interview meet with hiring committees who discuss and vote on potential employees. The selection process is done in a collaborative manner and includes input from organization staff. The newly adopted hiring policy outlines the entire selection process and the role of the Hospital Board, the Medical Board, Human Resources, department directors, and hiring committees.

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Areas for improvement
Job descriptions should be finalized and submitted for approval after written descriptions have been created for all positions within the organization. Efforts should be made to create well-defined qualification and experience requirements for all positions, both clinical and administrative.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion
New job descriptions have been drafted for various positions within the organization as well as a detailed hiring plan that describes the process of recommending and selecting additional staff. Hiring committees made up of department leaders are responsible for establishing criteria for applicants and interviewing and voting on new hires.

Standard GLD.5.4:
Directors provide orientation and training for all staff of the department or service.

Measurable element:
1. The director has established an orientation for department staff.

Changes
There is little variation from the baseline evaluation. Senior staff members are responsible for the orientation of new employees. Separate departments responsible for education and orientation of new staff do not exist. New employees are trained in department policies and operational procedures by experienced staff members of a similar position. For example, senior ICU nurses are responsible for the orientation of new ICU nursing employees. Orientation for non-clinical, non-specialized positions is poor and new employees receive little formal training in NMMC procedures.

Areas for improvement
A formal education department should be created to provide universal general orientation for all new employees prior to specific training within individual departments.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**

Follow-up conclusion
New staff members hired into specialized and clinical departments receive orientation and training by senior staff members. Individuals hired into non-specialized positions receive little formal orientation or training. No separate department exists that is responsible for the training of new employees.

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FUNCTION: MANAGEMENT OF INFORMATION (MOI)

Follow-up Evaluation Highlights

The information requirements of clinical and management services at NMMC are planned based on the needs assessment and appropriate strategies are implemented to meet those needs. A clinical record is completed for every patient assessed or treated. Clinical records contain sufficient information to support the diagnosis and justify the treatment. They contain information on the course and results of treatment. Physicians, nurses, residents, and fellows are verbally authorized to make entries into patient record, while a "case-manager" of a patient carries the responsibility for all entries. All care providers of a patient have access to his records. All records and information is retained at NMMC. Internal policies and processes ensure the confidentiality and security of data. Clinical and managerial data and information are integrated.

Since the baseline evaluation several improvements were noted in the field of information management. The ANP coordinators collaboratively with NMMC staff developed new structured encounter forms (SEFs) for ambulatory clinics and evaluated several times their completeness. Several new computerized databases were developed for different services (the admission, accountancy, blood bank, wound infection database, and appointment database in adult cardiology clinic, etc.). Recently ANP coordinators developed a new software for surgical and catheterization databases and planned to implement it during the next year. A EUROscore database was developed, which allows comparing the outcomes of surgical care over time and with outcomes of similar organizations. It is planned to develop also a computerized database for laboratories. Some departments were connected via network. The admission database involves unique identifiers for all inpatients, which are attached to all forms. The standardized codes for diagnosis and procedures are used in different services. The policy and procedure on "Provision and Use of Data" and "Patient and Family Rights" were developed by ANP coordinator and approved by Hospital board. The policies and procedures regulate the security, confidentiality, and conditions for accessing the individual and aggregate patient data at NMMC. An appointment of single person/department responsible for database management was planned/approved by Hospital board. The training on basic computer knowledge is planned for nurses.

Based on the follow-up evaluation the following recommendations are made:

- Develop a written plan for information management detailing tasks, timeframes and people responsible for its implementation;
- Develop a policy identifying individuals who are authorized to make entries in patient records and establish a process to ensure that only authorized individuals make entries in the records;
- Define unnecessary data and establish a process for destroying those data;
- Increase the enforcement of existing policies and establish new ones to ensure the security and confidentiality of patient information;
- Improve the recording of course and result of treatment by modifying patient histories and follow-up forms into more structured and more informative forms; allocate special space for justification of treatment;
- Develop a process for record evaluation and enforce better recording;
- Change the attitude of staff toward recording, emphasizing its importance and value;
- Use collected data more effectively: to make assumptions on the performance of the center, to evaluate the quality of care, and to make comparisons with similar institutions;
- Adopt and use evidence-based practice guidelines during daily practice, to standardize the process of treatment at NMMC and facilitate the evaluation of provided care;
- Improve the conditions in paper data archives, to prevent data from loss and destruction.

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MANAGEMENT OF INFORMATION

Standard MOI.1:

The organization plans and implements processes to meet patient needs of all those who provide clinical services, those who manage the organization, and those outside the organization who require data and information from the organization.

Measurable element:

1. The information needs of those who provide clinical services are considered in the planning process.

2. The information needs of those who manage the organization are considered in the planning process.

2. *The information needs and requirements of individuals and agencies outside the organization are considered in the planning process.*

Changes

There are several improvements in the field of information management since the baseline evaluation. Several new databases were developed for different departments. Several departments were connected via network. The admission and accountancy databases were developed generally to meet management needs of organization. A computerized database was developed in blood bank. A database was created at adult cardiology clinic for entering the appointments. Recently ANP coordinators developed a new software for surgical and catheterization databases and it is planned to start its use next year. Recently EUROscore database was developed and currently the risks for all surgical patients are calculated.

Areas for improvement

The informational needs that are not met at NMMC should be planned and addressed. The surgical and catheterization databases should be implemented during forthcoming year.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion

The information needs of clinical, management services and outside organizations are planned and met at NMMC.

Standard MOI.1.1:

The organization has a plan to meet information needs.

Measurable element:

1. An information plan is developed and implemented in the organization.

Changes

It is planned to develop also a computerized database for laboratories. The future plans also involve connection of all databases via network. The plan of providing nurses with basic

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computer training were discussed and approved by Hospital board. Also an appointment of single person/department responsible for database management was approved by Hospital board and the implementation planned in January 2006.

Areas for improvement
The informational needs are met not in a very coordinated way; there are no people directly responsible for development of information plan and its accomplishment. Some of people working with computerized databases lack basic computer knowledge. A written plan should be developed detailing tasks, timeframes and people responsible for its implementation, approved by Hospital board.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion
The informational plans are discussed by clinical and managerial leaders and approved during Medical and Hospital board meetings. However, there is no written plan, no people are directly responsible for its implementation.

Standard MOI.1.2:
The plan is based on an assessment of the needs of those within and outside the organization.

Measurable element:
1. Strategies are implemented to meet information needs of those who provide clinical services.
2. Strategies are implemented to meet information needs of those who manage the organization.

Changes
No major changes.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
The information needs of different services are identified, planned to be meet, and appropriate strategies are implemented to meet information needs for clinical and managerial services.

Standard MOI.1.4:
The plan includes how the confidentiality, security, and integrity of data and information will be maintained.

Measurable element:
1.The plan includes how the confidentiality of data and information will be maintained.
2.The plan includes how security of data and information will be maintained.

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3.The plan includes how the integrity of data and information will be maintained.

Changes
The policy and procedure on provision and use of data were developed by Medical board with assistance of ANP coordinator and approved by Hospital board. The patient and Family Rights policies and procedures were developed and approved by Hospital board. Above mentioned policies regulate the maintenance of confidentiality for patient data. The planned integral database for catheterization and surgical services involve different levels of security, so that only authorized people could use the database. The unified identifier for all inpatients was implemented during the last year at NMMC, to achieve the full integrity of all information at NMMC in future.

Areas for improvement
As the plan itself is not well formulated, the security, confidentiality issues are not viewed as a priority issue.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**3**	**3**
Measurable Element 3	**3**	**3**

Follow-up conclusion
There are internal policies and procedures addressing the confidentiality and security of data and information at NMMC. The security issues are solved by assigning staff responsible for database entry and security, by adding passwords, etc. Several initial steps were done to ensure the integrity of info (patient identifiers accepted, computers connected via network, etc) and several steps are planned to achieve the full integrity of data in future.

Standard MOI.1.5:
The plan defines the level of security.

Measurable element:
1. The plan identifies the level of security for each category of data and information.
2. The plan identifies those who have need or job position that permits access to each category of data and information.

Changes
Since the baseline survey the policies and procedures on provision and use of data were developed, which define the individuals/organizations that could have access to information, type of accessible data, the user's obligations, etc. Aside from mentioned policies the Policies on Patient and Family rights control the confidentiality of patient records and information.

Areas for improvement
There is no much concern among staff members on the security and confidentiality of patient information**.** Sometimes, outside individuals receive information on patients' conditions from physicians and nurses through a phone call, without specifying their relationship to the patient.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3***	**3**
Measurable Element 2	**3***	**3**

Follow-up conclusion
Generally almost all issues concerning the levels of security for each type of data, individuals/organizations authorized to have access to each type of data, and the conditions for having access are described in internal policies at NMMC. However, the staff is not very concerned with the issue and at times outsiders (without explaining their identity) may obtain info on patient.

Standard MOI.1.5.1:

Organization policy identifies those authorized to make entries in the patient medical record and determines the record's content and format.

Measurable element:
1.Those authorized to make entries in the patient clinical record are identified in organization policy.

Changes
No major changes.

Areas for improvement
A policy should be developed to identify individuals who are authorized to make entries in patient records and it could be stated in job descriptions of positions.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**

Follow-up conclusion
The individuals that are authorized to make entries into patient record are verbally well established at NMMC. These are mainly physicians, nurses, residents, and fellows. Generally one person: "case-manager" of a patient, carries the responsibility for all entries in the record.

Standard MOI.1.5.2:

Only authorized providers make entries in the patient clinical record.

Measurable element:
1. There is a process to ensure only authorized individuals make entries in patient clinical records.

Changes
No major changes.

Areas for improvement

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A process should be established to ensure that only authorized individuals make entries in patient records.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**

Follow-up conclusion
There is no formal process at NMMC that ensures only authorized individuals make entries in patient record. However, there is informal process (authors of entries are identified, case managers are responsible for recording, parts of record are recorded by defined staff (nurse, physician)) that assists in ensuring that only authorized individuals make entries at NMMC.

Standard MOI.1.6:

The organization has a policy on the retention time of records, data, and information.

Measurable element:
1.The organization has a policy on retaining patient clinical records and other data and information.
2.The retention process provides expected confidentiality and security.
3.Records, data, and information are destroyed appropriately.

Changes
No major changes.

Areas for improvement
There is no policy on retaining patient records and other information: all data is kept in computerized databases and/or archives. The center should define some selection criteria for defining unnecessary data and establishing process for destroying defined data to decrease the burden of paper and computer databases. As it was mentioned above, the internal policies are regulating confidentiality and security issues for the retained data at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**
Measurable Element 2	**3**	**3**
Measurable Element 3	**N/A**	**1**

Follow-up conclusion
There is no policy of record retention at the center. All records are retained. The expected confidentiality and security of data is available at NMMC.

Standard MOI.1.7:

The plan is implemented and supported by sufficient staff and other resources.

Measurable element:
1.Sufficient staff supports implementation.

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Changes
No major changes. A new staff was appointed to provide network administration at NMMC. It is planned to open position of database manager.

Areas for improvement
There is no staff responsible for overall data management at NMMC. The people responsible for provision of data entry are defined. However, there is no list of quality indicators of provided services reported annually or at defined times. Some of staff working with databases lacks basic computer knowledge.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Taking into account the increasing needs of information management, the center continuously works on providing sufficient staff, resources for implementation of the mentioned system.

Standard MOI.1.8:

The organization uses standardized diagnostic codes, procedure codes, symbols, and definitions.

Measurable element:
1. Standardized diagnosis codes are used.

Changes
The use of standardized diagnostic codes has increased during the last years. The admission database uses codes for diagnosis. The Pediatric cardiology clinic successfully uses codes for diagnosis of children in SEFs for about a year. The newly developed but not implemented surgical database has codes for diagnosis and procedures.

Areas for improvement
There are paper and computerized databases that do not contain diagnostic and procedure codes. This creates difficulties in retrieving data by diagnosis or procedure.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Several services are coding the diagnosis and procedures taking as a basis the well-known nomenclatures.

Standard MOI.1.9:

The data and information needs of those in and outside the organization are met on a timely basis in a format that meets user expectations and with the desired frequency.

Measurable element:

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1. Data and information dissemination meets user needs.
2. Users receive data and information on a timely basis.
3. Users receive data in a format that aids its intended use.

Changes
An improvement is noted that the data obtaining and collecting became more coordinated and improved. Several databases were created since the baseline to meet clinical and managerial needs of the center (computerized databases: accountancy, blood bank, infection control, wound infection, EUROscore database, etc). The SEFs were developed for ambulatory clinics, collaboratively by ANP coordinators and clinicians and are stored in ambulatory clinics' paper databases. The CHSR database engineer has developed a new software for surgical and catheterization databases, however, not implemented yet. Recently EUROscore database was developed and currently the mortality risks for all surgical patients are calculated.

Areas for improvement
Although the quality of patient data has improved during the last years, the data is mainly used to provide continuity of care. The data is not very efficiently used to evaluate the performance of the center, to measure the indicators of provided care, to make comparisons with similar institutions, etc.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
Data and information meet users' needs. Users receive data on a timely basis. Archive personnel assists the staff to access the information from archives during regular working hours. The information reports required by outside agencies are provided regularly and in time.

Standard MOI.1.10:

Appropriate clinical and managerial staff participates in selecting, integrating, and using information management technology.

Measurable element:
1. Clinical staff participates in information technology decisions.
2. Managerial staff participates in information technology decisions.

Changes
No changes.

Areas for improvement
No major limitations.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
The key clinical and managerial staff actively participates in information technology decisions. Some of staff members are proficient in using database management programs and generally all ACCESS-based databases are developed by clinical and managerial staff in addition to their main duties.

Standard MOI.1.12:

Records and information are protected from loss, destruction, tampering, and unauthorized access or use.

Measurable element:
1. Records and information are protected from loss and destruction.
2. Records and information are protected from tampering and unauthorized access or use.

Changes
The recently adopted policy and procedure on Provision and use of data ensures that patients' record data are readily available only for people directly involved in the care process of the particular patient. The access of all other individuals is limited and supervised by the staff.

Areas for improvement
The archive where the patients' records ("patient histories") are kept has poor conditions, so the records are not ensured from destruction. The records are kept without normal order and it is difficult to retrieve patient histories. Rarely some of the "patient histories" are lost. The archive of SEFs in Adult cardiology clinic is very busy. There are also some SEFs lost or not found. The computerized databases are also not protected completely from loss of information.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**3**
Measurable Element 2	**3**	**4**

Follow-up conclusion
Generally the records and information are protected from loss and destruction. The conditions are different in various departments. There are problems in some departments with poor conditions and excessive number of records. Recently accepted policies and procedures protect records and information from tampering and unauthorized use.

Standard MOI.1.13:

Clinical and managerial information is integrated to support the organization's governance and leadership.

Measurable element:

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1. Clinical and managerial data and information are integrated as needed to support decision-making.

Changes
Since the baseline survey, the admission database was developed, which is the first step for integration of clinical and managerial data. There are several staff members responsible for providing links between clinical and managerial data (statistician, basic benefit package staff).

Areas for improvement
The integration of clinical and managerial data has a room for improvement. For example, the available integration of data at organization could not provide the estimates of expenses spent on each patient.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Clinical and managerial data and information are partially integrated by the means of integral databases. Staff members carry the responsibility for providing integration of data. However, the current integration of data is far from being a complete one.

Standard MOI.1.14:

Decision-makers and other appropriate staff members are educated and trained in the principles of information management.

Measurable element:
1. The education is appropriate to needs and job responsibilities.

Changes
No major changes.

Areas for improvement
Generally the operators at each department are responsible for data entry and management. They have knowledge/skills of higher operator level. However, their knowledge is limited in understanding security of data, using statistical tools, data interpreting, etc.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Several clinical and managerial decision makers have appropriate knowledge of information management criteria. The staff responsible for information coordination does not have sufficient knowledge/experience of data management.

Standard MOI.2:

The organization initiates and maintains a clinical record for every patient assessed or treated.

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Measurable element:
1. A clinical record is initiated for every patient assessed or treated by the organization.

Changes
No major changes.

Areas for improvement
No limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion
A clinical record is completed for all ambulatory patients: the SEFs in Adult and Pediatric cardiology clinics. A "patient history" is initiated for all inpatients. A unique identifier is now assigned to all inpatients and attached to all forms inserted into patient history.

Standard MOI.2.1:

The clinical record contains sufficient information to identify the patient, support the diagnosis, justify the treatment, document the course and results of treatment, and promote continuity of care among health care providers.

Measurable element:
1.Patient clinical records contain adequate information to identify the patient.
2.Patient clinical records contain adequate information to support the diagnosis.
3. Patient clinical records contain adequate information to justify the care and treatment.
4. Patient clinical records contain adequate information to document the course and results of treatment.
5. The specific content of patient clinical records has been determined by the organization.

Changes
The SEFs of ambulatory clinics were improved significantly from the baseline survey (with assistance of ANP coordinators). They are more structured, informative in terms of data that support diagnosis, and justify the care and treatment.

Areas for improvement
The recording of the course and results of treatment has many flaws. For the inpatients, the daily monitoring results written by physicians are not informative, rather ceremonial. The follow-up information on the course and results of the treatment at ambulatory clinics is not well recorded in the follow-up forms. The forms for follow-up visit also need improvement. There is no special place in the records designed for justification of care and there is no policy requiring that the record should contain a justification. Generally, the info contained in the record is enough to justify the treatment, but not always.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**2**	**3**
Measurable Element 4	**3**	**3**
Measurable Element 5	**4**	**4**

Follow-up conclusion

The clinical records of patients at NMMC contain sufficient information to support the diagnosis and justify the treatment. The records also contain information on the course of treatment and results of treatment. However, justification of treatment, course of treatment, and treatment results are often not sufficient to evaluate provided treatment or make assumptions on the results of treatment.

Standard MOI.2.1.1:

The clinical record of every patient receiving emergency care includes the time of arrival, the conclusions at termination, the patient's condition at discharge, and follow-up care instructions.

Measurable element:

1.The clinical records of emergency patients include arrival time.
2.The clinical records of emergency patents include conclusions at the termination of treatment.
3.The clinical records of emergency patients include the patient's condition at discharge.
4.The clinical records of emergency patients include any follow-up care instructions.

Changes

No changes.

Areas for improvement

No major limitations.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**4**	**4**

Follow-up conclusion

The records of patients receiving emergency care include arrival time, conclusion at the termination of treatment, patient's condition at discharge, and follow-up care instructions.

Standard MOI.2.2:

As part of its performance improvement activities, the organization regularly assesses patient clinical record content and the completeness of patient clinical records.

Measurable element:

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1.Patient clinical records are reviewed regularly.
2.The review focuses on the timeliness, legibility, and completeness of the clinical record.

Changes
The chief of staff is responsible for reviewing the content and completeness of clinical records of inpatients. The ANP staff coordinators evaluated several times the completeness of SEFs in Adult Cardiology clinic and Pediatric Cardiology clinic. Based on the evaluation results, the forms were modified. Recently the team of Adult cardiology clinic repeated the evaluations of their primary and secondary forms. However, they failed to do it regularly as it was planned before.

Areas for improvement
The chief of staff is responsible for reviewing quality of "patient histories". However, the evaluation does not result in improvement (probably due to poor feedback, authority problems, poor enforcement for proper recording, etc.). The attitude of some staff to recording is negative: according to them, it is time consuming and not valuable. Along with improvement of evaluation activities and enforcement of better recording, additional efforts are necessary to change the attitude of staff toward recording.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**2**
Measurable Element 2	**N/A**	**2**

Follow-up conclusion
The quality of in-patient records (patient histories) is evaluated by the chief of staff regularly. The ANP coordinators have evaluated several times the completeness of SEFs of ambulatory clinics. However, regular successful evaluation mechanism does not exist.

Standard MOI.2.3:

Health care providers have access to the information in a patient's clinical record each time the patient is seen for a new or continuing care episode.

Measurable element:
1. Care providers have access to the patient's clinical record each time the patient is seen for care or treatment.

Changes
No changes.

Areas for improvement
As it was mentioned in MOI 1.12, the archive of SEFs at Adult Cardiology clinic is very busy and sometimes it is difficult to find the patient record there.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion

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Care providers at NMMC have access to patient information both paper and computer based each time the patient is seen for care or treatment.

Standard MOI.3:

Aggregate data and information support patient care, organization management, and the quality management program.

Measurable element:

1. Aggregate data and information support patient care.

2. Aggregate data and information support organization management.

Changes

An improvement in aggregating data to support care, management and quality improvement processes is noted at NMMC since the baseline. The EUROscore was validated by ANP project coordinator and is currently used to assess the mortality risks for patients. The EUROscore allows comparing the results of CABG surgery over time and across similar organizations. The infection control data is aggregated and support all infection control activities. The aggregated information (accountancy database of Financial and Inventory management departments) supports management activities.

Areas for improvement

Data aggregation and regular analysis should be improved. Currently a large amount of data is collected in the center, but not used appropriately to make assumptions on the performance of the center, to evaluate the quality of care indicators, etc.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**4***	**3**

Follow-up conclusion

Data and information are aggregated at the center to support patient care and organization management.

Standard MOI.3.2:

The organization supports patient care, education, research, and management with timely information from current sources.

Measurable element:

1. Current scientific and other information supports patient care.

2. Current scientific and other information supports clinical education.

3. Current scientific and other information supports research.

4. Current professional and other information supports management.

Changes

The center made efforts to use scientific and other information to support their duties. The Monday conferences, Journal clubs, interdepartmental clubs, Mortality and morbidity conferences all serve to educate the staff on scientific news and other relevant information. Often external lecturers are invited to present new interesting topics. The clinical staff is motivated to present

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interesting articles, news in the area of cardiology or cardiac surgery, etc. Since the baseline survey, a management course for healthcare administrators was organized at the Center by ANP. The director of the center attended a several-week course for health managers in the US. Numerous educational courses were organized by ANP for the NMMC staff covering many different areas (basics of biostatistics and epidemiology, nursing care, quality assurance, etc.)

Areas for improvement
Since the baseline survey, the ANP coordinators worked to adapt the evidence-based practice guidelines used in western countries. However, they were not approved/used by the center. The clinical practice guidelines could help to standardize the process of treatment at NMMC and facilitate the evaluation of provided care.

The educational activities at NMMC are numerous, but could be conducted more frequently and intensified to involve more staff (e.g. nurses). More efforts should be made to provide managerial staff with the current professional information.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**3**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**1**	**3**

Follow-up conclusion
The center makes efforts to provide and to motivate staff to use current scientific knowledge to support patient care, education, and research. The clinical practice guidelines were not adapted/accepted by the center, but the majority of staff knows and uses them in their daily practice. There are very few activities organized by the center to provide management with current professional knowledge (participation in conferences, workshops, seminars).

Standard MOI.3.2.2:
The organization uses external reference databases for comparative purposes.

Measurable element:
1. The organization compares its performance using external reference databases.

Changes
An improvement is noted that EUROscore is obtained for all surgical patients and the results of surgical care (CABG) are compared with the results of outside organizations taking into account patient casemix. The wound infection data is calculated and crude rates compared to other heart surgery centers.

Areas for improvement
Participation in external databases would help NMMC to improve evaluation/monitoring activities, to make the quality improvement measures more effective.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**2**

Follow-up conclusion

NMMC did not participate regularly in any external database. There were occasions were single cardiologists or services participated in data provision to European cardiac registry.

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FUNCTION: PREVENTION AND CONTROL OF INFECTIONS (PCI)

Follow-up Evaluation Highlights

A comprehensive infection control program (ICP) has been established at NMMC. The Infection Control Committee, consisting of qualified and experienced members, coordinates this program. In order to minimize the incidence of nosocomial infections at NMMC, modern techniques and materials for disinfection and sterilization are used. The committee developed numerous guidelines on appropriate infection control practices. The Infection Control Committee identifies sites from which specimens are to be collected and the frequency of collection. Nosocomial infection risks, rates and trends are tracked through computerized databases. The Infection Control Committee develops or modifies its strategies based on the acquired data on rates, trends and susceptibility of infection. The results of infection control monitoring are regularly presented to staff during presentations, educational sessions, and via printed reports available for all staff members. The Infection Control Committee provides continuous education for nurses, aides, residents/fellows and also orientation for nurses toward infection control practices prior to employment at NMMC. All staff at NMMC is oriented to the policies, procedures, and practices of the ICP during regular presentations and educational sessions and on new infection control policies and procedures and significant trends in infection data at monthly or specially organized presentations.

The following measures are recommended to improve the infection control practices at NMMC:

- Renovate the central sterilization department to correspond to recent standards and make it possible to achieve sterilization within the area;
- Establish better ventilation system in OR and special ICU ward for communicable diseases;
- Establish a filter and procedures to restrict the movement of staff to and from the OR during surgery;
- Create guidelines for a number of practices and services;
- Motivate self-control and control by peers to support appropriate infection control practices;
- Track the rates of all nosocomial infections and improve the recording of clinical manifestations of nosocomial infections;
- Organize special presentations of infection monitoring results for nurses;
- Organize structured education on infection prevention for patients and family members;
- Establish a formal, structured process of staff orientation on infection control practices prior to employment at NMMC.

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PREVENTION AND CONTROL OF INFECTIONS

Standard PCI.1:

The organization designs and implements a coordinated program to reduce the risks of nosocomial infections in patients and health care workers.

Measurable element:

1. There is a program to reduce the risk of nosocomial infections in patients and health care workers.

Changes

As compared to the baseline survey in 2000, the infection control activities have become much more organized and well coordinated. An Infection Control Committee has been established (see Standard PCI 6). There is a comprehensive infection control program (ICP) at NMMC that involves patients and health care workers. The program was developed and implemented by the Infection Control Committee. There is a written plan for the program.

The program establishes a control over all procedures and practices to ensure that rules of asepsis and antiseptics are not violated and aims to reduce the risk of nosocomial infection in patients at NMMC. A complex of procedures is undertaken for disinfection and sterilization with materials that correspond to current standards. Preventive antibiotics are used perioperatively and postoperatively. One major improvement is that materials and techniques used for sterilization and disinfection correspond to recent standards. In addition, health care workers at NMMC take a monthly swab test from their noses, which reveals whether or not they are infectious. If a worker is infectious, he or she is treated and tested again after treatment. The infected health care worker is notified by epidemiologist to take necessary precautions to avoid the transmission of infection to patients (e.g. wear mask in case of nasal infection).

An improvement was noted during last years in protection of health care workers from nosocomial infections. All workers that have contact with blood are vaccinated for hepatitis B and notified to wear eyeglasses and gloves during invasive procedures. All patients undergo immune tests for HIV, hepatitis B and C, syphilis, and brucellosis. The medical staff is notified if the patient has an infection. In addition, the sterilizing group is notified and may add specific procedures depending on the infectious pathogen (e.g. perform specific disinfection before sterilization).

Patients that have communicable diseases are isolated in a specific single-room ward in the ICU. The staff is notified that the patient has a communicable disease. The patient is also notified and his or her movements are limited within the room. According to the ICP, there are special orders/requirements concerning children under 2 years of age and their caregivers, and people who come from areas where malaria is endemic.

The patients in the ICU now consume only food provided by the ICU, where there is strict control over quality of food, expiratory dates, and storage in sterilized refrigerators.

Areas for improvement

The OR needs a more powerful ventilation system to change air 25 times per hour instead of 8-10 times per hour which it does currently. Although there is a special area for care of the ICU patients with communicable diseases, the room needs a separate ventilation system. There is no

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filter for the OR that restricts and controls the movement of staff to and from the OR during surgery. It should be emphasized that personal practice may always deviate from appropriate infection control practice. This is difficult to control; therefore much effort should be made to tackle the human factor in preventing the risk of nosocomial infections.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**4**

Follow-up conclusion
The infection control program (ICP) at NMMC is comprehensive and encompasses many policies, procedures and activities developed to prevent risks of nosocomial infections in patients and health care workers.

Standard PCI.1.1:

All patient, staff, and visitor areas of the organization are included in the infection control program.

Measurable element:
1. All areas of the organization are included in the infection control program.

Changes
There are no major changes compared to the baseline survey in 2000, the infection control activities are oriented mostly toward areas where patient care is provided. Recently several new policies/ regulations were developed to prevent the spread of infection from other areas (waiting rooms): forbidding visitors to carry food to the ICU, providing disinfection soap for visitors near wards, etc..

Areas for improvement
The infection control activities need improvement and additional provisions in the areas where patient care is not provided.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**3**

Follow-up conclusion
The infection control program at NMMC is mainly focused on the areas of the organization where patient care is provided (ICU, operating rooms, catheterization laboratory, laboratories, wards and areas connecting them). The cleaning of those areas is specified (solutions, frequency). Infection control committee members collect specimens from those areas with defined frequency (see Standard PCI 5). Other areas of the hospital such as waiting rooms, staff offices, etc. are not included in the infection control program. A limited number of regulations were accepted for other areas of the hospital.

Standard PCI.2:

The organization establishes the focus on the nosocomial infection prevention and reduction program.

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Measurable element:

1. The organization has established the focus of the program to prevent or reduce the incidence of nosocomial infections.
2. Respiratory tract infections are included as appropriate to the organization.
4. Intravascular invasive devices are included as appropriate to the organization.
5. Surgical wounds are included as appropriate to the organization.

Changes

There is improvement in development of new guidelines and policies/procedures such as guidelines for intravascular catheter (now catheters are more frequently changed based on the statistics). Respiratory tract infections (pneumonia mainly caused by pseudomonas) at NMMC have dramatically decreased over 5 years (active measures were carried out against pseudomonas). Infection Control Committee members establish the focus of current preventive measures based on the regular analysis of statistics of prevalent microorganisms. This focus can be changed over time and upon emergence of new problems (new strains of bacteria, drug resistance, etc.). A special database for wound infection was recently created.

Areas for improvement

No major limitations are present in this standard.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 4	**4**	**4**
Measurable Element 5	**4**	**4**

Follow-up conclusion

In order to minimize the incidence of nosocomial infections, the organization has established the infections, infection sites and associated devices that the ICP should focus on. The NMMC ICP includes measures and efforts to prevent surgical wound and respiratory tract infections. Intravascular invasive devices such as catheters are also the focus of ICP efforts.

Standard PCI.3:

The organization identifies the procedures and processes associated with the risk of infection and implements strategies to reduce infection risk.

Measurable element:

1. The organization has identified those processes associated with infection risk and implemented strategies to reduce infection risk in those processes.
2. Equipment cleaning and sterilization are included as appropriate to the organization.
3. Laundry and linen management are included as appropriate to the organization.
4. Disposal of infectious waste and body fluids is included as appropriate to the organization.
5. The handling and disposal of blood and blood components are included as appropriate to the organization.
6. Kitchen sanitation and food preparation and handling are included as appropriate to the organization.

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7. Operation of the mortuary and post-mortem area are included as appropriate to the organization.
8. Disposal of sharps and needles is included as appropriate to the organization.
9. Separation of patients with communicable diseases from patients and staff who are at greater risk due to immunosuppression or other reasons.
10. The management of the hemorrhagic patients is included as appropriate to the organization.

Changes

The sterilization materials and techniques in all services have improved dramatically. Equipment cleaning and sterilization are accomplished using modern techniques and materials that have been identified by the Infection Control Committee.

Since the baseline survey, the blood bank department was established at NMMC. The blood bank performs regular quality control of its activities, including periodical culture testing of the used bags. Culture tests of blood components are routinely performed for patients with post-transfusion reactions. All donors pass immune tests.

Closed shelves were constructed in the laundry facility to store washed linen. At least monthly culture tests are performed for linen to control the quality of laundry.

A recent achievement of the center is the dedication of a special room in the ICU for patients with communicable diseases. The patient in the ward is notified and his movements are limited within the room if he has a communicable disease.

In terms of disposal of infectious waste, body fluids, blood products and needles and sharps, no changes have occurred during recent years. A special procedure was established to disinfect some of the sharps used during surgery.

After 2000 a kitchen was established at NMMC where food is prepared for staff and visitors. The kitchen is in a separate building. The coordination of infection control in other ward kitchens, used only for handling and heating food, became much more organized (special procedures were established, such as daily disinfection of refrigerators).

Areas for improvement

The central sterilization department needs renovation to correspond to recent standards and make it possible to achieve sterilization within the area. The special room dedicated at the ICU for patients with communicable diseases needs a separate ventilation system. The area, preparation and handling of food in the kitchen at NMMC need improvement.

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	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**
Measurable Element 4	**3**	**3**
Measurable Element 5	**4**	**4**
Measurable Element 6	**4**	**4**
Measurable Element 7	**N/A**	**N/A**
Measurable Element 8	**4**	**4**
Measurable Element 9	**Not evaluated**	**4**
Measurable Element 10	**N/A**	**N/A**

Follow-up conclusion

The Infection Control Committee identified the processes and procedures that may pose a high risk for infection development. Procedures were collaboratively developed and established to minimize the risk of infection. Modern techniques of equipment cleaning, disinfection, and sterilization are used at NMMC. The disposal of infectious waste, body fluids, blood, blood components, sharps and needles is accomplished at NMMC by an outside institution called "Armenia" crematorium center. Established procedures exist for laundry and linen management. Patients with communicable diseases are isolated in a special room in the ICU and special regulations exist to prevent spread of infection in wards. There are established policies for the food provided to the ICU patients and for sanitation of kitchens designed for handling the food in the ICU and wards.

Standard PCI.4:

Gloves, mask, soap, and disinfectants are available and used correctly when required.

Measurable element:

1. The organization identifies those situations for which gloves and/or masks are required.

2. The organization identifies those areas where hand washing and disinfecting procedures are required.

Changes

As compared to the baseline survey, the education of staff on appropriate infection control practices became more coordinated and well organized. Several guidelines on infection control practices were prepared for different procedures and services at NMMC. Guidelines were developed for a significant number of procedures (using eyeglasses in the OR and catheterization laboratory, using masks in the OR, using soap in the wards, etc.). The staff members, mainly nurses, aids, and residents, have been educated on established procedures.

Areas for improvement

There is still a need to prepare guidelines for a number of practices and services. The human factor significantly impacts infection control practices. In these terms, the role of self-control and control by peers may support the appropriate infection control practices.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
NMMC has identified situations for which gloves and/or masks, hand washing, and disinfecting procedures are required.

Standard PCI.5:

Cultures are routinely obtained from designed sites in the organization associated with significant infection risk.

Measurable element:
1. The organization identifies those sites from which specimens are to be collected and the frequency of the collection from each site.
2. Specimens are routinely collected.

Changes
The coordination of specimen collection has improved significantly over last 5 years. At baseline the specimen collection was done mainly by SES, but now the activities are carried out by the Infection Control Committee. Committee members identify the sites with high incidence of infection where specimens are to be collected, and define the frequency of collection. However, upon emergence of new infections, new sites may be added and the frequency changed. The quality of bacteriology laboratory (Infection hospital) performing the specimen analysis has improved during recent years. The quality of supplied materials, and the experience and qualification of laboratory staff has improved significantly.

Areas for improvement
No major limitations exist in this field.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
The Infection control committee identifies those sites from which specimens are to be collected as well as the frequency of the collection. Upon emergence of new infections the Infection Control Committee member may collect specimens from additional sites that they feel are likely to harbor infection.

Standard PCI.6:

One or more individuals oversee all infection control activities.

Measurable element:
1. One or more individuals oversee the infection control program.
2. The individuals are qualified for the scope and complexity of the program.

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Changes

As compared to 2000, significant improvement was noted in the coordination of the infection control program. The Infection Control Committee was formed by qualified and experienced members. The Infection Control Committee includes 4 members: leading surgeon, junior surgeon, epidemiologist, and epidemiological nurse. Responsibilities of each member of the Infection Control Committee have been described in the Infection control program.

Areas for improvement

No major limitations exist in this field.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**
Measurable Element 2	**2**	**4**

Follow-up conclusion

Infection control practices are overseen by the Infection Control Committee (a group of 4 people). Infection Control Committee members are qualified and experienced in overseeing infection control at NMMC.

Standard PCI.8:

Coordination of infection control activities involves medicine, nursing, and others as appropriate to the organization.

Measurable element:

1. Coordination of infection control activities involves medicine.

2. Coordination of infection control activities involves nursing.

Changes

As compared to 2000 no major changes exist.

Areas for improvement

One of the limitations is that nurses' involvement in ICP activities is less than physicians' involvement.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion

Medical staff including physicians, nurses, and residents/fellows is involved in infection control activities at NMMC.

Standard PCI.9:

The infection control program is based on current scientific knowledge, accepted practice guidelines, and applicable laws and regulations.

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Measurable element:
1. The infection control program is based on current scientific knowledge.
2. The infection control program is based on accepted practice guidelines.
3. The infection control program is based on applicable laws and regulations.

Changes
As compared to 2000, the major improvement is development of infection control practice guidelines. During the past four years Infection Control Committee members developed numerous guidelines (e.g. instrument sterilization, equipment disinfection, sample-taking, etc.) at NMMC using accepted guidelines and adapting them to local needs.

In 2000, the infection control practices at hospitals were based on laws and regulations. However, these laws and regulations were terminated and new ones have not yet been accepted.

Areas for improvement
There is still a need for developing guidelines for some services and practices at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**1**	**3**
Measurable Element 3	**4**	**N/A**

Follow-up conclusion
The ICP at NMMC is based on current scientific knowledge and accepted practice guidelines.

Standard PCI.10:
Organization information management systems support the infection control program.

Measurable element:
1. Information management systems support the infection control program.

Changes
As compared to the baseline survey, significant improvement was noted in the information management systems at NMMC (see Standard PCI 11.1). Bacteriology and wound infection databases were developed.

Areas for improvement
No major limitations exist in this field.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion
The infection control activities carried out by the Committee are supported by information management systems at NMMC.

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Standard PCI.11:

The infection control process is integrated with the organization's overall program for quality management and improvement.

Measurable element:
1. Infection control activities are integrated into the organization's quality management and improvement program.

Changes
As compared to the baseline survey, the major change is the quality assurance program functioning at NMMC since 2001. Improvement was noted in the coordination of infection control practices and integration into all spheres of institution.

Areas for improvement
No major limitations exist in this field.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**4**

Follow-up conclusion
NMMC have a formal quality management and improvement program. The infection control program is integrated into all processes of patient care. Necessary measures were taken for risk reduction and assurance of quality of care.

Standard PCI. 11.1:

The organization tracks infection risks, infection rates, and trends in nosocomial infections.

Measurable element:
1. Nosocomial infection risks are tracked.
2. Nosocomial infection rates are tracked.
3. Nosocomial infection trends are tracked.

Changes
As compared to the baseline survey, significant improvement was noted in this field. The data on infection rates and trends has been stored in computerized databases: bacteriological database containing data on cultures taken from patients (serology and susceptibility data), database of surgical wound infections, and surgical database. The data is the primary tool used for making relevant decisions. Aggregating, analyzing, and presenting data to staff on a regular basis is also a major improvement.

Areas for improvement
The clinical manifestations of nosocomial infections are not well described. The rates of other than surgical wound infections have no good estimates at NMMC (surgical database).

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**4**	**4**

Follow-up conclusion
Nosocomial infection risks are tracked at NMMC with the help of computerized databases. Hospital-acquired surgical wound rates are calculated on regular basis. The trends of nosocomial infections are evaluated based on the acquired data.

Standard PCI.11.3:

The organization uses risk, rate, and trend information to design or modify processes to reduce nosocomial infections to the lowest possible level.

Measurable element:
1. Processes are redesigned based on risk, rate and trend data and information.
2. Processes are redesigned to reduce infection risk to the lowest levels possible.

Changes
As compared to the baseline survey, bacteriology and wound infection databases were developed that allow regular data monitoring, analysis, and thus makes it possible to redesign the ICP. For example, prophylactic antibiotic therapy regimes have been modified based on these data. The spectra of used antibiotics has become much broader in recent years.

Areas for improvement
No major limitations exist in this field.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
Infection control activities are redesigned based on risk, rate and trend data and information aiming to reduce infection risk.

Standard PCI.11.4:

The organization compares its infection control rates with other organizations through comparative databases.

Measurable element:
1. Infection control rates are compared to other organizations' rates.

Changes
No major changes were noted in this field. Informally, the clinic started to compare wound infection rates at NMMC with data presented by other hospitals.

Areas for improvement

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The major limitation is the absence of comparative databases between NMMC and other prominent clinics. The quality of data on the rates of nosocomial infections (other than surgical wound infection) needs improvement.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**2**

Follow-up conclusion

NMMC does not have comparative databases with other organizations, however compares its infection rates with available data in articles and publications. Besides, Committee members informally compare the rates of NMMC with those at St. Vincent's Hospital in the United States.

Standard PCI.11.5:

The results of infection monitoring in the organization are regularly communicated to staff, doctors and management.

Measurable element:

1. Monitoring results are communicated to the medical staff.
2. Monitoring results are communicated to nursing staff.
3. Monitoring results are communicated to management.

Change

The communication of monitoring results to the staff has greatly improved since 2000. The results of nosocomial infections monitoring at NMMC are communicated to the medical staff on a regular basis by an Infection Committee member (epidemiologist). She regularly (monthly) presents the statistics of serology and susceptibility test results, trends, and the overview of the committee's strategies. Medical, nursing and administrative staff can regularly participate in presentations. Besides oral presentations, the monthly statistics are visualized in the form of reports (tables and graphs) displayed on the announcement desk, where medical, nursing and administrative staff can read them. The summary of infection control data is also communicated and explained to the NMMC nursing staff during educational sessions organized regularly and prior to employment at NMMC (applicants for vacant nurse positions at NMMC).

Areas for improvement

The communication of monitoring results to nursing staff has room for improvement. Participation of nurses in regular presentations of monitoring results at NMMC can be increased by motivating them to participate.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**4**
Measurable Element 2	**2**	**3**
Measurable Element 3	**4**	**4**

Follow-up conclusion

Monitoring results (monthly statistics) from the ICP are communicated to all medical staff during conferences/presentations and displayed prominently for all staff members. Monitoring results are also communicated to nursing staff, and are available to NMMC management.

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Standard PCI.11.6:

The organization reports information on infections to appropriate external public health agencies.

Measurable element:

1. Infection control results are reported to public health agencies as required.

Changes

No major changes in this area.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**N/A**	**N/A**

Follow-up conclusion

Public health agencies in Armenia do not require that data about infection control results be reported.

Standard PCI.12:

The organization provides education on infection control practices to staff, doctors, patients, and as appropriate, family and other care givers.

Measurable element:

1. The organization provides education about infection control program.
2. Medical, nursing and other professional staff are included in the program.
3. Patients and families are included when appropriate to the patient's needs and condition.

Changes

The applied practice of organizing educational sessions on infection control practices for nurses, aides, and residents/fellows can be considered as a major improvement. An Infection Control Committee member (epidemiologist) provides information and education about the infection control practices. Regularly (monthly) special sessions are organized for communication of data on infection to the staff. In addition, at least twice a year, the epidemiologist provides continuous education for nurses, aides, and residents/fellows. The infection control topics include asepsis and antiseptics, infectious diseases, ICP policies and strategies. The short summary of topics is displayed on desks after the lectures for other staff members. Education is also provided for nurses during postgraduate training prior to employment at NMMC.

Areas for improvement

There is no structured education for medical staff except the monthly presentations of infection control statistics. Patient education is disjointed and not well organized. Patients and families need structured and organized education on some topics such as wound care.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**2**	**4**
Measurable Element 3	**4***	**3**

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Follow-up conclusion
NMMC provides continuous education about the infection control program for medical, nursing and other professional staff. Patients and families are educated on some selective infection control topics.

Standard PCI.12.1:

All staff receives an orientation to the organization's infection control program.

Measurable element:
1. All staff is oriented to the policies, procedures, and practices of the infection control program.

Changes
As compared to 2000, there is much better orientation of staff. The orientation is provided by an Infection Control Committee member during regular monthly presentations or specially allocated sessions to address new policies and procedures. Nursing staff is also oriented to ICP policies during educational sessions. At the baseline, the orientation varied throughout departments, but now it has become more equally dispersed, taking into account the differences in information needed by different staff members. There is also improvement in the orientation of nurses prior to employment at NMMC.

Areas for improvement
There is no formal orientation for staff (except nurses) for infection control practices prior to employment at NMMC. Medical staff receives more detailed orientation than nursing staff.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**4**

Follow-up conclusion
All staff at NMMC is oriented to the policies, procedures, and practices of the infection control program. The orientation is formal, regular and is based on what a staff member needs to know in order to carry out his or her daily practice while minimizing the risk of infection.

Standard PCI.12.2:

All staff is educated in infection control when new policies are implemented and when significant trends are noted in surveillance data.

Measurable element:
1. Periodic staff education includes new policies and procedures.
2. Periodic staff education is in response to significant trends in infection data.

Changes
As compared to 2000, there is significant improvement in educating and informing staff about new policies and procedures. Staff at NMMC is educated regarding new policies and procedures related to the ICP during monthly presentations and educational sessions for nurses and aides. Any observed trends in infection data are conveyed to the staff during these sessions. Besides regular presentations of infection data, specially allocated sessions are organized to present the significant trends in infection data.

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Areas for improvement
No major limitations exist in this field.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**4**
Measurable Element 2	**1**	**4**

Follow-up conclusion
Periodic staff education includes new policies and procedures and is carried out in response to significant trends in infection data.

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FUNCTION: QUALITY MANAGEMENT AND IMPROVEMENT (QMI)

Follow-up evaluation highlights

A collaborative "Quality Assurance" project (venture initiative of American University of Armenia and Nork-Marash Medical center) has functioned at NMMC since 2001. Managerial bodies (Hospital board and Medical board) responsible for shaping quality assurance activities were created. However, the current quality assurance activities are more problem driven than planned. Moreover, the quality assurance activities are not very evenly distributed throughout the institution, reflecting the priorities of clinical and managerial leadership. The quality improvement activities do not necessarily follow the sequence of basic steps. The "Quality Assurance" project coordinators evaluated different indicators in various departments, however few of the suggested recommendations were implemented.

An improvement in quality assurance activities was noted in infection control, laboratory tests, and in the blood bank. The use of blood products and quality control in laboratories has been monitored. Managerial indicators such as financial management and procurement of supplies have received more attention during the last few years. New accounting software allows for the production of reliable figures of incomes and expenditures at NMMC.

The infection control activities have improved significantly during the last five years. The EUROscore was calculated for all surgical patients, which allows the comparison of results of surgical procedures at NMMC with international data taking into account the patient case mix. Continuous quality control has been implemented in the laboratories of NMMC since the baseline survey. The quality of tests is checked with standard solutions and with defined frequency. Standard operating procedures (SOPs) were developed for all laboratory tests by laboratory staff and "Quality Assurance" project coordinators. The Blood bank at NMMC has a well established and regular quality control procedure that was developed based on the standards of the American Association of Blood Banks. NMMC recently contracted a US organization that provides NMMC with badges and measures the occupational exposure of staff exposed to ionizing radiation.

Since the baseline survey structured encounter forms (SEFs) were developed and implemented in the Adult and Pediatric cardiology clinics, and the catheterization laboratory. The completed forms are kept in the archive and a part of the form is entered into databases (Adult cardiology, Pediatric cardiology database). Several other databases were created in different service departments of NMMC (admission, bacteriology database, surgical, blood bank, catheterization laboratory databases). Thus, patient information may be extracted from different sources: computerized databases, SEFs, and patient history. The Medical board, with the help of "Quality Assurance" project coordinators, developed policies and procedures for providing patient data to external and internal users.

As a risk management initiative the "Incidence Report" form was developed and implemented in 2004. This form was created to address incidents that could alter the quality of patient care at NMMC.

An Inventory management department was created to coordinate the procurement, distribution, and monitoring of supplies. The personnel of the department monitors supplies daily to assure supplies are stocked to required levels. The data on procured and used supplies and materials are entered into a computerized database and monthly reports are submitted to the financial department.

The following measures are recommended to improve the QMI practices at NMMC:

- Develop a written "quality assurance" plan outlining activities on a quarterly or annual basis and follow-up of plan implementation;

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- Assure quality improvement activities that are all-inclusive and organization-wide (all services and departments);
- Provide activities that follow the quality monitoring cycle that has 5 sequential main steps: 1. Obtaining data on performance; 2. Pattern analysis; 3. Interpretation, which means advancing hypotheses that might explain the patterns observed; 4. Taking preventive, corrective, or promotive action based on the causal hypotheses; 5. Obtaining data on subsequent performance to determine what the consequences of the actions taken have been;
- Assign a person with enough authority or a group of people responsible for carrying out QMI activities;
- Create a single body (e.g. quality assurance committee) responsible for collecting, analyzing and reporting the institutional data and communicating QMI results to staff, or assign the responsibility to existing boards or committees;
- Hire a specialist (as a new position, or as a consultant) that may supervise and coordinate regular radiation control at NMMC (control over equipment, evaluation of radiation levels, evaluation of the condition of personal safety devices, equipment testing before use and regularly thereafter);
- Provide continuously badges and record occupational exposure for all staff members working with ionizing radiation;
- Make the archives (Adult cardiology clinic, general archive of patients' histories) well-organized and well-ordered;
- Develop a purchasing budget in the Inventory management department;
- Implement stricter cost-control measures over the expenses of all departments;
- Make requirements regarding the frequency of data analysis at NMMC for different services and types of data;
- Establish formal criteria and guidelines for patient assessment and monitoring actual performance based on the criteria and guidelines;
- Redesign the incidence reporting system at NMMC and develop other activities to manage the risk of patients, family members, and staff.

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QUALITY MANAGEMENT AND IMPROVEMENT

Standard QMI.1:

Those responsible for governing and leading the organization participate in planning and monitoring a quality management and improvement program.

Measurable element:
1. Those who govern and lead participate in planning and monitoring the quality management and improvement program.

Changes
Compared to the baseline survey, the formal "Quality Assurance" project was implemented as a joint venture between American University of Armenia and Nork-Marash medical center. Two governing bodies, the Medical and Hospital Boards, were created with assistance from "Quality Assurance" project coordinators. The Medical Board is responsible for quality assurance on the clinical level and the Hospital Board is responsible for quality assurance on the administrative and institutional level. A "Quality Assurance Committee" was organized within the Medical Board. The committee includes "Quality Assurance" project coordinators, a physician, a nurse, and the chief of staff.

Areas for improvement
Although NMMC has a quality management and improvement (QMI) program and bodies to shape those activities, they are not organization-wide and the planning of activities is not very effective. The principle of quality assurance is becoming incorporated, although not entirely, into NMMC operation. The Nursing Board failed to function and nursing participation in quality assurance activities is limited.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion
A "Quality Assurance" project has been functioning at NMMC since 2001. The Hospital and Medical Boards, responsible for shaping quality assurance activities at NMMC, were created. However, quality assurance activities are neither well planned nor evenly distributed throughout the organization.

Standard QMI.1.1:

The organization's clinical and managerial leaders collaborate to plan and carry out the quality management and improvement program.

Measurable element:
1. Clinical leaders participate to plan and carry out the quality management and improvement program.
2. Managerial leaders participate to plan and carry out the quality management and improvement program.

Changes

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Clinical leaders participate in discussing and planning quality assurance activities during regular Medical Board meetings. Some of the recommendations of the Medical Board are referred to the Hospital Board (superior governing body) for approval. The quality assurance activities on an institutional and administrative level are discussed and developed during Hospital Board meetings.

Areas for improvement
A main area of improvement would be a more active role of Medical and Hospital boards in planning and carrying out QMI.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**
Measurable Element 2	**2**	**3**

Follow-up conclusion
Clinical and managerial leaders of NMMC collaborate to plan and carry out the quality assurance project, with more initiative and activity from clinical leadership side.

Standard QMI.1.1.1:

There is a written plan for the organization wide quality management and improvement program.

Measurable element:
1. There is a written plan for the quality management and improvement program.

Changes
There is no written plan for quality assurance at NMCC. Few indicators are monitored on a regular basis and could be considered as planned. The "Quality Assurance" project coordinators attempted to write the plan for quality assurance activities. However, the plan was not approved or discussed by the managerial bodies of NMMC. The quality assurance activities at NMMC are mainly sporadic (not periodical), localized (not organization wide), and address existing or developing problems.

Areas for improvement
The planning of quality improvement activities has room for improvement. The activities are mainly carried out to solve existing and developing problems. For effective QMI activities managerial bodies of NMMC should develop a "quality assurance" plan that identifies quarterly and annual activities and plans follow-up after implementation. The plan should be all-inclusive and organization-wide (all services and departments).

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**1**

Follow-up conclusion
There is no written plan for the QMI program at NMMC.

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Standard QMI.1.1.2:

The program includes all components of the organization's quality monitoring and control activities, including risk management.

Measurable element:
1. The program includes all components of the organization's quality monitoring and control activities.

Changes
The efforts of the "Quality Assurance" project, as well as the activities organized by the Medical and Hospital Boards, are not organization-wide. The "Incidence Report" form was developed by the Medical Board and implemented in 2004. This form was created to address incidents that could alter the quality of patient care at NMMC. Thus, this form could be considered as an activity that may address risk management at NMMC.

Areas for improvement
Quality assurance activities are not evenly distributed at NMMC. Some services or departments receive more attention than others.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**

Follow-up conclusion
The QMI project has been functioning at NMMC since 2001. The managerial bodies responsible for quality assurance on managerial and clinical levels were organized and established. However, QMI activities at NMMC need to become organization-wide.

Standard QMI.1.3:

The leaders provide technological and other support to the quality management and improvement program.

Measurable element:
1. The leaders understand the technology and other support requirements for tracking and comparing monitoring results.
2. The leaders provide technology and support, consistent with the organization's resources, for tracking and comparing monitoring results.

Changes
The "Quality Assurance" project is not financed by NMMC but by an outside sponsor. It is questionable whether the Hospital Board would agree to accept staff responsible for quality improvement activities or to delegate the responsibilities to existing staff upon completion of the project. The center acquired technology based on its need and available funds. Both clinics (adult, pediatric) and some services (cath. lab, surgery department, blood bank, infection control) have computerized databases and individuals responsible for providing data entry and data analysis. A recent achievement of the center was that a network was created at NMMC that connected and linked several services. A new staff member was appointed at NMMC who is responsible for technological support.

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Areas for improvement
Not all technology needs are covered timely as the organization resources are limited.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**4***	**3**

Follow-up conclusion
Leaders at NMMC respond to staff and technological needs based on the current financial state of the institution.

Standard QMI.1.4:

The quality management and improvement program is coordinated, and program information is communicated to staff.

Measurable element:
1. The organization's quality management and improvement program is coordinated.
3. Information on the program is communicated to staff regularly.

Changes
QMI activities are coordinated by the Medical and Hospital Boards. A quality assurance committee was created within Medical Board, however it is not empowered to coordinate quality related activities at NMMC. The group is only responsible for facilitating the incidence reporting system. Some information on QMI programs and activities is provided through Board protocols. The discussed issues and decisions are recorded in protocols and placed on the announcement desks. Clinical quality issues are presented during Monday conferences and mortality and morbidity conferences. "Quality Assurance" project coordinators coordinate the monitoring and evaluation of quality indicators in several departments and report the results during Monday conferences or Board meetings. Department chiefs provide other quality related information orally to staff of the department.

Areas for improvement
There is no single body (e.g. quality assurance committee) responsible for the communication of QMI results to staff. There should be a written plan of activities per quarter or year, a committee responsible for carrying out those activities, and individuals responsible for evaluating the results of those activities.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**2**	**3**

Follow-up conclusion
The QMI efforts are coordinated by the Medical and Hospital Boards and by "Quality Assurance" project coordinators. Information is communicated through protocols of Board meetings, announcements, Monday conferences, and orally. There is no single body responsible for the communication of information on QMI to staff.

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Standard QMI.2:

The organization designs new and modified systems and processes according to quality improvement principles.

Measurable element:
1. Quality improvement principles and tools are applied to the design of new or modified processes.

Changes
Compared to baseline survey, the QMI efforts in some areas such as infection control and prevention could be evaluated as meeting the baseline principles of good process design.

Areas for improvement
According to Donabetian, quality improvement is a process that requires the completion of 5 main sequential steps (obtaining data on performance, doing pattern analysis, interpreting data, taking preventive or corrective action, and obtaining data on subsequent performance), where designing and modifying the processes of quality improvement is not the first step of the quality cycle. The conduct of initial steps have room for improvement at NMMC and that is why the designing new processes couldn't be satisfactory.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3***	**3**

Follow-up conclusion
The principles of quality improvement are slowly filtering into the center. However, quality activities that are close to satisfactory are practiced within a small number of services.

Standard QMI.2.2:

The organization sets expectations for how new and modified processes should operate.

Measurable element:
1. *Indicators are selected to measure how well the newly designed or redesigned process operates.*

Changes
No major changes exist.

Areas for improvement
The coordination and planning of QMI activities has room for improvement. The quality activities at NMMC should follow the main steps of quality improvement cycle.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3***	**2**

Follow-up conclusion

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There were few cases when NMMC evaluated indicators to measure the implemented change (SEFs were evaluated after their implementation, the waiting times were reevaluated after implementation of new system of scheduling).

Standard QMI.2.3:

The organization collects data to see if new and modified processes meet operational expectations.

Measurable element:
1. Indicator data used to evaluate the operation of the process.

Changes
The quantity and quality of data collected at NMMC has increased during the last few years and several databases were created. The "Quality Assurance" project coordinators evaluated different indicators in various departments.

Areas for improvement
The research conducted by "Quality Assurance" project coordinators was mainly the evaluation of the current state of processes. The recommendations made based on research results were generally not implemented.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Few examples exist when data was collected after implementing new or redesigning old processes (e.g. the modification process for leg-wound care based on the increase of leg-wound infection).

Standard QMI.3:

The organization's leaders identify key measures (indicators) to monitor the organization's clinical and managerial structures, processes, and outcomes.

Measurable element:
1. The leaders identify key measures to monitor clinical areas.
2. The leaders identify key measures to monitor managerial areas.

Changes
Key clinical indicators include monitoring of nosocomial infection, wound infection, radiology safety, quality of laboratory tests, blood and blood products, and health outcomes through mortality and morbidity conferences.

Areas for improvement
The indicators monitored at NMMC are very limited. There is no formal control over many activities and services at NMMC. Thus, quality monitoring is inconsistent and irregular.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3***	**3**
Measurable Element 2	**2***	**2**

Follow-up conclusion
Clinical leaders focus on several clinical areas and services. Primary focus is on the most important areas such as infection control, laboratory tests, blood bank, etc. Managerial indicators, such as financial measures, information about patients, the use of blood and blood products, quality checks at laboratories, and radiology safety, have also been monitored.

Standard QMI.3.1:
Clinical monitoring includes patient assessment.

Measurable element:
1. Clinical monitoring includes patient assessment.

Changes
SEFs were implemented at ambulatory clinics at NMMC, where the information that should be obtained from the patient is clearly defined.

Areas for improvement
There are no formally established standards or guidelines for patient assessment at NMMC. Clinical monitoring over patient assessment needs formally established criteria.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**3**

Follow-up conclusion
Patient assessment is an established process at NMMC, which is based on informal rules and SEFs. This process is guided by clinical managers and through medical rounds and peer reviews.

Standard QMI.3.2:
Clinical monitoring includes laboratory and radiology safety and quality control programs.

Measurable element:
1. Clinical monitoring includes laboratory and radiology safety and quality control programs.

Changes
Continuous quality control has been implemented in the laboratories of NMMC since the baseline survey. The quality of tests is checked with standard solutions with a defined frequency. Special quality control sheets are completed based on the results of the quality control tests. The test technique and materials are reviewed in cases where the results fall out of defined ranges. SOPs were developed for all laboratory tests by laboratory staff and "Quality Assurance" project coordinators. There is strict infection control over laboratories that is supervised by the Infection Control Committee.

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Quality control of radiology services at NMMC was previously conducted by the Republican Radiology Center (RRC). Currently, the role of RRC is only ceremonial. NMMC now has a contract with an USA organization that provides NMMC with badges and measures the occupational exposure of staff exposed to ionizing radiation. Staff members (catheterization laboratory) wear badges for three months in rotation and radiation exposure is calculated for each staff member. The "Quality Assurance" project coordinators developed polices for radiation safety at NMMC. However, those policies were not discussed at Medical or Hospital Board meetings.

Areas for improvement

The equipment used in the laboratories of NMMC needs to be upgraded. The biochemical analyzers used at NMMC have comparatively lower sensitivity and specificity and are not used in western developed countries.

It is possible to calculate the annual radiation exposure of staff based on a three-month level, however, it would only be estimation. Ideally, staff should wear badges at all times while in the catheterization laboratory. The x-ray laboratory staff also should wear badges. Radiation safety control at the center has room for improvement. There is no specialist (full-time position, or hired periodically as a consultant) that may monitor the equipment, evaluate the radiation level in the areas, and evaluate the condition of personal safety devices (lead aprons, thyroid shields, and eye-glasses). Lead aprons and other protective devices should be tested for defects before being used. The Joint Commission on Accreditation of Health Organizations (JCAHO) requires annual testing for defects and documentation of test results. Invasive and interventional cardiologists should consider the use of sterilizable ring badges to also monitor hand exposure. The radiation safety measures should be conducted on regular basis.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3***	**3**

Follow-up conclusion

The laboratories of NMMC have a well-established and regular process of quality control. However, the quality control measures and radiation safety in radiology services at NMMC (catheterization laboratories) are limited to the shielding of personnel and periodical monitoring of the occupational exposure.

Standard QMI.3.3:

Clinical monitoring includes surgical procedures.

Measurable element:

1. Clinical monitoring includes surgical procedures.

Changes

As compared to the baseline survey, the monitoring of nosocomial infections in surgical patients improved. The wound infection database was also created. A considerable improvement was that "Quality Assurance" project coordinators validated models to predict early hospital mortality. The best model (EUROscore) was selected. Currently, the EUROscore is calculated for all surgical patients, which allows the comparison of surgical procedure outcomes at NMMC with international data taking into account the patient case mix. Surgical procedures monitoring will

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enhance considerably with implementation of a comprehensive database, which was developed in the scope of AUA.

Areas for improvement
The surgical database currently in use has many flaws. The "Quality Assurance" project coordinators developed new surgical database, however, the database has not yet been implemented.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**4**

Follow-up conclusion
Surgical procedures are one of the main focuses of clinical monitoring at NMMC.

Standard QMI.3.4:
Clinical monitoring includes the use of antibiotics and other medications and medication errors.

Measurable element:
1. Clinical monitoring includes the use of antibiotics and other medications and medication errors.

Changes
There is an improvement in monitoring of antibiotics used based on sensitivity test results. The "Quality Assurance" project coordinators and pharmacology intern conducted a research study to evaluate the quality of antibiotic use and made recommendations that were presented and discussed with NMMC staff. The Incidence Report forms were created with hopes that medication errors could be identified, but they did not function as planned.

Areas for improvement
Aside form above mentioned there is no process of quantitative-indicator based evaluation of the quality of medication use and medication errors.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion
The use of antibiotics is monitored based on clinical rounds, peer review. The antibiotics are prescribed for preventive/curative reasons based on the microbial sensitivity patterns. There is very strict control over the use of narcotic drugs, which is regulated by special laws. The monitoring of medication errors is based mainly on clinical monitoring and peer review.

Standard QMI.3.5:
Clinical monitoring includes the use of anesthesia.

Measurable element:

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1. Clinical monitoring includes the use of anesthesia.

Changes
Since the baseline evaluation, the devices providing anesthesia were replaced with newer, more modern models. Technicians previously assisted anesthesiologists at NMMC. The anesthesiology nurses have replaced the technicians. The nurses had nursing education and repeatedly participated in continuous education provided for nurses. A new staff member, who passed a fellowship in cardiac anesthesiology, was admitted recently at NMMC yielding a decrease in anesthesiologist workload.

Areas for improvement
There are no well-established procedures at NMMC to monitor the use of anesthesia.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**

Follow-up conclusion
The use of anesthesia is a well-established process at NMMC. The medications, dosages, durations and other details of anesthesia are filled into special forms and attached into patient record. However, there are no formally founded procedures at NMMC to monitor the use of anesthesia.

Standard QMI.3.6:
Clinical monitoring includes the use of blood and blood products.

Measurable element:
1.Clinical monitoring includes the use of blood and blood products.

Changes
At the baseline survey NMMC used the services of Viola's blood bank. In-house blood bank services were established at NMMC in 2002. Regular quality related activities are held in the blood bank based on the standards of American Association of Blood Banks. Regularly, blood packages are sent to the bacteriology laboratory for sterility checks or back to the blood bank for measuring other defined indicators of quality. The standard operating procedures were developed for all procedures at the blood bank with the assistance of "Quality Assurance" project coordinators. Several guidelines were developed for staff dealing with blood products. The "Quality control in blood bank" journal was developed with the help of "Quality Assurance" project coordinators. A number of quality indicators are measured with defined frequency at the blood bank. Also, a database was created for used blood and blood components. A donor database was also created at NMMC. Recently, forms were created to record blood reactions. Those forms are completed by nurses and sent back to the blood bank.

Areas for improvement
Laboratories in western developed countries use laboratory equipment that have higher sensitivity and specificity and higher speed for immunology tests as compared to equipment currently in use at NMMC. The donors at NMMC are screened for antibodies of HIV (IFA) instead of antigens.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**4**

Follow-up conclusion
There are well-established and regular quality control procedures at the blood bank. Those procedures were developed based on the standards of the American Association of Blood Banks.

Standard QMI.3.7:

Clinical monitoring includes availability, content, and use of patient records.

Measurable element:
1.Clinical monitoring includes availability, content, and use of patient records.

Changes
Since the baseline survey, structured encounter forms (SEFs) were developed and implemented with the help of "Quality Assurance" project coordinators for the Adult and Pediatric cardiology clinics and the catheterization laboratory. These completed forms are kept in the archive and a part of the form is entered into databases (Adult cardiology and Pediatric cardiology database). Several other databases were created in different services of NMMC (admission, bacteriology database, surgical, blood bank, and catheterization laboratory databases). Thus, patient information may be extracted from different sources: computerized databases, SEFs, and patient history.
The Medical Board, with the help of "Quality Assurance" project coordinators, developed policies and procedures for providing patient data to external and internal users. Those policies are based on the patient rights. The Hospital Board approved the policies. Other forms were also developed.

Several studies were conducted by "Quality Assurance" project coordinators to evaluate the completeness and validity of medical records. Based on the study results the SEFs were redesigned.

Areas for improvement
The studies evaluating the completeness and validity of records defined many flaws in all sources of data recording. There is no process of continuous monitoring over the quality of recorded data. The archive of SEFs at the Adult cardiology clinic is very congested and could benefit from better shelves and drawers. The archive of patient histories of inhospital patients is also poorly managed. It is difficult and time-consuming to find a patient record in the archive.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**2**	**3**

Follow-up conclusion
There are different sources of patient information at NMMC. Those sources have several limitations regarding the completeness of information and its validity. Recently, policies and procedures for providing patient data to external and internal users were developed by NMMC.

Standard QMI.3.8:

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Clinical monitoring includes infection control, surveillance, and reporting.

Measurable element:
1.Clinical monitoring includes infection control, surveillance, and reporting.

Changes
As compared to the baseline survey, the infection control practices have improved significantly at NMMC (see Prevention and Control of Infection standards). The infection control committee was created which improved the coordination of infection control activities. The information on the samples taken from patients and their sensitivity data are entered into the bacteriology database. The data is analyzed on a regular basis and infection control strategies are developed or modified based on the statistics. The monthly statistics, activities of the committee, and strategic plans are presented to staff on a regular basis. Nurses and aids are regularly trained on appropriate infection control practices.

Areas for improvement
The bacteriology database has some flaws regarding the completeness of data and its quality.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**4**

Follow-up conclusion
Nosocomial infection control is one of the main focuses of clinical monitoring at NMMC.

Standard QMI.3.10:

Managerial monitoring includes the procurement of routinely required supplies and medications essential to meet patient needs.

Measurable element:
1.Managerial monitoring includes the procurement of routinely required supplies and medications essential to meet patient needs.

Changes
Compared to the baseline survey, the Inventory management department was created. Special computerized accounting software is being used at the department where the procurement and use of materials is recorded. There is a computer network shared among accountancy, the Inventory management department, and the cashier's office. Monthly reports on the items, numbers, and prices of used supplies and medications are submitted to the financial department.

The Inventory management department monitors the availability of supplies on a daily basis. The staff of the department inspects the local storehouses in each department to see whether any item is less that the minimum number of supplies set by department (the number is calculated as maximum daily number used). Otherwise, the nurses order necessary supplies by sending order forms; the inventory management personnel provide the supply with an exit form signed by two people. The monitoring of central storage occurs monthly and is completed by 4 people (inventory management, professional union personnel, accountant, and head nurse).

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Areas for improvement
The Inventory management department does not develop the purchasing budget, which will make the expenses more foreseeable. While the department is responsible for all material management, it is mandatory to implement stricter cost-control over the expenses. Currently, the hospital policy does not consider it necessary to calculate the used supplies and medications on a per patient basis. However, the policy may be changed in future.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion
The monitoring of supplies is done daily by the inventory management department, which conducts the procurement of necessary supplies. The data on procured and used supplies and materials are entered into a computerized database. The Inventory management department submits the reports on used supplies to the financial department monthly.

Standard QMI.3.11:
Managerial monitoring includes reporting of activities as required by law and regulation.

Measurable element:
1.Managerial monitoring includes reporting of activities as required by law and regulation.

Changes
No major changes.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion
There is a set of reports submitted by NMMC with defined frequency (staff statistics, financial statistics, clinical statistics, etc) to governmental organizations, which is required by Armenian laws.

Standard QMI.3.12:
Managerial monitoring includes risk management.

Measurable element:
1.Managerial monitoring includes risk management.

Changes
The "Incidence Report" form was developed at NMMC by the Medical Board and approved by the Hospital Board. Staff training on the policies and procedures of incident report was conducted by "Quality Assurance" project coordinators. The aims of the incident report is risk reduction for

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patients by means of peer-review and focus on faulty systems rather then persons involved in the incidence.

Areas for improvement
The incidence reporting system does not function well. There have been several cases when it was used as a grievance form by personnel at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**

Follow-up conclusion
Incidence reporting was implemented as an attempt to control risk management.

Standard QMI.3.14:
Managerial monitoring includes patient and family expectation and satisfaction.

Measurable element:
1.Managerial monitoring includes patient and family expectation and satisfaction.

Changes
Several patient satisfaction surveys were conducted at NMMC. The ANP "Marketing" subproject coordinator conducted a general satisfaction survey for all services at NMMC. Patient satisfaction rate was very high. A patient "Discharge Questionnaire" has been developed by "Quality Assurance" project coordinators to continuously evaluate the satisfaction of inpatients. Again, the satisfaction of inhospital patients was very high. A grievance form was implemented at the Adult cardiology clinic to allow unsatisfied patients to express their criticism.

Areas for improvement
The coordination of continuous collection of "Discharge Questionnaire" data has room for improvement. The recommendations to improve services based on suggestions of patients are generally not being met because of financial constraints.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**4**

Follow-up conclusion
Several satisfaction surveys were conducted during recent evaluations that revealed a high level of satisfaction among patients treated at NMMC.

Standard QMI.3.16:
Managerial monitoring includes patient demographics and diagnoses.

Measurable element:
1.Managerial monitoring includes patient demographics and diagnoses.

Changes

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Recently, an admission database was developed at NMMC that allows collection of demographic data and diagnoses of all patients admitted to inhospital departments of NMMC. The demographic data and diagnoses of outpatients are entered into Pediatric and Adult cardiology databases.

Areas for improvement
No major limitations.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**4**

Follow-up conclusion
Patient demographic data and diagnoses are collected by the admission database.

Standard QMI.3.17:
Managerial monitoring includes financial management.

Measurable element:
1.Managerial monitoring includes financial management.

Changes
In 2002, accounting software (1C accounting) had been implemented in the Accountancy department. The software was customized to meet the needs of NMMC. A network was created between accountancy, the inventory management department, and the cashier's office. The current accounting system is designed to assist in meeting general accounting requirements, preparing financial statements for state authorities, calculating costs per department, and calculating costs of providing core services. The system also allows calculation of costs on a per-patient basis. However, the center does not see it as necessary to have that data. The software is regularly updated. The system makes it possible to accurately identify the figures of incomes and expenditures.

Following ANP recommendations a position of financial manager was established at NMMC in 2002. As a result, financial management and coordination were improved at the center. A yearly budgeting was introduced by financial management, which was also an improvement as compared to the baseline survey.

Areas for improvement
Stricter cost-control should be integrated into the total management process to serve as a motivation tool. Financial management could be more effective if it operated on the basis of individual departments carrying the responsibility of their expenditures.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion
The accountancy department implemented software that allows calculating reliable figures of incomes and expenditures. The financial manager carries out annual budgeting.

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Standard QMI.3.18:

Managerial monitoring includes the surveillance, control, and prevention of events that jeopardize the safety of patients, families, and staff.

Measurable element:
1.Managerial monitoring includes the surveillance, control, and prevention of events that jeopardize the safety of patients, families, and staff.

Changes
The incidence reporting partially addresses the surveillance, control, and prevention of events that affect the safety of patients. The "Patient advocacy group" was created recently to support patients and their families.

Areas for improvement
Incidence reporting is aims to control the quality of patient care. There is no formal process designed specifically for controlling safety of families and staff.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**

Follow-up conclusion
The Hospital Board and management of NMMC carry out some activities for the surveillance, control, and prevention of events jeopardizing the safety of patients, families, and staff.

Standard QMI.3.19:

Data collection supports further study of areas targeted for study and improvement.

Measurable element:
1.Data collection is used to study areas targeted for improvement.

Changes
During the last years, the "Quality assurance" subproject team implemented this approach: numerous studies were carried out to address the problems revealed by data collection at the center. There are some signs showing that this task will be at least partially assumed by the NMMC staff upon completion of ANP. However, this assumption is questionable unless some staff member will be designated formally to carry the responsibility of initiating studies based on data collection at the center.

Areas for improvement
It would be more efficient if center assigns a person responsible for data analysis, and undertaking actions based on collected data.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3***	**3**

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Follow-up conclusion
Few areas in NMMC targeted for improvement collect, analyze data to evaluate improvements and /or undertake further actions.

Standard QMI.3.20:

Data collection supports evaluation of the effectiveness of implemented improvements.

Measurable element:
1.Data collection is used to monitor and evaluate the effectiveness of improvements.

Changes
No major changes. Evaluating of SEFs and redesigning those further, modifying infection control practices based on monthly statistics are examples of monitoring and evaluating implemented changes.

Areas for improvement
Few examples exist where the process of improvement followed the sequence of main steps outlined in the quality cycle. A person or a group should be assigned the responsibility for QA initiative to reach the improvement.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3**	**3**

Follow-up conclusion
There are examples where data was used to evaluate the effectiveness of improvements (e.g. infection control activities when the data supports the implemented new strategy). However the lack of staff member specially designate do coordinate QA activities does not allow to fully implement this approach.

Standard QMI.4:

Individuals with appropriate experience, knowledge, and skills systematically aggregate and analyze data in the organization.

Measurable element:
1. *Data are aggregated, analyzed, and transformed into useful information.*
2. *Individuals with appropriate clinical or managerial experience, knowledge, and skills participate in the process.*

Changes
Data are entered into computerized databases and analyzed by computer operators at the clinics and the surgical department. Training of new operators is conducted by the staff of particular departments, operators of other clinics, and their predecessors. They are responsible for entering the patient data into existing computerized databases and providing general analysis. The existing databases were created by clinical personnel of the center (not professionals) who had some experience in that field. Recently, a network was created at NMMC connecting some departments and services and a network administrator was hired by NMMC. The surgical and catheterization databases were developed by "Quality assurance" project members and will be implemented soon.

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Areas for improvement
The process of data analysis is not systematic, data can produce much more useful information. The person (statistician) who is responsible for providing statistical analyses has no computer. She is doing very simple calculations based on her journals and patient's histories. She is mainly responsible for submitting the reports to governmental organizations. There is no single body responsible for collecting, analyzing, and reporting institutional data. Each department collects some data locally. For some years international program coordinators aggregated the information.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**4***	**3**

Follow-up conclusion
Various types of data are collected and analyzed at NMMC. Individuals who participate in the collection, analysis, and transformation of data mainly have the corresponding education and/or experience. However the scope of data used is limited.

Standard QMI.4.1:

The frequency of data analysis is appropriate to the process being studied and meets organization requirements.

Measurable element:
1. *The frequency of data analysis is appropriate to the process under study.*
2. *The frequency of data analysis meets organization requirements.*

Changes
No major changes.

Areas for improvement
The frequency of data analysis for several processes at NMMC is satisfactory, but there are processes where the quality of acquired data and the frequency of collection has room for improvement. There is no policy at NMMC that defines the frequency of data analysis. However, in some services there are informal policies for frequency of data analysis. Moreover, there are mandatory obligations to regularly provide data that are defined by law.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**
Measurable Element 2	**3**	**3**

Follow-up conclusion
There are several services where the frequency of data analysis is satisfactory. There are no formal organizational requirements regarding the frequency of data analysis at NMMC, but there are informal policies on some data analysis in several departments and services. Armenian legislation requires medical institutions to submit some data with a defined frequency.

Standard QMI.4.2:

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Data are intensively assessed when significant unexpected events and undesirable trends and variation occur.

Measurable element:

1. *Intense analysis of data takes place when significant adverse levels, patterns, or trends occur.*
2. *The organization has established which events are significant.*
3. *The organization has established the process for intense analysis of these events.*
4. *Significant events are analyzed when they occur.*

Changes

Adverse events are initiating discussion and resulting in decisions by the Medical and Hospital boards. In cases of events, an "Incidence Report" form is to be completed. Some events (e.g. infections) are topics for discussion at Monday conferences and each case of mortality is an issue for discussion during mortality and morbidity conferences. Furthermore, for each case of mortality an "Incidence Report" form should be completed.

Areas for improvement

The organization should clearly define which events are significant and where/how to discuss them. There is no well-established process of intense analysis of those events. An established process is in place only for mortality cases. The "Incidence Report" form was developed, but the events for which it should be initiated are not defined (except inhospital deaths). Also, the way the form functions at NMMC does not address its main purpose.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**3**	**3**
Measurable Element 3	**3**	**3**
Measurable Element 4	**4**	**4**

Follow-up conclusion

Adverse events became the issue of discussion by managerial bodies at NMMC. All mortality cases are discussed during mortality and morbidity conferences and incident reports are filled for them. However, there is no well-defined list of significant events at NMMC and established processes to analyze those events. The process of incidence reporting partially meets those criteria, but it fails to function properly.

Standard QMI.4.3:

The analysis process includes comparisons internally, with other organizations when available, and with scientific standards and desirable practices.

Measurable element:

1. *Comparisons are made over time within organization.*
2. *Comparisons are made with similar organizations when possible.*
3. *Comparisons are made with standards when appropriate.*

Changes

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A considerable improvement was that "Quality assurance" project coordinators validated the models to predict early hospital mortality. The model (EUROscore) that had better predictive ability for NMMC patients was selected. Currently, the EUROscore is calculated for all surgical patients. The EUROscore allows NMMC to compare short and long-term surgery results with similar western surgical centers taking into account the patient case mix.

A recently created wound infection database allows long-term comparisons with similar organizations.

"Quality Assurance" project coordinators conducted research to evaluate the care provided at NMMC based on well-established standards. Following the studies/comparisons made by QA project, the ideas of quality improvement are filtering into clinical life at NMMC. Clinicians in their daily practice often refer to established standards of care and evidence-based guidelines.

Areas for improvement

The data acquired identified that some services within the center have room for improvement. The catheterization laboratory is one of the major services at NMMC but it does not yet have an appropriate database (in the process of development). Hopefully, the future database will allow comparing the quality of provided services with similar organizations. There is no single database providing information on the number of patients who developed nosocomial infections at NMMC. It would be very valuable if NMMC joined some databases (to compare its rates with other organizations). A very limited number of guidelines and standards are functioning at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**4***	**3**
Measurable Element 3	**4***	**3**

Follow-up conclusion

Several important indicators at NMMC such as mortality rates and wound infection rates are compared to rates at similar organizations. There is an increasing effort at NMMC to provide clinical practices in accordance to current scientific knowledge, existing guidelines, and standards.

Standard QMI.4.4:

Statistical tools and techniques suitable to the process or outcome under study are used.

Measurable element:

1. Statistical tools and techniques are used in the analysis process when suitable.

Changes

ANP team used the needed tools and techniques during the years of its functioning."Quality assurance" project coordinator conducted trainings on biostatistics and epidemiology for interested NMMC staff . The same project coordinators often provides consultancy on appropriate statistical tools and techniques.

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Areas for improvement
The local abilities of NMMC staff to use appropriate statistical tools and techniques are still limited.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**3***	**3**

Follow-up conclusion
Several individuals entering data into databases have general knowledge (not proficiency) of the general statistical tools of several softwares and how to conduct basic analysis.

Standard QMI.5:

Improvement in quality is achieved and sustained.

Measurable element:
1. *The organization uses a consistent process to plan and implement improvements.*
2. *The organization documents the improvements achieved and sustained.*

Changes
No major changes. The planning and implementation of improvement is discussed during Hospital and Medical Board meetings.

Areas for improvement
The improvement activities at NMMC are rarely planned in advance. Generally, they are not data driven but more as a reaction to address a problem defined through daily monitoring. The achieved and sustained improvements are not documented.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**
Measurable Element 2	**1**	**1**

Follow-up conclusion
Improvement activities are discussed by the managerial bodies of NMMC. However, there is no established path for planning and implementing improvements. The achieved and sustained improvements are not documented.

Standard QMI.5.1:

Improvement activities are undertaken for the priority areas identified by the organization's leaders.

Measurable element:
1. *The priority areas identified by the organization's leaders are included in improvement activities.*

Changes
No major changes.

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Areas for improvement
Improvement activities at NMMC are mainly carried out to address existing and developing problems. There is no well-established process for prioritizing the areas in need of improvement. Improvement activities are not organization-wide but rather unevenly distributed.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Certain areas and services (surgical procedures, catheterization, and PCI) are prioritized and receive more attention from NMMC leaders.

Standard QMI.5.2:
Assignments are made and support provided.

Measurable element:
1. *Those responsible for an improvement are assigned.*

Changes
No major changes in the field.

Areas for improvement
The "Quality Assurance" project coordinators evaluated several quality indicators at NMMC and recommended actions based on monitored results. However, the majority of recommendations were not supported by the organization.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Organization leaders assign personnel responsible for implementing improvements and also attempt to address some existing and arising problems at NMMC.

Standard QMI.5.3:
Staff is trained, appropriate policy changes are made, and necessary resources are allocated.

Measurable element:
1. *Policy changes necessary to plan and carry out the improvement are made.*
2. *Necessary resources are allocated.*

Changes
Policy changes are decided during Medical and Hospital Board meetings. Policies and necessary resource allocations are approved by the Hospital Board.

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Areas for improvement
Often the improvements that need considerable resources are not addressed due to financial constraints.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**3**	**3**

Follow-up conclusion
Managerial bodies at NMMC introduce policy changes making it possible to plan and implement an improvement. The Hospital Board decides on the allocation of resources. Not all improvement initiatives are supported due to financial constraints.

Standard QMI.5.4:
Changes to improve are planned and tested.

Measurable element:
1. *Changes are planned.*
2. *Changes are tested.*
3. *Changes that resulted in improvements are implemented.*

Changes
No major changes.

Areas for improvement
The implementation of change does not always follow the appropriate sequence of steps of the QA cycle.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**
Measurable Element 2	**4***	**3**
Measurable Element 3	**4***	**3**

Follow-up conclusion
Changes aiming to improve the quality of care are not always planned and tested before their implementation at NMMC.

Standard QMI.5.5:
The organization collects data to show that the improvement was sustained.

Measurable element:
1. *Data are available to demonstrate that improvements are sustained.*

Changes

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No major changes. Data is collected and analyzed in some services of NMMC and may demonstrate a sustained improvement (for example the decreased rate of nosocomial infection caused by pseudomonas after modification of infection control practices).

Areas for improvement
In many services, data collection and frequency of analysis is not sufficient to demonstrate any improvements made.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4***	**3**

Follow-up conclusion
Several services and functions at NMMC have databases, in which data is systematically entered, analyzed, and can demonstrate any improvements made.

Standard QMI.5.6:

The organization documents its continuing, systematic improvement and uses the information to develop strategic improvement plans.

Measurable element:
1. *Successful improvements are documented.*
2. *The documentation contributes to the development of strategic improvement plan.*

Changes
There are no major changes in the field.

Areas for improvement
There is no body or individual responsible for documentation of successful improvements. Generally, the improvements are not documented and thus documentation cannot help to develop a strategy for improvement at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**2**
Measurable Element 2	**1**	**1**

Follow-up conclusion
Usually improvements are not documented at NMMC. There is no strategic improvement plan to monitor improvement activities in the organization.

Evaluation Score:
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FUNCTION: STAFF QUALIFICATION AND EDUCATION (SQE)

Follow-up Evaluation Highlights

Policies and procedures for staff recruitment were developed by ANP and approved by the Hospital Board. The process of staff recruitment at NMMC is currently guided by these policies. There is a written staffing plan developed collaboratively by medical and administrative staff. The staffing plan is being revised as necessary. New positions are discussed by managerial bodies and approved by Hospital Board. Suggestions of specific departments, working hours' statistics, or adopted principles (e.g. patient and nurse ratio 1 to 1 at ICU) serve as the basis for making changes in the staffing plan.

"Quality assurance" subproject coordinators developed job descriptions for all positions at NMMC. However, these were not discussed and approved yet. The desired levels of education, skills, and knowledge are not yet specifically defined for each staff members. For medical positions, completion of special training/fellowship at NMMC is a general requirement for employment. Recently, in-service nurse training became a requirement for employment of nurses at NMMC. Licensure, education, and training of the staff are considered in accordance with the laws of RA. Lists of competencies were developed for cardiologists (adult, pediatric, arrhythmologist) defining the types of care where they could work independently (invasive/noninvasive cardiology, etc).

Continuous in-service education is organized at NMMC by the means of Monday conferences, journal clubs, mortality and morbidity conferences, infection control trainings and other educational courses. Regular education is provided by state agencies for physicians, nurses, and accountants. There is no process of regular staff performance evaluation at NMMC. The staff performance is evaluated informally after probation period. Unsatisfactory performance, when revealed, could initiate process of evaluation or discussion.

Human Resource (HR) department staff keeps standardized separate files for each staff member. Recently the data from files is entered into computerized database. The forms are current. The files for medical and nursing staff contain copies of documents verifying their education and training (diploma, certificate of postgraduate training, and fellowship at NMMC). Administrative leaders (director or human resource coordinator) carry out general orientation of a new staff member while the leader and staff of particular department perform specific orientation.

Following recommendations are made to improve the function of staff qualification & education:

- Adopt job descriptions for all positions at NMMC with further regular revisions;
- Adopt clear definitions for desired educational levels, skills, and knowledge for all positions (with inclusion in job descriptions);
- Develop a formal process of regular staff performance evaluation;
- Develop criteria for evaluation of staff qualification for all positions;
- Investigate regularly educational needs of all staff members, identify resources necessary to cover those needs (educators, time, materials, etc.); and allocate the necessary resources;
- Include all trainings and in-service education passed by each staff member in his/her personal file;
- Allocate equally educational activities to achieve more regular, structured, and organized process of staff education while providing space and time convenient for all staff members;
- Develop a formal process of staff orientation, which will include responsibilities of the staff who provides orientation and the list of the issues covered;
- Develop competency lists for all medical and nursing staff.

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STAFF QUALIFICATION AND EDUCATION

Standard SQE.1:

Organization leaders define the desired education, skills, knowledge, and other requirements of all staff members.

Measurable element:
2. The desired education, skills, and knowledge are defined for staff.

Changes
Recently a new requirement for nurse position at NMMC was put into practice. The majority of nurses are employed after passing nurse training at NMMC. For all other medical positions except intensivists, the unwritten requirement is special training or fellowship at NMMC before employment (recently a formal fellowship in intensive care was initiated).

Areas for improvement
The desired education, skills, and knowledge are not well defined at NMMC (particularly for non-medical positions).

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 2	**3**	**3**

Follow-up conclusion
For several positions, mainly medical, special training/fellowship at NMMC is required prior to employment. In addition, the requirements set up by state laws and regulations also apply.

Standard SQE.1.1:

Each staff member's responsibilities are defined in a current job description.

Measurable element:
1. Those staff members not permitted to practice independently have a job description.
2. Job descriptions are current.

Changes
As compared to the baseline survey in 2000, the ANP "Quality assurance" project coordinators wrote job descriptions describing the responsibilities of almost all staff members (except residents and fellows) at NMMC. Job descriptions were not yet approved by governing bodies at NMMC and therefore none was up-dated.

Areas for improvement
The main limitation is that the developed job descriptions are not approved. Once the descriptions get approval, the process of up-dating those could be initiated.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**3**
Measurable Element 2	**1**	**1**

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Follow-up conclusion
Job descriptions were developed for all positions at NMMC. They are not yet approved and therefore are not current.

Standard SQE.2:

Organization leaders develop and implement processes for recruiting, evaluating, and appointing staff as well as other procedures identified by the organization.

Measurable element:
1. There is a process in place to recruit staff.
2. There is a process in place to evaluate the qualifications of new staff.
5. The process is implemented.

Changes
The major change in the standard was that policies and procedures for staff recruitment were developed (with the help of ANP "Quality assurance" project coordinators) and approved by the NMMC Hospital Board in 2004. The policies correspond to Laws of RA, with additional provisions and details for NMMC staff. The process is uniform across the organization. The process of recruitment at NMMC is currently based on the written policies.

There is a trend at NMMC that almost all medical positions organize training /fellowships (e.g., a fellowship in intensive care was initiated lately). Recently, nurse education was implemented at NMMC, followed by a structured examination. Almost all nurses must pass the training and further evaluation by educators before being appointed as staff. As it was mentioned above, there is unwritten requirement at NMMC to pass special training or fellowship before employment.

Areas for improvement
There is room for improvement in evaluating the qualifications of new staff. A list of criteria for evaluation of qualifications could be developed for all positions at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**4**
Measurable Element 2	**2**	**3**
Measurable Element 5	**3**	**3**

Follow-up conclusion
The policies and procedures for staff recruitment were developed and approved by the Hospital Board. The process of recruitment at NMMC currently follows those policies. The process of evaluating staff qualifications is based on the laws and regulations of RA and additional requirements set up for medical and nurse positions at NMMC.

Standard SQE.3.1:

Each staff member's ability to carry out the responsibilities in his or her job description is evaluated at appointment and then regularly thereafter.

Measurable element:
1. New staff members are evaluated at the time they begin their work responsibilities.

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4. There is at least one documented evaluation of staff each year or more frequently as defined by the organization

Changes
No major changes occurred in this field. Two different systems for staff evaluation were written and proposed by ANP "Quality assurance" project coordinators. None of them was approved yet.

Areas for improvement
There is no structured, formal process of regular staff performance evaluation. The process of staff evaluation should be developed at NMMC.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 4	**1**	**1**

Follow-up conclusion
Staff performance is evaluated informally after a probation period. There is no process of further evaluation of staff performance on a regular basis. Only unsatisfactory performance initiates evaluation or discussion.

Standard SQE.3.2:
There is documented personnel information for each staff member.

Measurable element:
1. Personnel information is maintained for each staff member.
2. Personnel files are standardized.
3. Personnel files are kept current.
7. Personnel files contain a record of in-service education attended by the staff member.

Changes
Personnel standardized forms (created by ANP "Quality assurance" project coordinator) are used at the human resource department. Each member of staff has his or her own current file. Personnel are notified to inform the Human Resources (HR) department if any changes occur. A computerized database was recently created and is used in HR, where personnel information is entered and analyzed. In-service education provided by state agencies, fellowships, and newly implemented nursing education provided by NMMC are recorded in personnel files.

Areas for improvement
The main limitation is that the majority of in-service education is not recorded.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**
Measurable Element 3	**1**	**4**
Measurable Element 7	**1**	**2**

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Follow-up conclusion
NMMC has standardized personnel forms and separate files for each staff member. This information is also entered into computerized database. The forms are kept updated. The forms include a limited part of in-service education.

Standard SQE.4:

A staffing plan for the organization, developed collaboratively by the clinical and managerial leaders, identifies the number, types, and desired qualifications of staff.

Measurable element:
1. There is a written plan for staffing the organization.
2. The clinical and managerial leaders developed the plan collaboratively.

Changes
There is a written staffing plan at NMMC that is presented annually to Yerevan municipality for approval. The new positions are suggested (medical positions by the Medical Board) and then discussed and approved by the Hospital Board. The staffing plan is based on actual needs, calculated work hours, or adopted principles (recently adopted principle of 1 to 1 patient to nurse ratio at the ICU, also taking into account the right of nurses to take a break of 5 hours during duty)

Areas for improvement
No major limitations exist in this field.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**1**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
Yerevan municipality annually approves the written staffing plan of NMMC. Clinical and administrative managerial bodies (the Hospital and Medical Boards) collaboratively develop the staffing plan.

Standard SQE.4.1:

The staffing plan is reviewed on an ongoing basis and updated as necessary.

Measurable element:
2. The plan is revised and updated when necessary

Changes
The plan is revised and updated whenever the necessity for new staff or positions arises. The issues of new staff or positions are discussed at the Medical Board and Hospital Board meetings.

Areas for improvement
No major limitations exist in this field.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 2	**3**	**4**

Follow-up conclusion
The staffing plan is revised upon emerging necessities.

Standard SQE.5:

All staff members are oriented to the organization and to their specific job responsibilities at appointment to the staff.

Measurable element:
1. New staff members are oriented to the organization, job responsibilities, and their specific assignments.

Changes
No major changes occurred in this field. The staff orientation process is still informal.

Areas for improvement
Formal process of staff orientation should be established.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**3**

Follow-up conclusion
Administrative leaders (director or human resource coordinator) conduct general orientation to the organization and to the role of the employee in the organization. Leaders and staff of particular departments conduct specific orientation, such as explanation of job responsibilities.

Standard SQE.6:

Each staff member receives ongoing in-service and other education and training to maintain or advance his or her skills and knowledge.

Measurable element:
1. Organization staff is provided ongoing in-service education and training.

Changes
NMMC staff receives in-service education at the center and trainings from state institutions (according to the laws of RA). Nurses, aides, and residents are regularly trained in infection control practices at NMMC. Continuous education of the staff is being conducted also through means of Monday conferences, journal clubs, mortality and morbidity conferences, and other educational courses organizes at the center. In 2003, in-service training of nurses on different topics was organized by the AUA/NMMC Collaborative Project (Dr. Susan McMarlin). Training of medical staff in baseline epidemiology and medical statistics was organized by "Quality assurance" project coordinators. Recently a decision was made that annually, one physician would be financed by NMMC to attend a conference or short training abroad. Cardiologists regularly receive training in interventional cardiology in France. Perfusionists recently received

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training in dialysis assistance. Some administrative staff attended short-term training. Policies and procedures for "Continuous staff education" were developed by "Quality assurance" project coordinator. However, they were not approved by governing bodies at NMMC.

Areas for improvement

The organization should regularly investigate the educational needs of all staff members. Needed resources (educators, time, etc.) should be allocated to organize trainings to meet the educational needs of the staff. Trainings passed by each staff member should be recorded in a personal file.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**

Follow-up conclusion

Regular education is provided by state agencies for physicians, nurses and accountants. Continuous in-service education is organized at NMMC by means of Monday conferences, journal clubs, mortality and morbidity conferences, infection control trainings and other educational courses.

Standard SQE.6.4:

Staff is given the opportunity to participate in advanced education, research, and other educational experiences to acquire new skills and knowledge and to support job advancement.

Measurable element:

1. Staff is informed of opportunities to participate in advanced education, training, research, or other experiences.

2. The organization supports staff participation in such opportunities as appropriate to its mission and resources.

Changes

Continuous education for nurses in the field of infection control was organized recently. Nurses, aides and residents are informed about participation in these courses. The courses are organized for all 3 turns of nurses. The Hospital Board informed the medical staff on its decision that each year one physician will be provided the opportunity (fee) to visit a conference or training of his choice. State institutions recently implemented mandatory training for nurses and physicians. The NMMC provides support for staff members to participate in those courses. Tuition is covered by NMMC, and HR department worked out the schedule so the staff take turns in course participation.

Areas for improvement

Educational activities should be more equally dispersed, more structured and organized (see "Areas for improvement" of standard 6). Monday conferences take place in a small conference room where only medical staff can participate; there is no place for nurses and administrators. The time of conferences is also not convenient for all staff members; the conferences could be organized outside of office hours.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**1**	**3**
Measurable Element 2	**1**	**3**

Follow-up conclusion
NMMC staff is participating in training courses organized at the center and by state institutions. The HR department arranges participation of the staff in trainings organized by state institutions according to RA regulations.

Standard SQE.7:

The organization has an effective process for gathering, verifying, and evaluating the credentials (license, education, training, and experience) of those medical staff permitted to provide patient care without supervision.

Measurable element:
1. Those permitted by law, regulation, and the organization to provide patient care without supervision are identified.

Changes
There are no major changes in this field. Only the lists of competencies were developed (by the "Quality assurance" coordinator) and filled by cardiologists (adult, pediatric, arrhythmologist) defining the types of care where they could work independently (invasive/noninvasive cardiology, etc).

Areas for improvement
Lists of competencies should also be developed for other medical and nursing staff.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**3**	**3**

Follow-up conclusion
Those providing patient care without supervision were identified according to the laws of RA and specific requirements set by NMMC. The corresponding documents (diploma, certificate of postgraduate training, and fellowship at NMMC) were collected and kept in personal files and are reviewed periodically in the HR department.

Standard SQE.7.1:

The organization maintains a record of the current professional license, certificate, or registration, when required by law, regulation, or by the organization, of every medical staff member.

Measurable element:
1. There is a record maintained for every medical staff member.
2. The record contains copies of any required license, certification, or registration.

Changes

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No major changes occurred in this field. The only change is that the licenses were cancelled.

Areas for improvement
No major areas for improvement were identified.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**
Measurable Element 2	**4**	**4**

Follow-up conclusion
All medical staff have personal files at the HR department. The files contain copies of documents verifying their education and training (diploma, certificate of postgraduate training, and fellowship at NMMC).

Standard SQE.7.2:

The credentials of medical staff members are reevaluated at least every three years to determine their qualifications to continue to provide patient care services in the organization.

Measurable element:
1. There is a process to review each record every three year.

Changes
The Ministry of Health reinitiated the process of physician and nurse retraining. According to new regulations, medical and nursing staff should participate in mandatory training courses (once in 3 – 5 years). The HR department is responsible for organizing the process of staff participation in those trainings. The HR coordinator reviews records systematically to identify individuals who should pass training and to ensure the completion of training during required time frames.

Areas for improvement
There is no process to assess medical staff performance.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**1**	**3**

Follow-up conclusion
The HR coordinator regularly reviews medical staff records to ensure their participation in trainings. There is no formal evaluation of physician performance.

Standard SQE.8:

The organization has an effective process to authorize all medical staff members to admit and treat patients and provide other clinical services consistent with their qualifications.

Measurable element:
1. *There is a process to authorize the individual to admit and care for patients.*
2. *A medical staff member's licensure, education, training, and experience are used to authorize the individual to provide clinical services consistent with qualifications.*

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Changes
No major changes occurred in this field. The list of competencies is being filled by cardiologists and signed by the Medical Board to authorize them to perform certain types of services (see standard 8).

Areas for improvement
The major limitation is the absence of formal performance evaluation, which could be the basis for authorizing an individual to care for patients.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**2**	**3**
Measurable Element 2	**4**	**4**

Follow-up conclusion
For the majority of medical and nursing positions, only those individuals who passed specific training (fellowship, postgraduate training, nurse training) are employed. Licensure, education and training requirements are in accordance with the laws of RA.

Standard SQE.9:

The organization has an effective process for medical staff participation in the organization's quality improvement activities, including evaluating individual performance, when indicated, and for periodically reevaluating the performance of all medical staff members.

Measurable element:
1. Medical staff members participate in the organization's quality improvement activities.
3. The performance of individual medical staff members is reviewed periodically, as established by the organization.

Changes
As compared to the situation at the baseline survey, a formal project of "Quality Assurance" was initiated at NMMC in 2001. The project contributed to the establishment of two governing bodies at the center: Hospital Board and Medical Board, which included Quality Assurance subcommittee. One of the main responsibilities of these governing bodies is quality improvement in the institution. The majority of Medical Board members are physicians and half of the Hospital Board members are also physicians. Medical staff members uninvolved in these bodies also participate in quality improvement activities occasionally. Although different versions of policies/procedures on staff performance evaluation were developed and suggested by the "Quality Assuranse" project coordinators, no one was approved and implemented at the center.

Areas for improvement
There is no formal, ongoing, regular performance evaluation at NMMC.

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	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4***	**4**
Measurable Element 2	**2***	**2**

Follow-up conclusion
Quality improvement activities are discussed and shaped by medical staff during Medical Board and Hospital Board meetings. There is no formal process of medical staff performance evaluation. It is done informally only after probation period, and when apparent problems with performance arise.

Standard SQE.10.1:

The organization maintains a record of the current professional license, certificate, or registration, when required by law, regulation, or the organization, of every nursing staff member.

Measurable element
1. There is a record maintained on every nursing staff member.

Changes
The Department of Human Resources at NMMC maintains a record for every nursing staff member. This record includes the individual's current license, education, training, and experience.

Areas for improvement
No areas for improvement are identified.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**

Follow-up conclusion
For each nursing staff member, NMMC maintains a record that includes the individual's current credentials, including current licensing information.

Standard SQE.11:

The organization has an effective process to identify job responsibilities and make clinical work assignments based on the nursing staff member's credentials and any regulatory requirements.

Measurable element:
1. Licensure, education, training, and experience of a nursing staff member are used to make clinical work assignments.

Changes
Recently, in-service nurse training was initiated for nurses prior to employment at NMMC. Those nurses that pass the training and are positively evaluated by 70% of trainers are appointed to

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NMMC staff. Appointed nurses must pass a 4-month probation period and be reevaluated on their abilities to work in a specific department by the nurses of that department.

Areas for improvement
The types of care nurses are permitted to provide are not specified in writing. There are written job descriptions that are neither reviewed nor approved by the Medical and Hospital Boards yet.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4**	**4**

Follow-up conclusion
The credentials of nursing staff are reviewed at the time of employment at NMMC. Nurse training prior to employment and the probation period results serve as a basis for evaluation of nurses' ability to work at the center.

Standard SQE.12:

The organization has an effective process for nursing staff participation in the organization's quality improvement activities, including evaluating individual performance when indicated.

Measurable element:
1. Nursing staff participates in the organization's quality improvement activities.

Changes
As compared to the baseline survey, the situation in terms of this standard was improved: a formal program of "Quality assurance" was initiated at NMMC in 2001 (see standard 10). In the scope of this program, numerous quality improvement activities were conducted with involvement of nurses. The head nurse of the center and other leading nurses are members of the Medical and Hospital Boards. The Quality Assurance subcommittee of the Medical Board also has a nurse representative.

Areas for improvement
A Nursing Board was created in 2004. Policies and procedures were developed for this body (by the "Quality assurance" project coordinator). However, the Nursing Board had 2 meetings and then stopped functioning. It is essential for NMMC nurses to have a body to shape quality improvement activities in nursing. For now, nurse involvement in quality assurance activities is rather limited taking into account both their role in patient care and that nurses make up the majority of the staff at NMMC.

	EVALUATION SCORES	
	2000	2005
Measurable Element 1	**4***	**3**

Follow-up conclusion
Few nurses are represented in managerial boards at NMMC organizing the quality improvement initiatives. The participation of nurses in those activities is unsatisfactory.

Standard SQE.13.1:

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The organization maintains a record of the current professional license, certificate, or registration, when required by law or regulation, of those other health professional staff members.

Measurable element:
1. The organization has a process in place to gather the credentials of other health professional staff members.

Changes
No changes occurred in this field.

Areas for improvement
No major limitations exist in this field.

	EVALUATION SCORES	
	2000	**2005**
Measurable Element 1	**4**	**4**

Follow-up conclusion
All the staff members at NMMC have their files at the HR department. The documents verifying their licensure, education, training, and experience are included in these files.

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ACCESS TO CARE AND CONTINUITY OF CARE (ACC)				
Standard #	**Standard**	**Measurable Element**	**Evaluation Score**	
			2000	**2005**
ACC.1	Patients have access to the health organization's services based on their identified health care needs and the organization's mission and resources.	(1) Screening is initiated at the point of first contact.	4	4
		(2) Based on screening, the patient is matched with the organization's mission and resources.	4	4
		(3) Information on services, hours of operation, and the process to obtain care are provided to agencies and referral sources in the community.	2	3
ACC.1.1	The organization has a process for admitting patients to the organization.	(1) Policies and procedures are used to standardize the admitting process.	3	3
		(3) The policies and procedures address admitting emergency patients.	3	3
		(4) Policies and procedures address holding patient for observations.	3	3
ACC.1.1.1	Patients with emergency or immediate needs are given priority for assessment and treatment.	(1) The organization has established criteria to prioritize patients with immediate needs.	3	3
		(2) Staff is trained to use criteria.	4	4
		(3) Patients are prioritized based on the urgency of their needs.	4	4
ACC.1.1.2	Patient needs for preventive, palliative, curative and rehabilitative services are prioritized based on the patient's condition at the time of entry to the organization.	(1) The screening assessment helps staff understand the type of preventive, palliative, curative and rehabilitative services needed by the patient.	4	4
		(2) The setting of care to meet these needs is appropriate.	N/A	N/A
ACC.1.2	At admission, the health care organization provides the following information to patient and appropriate family members or decision-makers: information on proposed care, the expected results of that care, and any expected cost to the patient for the care.	(1) There is a process to provide patient/family with information at admission.	4	4
		(2) The process includes information on the proposed care.	4	4
		(3) The process includes information on the expected results of care.	4	4
		(4) The process includes information on any expected costs to the patient or family.	4	4
		(5) Patients receive sufficient information to make knowledgeable decisions.	4	4

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ACCESS TO CARE AND CONTINUITY OF CARE (ACC)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
ACC.1.4	Diagnostic tests for determining patient needs are completed and used as appropriate to determine whether the patient should be admitted, transferred or refused.	(1) There is a process to provide the results of diagnostic test to those responsible for determining if patient is to be admitted, transferred or refused.	4	4
		(2) Criteria are used to determine which screening and diagnostic required before admission.	3	3
		(3) Patients are not admitted, transferred or refused before the test results are available.	N/A	N/A
ACC.1.5	Entry or transfer to units providing intensive or specialized services is determined by established criteria.	(1) The organization has established entry or transfer criteria for its intensive and specialized services.	2	2
		(3) Staff is trained to apply the criteria.	2	2
		(5) Patients who no longer meet the criteria are transferred or discharged.	3	3
ACC.2	The organization designs and carries out processes to provide continuity of patient care services in the organization and coordination among health care professionals.	(1) The leaders of services and settings design and implement processes that support continuity and coordination of care.	4	4
		(2) Established criteria or policies determine the appropriateness of transfer within the organization.	3	3
		(4) Care is coordinated between emergency services and inpatient admission.	4	4
		(5) Care is coordinated between diagnostic and treatment services.	4	4
		(6) Care is coordinated between surgical and non-surgical services.	4	4
		(8) Individuals responsible for coordination are identified.	3	4
ACC.2.1	During all phases of care, there is a qualified individual identified as responsible for the patient's care.	(1) The individual responsible for patient's care is identified.	4	4
		(2) The individual is qualified to assure responsibility for patient's care.	4	4
		(3) The individual is identified to the organization's staff.	4	4

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ACCESS TO CARE AND CONTINUITY OF CARE (ACC)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
ACC.2.2	Information about the patient's care and response to care is shared among medical, nursing and other care providers during each shift, between shifts, and during transfer between units.	(1) There is a process to transfer patient information between the care providers on an ongoing basis or at key times in the care process.	4	4
ACC.2.2	Information about the patient's care and response to care is shared among medical, nursing and other care providers during each shift, between shifts, and during transfer between units.	(2) Information exchanged includes the patient's health status.	4	4
		(3) Information exchanged includes a summary of the care provided	4	4
		(4) Information exchanged includes the patient's progress.	4	4
		(5) When a transfer occurs, the reason for transfer is communicated.	4	4
ACC.2.3	The patient's record(s) is available to the care providers to facilitate the exchange of information.	(1) Policy establishes those care providers who have access to the patient's records.	3	4
		(2) The patient record(s) is available to those providers.	4	4
		(3) The records are up to date to ensure the transfer of the latest information.	4	4
ACC.2.4	Information related to the patient's care is transferred with the patient.	(1) The patient's records or summary of patient care information is transferred with patient.	4	4
		(2) The summary contains the reason for admission.	4	4
		(3) The summary contains significant findings.	4	4
		(4) The summary contains any diagnosis made.	4	4
		(5) The summary contains any procedures performed.	4	4
		(6) The summary contains any medications and other treatments.	4	4
		(7) The summary contains the patient's condition at transfer.	4	4
ACC.3	There is a process to appropriately refer or discharge patients.	(1) There is an organized process to refer and/or discharge patients.	3	4
		(2) The referral and/or discharge are based on the patient's needs for continuing care.	4	4
		(3) Criteria are used to determine readiness for discharge.	3	3

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ACCESS TO CARE AND CONTINUITY OF CARE (ACC)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
ACC.3.1	The organization cooperates with health care practitioners and outside agencies to ensure timely and appropriate referrals.	(1) The discharge planning process considers the need for both support services and continuing medical services.	2	3
		(4) Referrals are made when possible for support services	3	3
ACC.3.2	Patients and, as appropriate, their families are given understandable follow-up instructions at referral or discharge.	(1) Follow-up instructions are provided in an understandable form and manner.	4	4
		(2) The instructions include any return for follow-up care.	4	4
		(3) The instructions include when to obtain urgent care.	2	4
		(4) Families are also provided the instructions as appropriate to the patient's condition.	4	4
ACC.3.3	Patient records contain a copy of discharge summary.	(1) A discharge summary is prepared at discharge.	4	4
		(2) The summary contains the reason for admission.	4	4
		(3) The summary contains significant findings.	4	4
		(4) The summary contains any diagnosis.	4	4
		(5) The summary contains any procedure performed.	4	4
		(6) The summary contains any medications and other treatments.	2	2
		(7) The summary contains the patient's condition at discharge.	3	3
		(8) The summary contains discharge medications and follow-up instructions	3	3
		(9) When organization or practice dictates, the patient is given a copy of discharge summary.	4	4
ACC.4	There is a process to appropriately transfer patients to another organization to meet their continuing care needs.	(1) There is a process to transfer patients.	3	4
		(2) The transfers are based on the patient's need for continuing care.	4	4
		(3) The process addresses criteria that define when transfer is appropriate.	3	3
		(4) The process addresses who is responsible during transfer.	3	4

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ACCESS TO CARE AND CONTINUITY OF CARE (ACC)				
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		(5) The process addresses the situation in which transfer is not possible.	3	4
ACC.4.1	The referring organization determines that the receiving organization can meet the patient's continuing care needs.	The referring organization determines that the receiving organization can meet the needs of patients to be transferred.	4	4
ACC.4.1.1	The organization establishes formal or informal arrangements and affiliations with receiving organizations to ensure continuity of care for its patients.	Formal or informal arrangements are in place with receiving organizations when patients are frequently transferred to the receiving organization.	4	4
ACC.4.2	The receiving organization is given a written summary of the patient's clinical condition and the interventions provided by the referring organization.	(1) Patient clinical information or a clinical summary is transferred with the patient.	4	4
		(2) The clinical summary includes patient status.	4	4
		(3) The clinical summary includes procedures and other interventions provided.	4	4
		(4) The clinical summary includes the patient's continuing care needs.	4	4
ACC.4.3	During transfer, a qualified staff member monitors the patient's condition	(1) All patients are monitored during transfer.	3	4
		(2) The qualification of the staff member is appropriate for the patient's condition.	4	4
ACC.4.4	The transfer process is documented in the patient's record	(1) The records of transferred patients note the health care organization agreeing to receive the patient.	4	4
		(3) The records of transferred patient note the reason(s) for transfer.	4	4

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ASSESSMENT OF PATIENTS (AOP)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
AOP.1	All patients cared for by the organization have their health care needs identified through an established process.	Organization policy and procedure define the information to be obtained for inpatients and ambulatory patients.	3*	3
AOP.1.1	The organization has determined the scope and contents of assessments, based on applicable laws and regulations.	Only those individuals permitted by licensure, applicable laws and regulations, or certification perform the assessments.	4	4
AOP.1.3	Assessments are completed in the time frame prescribed by the organization.	Assessments are completed within the time frames established by the organization.	1	2
AOP.1.4	Assessment findings are documented in the patient's record and readily available to those responsible for the patient's care.	Assessment findings are documented in the patient's record.	4	4
AOP.2.1	The patient's medical and nursing needs are identified from the initial assessment.	(1) The initial assessment results in the identification of the patient's medical needs.	4	4
		(2)The initial assessment results in the identification of the patient's nursing needs.	3	3
AOP.2.1.1	The initial medical assessment is documented in the patient's record within the first 24 hours after the patient's entry.	The initial medical assessment is documented in the patient's record within the 24 hours of admission.	3	3
AOP.2.1.2	The initial medical assessment is documented before anesthesia and surgical treatment.	(1) The medical assessment of surgical patients is documented before surgery.	4	4
		(2) Surgical patients have a preoperative diagnosis recorded before surgery.	4	4
		(3) The anesthesia assessment determines if the patient is an appropriate candidate for the planned anesthesia.	4	3

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ASSESSMENT OF PATIENTS (AOP)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
AOP.3	All patients are reassessed at appropriate intervals to determine their response to treatment and to plan for continued treatment or discharge.	(1) Patients are reassessed at intervals appropriate to their condition, plan of care, and individual needs or according to organizational policies and procedures.	3	3
		(2) Reassessments are documented in the patient's record.	4	4
AOP.5.1	Clinical pathology services are provided by the organization to meet patient needs or are readily available through arrangements with outside sources.	(1) Adequate, regular, and convenient laboratory services are available to meet needs.	4	4
		(3) Outside sources are selected based on an acceptable record and compliance with laws and regulations.	2	3
AOP.5.2	A laboratory safety program is in place, followed, and documented.	(1) A laboratory safety program is in place and is appropriate to the risks and hazards encountered.	2	2
		(4) Appropriate safety devices are available.	3	3
AOP.5.3	Individuals with adequate training, skills, orientation, and experience administer the tests and interpret the results.	(1) Appropriately trained and experienced staff administers the test.	4	4
		(2) Appropriately trained and experienced staff interprets.	4	4
AOP.5.4	Laboratory results are available in a timely way as defined by the organization.	(1) The organization has established the expected report time for results.	3	3
		(2) Laboratory results are reported within a time frame to meet patient needs.	4	4
AOP.5.5	All laboratory equipment is regularly inspected, maintained, and calibrated, and appropriate records are maintained for these activities.	There is a laboratory equipment management program.	3*	2
AOP.5.6	Essential reagents and other supplies are regularly available.	Reagents and supplies of "high quality" are readily available at the laboratory, and they are maintained according to their date of expiration.	4	4

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ASSESSMENT OF PATIENTS (AOP)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
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AOP 5.8	Established norms and ranges are used to interpret	(1)The laboratory has established reference ranges for each test performed	4	4
		(2) The range is included in the clinical record at the time test results are reported.	4	4
		(5) Ranges are reviewed and updated as needed.	4	4
AOP.5.10	Quality control procedures are in place, followed, and documented.	(1) There is a quality program for the clinical laboratory.	2	4
		(2) The program includes the validation of test methods.	4	4
AOP.6	Radiology services are available to meet patient needs, and all such services meet applicable local and national standards, laws, and regulations.	Radiological services meet applicable local and national standards, laws, and regulations.	4*	3
AOP.6.1	Diagnostic imaging services are provided by the organization or are readily available through arrangements with outside sources.	(1) Adequate, regular, and convenient radiology services are available to meet needs.	4	4
		(2) Radiology services are available for emergencies after normal hours.	4	4
		(3) Outside sources are selected based on an acceptable record and compliance with laws and regulations.	2*	4
AOP.6.2	A radiation safety program is in place, followed, and documented.	(1) A radiation safety program is in place and appropriate to the risks and hazards encountered.	4*	2
		(5) Appropriate radiation safety devices are available.	4*	3
AOP.6.3	Individuals with adequate training, skills, orientation, and experience administer the tests and interpret the results.	(1) Appropriately trained and experienced staff administers tests.	4	4
		(2) Appropriately trained and experienced staff interprets tests.	4	4
AOP.6.4	Radiology results are available in a timely way as defined by the	(1) The organization has established the expected report time for results	2	2

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	as defined by the organization.	(2) Radiology results are reported within a time frame to meet patient needs.	4	4
AOP.6.5	All diagnostic equipment is regularly inspected, maintained, and calibrated, and appropriate records are maintained for these activities.	(1)There is a radiology equipment management program.	4*	3
		(5) The program includes calibrating and maintaining equipment.	4*	3
AOP.6.6	X-ray film and other supplies are regularly available.	(1) Essential reagents and supplies are identified.	4	4
		(2) Essential reagents and supplies are available.	4	4
AOP.6.8	Quality control procedures are in place, followed, and documented.	(2) Quality control includes daily surveillance of results.	4*	2
		(5) Quality control includes documenting results and corrective actions.	2	2
AOP.7	Medical, nursing, and other individuals and services responsible for patient care collaborate to analyze and integrate patient assessments.	(1) Patients assessment data and information are analyzed and integrated.	4	4
		(2) Those responsible for the patient's care participate in the process.	3	3
AOP.7.1	The most urgent or important care needs are identified.	(1) Patient needs are prioritized based on assessment results.	4	4
		(2) The patient and his or her family participate in the decisions about the priority needs to be met.	4	4

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CARE OF PATIENTS (COP)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	
COP.1	Policies and procedures and applicable laws and regulations guide the uniform care of all patients.	(1) The organization's clinical and managerial leaders collaborate to provide uniform care process.	4	4
		(2) When similar care provided in more than one setting, care delivery is uniform.	4*	3
		(3) Policies and procedures guide uniform care and reflect relevant laws and regulations.	4	4
COP.2	There is a process to integrate and coordinate the care provided to each patient.	(1) Care planning is integrated and coordinated among settings, departments and services.	4	4
COP.2.1	The care provided to each patient is planned and written in the patient record.	(1) The care for each patient is planned.	4	4
		(2) The care planned is noted in the patient's record.	2	2
		(4) The care providers for each patient are noted in the patient's record.	4	4
		(5) Any patient care team meetings are noted in the patient records.	1	1
COP.2.2	Those permitted to write patient orders write the order in the patient record in a uniform location.	(1) Orders are written when required.	3	3
		(2) Orders are found in a uniform location in patient records.	1	2
COP.2.3	Procedures performed are written into the patient's record.	(1) The results of procedures performed are entered into the patient's record.	4	4
COP.2.4	Each care provider has access to the patient care notes recorded by other care providers, consistent with organization policy.	(1) There is a method for one care provider to access other provider's care notes.	4	4
COP.2.5	The patient's plan of care is revised when indicated by a change in the patient's condition.	(1) The patient's plan of care is modified as the patient's needs change.	4	4
COP.3	Clinical practice guidelines, when available and adopted by the organization, are used to guide the patient's clinical care.	(1) Clinical guidelines when available and relevant to the organization's patients and sources, are used to guide patients care process.	N/A	2

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CARE OF PATIENTS (COP)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	
COP.5	Policies and procedures guide the care of high-risk patients and the provision of high-risk patients and services.	(1) The organization's clinical and managerial leaders have identified the high-risk patients and services.	3	3
		(3) Staff has been trained and uses the policies and procedures to guide care.	1	3
COP.5.1	Policies and procedures guide the care of emergency patients.	(2) Patients receive care consistent with the policies and procedures.	3	3
COP.5.2	Policies and procedures guide the use of resuscitation services throughout the organization.	(1) Resuscitation is provided according to policies and procedures.	3	3
COP.5.3	Policies and procedures guide the handling, use, and administration of blood and blood products.	(2) Blood and blood products are administered according to policies and procedures.	4	4
COP.5.4	Policies and procedures guide the care of patients on life support or who are comatose.	(1) Patients on life support receive care according to the policies and procedures.	3	3
COP.5.8	Policies and procedures guide the care of vulnerable elderly patients and of children.	(2) Frail, dependent elderly patients receive care according to the policies and procedures.	1	3
		(4) Young, dependent children receive care according to the policies and procedures.	2	3
COP.6.	A qualified individual conducts a pre-anesthesia assessment.	(1) Pre –anesthesia assessment is performed for each patient before anesthesia induction.	4	4
		(2) A qualified individual performs the assessment.	4	4
COP.7	Each patient's anesthesia care is planned and documented.	(1) The anesthesia care of each patient is planned.	4*	3
		(2) The plan is documented.	2*	1
COP.7.1	The risks, potential complications, and options are discussed with the patient, his or her family or those who make decisions for the patient.	(1) The patient and decision-makers are educated on risks, potential complications and options of anesthesia.	2	3
		(2) The anesthesiologist or other qualified individual providers the education.	4	4
COP.7.2	The anesthesia used is written in the patient record.	(1) The anesthesia used and anesthetic technique are entered into the patient's anesthesia record.	4	4

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Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	
COP.7.3	Each patient's physiological status during anesthesia administration is continuously monitored and written in the patient's record.	(1) Physiological status is a continuously monitored during anesthesia administration.	4	4
		(2) The results of monitoring are entered into the patient's anesthesia record.	4	4
COP.8	The patient's post-anesthesia status is monitored and documented and a qualified individual discharges the patient from the recovery area using established criteria.	(1) The patients are monitored appropriate to their condition during the post-anesthesia recovery period.	4	4
		(2) Monitoring findings are entered into the patient's record.	4	4
		(3) Established criteria are used to make discharge decisions.	4	4
		(5) Recovery area arrival and discharge times are recorded.	4	4
COP.9	Equipment, supplies and medications recommended by anesthesia professional organizations or by alternative authoritative sources are used.	(1) Recommended equipment is used.	4	4
		(2) Recommended supplies are used.	4	4
		(3) Recommended medications are used.	4	4
COP.10	Each patient's surgical care is planned and documented, based on the results of the assessment.	(1) Each patient's surgical care is planned.	3	3
		(4) A preparative diagnosis is documented.	4	4
COP.10.1	The risks, benefits, potential complications, and options are discussed with the patients and his or her family or those who make decisions for patients.	(1) The patient, family and decision makers are educated on the risks, benefits, potential complications and options related to the planned surgical procedures.	4	4
		(2) The education includes the need for risk of, and alternatives to blood and blood product use.	4*	3
		(3) The patient' surgeon or other qualified individual provides the education.	4	4
COP.10.2	The surgery performed is written in the patient record.	(1) A postoperative diagnosis is documented.	2	3
		(2) A description of the surgical procedure, findings and any surgical specimens is documented.	4*	3
		(3) The names of surgeon and surgical assistants are documented.	4*	3

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Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
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		(4) The surgical report is available within a time frame needed to provide post-surgical care to the patient.	4*	3
COP.10.3	Each patient's physiological status is continuously monitored during and immediately after surgery and written in the patient's record.	(1) The patient's physiological status is continuously monitored during surgery.	4	4
		(3) Findings are entered into the patient's record.	4	4
COP.10.4	Patient care after surgery is planned and documented.	(1) Each patient's medical, nursing and other post-surgical care is planned.	4	4
		(2) The plan is documented in the patient's record.	1^	3
COP.11	Medication use in the organization is efficiently organized to meet patient needs.	(1) Medication use is organized throughout the organization so that patient's medication needs are met.	4*	4
COP.11.1	The pharmacy or pharmaceutical service and medication use in the organization comply with applicable laws and regulations.	(1) The pharmacy or pharmaceutical service and medication use comply with applicable laws and regulations.	2	3
COP.11.2	An appropriate selection of medications for prescribing or ordering is stocked or readily available	(1) Medications available for prescribing and ordering are appropriate to the organization's mission, patient needs and services provided.	4	4
		(2) There is a list of medications stocked in the organization or readily available from outside sources.	4	4
COP.11.2.1	There is a method for overseeing the organization's medication list and medication use.	(1) There is a method for overseeing the medication list.	2	3
COP.11.2.2	The organization can readily obtain medications not stocked or normally available to the organization.	(1) There is a process to obtain required medications not stocked or normally available to the organization.	4	4
COP.11.2.3	There is a process to obtain medications when the pharmacy or pharmaceutical service is closed.	(1) There is a process to obtain medications when the pharmacy is closed.	4	4

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Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
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COP.11.2.4	Emergency medications are available, monitored and safe when stored out of the pharmacy.	(1) Emergency medications are available in the organization within a time frame to meet emergency needs.	4	4
		(2) Emergency medications are protected from loss and theft	2	2
COP.11.3	Prescribing, ordering and administration of medications are guided by policies and procedures.	(1) Policies and procedures guide the safe prescribing, ordering and administration of medications in the organization.	3	3
		(2) Documentation requirements are stated.	2	2
		(4) Relevant staff is trained in correct prescribing, ordering and administration practice.	4	4
COP.11.3.2	Policies and procedures govern any patient self-administration of medications, the control of medication samples, the use of any medications brought into the organization by the patient or his her family, and dispensing of medications at discharge.	(1) Policies and procedures govern patient self-administration of medications.	3	3
		(3) Policies and procedures govern the documentation and management, of any medications brought into the organization for or by the patient.	3	3
		(4) Policies and procedures govern the dispensing of medications at the time of the patient's discharge.	3	3
COP.11.3.3	Policies and procedures govern the preparation, handling, storage and distribution of parenteral and enteral tube therapy.	(1) Policies and procedures guide the storage, preparation, handling and distribution of parenteral and enteral tube nutrition products.	3	4
COP.11.4	Medications are stored, prepared and dispensed in a safe and clean environment.	(2) Medications are stored properly.	4*	3
		(3) Medications are prepared and disposed in clear and safe areas.	N/A	N/A
COP.11.4.1	An appropriately licensed pharmacist, technician or other trained professional supervises the storage, preparation and dispensing of medications.	(1) A qualified individual supervises all activities.	4	4
COP.11.4.2	Medication prescriptions or orders are verified.	(1) Each prescription or order is reviewed.	1*	3
COP.11.4.3	The organization has a medication recall system.	(2) Policies and procedures address any use of medications known to be expired or outdated.	4	4

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		(3) Policies and procedures address the destruction of medications known to be expired or outdated.	4	4
		(4) Policies and procedures are implemented.	4	4
COP.11.4.4	A system is used to dispense medications in the right dose to the right patient at the right time.	(1) There is a uniform medication dispensing and distribution system in the organization.	4	4
COP.11.5	Patients are identified before medications are administered.	(1) Patients are identified before medications are administered.	2	3
COP.11.5.1	The right dose of medication is administered at the right time.	(1) Medications are verified with the prescription or order.	4	4
		(2) The dosage amounts of the medication are verified with the prescription or order.	4	4
		(4) Medications are administered on a timely basis.	4	4
		(5) Medications are administered as prescribed.	4	4
COP.11.6	Medication effects on patients are monitored.	(1) Medication effects are monitored.	4	4
COP.11.6.1	Medications prescribed and administered are written in the patient's record.	(1) Medications prescribed or ordered are recorded for each patient	4	4
		(3) Medication information is kept in the patient's record or inserted into his or her record at discharge or transfer.	4	4
COP.11.6.2	Adverse medication effects are noted in the patient's record.	(1) Monitoring includes observing adverse medication effects.	4	4
		(3) Adverse effects are documented in the patient's record.	4	4
COP.12	Food, appropriate for the patient and consistent with his or her clinical care is regularly available.	(1) Food, appropriate to the patient, is regularly available.	4	4
COP.12.1	All patients receive an order for food or other nutrients based on their nutritional status or need, including orders for nothing by month, a regular diet, a special diet, or parenteral or enteral tube nutrition.	(1) All patients have an order for food in their record.	4*	3
		(2) The order is based on the patient's nutritional status and needs.	4*	2

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PATIENT AND FAMILY EDUCATION (PFE)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
PFE.1	Education supports patient and family participation in care decisions and care process.	(1) The organization plans education consistent with its mission, services and patient population.	3	3
		(2) There is an appropriate structure or mechanism for education throughout the organization.	3	3
PFE.1.1	Each patient's education needs are assessed and recorded in his or her records.	(1) The patient's and family education needs are assessed.	3	3
		(2) Assessment findings are recorded in the patient's record.	1	1
		(3) There is a uniform process for recording patient education information.	1	1
PFE.1.2	Each patient and his or her family receive education to help them give informed consent, participate in care processes, and understand any financial implications of care choices.	(1) Patients and family learn about informed consent.	4*	4
		(2) Patients and family learn about participation in care decisions.	4	4
		(3) Patients and families learn about participation in the care process.	4	4
		(4) Patients and families learn about any financial implications of care decisions.	4	4
PFE.2	Education and training help meet patient's ongoing health needs.	Patients and families receive education and training to meet their ongoing health needs or achieve their health goals.	4*	4
PFE.2.1	The organization cooperates with available community resources to provide health promotion and disease prevention education.	The organization identifies and establishes relationships with community resources that support continuing health promotion and disease prevention education.	1	3
PFE.3	Patient and family education include the following topics, as appropriate to the patient's care: the safe use of medications, the safe use of medical equipment, potential interactions between medications and food, nutritional guidance and rehabilitation techniques.	(1) When appropriate, patients and families are educated about the safe and effective use of medications and potential side effects of medications.	4	4
		(2) When appropriate, patients and families are educated about safely and effectively using medical equipment.	4	4
		(3) When appropriate, patients and families are educated about preventing interactions between medications and food.	4	4

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PATIENT AND FAMILY EDUCATION (PFE)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
		(4) When appropriate, patients and families are educated about appropriate diet and nutrition.	4	4
		(5) When appropriate, patients and families are educated about rehabilitation techniques.	4	4
PFE.4	Education methods consider the patient's and family's values and preferences and allow sufficient interaction among the patient, family and staff for learning to occur.	(1) Education methods are selected on the basis of patient and family values and preferences.	4	4
		(2) Interaction among staff, the patient, and family confirms that the information was understood.	4	4
PFE.4.1	The patient and family are taught in a format and language that they understood.	The patients and families are taught in a format they understand.	3	3
PFE.4.2	Health professionals caring for the patient collaborate to provide education.	Patient and family education is provided collaboratively when appropriate.	4	4
PFE.4.2.1	These professionals have the knowledge and skills required for effective education.	(1) Those who provide education have the knowledge to do so.	4	4
		(1) Those who provide education have the communication skills to do so.	2	3

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PATIENT AND FAMILY RIGHTS (PFR)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**2000**	**2005**
PFR.1	The organization is responsible for providing process that support patients' and families' rights during care.	(2) The leaders understand patient and family rights as identified in laws and regulations.	2	3
		(3) The leaders work collaboratively to protect and advance patient and family rights.	3	3
		(5) Staff members can explain their responsibilities in protecting patient rights.	3	3
		(6) Policies and procedures guide and support patient and family rights in the organization.	2	4
PFR.1.1	The organization informs patients and families about its care and services and how to access those services.	(1) Patients are provided information on the care and services provided by the organization.	2	3
		(3) The information is provided to families, as appropriate.	4	4
		(4) Information on alternative sources of care and services is provided when the organization cannot provide the care or services.	4	4
PFR.1.2	Care is considerate and respectful of the patient's personal values and beliefs.	(1) There is a process to identify and respect patient values and beliefs.	3	4
		(2) Staff uses the process and provides care that is respectful of the patient's values and beliefs.	4	4
PFR.1.3	Care is respectful of the patient's need for privacy.	A patient's needs for privacy is respected for all examinations, procedures and treatments.	2	2
PFR.1.4	The organization takes measures to protect patient's possessions from theft and loss.	(1) The organization has determined its level of responsibility for patients' possessions.	1	3
		(2) Patients receive information about the organization's responsibilities for protecting personal belongings.	1	3
		(3) Patient's possessions are safeguarded when the organization assures responsibilities or when patient is unable to assure responsibility.	2	3
PFR.1.5	Patients are protected from physical assaults.	(1) The organization has a process to protect patients from physical assault.	2	3

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PATIENT AND FAMILY RIGHTS (PFR)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**2000**	**2005**
		(2) Individuals without identification are investigated.	2	3
PFR.1.6	Vulnerable children, disabled individuals, and elderly receive appropriate protection.	(1) The organization identifies its vulnerable patient groups.	4	4
		(2) Vulnerable children, disabled individuals, the elderly, and others identified by the organization are protected.	4	4
PFR.1.7	Patient information is confidential and protected from loss or misuse.	(2) Policies and procedures to prevent the loss of patient information are implemented.	3	4
		(3) Policies and procedures to prevent the misuse of patient information are implemented.	3	4
PFR.2	The organization supports patients' and families' rights to participate in the care process.	(1) Policies and procedures are developed to support and promote patient and family participation in care processes.	3	4
		(3) Staff members are trained on the policies and procedures and their role in supporting participation in care processes.	2	3
PFR.2.1	The organization informs patients and families how they will be told of medical conditions and treatments and how they can participate in care decisions, to the extent they wish to participate.	(1) Patients and families understand how and when they will be told of medical conditions.	4*	3
		(2) Patients and families understand how they will be told of planned treatment.	4*	3
		(3) Patients and families understand the process used to obtain consent.	4	4
		(4) Patients and families participate in care decisions to the extent they wish.	4	4

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PATIENT AND FAMILY RIGHTS (PFR)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**2000**	**2005**
PFR.2.2	The organization informs patients and families about their rights and responsibilities related to refusing or discontinuing treatment.	(1) The organization informs patients and families about their rights to refuse or discontinue treatment.	4	4
		(2) The organization informs patients and families about the consequences of their decisions.	4	4
		(4) The organization informs patients about available care and treatment alternatives.	4	4
PFR.2.3	The organization respects patient wishes and preferences to withhold resuscitative services and forgo or withdraw life-sustaining treatments.	(1) The organization has identified its position on withholding resuscitative services and forgoing or withdrawing life-sustaining treatments.	1	3
		(3) Policies and procedures guide the process for patients to make their decisions known to the organization and for modifying decisions during the course of care.	2	3
		(4) Policies and procedures guide the organization's response to the patient decisions.	2	3
		(6) Documentation about decisions follows organization policy.	1	3
PFR.2.4	The organization has processes to assess and manage pain appropriately.	(1) The organization respects and supports the patient's right to appropriate assessment and management of pain.	3	4
		(2) The organization identifies patients in pain during the assessment process.	4	4
		(3) The organization communicates with and provides education for patients and families about the pain and pain management.	4	4
		(4) The organization educates health professionals in assessing and managing pain.	3	4
PFR.4	The organization informs patients and families about how to gain access to clinical research, investigations, or clinical trials involving	(1) Patients and families are informed about how to gain access to those research, investigations, or clinical trials relevant to their treatment needs.	4	4

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PATIENT AND FAMILY RIGHTS (PFR)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**2000**	**2005**
	clinical trials involving human subjects.	(2) Patients asked to participate are informed about expected benefits.	4	4
		(3) Patients asked to participate are informed about potential discomfort and risks.	4	4
		(6) Patients are assured that their refusal to participate or withdraw from participation will not compromise their access to the organization's services.	4	4
PFR.6	The organization informs patients and families about its process to receive and act on complaints, conflicts, and differences of opinion about patient care and the patient's right to participate in these processes.	(1) Patients are aware of their right to voice a complaint and the process to do so.	2	3
		(2) Complaints are reviewed according to the organization's mechanism.	2	3
		(4) Policies and procedures identify participants in the process.	1	2
		(5) Policies and procedures identify how the patient and family participate.	2	2
PFR.7	Staff members understand their role in identifying patient's values and beliefs and protecting patient's rights.	(1) Staff members understand their role in identifying patient and family values and beliefs and how such values and beliefs can be respected in the care process.	3	4
		(2) Staff members understand their role in protecting patient and family rights.	3	3
PFE.8	All patients are informed about their rights in a manner they can understand	(1) Each patient receives information about his or her rights in writing.	1	3
		(2) The organization has a process to inform patients of their rights when written communication is not effective or appropriate.	2	3

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PATIENT AND FAMILY RIGHTS (PFR)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**2000**	**2005**
PFR.9	Patient informed consent is obtained through a process defined by the organization and carried out by trained staff.	(1) The organization has a defined consent process described in policies and procedures.	3	4
		(3) Patients give informed consent consistent with the policies and procedures.	4	4
PFR.9.1	Patient and families receive adequate information about the illness, proposed treatment, and care providers so that they can make care decision.	(1) Patients are informed of their condition.	4	4
		(2) Patients are informed about the proposed treatment.	4	4
		(3) Patients are informed about the potential benefits and drawbacks to the proposed treatment.	4	4
		(4) Patients are informed about possible alternatives to the proposed treatment.	4	4
		(5) Patients are informed about the likelihood of successful treatment.	4	4
		(6) Patients are informed about possible problems related to recovery.	4	4
		(7) Patients are informed about the possible results of non-treatment.	4	4
		(9) Patients know the identity of the physician or other practitioner responsible for their care.	4	4
PFR.9.1.1	The information is provided in a way and language understood by those making the care decision.	(1) The information is provided to the patient in a clear and understandable way.	4	4
PFR.9.2	The organization establishes a process, within the content of existing law and culture, for when other can grant consent.	(1) The organization has a process for when others can grant informed consent.	2	4
PFR.9.2.1	When someone other than the patient gives the informed consent, that individual is noted in the patient's record.	(1)Individuals, other than patient, granting consent are noted in the patient's record.	4	4

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PATIENT AND FAMILY RIGHTS (PFR)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**2000**	**2005**
PFR.9.4	Informed consent is obtained before surgery, anesthesia, use of blood and blood products, and other high-risk treatments and procedures.	(1) Consent is obtained before surgical or invasive procedures.	4	4
		(2) Consent is obtained before anesthesia.	1	3
		(3) Consent is obtained before use of blood and blood products.	1	3
		(4) Consent is obtained before other high-risk procedures and treatments.	4	4
		(5) The identity of the individual providing the information to the patient and family is noted in the patient's record.	3	4
PFR.9.4.1	The organization lists those categories or types of treatments and procedures that require specific informed consent.	(1) The organization has listed those procedures and treatments that require separate consent.	1	4
		(2) The list was developed collaboratively by those who provide the treatments and perform the procedures.	N/A	4
PFR.9.6	The patient's signature or other indication of all types of consent is documented in his or her record.	(1) Consent is documented in the patient's clinical record by signature or record of verbal consent.	4	4
PFR.10	The organization provides patient care within business, financial, ethical, and legal norms that protect patients and their rights.	(1) Organization leaders establish ethical and legal norms that protect patients and their rights.	2	3
PFR.10.1	The organization's mission statement is made public.	(1) The leaders make public the organization's mission statement.	1	2
PFR.10.2	The organization has established and implemented a framework for ethical management that includes marketing, admission, transfer, and discharge, and disclosure of ownership and any business and professional conflicts that may not be in the patients' best interests.	(3) The organization honestly portrays its services to patients.	4	4
		(5) The organization accurately bills for its services.	4	4
		(6) The organization discloses and resolves conflicts when financial incentives and payment arrangements compromise patient care.	N/A	N/A

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FACILITY MANAGEMENT AND SAFETY (FMS)				
Standard #	**Standard**	(# of measurable element)	**Evaluation Score**	
			2000	**2005**
FMS.1	The organization complies with relevant laws, regulations and facility inspection requirements.	(1) The organization leaders know what laws, regulations, and other requirements apply to the organization's facilities.	3	3
		(2) The leaders implement the applicable requirements or approved alternatives.	3	3
		(3) The leaders ensure the organization meets the condition of facility inspection reports or citations.	3	3
FMS.1.1	The organization plans and budgets for upgrading or replacing key systems, building, or components.	The organization plans and budgets for upgrading or replacing the systems, building, or components needed for the continued operation of a safe and effective facility.	4*	3
FMS.3.1	The plan includes prevention, early detection, suppression, abatement and safe exit from the facility in response to fires and non-fire emergencies.	(1) The program includes the reduction of fire risks.	3	3
		(3) The program includes the early detection of fire and smoke.	3	3
		(4) The program includes the abatement of fire and containment of smoke.	4*	3
		(5) The program includes the safe exit from the facility when fire and non-fire emergencies occur.	3	3
FMS.3.2	The organization regularly tests its fire and smoke safety plan, including any devices related to early detection and suppression, and documents the results.	(1) Fire detection and abatement systems are inspected, tested, and maintained at a frequency determined by the organization.	N/A	1
		(2) The fire and smoke safety evaluation plan is tested at least twice per year.	1	1
		(3) Staff is trained to participate in the fire and smoke safety plan.	1	1
		(5) Inspection, testing and maintenance of equipment and systems are documented.	1	1
FMS.3.3	The organization develops and implements a plan to limit smoking by staff and patients to designated not patient care areas of the facility.	(1) The organization has implemented a policy and plan to eliminate and limit smoking.	3	3
		(2) The plan applies to patients, families, visitors and staff.	3	3
		(3) There is a process to grant patient exceptions to the plan.	3*	2

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FACILITY MANAGEMENT AND SAFETY (FMS)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
FMS.4	The organization develops a plan to respond to likely community emergencies, epidemics, and natural or other disasters.	The organization plans its response to likely community emergencies, epidemics, and natural or other disasters.	2	2
FMS.4.1	The organization has tested its response to emergencies, epidemics and disasters.	The plan is tested.	1	1
FMS.4.2	The organization has access to any medical supplies, communication equipment and other materials to support its response to emergencies, epidemics and disasters.	(1) Medical supplies are available in emergencies.	4*	3
		(2) Communication equipment is available in emergencies.	4	4
FMS.5	The organization has a plan for the inventory, handling, storage and use of hazardous materials and the control and disposal of hazardous materials and waste.	(1) The organization identifies hazardous materials and waste.	3	3
		(2) Hazardous materials and waste are managed according to the plan.	N/A	N/A
		(3) The plan includes safe handling, storage and use.	4*	3
		(4) The plan includes reporting and investigation of spills, exposures and other incidents.	3*	1
		(5) The plan includes the proper disposal of hazardous waste.	3*	2
		(8) The plan includes labeling hazardous materials and waste.	4*	1
FMS.6	One or more qualified individuals oversee the planning and implementation of the program to provide a safe and effective physical facility.	(1) The program oversight and direction are assigned to one or more individuals.	4*	3
		(2) The individual(s) is qualified by experience and training.	4*	3
FMS.7	The organization plans and implements a program for inspecting, testing, and maintaining medical equipment and documenting results.	(1) Medical equipment is managed throughout the organization according to the plan.	2	2
		(2) There is an inventory of all medical equipment.	2	2
		(3) Medical equipment is regularly inspected.	4*	3
		(4) Medical equipment is tested when new and as appropriate thereafter.	4*	3
		(5) There is a preventive maintenance program.	2	2

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FACILITY MANAGEMENT AND SAFETY (FMS)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
FMS.8	Potable water and electrical power are available 24 hours a day, seven days a week, through regular or alternate sources, to meet essential patients care needs.	(1) Potable water is available 24 hours a day, seven days a week.	4	4
		(2) Electric power is available 24 hours a day, seven days a week.	4	4
FMS.9	Electrical, water, waste, ventilation, medical gas and other key systems are regularly inspected, maintained, and when appropriate improved.	(1) Utility systems are regularly inspected.	4	4
		(3) Utility systems are regularly maintained.	4	4
FMS.9.1	Designated individuals or authorities monitor water quality regularly.	(1) Water quality is monitored regularly.	4	4
		(2) An individual(s) or agency is assigned responsibility for monitoring.	4	4
FMS.10	The organization educates and trains all staff members about their roles in providing a safe and effective patient care facilities.	For each component of the organization's facility management and safety program there is a planned education to ensure that staff members can effectively carry out their responsibilities.	3*	2
FMS.10.1	Staff members are trained and knowledgeable about their roles in the organization's plans for their fire safety, security, hazardous materials and emergencies.	(1) Staff members can describe and/or demonstrate their role in the response to a fire.	2	2
		(4) Staff members can describe and/or demonstrate procedures and their role in internal and community emergencies and disasters.	2	2
FMS.10.2	Staff is trained to operate and maintain medical equipment and utility systems.	(1) Staff is trained to operate medical equipment.	4*	3
		(2) Staff is trained to maintain medical equipment.	3*	2
FMS.10.3	The organization periodically tests staff knowledge through demonstration, mock events, and other suitable methods. This testing is then documented.	(1) Staff knowledge is tested regarding their role in maintaining a safe and effective facility.	2	2
		(2) Staff training and testing are documented as to who was trained and tested and the results**.**	1	1

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GOVERNANCE, LEADERSHIP, AND DIRECTION (GLD)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
GLD.1	Governance responsibilities and accountabilities are described in bylaws policies and procedures, or similar documents that guide how they are to be carried out.	(1) The organization's governance structure is described in written documents.	4*	4
		(2) Governance responsibilities and accountabilities are described in the document.	4*	4
		(3) There is an organization chart or document.	1	3
		(4) Those responsible for governing and managing are identified by title or name.	3	4
GLD.1.1	Those responsible for governance approve the organization's mission statement.	Those responsible for governance approve the organization's mission.	1	2
GLD.1.2	Those responsible for governance approve the policies and plans to operate the organization.	Those responsible for governance approve the organization's strategic and management plans and operating policies.	1	3
GLD.1.3	Those responsible for governance approve the budget and allocate the resources required to meet the organization's mission.	(1) Those responsible for governance approve the organization's budget.	2	3
		(2) Those responsible for governance allocate the resources required to meet the organization's mission.	2	3
GLD.1.4	Those responsible for governance appoint the organization's senior manager(s) or director(s).	Those responsible for governance appoint the organization's senior manager or leader.	3	4
GLD.1.5	Those responsible for governance support and promote quality management and improvement efforts.	Those responsible for governance support and promote quality management and improvement.	2	3
GLD.1.6	Those responsible for governance collaborate with the organization's managers and leaders.	Those responsible for governance use processes that provide communication and cooperation between governance and management.	2	4
GLD.2	A senior manager or director is responsible for operating the organization and complying with applicable laws and regulations.	(1) The senior manager or director manages the organization's day-to-day operations.	4	4
		(2) The senior manager or director has the education and experience to carry out his or her responsibilities.	4	4
		(4) The senior manager or director carries out approved policies.	4	4

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GOVERNANCE, LEADERSHIP, AND DIRECTION (GLD)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
GLD.2	A senior manager or director is responsible for operating the organization and complying with applicable laws and regulations	(5) The senior manager or director ensures compliance with applicable laws and regulations.	4	4
		(6) The senior manager or director responds to any reports from inspecting and regulatory agencies.	4	4
		(7) The senior manager or director manages human, financial and other resources.	4	4
GLD.3	The organization's clinical and managerial leaders are identified and are collectively responsible for defining the organization's mission and creating the plans and policies needed to fulfill the mission.	(1) The leaders of the organization are formally or informally identified.	4	4
		(2) The leaders are collectively responsible for defining the organization mission.	4	4
		(3) The leaders are responsible for creating the policies and procedures necessary to carry out the mission.	4	4
		(4) The leaders work collaboratively to carry out the organization's mission and policies.	4	4
GLD.3.1	Organization leaders plan with the community leaders and leaders of other organizations to meet the community health care needs.	The organization's leaders plan with recognized community leaders.	N/A	3
GLD.3.2	The clinical leaders identify and plan for the type of services required to meet the needs of the patients served by the organization.	(1) The organization plans describe the care and services to be provided.	1	1
		(2) The care and services to be offered are consistent with the organization's mission.	4*	3
		(3) Clinical leaders determine the type of care and services to be provided by the organization.	4	4
GLD.3.4	The medical, nursing and other leaders are educated in concept of quality management and improvement.	(1) Medical, nursing and other leaders are educated in concept of quality management and improvement.	2	3
		(2) Medical, nursing and other clinical leaders participate in relevant quality management and improvement processes.	4*	3

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GOVERNANCE, LEADERSHIP, AND DIRECTION (GLD)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
GLD.3.5	Organization leaders ensure that there are uniform programs for the recruitment, and continuing education of the staff.	(1) Thre is a planned process for staff recruitment.	2	4
		(2) There is a planned process for staff retention.	2	2
		(3) There is a planned process for staff personnel development and continuing education.	2	3
		(4) The planning is collaborative and includes all departments and services in the organization.	2	4
GLD.3.6	The leaders foster communication and coordination among those individuals and departments responsible for providing clinical services.	(1) Leaders foster communication among departments, services and individual staff members.	4	4
		(2) Leaders foster coordination of clinical services.	3	4
GLD.4	Medical, nursing and other clinical leaders plan and implement an effective organizational structure to support their responsibilities and authority.	There is an effective organizational structure used by medical, nursing and other Clinical leaders to carry out their responsibilities and authority.	1	3
GLD.4.1	The organizational structure and processes support professional communication.	The organizational structure and processes support professional communication.	4	4
GLD.4.3	The organizational structure and processes support the oversight of professional clinical issues.	The organizational structure(s) and processes support oversight of professional ethical issues.	2	3
GLD.4.4	The organizational structure and process support the oversight of the quality of clinical services.	The organizational structure(s) and processes support oversight of the quality of clinical services.	3	3
GLD.5	One or more qualified individuals provide direction for each department or service in the organization.	(1) An individual with appropriate training, education and experience directs each department or service in the organization.	3	4
		(2) When more that one individual provides direction the responsibilities of each are defined in writing.	3	3
GLD.5.1	Directors identify in writing the services to be provided by the department.	(1) Documents describe the services provided by each department or service.	1	3
		(2) Each department's or service's policies and procedures guide the provision of identified services.	1	1

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GOVERNANCE, LEADERSHIP, AND DIRECTION (GLD)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
		(3) Each department's or service's policies and procedures address the staff knowledge and skills needed to assess and meet patient needs.	1	2
GLD.5.1.1	Services are coordinated and integrated within the department or services and with other departments and services.	(1) There is coordination and integration of services within each department and service.	4	4
		(2) There is coordination and integration of services with other departments and services.	4	4
GLD.5.2	Directors recommend space, staffing and other resources needed by the department or service.	(1) Directors recommend staff needed to provide services.	4	4
		(2) Directors recommend other special resources needed to provide services.	4	4
GLD.5.3	Directors recommend criteria for selecting the department or service's professional staff and choose individuals who meet those criteria.	The director develops and when required, submits for endorsement criteria related to education, skills knowledge and experience of professional staff.	2	3
GLD.5.4	Directors provide orientation and training for all staff of department or service.	The director has established an orientation for department staff.	2	2

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MANAGEMENT OF INFORMATION (MOI)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
MOI.1	The organization plans and implements processes to meet patient needs of all those who provide clinical services, those who manage the organization, and those outside the organization who require data and information from the organization.	(2) The information needs of those who provide clinical services are considered in the planning process.	4	4
		(3) The information needs of those who manage the organization are considered in the planning process.	4	4
		(4) The information needs and requirements of individuals and agencies outside the organization are considered in the planning process.	4	4
MOI.1.1	The organization has planned to meet information needs.	An information plan is developed and implemented in the organization.	2	3
MOI.1.2	The plan is based on an assessment of the needs of those within and outside the organization.	(1) Strategies are implemented to meet information needs of those who provide clinical services.	4	4
		(2) Strategies are implemented to meet information needs of those who manage the organization.	4	4
MOI.1.4	The plan includes how the confidentiality, security, and integrity of data and information will be maintained.	(1) The plan includes how confidentiality of data and information will be maintained.	2	3
		(2) The plan includes how security of data and information will be maintained.	3	3
		(3) The plan includes how the integrity of data and information will be maintained.	3	3
MOI.1.5	The plan defines the level of security.	(1) The plan identifies the level of security for each category of data and information.	3*	3
		(2) The plan identifies those who have need or job position that permits access to each category of data and information.	3*	3
MOI.1.5.1	Organization policy identifies those authorized to make entries in the patient medical record and determines the record's content and format.	Those authorized to make entries in the patient clinical record are identified in organization policy.	3	3

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MANAGEMENT OF INFORMATION (MOI)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
MOI.1.5.2	Only authorized providers make entries in the patient clinical record.	There is a process to ensure that only authorized individuals make entries in patient clinical records.	2	2
MOI.1.6	The organization has a policy on the retention time of records, data, and information.	(1) The organization has a policy on retaining patient clinical records and other data and information.	2	2
		(2) The retention process provides expected confidentiality and security.	3	3
		(3) Records, data, and information are destroyed appropriately.	N/A	1
MOI.1.7	The plan is implemented and supported by sufficient staff and other resources.	Sufficient staff support the implementation.	4*	3
MOI.1.8	The organization uses standardized diagnosis codes, procedure codes, symbols, and definitions.	Standardized diagnosis codes are used.	4*	3
MOI.1.9	The data and information needs of those in and outside the organization are met on a timely basis in a format that needs user expectations and with the desired frequency.	(1) Data and information dissemination meets user needs.	4	4
		(2) Users receive data and information on a timely basis.	4	4
		(3) Users receive data in a format that aids its intended use.	4	4
MOI.1.10	Appropriate clinical and managerial staff participates in selecting, integrating, and using information management technology.	(1) Clinical staff participates in information technology decisions.	4	4
		(2) Managerial staff participates in information technology decisions.	4	4
MOI1.12	Records and information are protected from loss, destruction, tampering, and unauthorized access or use.	(1) Records and information are protected from loss and destruction.	3	3
		(2) Records and information are protected from tampering and unauthorized access or use.	3	4
MOI.1.13	Clinical and managerial information is integrated to support the organization's governance and leadership.	Clinical and managerial data and information are integrated as needed to support decision-making.	4*	3

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MANAGEMENT OF INFORMATION (MOI)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
MOI.1.14	Decision-makers and other appropriate staff members are educated and trained in the principles of information management.	The education is appropriate to needs and job responsibilities.	4*	3
MOI.2	The organization initiates and maintains a clinical record for every patient assessed or treated.	A clinical record is initiated for every patient assessed or treated by the organization.	4	4
MOI.2.1	The clinical record contains sufficient information to identify the patient, support the diagnosis, justify the treatment, document the course and results of treatment, and promote continuity of care among health care providers.	(1) Patient clinical records contain adequate information to identify the patient.	4	4
		(2) Patient clinical records contain adequate information to support the diagnosis.	4	4
		(3) Patient clinical records contain adequate information to justify the care and treatment.	2	3
		(4) Patient clinical records contain adequate information to document the course and results of treatment.	3	3
		(5) The specific content of patient clinical records has been determined by the organization.	4	4
MOI.2.1.1	The clinical record of every patient receiving emergency care include the time of arrival, the conclusions at termination, the patient's condition at discharge, and follow-up care instructions.	(1) The clinical records of emergency patients include arrival time.	4	4
		(2) The clinical records of emergency patients include conclusions at the termination of treatment.	4	4
		(3) The clinical records of emergency patients include the patient's condition at discharge.	4	4
		(4) The clinical records of emergency patients include any follow-up care instructions.	4	4
MOI.2.2	As part of its performance improvement activities, the organization regularly assesses patient clinical record content and the completeness of patient clinical records.	(1) Patient clinical records are reviewed regularly.	1	2
		(2) The review focuses on the timeliness legibility, and completeness of the clinical record.	N/A	2

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MANAGEMENT OF INFORMATION (MOI)				
Standard #		**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
MOI.2.3	Health care providers have access to the information in a patient's clinical record each time the patient is seen for a new or continuing care episode.	Care providers have access to the patient's clinical record each time the patient is seen for care or treatment.	4	4
MOI.3	Aggregate data and information support patient care, organization management and the quality management program.	(1) Aggregate data and information support patient care.	4*	3
		(2) Aggregate data and information support organization management.	4*	3
MOI.3.2	The organization supports patient care, education, research, management with timely information from current sources.	(1) Current scientific and other information supports patient care.	1	3
		(2) Current scientific and other information supports clinical education.	4	4
		(3) Current scientific and other information supports research.	4	4
		(4) Current professional and other information supports management.	1	3
MOI.3.2.2	The organization uses external reference databases for comparative purposes.	The organization compares its performance using external reference databases.	4*	2

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PREVENTION AND CONTROL OF INFECTIONS (PCI)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
PCI.1	The organization designs and implements a coordinated program to reduce the risks of nosocomial infectious in patients and health care workers.	(1) There is a program to reduce the risk of nosocomial infections in patients and health care workers.	3	4
PCI.1.1	All patient, staff, and visitor areas of the organization are included in the infection control program.	(1) All areas of the organization are included in the infection control program.	3	3
PCI.2	The organization establishes the focus on the nosocomial infection prevention and reduction program.	(1) The organization has established the focus of the program to prevent or reduce the incidence of nosocomial infections.	4	4
		(2) Respiratory tract infections are included as appropriate to the organization.	4	4
		(4) Intravascular invasive devices are included as appropriate to the organization.	4	4
		(5) Surgical wounds are included as appropriate to the organization.	4	4
PCI.3	The organization identifies the procedures and processes associated with the risk of infection and implements strategies to reduce infection risk.	(1) The organization has identified those processes associated with infection risk and implemented strategies to reduce infection risk in those processes.	4	4
		(2) Equipment cleaning and sterilization are included as appropriate to the organization.	4	4
		(3) Laundry and linen management are included as appropriate to the organization.	4	4
		(4) Disposal of infectious waste and body fluids is included as appropriate to the organization.	4	4
		(5) The handling and disposal of blood and blood components are included as appropriate to the organization.	4	4
		(6)Kitchen sanitation and food preparation and handling are included as appropriate to the organization.	4	4

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PREVENTION AND CONTROL OF INFECTIONS (PCI)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
		(7) Operation of the mortuary and post-mortem area are included as appropriate to the organization.	N/A	N/A
		(8) Disposal of sharps and needles is included as appropriate to the organization.	4	4
		(10) The management of the hemorrhagic patients is included as appropriate to the organization.	4	4
PCI.4	Gloves, mask, soap, and disinfectants are available and used correctly when required.	(1) The organization identifies those situations for which gloves and/or masks are required.	4	4
		(3) The organization identifies those areas where hand washing and disinfecting procedures are required.	4	4
PCI.5	Cultures are routinely obtained from designed sites in the organization associated with significant infection risk.	(1) The organization identifies those sites from which specimens are to be collected and the frequency of the collection from each site.	4	4
		(2) Specimens are routinely collected.	4	4
PCI.6	One or more individuals oversee all infection control activities.	(1) One or more individuals oversee the infection control program.	3	4
		(2) The individuals are qualified for the scope and complexity of the program.	2	4
PCI.8	Coordination of infection control activities involves medicine, nursing, and others as appropriate to the organization.	(1) Coordination of infection control activities involves medicine.	4	4
		(2) Coordination of infection control activities involves nursing.	4	4
PCI.9	The infection control program is based on current scientific knowledge, accepted practice guidelines, and applicable laws and regulations.	(1) The infection control program is based on current scientific knowledge.	4	4
		(2) The infection control program is based on accepted practice guidelines.	1	3
		(3) The infection control program is based on applicable laws and regulations.	4	N/A
PCI.10	Organization information management systems support the infection control program.	(1) Information management systems support the infection control program.	4	4

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PREVENTION AND CONTROL OF INFECTIONS (PCI)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
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PCI.11	The infection control process is integrated with the organization's overall program for quality management and improvement.	(1) Infection control activities are integrated into the organization's quality management and improvement program.	2	4
PCI.11.1	The organization tracks infection risks, infection rates, and trends in nosocomial infections.	(1) Nosocomial infection risks are tracked.	4	4
		(2) Nosocomial infection rates are tracked.	4	4
		(3) Nosocomial infection trends are tracked.	4	4
PCI.11.3	The organization uses risk, rate, and trend information to design or modify processes to reduce nosocomial infections to the lowest possible level.	(1) Processes are redesigned based on risk, rate and trend data and information.	4	4
		(2) Processes are redesigned to reduce infection risk to the lowest levels possible.	4	4
PCI.11.4	The organization compares its infection control rates with other organizations through comparative databases.	(1) Infection control rates are compared to other organizations' rates.	2	2
PCI.11.5	The results of infection monitoring in the organization are regularly communicated to staff, doctors and management.	(1) Monitoring results are communicated to the medical staff.	2	4
		(2) Monitoring results are communicated to nursing staff.	2	3
		(3) Monitoring results are communicated to management.	4	4
PCI.11.6	The organization reports information on infections to appropriate external public health agencies.	(1) Infection control results are reported to public health agencies as required.	N/A	N/A
PCI.12	The organization provides education on infection control practices to staff, doctors, patients, and as appropriate, family and other care givers.	(1) The organization provides education about infection control program.	2	3
		(2) Medical, nursing and other professional staff are included in the program.	2	4
		(3) Patients and families are included when appropriate to the patient's needs and condition.	4*	3
PCI.12.1	All staff receives an orientation to the organization's infection control program.	(1) All staff is oriented to the policies, procedures, and practices of the infection control program.	3	4

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PREVENTION AND CONTROL OF INFECTIONS (PCI)				
Standard #	**Standard**	**Measurable Element** (# of measurable element)	**Evaluation Score**	
			2000	**2005**
PCI.12.2	All staff is educated in infection control when new policies are implemented and when significant trends are noted in surveillance data.	(1) Periodic staff education includes new policies and procedures.	1	4
		(2) Periodic staff education is in response to significant trends in infection data.	1	4

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QUALITY MANAGEMENT AND IMPROVEMENT (QMI)				
#	Standard	Measurable Element (# of measurable element)	Evaluation Score	
				2005
QMI.1	Those responsible for governing and leading the organization participate in planning and monitoring a quality management and improvement program.	Those who govern and lead participate in planning and monitoring the quality management and improvement program.	2	3
QMI.1.1	The organization's clinical and managerial leaders collaborate to plan and carry out the quality management and improvement program.	(1) Clinical leaders participate to plan and carry out the quality management and improvement program.	3	3
		(2) Managerial leaders participate to plan and carry out the quality management and improvement program.	2	3
QMI.1.1.1	There is a written plan for the organization wide quality management and improvement program.	There is a written plan for the quality management and improvement program.	1	1
QMI1.1.2	The program includes all components of the organization's quality monitoring and control activities, including risk management.	The program includes all components of the organization's quality monitoring and control activities.	2	2
QMI.1.3	The leaders provide technological and other support to the quality management and improvement program.	(1) The leaders understand the technology and other support requirements for tracking and comparing monitoring results.	4*	3
		(2) The leaders provide technology and support, consistent with the organization's resources, for tracking and comparing monitoring results.	4*	3
QMI.1.4	The quality management and improvement program is coordinated, and program information is communicated to staff.	(1) The organization's quality management and improvement program is coordinated	2	3
		(2) Information on the program is communicated to staff regularly.	2	3
QMI.2	The organization designs new and modified systems and processes according to quality improvement principles.	Quality improvement principles and tools are applied to the design of new or modified processes.	3*	3
QMI.2.2	The organization sets expectations for how new and modified processes should operate.	Indicators are selected to measure how well the newly designed or redesigned process operates.	3*	2

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QUALITY MANAGEMENT AND IMPROVEMENT (QMI)				
Standard #	**Standard**	**Measurable Element (# of measurable element)**	**Evaluation Score**	
			2000	**2005**
QMI.2.3	The organization collects data to see if new and modified processes meet operational expectations.	Indicator data used to evaluate the operation of the process.	4*	3
QMI.3	The organization's leaders identify key measures (indicators) to monitor the organization's clinical and managerial structures, processes, and outcomes.	(1) The leaders identify key measures to monitor clinical areas.	3*	3
		(2) The leaders identify key measures to monitor managerial areas.	2*	2
QMI.3.1	Clinical monitoring includes patient assessment.	Clinical monitoring includes patient assessment.	2	3
QMI.3.2	Clinical monitoring includes laboratory and radiology safety and quality control programs.	Clinical monitoring includes laboratory and radiology safety and quality control programs.	3*	3
QMI.3.3	Clinical monitoring includes surgical procedures.	Clinical monitoring includes surgical procedures.	4*	4
QMI.3.4	Clinical monitoring includes the use of antibiotics and other medications and medication errors.	Clinical monitoring includes the use of antibiotics and other medications and medication errors.	2	3
QMI.3.5	Clinical monitoring includes the use of anesthesia.	Clinical monitoring includes the use of anesthesia.	2	2
QMI.3.6	Clinical monitoring includes the use of blood and blood products.	Clinical monitoring includes the use of blood and blood products.	2	4
QMI.3.7	Clinical monitoring includes availability, content, and use of patient records.	Clinical monitoring includes availability, content, and use of patient records	2	3
QMI.3.8	Clinical monitoring includes infection control, surveillance, and reporting.	Clinical monitoring includes infection control, surveillance, and reporting.	4*	4
QMI.3.10	Managerial monitoring includes the procurement of routinely required supplies and medications essential to meet patient needs.	Managerial monitoring includes the procurement of routinely required supplies and medications essential to meet patient needs.	2	3
QMI.3.11	Managerial monitoring includes reporting of activities as required by law and regulation.	Managerial monitoring includes reporting of activities as required by law and regulation.	4	4

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QUALITY MANAGEMENT AND IMPROVEMENT (QMI)				
Standard #	**Standard**	**Measurable Element (# of measurable element)**	**Evaluation Score**	
			2000	**2005**
QMI.3.12	Managerial monitoring includes risk management.	Managerial monitoring includes risk management.	2	2
QMI.3.14	Managerial monitoring includes patient and family expectation and satisfaction.	Managerial monitoring includes patient and family expectation and satisfaction.	4*	4
QMI.3.16	Managerial monitoring includes patient demographics and diagnoses.	Managerial monitoring includes patient demographics and diagnoses.	4*	4
QMI.3.17	Managerial monitoring includes financial management.	Managerial monitoring includes financial management	2	3
QMI.3.18	Managerial monitoring includes the surveillance, control, and prevention of events that jeopardize the safety of patients, families, and staff.	Managerial monitoring includes the surveillance, control, and prevention of events that jeopardize the safety of patients, families, and staff.	2	2
QMI.3.19	Data collection supports further study of areas targeted for study and improvement.	Data collection is used to study areas targeted for improvement.	3*	3
QMI.3.20	Data collection supports evaluation of the effectiveness of implemented improvements.	Data collection is used to monitor and evaluate the effectiveness of improvements	3	3
QMI.4	Individuals with appropriate experience, knowledge, and skills systematically aggregate and analyze data in the organization.	(1)Data are aggregated, analyzed, and transformed into useful information	4*	3
		(2)Individuals with appropriate clinical or managerial experience, knowledge, and skills participate in the process.	4*	3
QMI.4.1	The frequency of data analysis is appropriate to the process being studied and meets organization requirements.	(1)The frequency of data analysis is appropriate to the process under study.	2	2
		(2)The frequency of data analysis meets organization requirements.	3	3
QMI.4.2	Data are intensively assessed when significant unexpected events and undesirable trends and variation occur.	(1)Intense analysis of data takes place when significant adverse levels, patterns, or trends occur.	4	4
		(2)The organization has established which events are significant.	3	3
		(3)The organization has established the process for intense analysis of these events.	3	3

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QUALITY MANAGEMENT AND IMPROVEMENT (QMI)				
Standard #	**Standard**	**Measurable Element (# of measurable element)**	**Evaluation Score**	
			2000	**2005**
		(4)Significant events are analyzed when they occur.	4	4
QMI.4.3	The analysis process includes comparisons internally, with other organizations when available, and with scientific standards and desirable practices.	(1)Comparisons are made over time within organization.	4*	3
		(2)Comparisons are made with similar organizations when possible.	4*	3
		(3)Comparisons are made with standards when appropriate.	4*	3
QMI.4.4	Statistical tools and techniques suitable to the process or outcome under study are used.	Statistical tools and techniques are used in the analysis process when suitable.	3*	3
QMI.5	Improvement in quality is achieved and sustained.	(1) The organization uses a consistent process to plan and implement improvements.	2	2
		(2)The organization documents the improvements achieved and sustained.	1	1
QMI.5.1	Improvement activities are undertaken for the priority areas identified by the organization's leaders.	The priority areas identified by the organization's leaders are included in improvement activities.	4*	3
QMI.5.2	Assignments are made and support provided.	Those responsible for an improvement are assigned.	4*	3
QMI.5.3	Staff is trained, appropriate policy changes are made, and necessary resources are allocated.	(1)Policy changes necessary to plan and carry out the improvement are made.	4	4
		(2)Necessary resources are allocated.	3	3
QMI.5.4	Changes to improve are planned and tested.	(1)Changes are planned.	4*	3
		(2)Changes are tested.	4*	3
		(3)Changes that resulted in improvements are implemented.	4*	3
QMI.5.5	The organization collects data to show that the improvement was sustained.	Data are available to demonstrate that improvements are sustained.	4*	3
QMI.5.6	The organization documents its continuing, systematic improvement and uses the information to develop strategic improvement plans.	Successful improvements are documented.	2	2
		The documentation contributes to the development of strategic improvement plan.	1	1

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STAFF QUALIFICATION AND EDUCATION (SQE)				
Standard #	**Standard**	**Measurable Element (# of measurable element)**	**Evaluation Score**	
				2005
SQE.1	Organization leaders define the desired education, skills, knowledge, and other requirements of all staff members.	(2) The desired education, skills, and knowledge are defined for staff.	3	3
SQE.1.1	Each staff member's responsibilities are defined in a current job description.	(1) Those staff members not permitted to practice independently have a job description.	1	3
		(2) Job descriptions are current.	1	1
SQE.2	Organization leaders develop and implement processes for recruiting, evaluating, and appointing staff as well as other procedures identified by the organization.	(1) There is a process in place to recruit staff.	2	4
		(2) There is a process in place to evaluate the qualifications of new staff.	2	3
		(3) The process is implemented.	3	3
SQE.3.1	Each staff member's ability to carry out the responsibilities in his or her job description is evaluated at appointment and then regularly thereafter.	(1) New staff members are evaluated at the time they begin their work responsibilities.	2	3
		(2) There is at least one documented evaluation of staff each year or more frequently as defined by the organization.	1	1
SQE.3.2	There is documented personnel information for each staff member.	(1) Personnel information is maintained for each staff member.	4	4
		(2) Personnel files are standardized.	4	4
		(3) Personnel files are kept current.	1	4
		(4) Personnel files contain a record of in-service education attended by the staff member.	1	2
SQE.4	A staffing plan for the organization, developed collaboratively by the clinical and managerial leaders, identifies the number, types, and desired qualifications of staff.	(1) There is a written plan for staffing the organization.	1	4
		(2) The clinical and managerial leaders developed the plan collaboratively.	4	4
SQE.4.1	The staffing plan is reviewed on an ongoing basis and updated as necessary.	(1) The plan is revised and updated when necessary.	3	4
SQE.5	All staff members are oriented to the organization and to their specific job responsibilities at appointment to the staff.	(1) New staff members are oriented to the organization, job responsibilities, and their specific assignments.	3	3

Evaluation Score:
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^ The score is underestimated at the baseline survey.

STAFF QUALIFICATION AND EDUCATION (SQE)				
Standard #	**Standard**	**Measurable Element (# of measurable element)**	**Evaluation Score**	
				2005
SQE.6	Each staff member receives ongoing in-service and other education and training to maintain or advance his or her skills and knowledge.	(1) Organization staff is provided ongoing in-service education and training.	2	3
SQE.6.4	Staff is given the opportunity to participate in advanced education, research, and other educational experiences to acquire new skills and knowledge and to support job advancement.	(1) Staff is informed of opportunities to participate in advanced education, training, research, or other experiences.	1	3
		(2) The organization supports staff participation in such opportunities as appropriate to its mission and resources.	1	3
SQE.7	The organization has an effective process for gathering, verifying, and evaluating the credentials (license, education, training, and experience) of those medical staff permitted to provide patient care without supervision.	(1) Those permitted by law, regulation, and the organization to provide patient care without supervision are identified.	3	3
SQE.7.1	The organization maintains a record of the current professional license, certificate, or registration, when required by law, regulation, or by the organization, of every medical staff member.	(1) There is a record maintained for every medical staff member.	4	4
		(2) The record contains copies of any required license, certification, or registration.	4	4
SQE.7.2	The credentials of medical staff members are reevaluated at least every three years to determine their qualifications to continue to provide patient care services in the organization.	(1) There is a process to review each record every three years.	1	3

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STAFF QUALIFICATION AND EDUCATION (SQE)				
Standard #	**Standard**	**Measurable Element (# of measurable element)**	**Evaluation Score**	
				2005
SQE.8	The organization has an effective process to authorize all medical staff members to admit and treat patients and provide other clinical services consistent with their qualifications.	(1) There is a process to authorize the individual to admit and care for patients.	2	3
		(2) A medical staff member's licensure, education, training, and experience are used to authorize the individual to provide clinical services consistent with qualifications.	4	4
SQE.9	The organization has an effective process for medical staff participation in the organization's quality improvement activities, including evaluating individual performance, when indicated, and for periodically reevaluating the performance of all medical staff members.	(1) Medical staff members participate in the organization's quality improvement activities.	4*	4
		(2) The performance of individual medical staff members is reviewed periodically, as established by the organization.	2*	2
SQE.10.1	The organization maintains a record of the current professional license, certificate, or registration, when required by law, regulation, or the organization, of every nursing staff member.	(1) There is a record maintained on every nursing staff member.	4	4
SQE.11	The organization has an effective process to identify job responsibilities and make clinical work assignments based on the nursing staff member's credentials and any regulatory requirements.	(1) Licensure, education, training, and experience of a nursing staff member are used to make clinical work assignments.	4	4
SQE.12	The organization has an effective for nursing staff participation in the organization's quality improvement activities, including evaluating individual performance when indicated.	(1) Nursing staff participates in the organization's quality improvement activities.	4*	3
SQE.13.1	The organization maintains a record of the current professional license, certificate, or registration,	(1) The organization has a process in place to gather the credentials of other health professional staff members.	4	4

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STAFF QUALIFICATION AND EDUCATION (SQE)				
Standard #	**Standard**	**Measurable Element (# of measurable element)**	**Evaluation Score**	
			2000	**2005**
	when required by law or regulation, of those other health professional staff members.			

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