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**EVALUATION OF PHYSICIAN COUNSELING
SKILLS IN THE ADULT CARDIOLOGY CLINIC
AT NORK MARASH MEDICAL CENTER**

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Executive Summary

Background. Effective patient education includes matching patients perceptions, values, and beliefs to teaching activities. Explanation of disease and treatment related issues in an understandable manner increases patients' understanding, participation in carrying out day-to-day preventive measures, compliance to treatment, etc. To initiate activities aiming to improve patient-provider communication at Nork Marash Medical Center (NMMC) it was considered useful to assess physicians' counselling skills at NMMC, reveal strengths and potential areas of improvement of patient counselling process, and design appropriate interventions to improve patient education in the hospital.

Aim. This investigation was undertaken to evaluate cardiologists' and cardiology residents' counselling skills at the Adult Cardiology Clinic (ACC) at NMMC and make appropriate recommendations to improve patient education in the hospital. It is believed that in long run this may lead to improving patient health status and health behaviour and decreasing patient dropouts from follow-up.

Methods. A descriptive cross-sectional design was chosen for this study. Data was collected prospectively through observations of patient-provider encounters at the ACC. The sample size of the study was calculated as 53 assuming that 85% of the studied counseling skills would be observed during patient-provider encounters. This sample size was increased to 61, considering possible problems that might naturally occur during the study implementation. Patients admitted to ACC during July 2003 were enrolled in the study consecutively based on the time of visit assigned to them. The instrument was developed based on the Check Your Counseling Skills tool, GATHER (Greet, Ask, Tell, Help, Explain, Return) model, which was adapted and reduced to a 36-item instrument. Both primary and follow-up patients aged 18 years or more with all types of visits (emergency or planned, scheduled or non-scheduled) were included in the study.

Ethical considerations. The study possessed minimal risk for patients and physicians and was considered as a part of an internal evaluation process, so that neither physicians nor patients received consent forms.

Results. Data on 61 physician-patient encounters were analyzed. The mean sum score of providers on patient counselling skills was 16.46 (sd±3.73), which was significantly lower than the hypothesized score of 28.8 (85% of the maximum possible score). Analysis done by counselling domains showed that the mean sum scores for all Greet, Tell, Ask, Explain, and Return domains were significantly lower than the hypothesized means ($p < .000$). The mean sum score for provider counselling skills was not different across patient diagnoses, among cardiologists, and by patient emergency status. However, there was statistically significant difference in mean scores for provider counselling skills between scheduled and not scheduled appointments ($p = .013$). The study revealed those counselling areas at ACC that were weak and needed to be improved.

Conclusions/Recommendations. Based on the findings of this study, recommendation was made to increase counselling skills of ACC physicians through implementing the following routines: (1) Introducing themselves, as well as other staff members present in the examination room to patients and their family members, (2) Explaining what to expect during the visit, (3) Using visual aids while providing explanations on disease or treatment, (4) Asking patients about preferred health care provider/institution in case of referral and provide them with a list of these institutions, (5) Involving patients in development of treatment plan, (6) Encouraging patients to ask questions or clarify issues, (7) Inviting patients to come back in case of emergency, and (8) Establishing self-assessment process at ACC and other departments of NMMC to improve providers' counseling skills.

Introduction

Most health problems are a result of chronic conditions related to an individual behavior that can be changed by preventive measures at all levels, i.e. primary (preventing disease), secondary (early diagnosis), and tertiary (slowing or preventing deterioration). This requires patients' active participation guided by physicians, public health professionals, and/or social workers. Numerous studies have proven that patients' lifestyle/behavior can be changed by simple (e.g. smoking cessation) or intensive (e.g. related to sexually transmitted diseases) counseling [1-3]. However, effective patient counselling is a key for changing health behavior, as increased knowledge on health related issues alone is not necessarily imply behavioral changes, otherwise there would be less smokers and obese and more physically active people. Scientific literature offers a comparison of effectiveness of different counseling strategies, which can be applied into practice [4]. Patients' perceptions, values, and beliefs should be considered when planning teaching activities, as this increases a person's self-efficacy, i.e. his/her confidence in having a control over his/her own health [5]. Explanations of treatment alternatives, related risks and benefits, as well as when to expect these benefits make patients to become more responsible in day-to-day preventive behaviors, more compliant to prescribed treatment even when results are not immediately visible. Specific and short instructions have more impact on patients' understanding and compliance with instructions [6]. Evidence suggests other strategies and their combination to influence patient knowledge of, attitude toward, and behavior related to health issues.

A Quality Assurance Project was designed in the scope of collaborative project between American University of Armenia (AUA) and NMMC to improve clinical and managerial systems and quality of care at NMMC. The evaluation of Impact of Enhanced Patient Education Program among Surgical Coronary Artery Patients at NMMC conducted in 2001 in the scope of this project showed that enhanced patient education increases patients' knowledge and awareness of disease and its risk factors [7]. Literature indicates that increasing patients' health related knowledge may result in behavioural changes and decrease coronary heart disease (CHD) morbidity and mortality [8,9]. To initiate activities to improve patient-provider communication at NMMC it would be useful to assess the current level of physicians' counseling skills at NMMC, reveal strength and potential areas of improvement of patient counseling process, and design appropriate interventions to improve patient education in the hospital.

Considering invasive nature of cardiac surgery, associated risks, and possible impact on lives of patients, it is essential to provide patients and their family members with complete information about their health condition, treatment alternatives, associated risks and benefits, and other issues to support decision-making. This is especially important in the Armenian health care system, where patients had limited access to health related literature designed for general population.

At NMMC, patients initially get admitted to the Adult, Pediatric, or Arrhythmology Cardiology Clinics, where their health status is assessed and, when necessary, appropriate treatment is proposed. This is a patient's first encounter with medical services at NMMC. The cardiologist admitting a patient in these clinics becomes his/her "case manager" meaning that s/he is responsible for coordinating the patient care before and after a surgery is performed, as well as during inpatient treatment. Thus, it is important to build up effective patient-provider relationships starting from the first encounter and maintain these relationships over time. Despite this, counseling skills of providers have never been evaluated at NMMC.

This study was undertaken to describe cardiologists' counseling skills and make appropriate recommendations to improve patient counselling/education at NMMC, which in long run may lead to improved health status and health behaviour in patients.

Methods

Study design and sample size

The study design was descriptive cross-sectional. Data was collected prospectively through observations of patient-provider encounters at the ACC. The sample size of the study was determined using one-sample proportion formula in the STATA 7.0 statistical software. The study assumed that 85% of the examined counseling skills would be observed during patient-provider encounter. With the least difference desirable to detect of 15% the sample size was equal to 53 patients. The latter was increased up to 61 patients considering possible problems that might naturally rise during the study implementation.

Study protocol

Patients were enrolled in the study consecutively based on the time of visit assigned to them. One visit was observed at any given time. If there was more than one patient visit scheduled at the same time, the investigator selected the one that had begun first. If an observation was interrupted for some reasons (e.g. patient was referred to the laboratory, X-ray exam room, etc) so that it was impossible to continue observation, the investigator continued filling in the questionnaire for the next patient. There were five adult cardiologists and four cardiology residents at ACC. Though the observed encounters did not represent the sample proportional to the volume of each cardiologist's practice, an attempt was made to observe patient visits per each cardiologist equally. However, it was rather difficult, as one physician was in vacation during the study period and the schedule of primary patients' admissions was changed to address his absence. Besides, the study aimed to describe counseling skills at the ACC in general rather than differentiate the cardiologists and/or cardiology residents by the level of their patient counselling skills. Patient visits occurred both in morning and afternoon were observed to detect possible differences in counseling skills pattern depending on the time of day. Data were collected during one-month period, July 2003.

Study instrument

The study instrument was developed based on Check Your Counseling Skills tool, GATHER (Greet, Ask, Tell, Help, Explain, Return) model [10]. The content of the evaluation tool was limited to a 36-item questionnaire. The items included in the questionnaire were relevant to cardiology patients and equally important for them. Thus, the same weight was assigned to each item when calculating the sum scores.

Considering that both primary and follow-up patients participated in the study, the instrument was designed to reflect the communication with both types of patients (Appendix 1). For those questions that could be not applicable for either primary or follow-up visits the options "not applicable" (N/A) was provided. Additional information, such as patient age, gender, diagnosis, type of patient visit (scheduled and not scheduled), and emergency status was collected. In addition, the evaluation tool included time of visit initiation and end, information regarding the completeness of observation, and presence of a cardiology resident in the examination room during the patient visit.

The instrument was pre-tested during 10 patients-provider encounters at ACC. It was revealed that some items required adding N/A option to the responses, other problems were not detected.

Study population

The eligibility criteria for the participation in this investigation at the ACC were the following:

- Primary and follow-up patients admitted to ACC
- Patients aged 18 years or more
- Patients making any type of visit (emergency or planned, scheduled and non-scheduled).

Ethical Considerations

A consent form was not provided to either patients or cardiologists. The study possessed minimal risk for patients, as the probability and extent of anticipated harm and discomfort were equal and not greater than that of routine physical and psychological examinations or tests performed in ordinary daily life. Further, the evaluation of providers' counselling skills was considered as a part of an internal evaluation process in the scope of Quality Assurance Project. Physicians at ACC were informed that a study on assessment of patient-provider relationships will be conducted through observations of their encounters with patients and their verbal consent was obtained prior to the study initiation.

Data Entry/Analysis

Data entry and analysis were performed by SPSS 10.0 statistical software. Single entry with further data cleaning was done to ensure accuracy of the entered information

Results

General information

Overall, 66 physician-patient encounters were observed. Among these, 9 observations were incomplete, because of being interrupted. The latter mainly happened when the patient was referred to laboratory to perform blood tests. Since it could take long waiting time to complete the observation, the initially incomplete observation was continued for the same physician, but another patient to generate the missing information. As a result, only 5 observations were left incomplete in terms of recorded information (i.e. two third of items were left unanswered) and excluded from the analysis

The study revealed that about half of patients (50.8%) were assessed by cardiology residents, so that the findings of this investigation reflected patient counselling practice for both physicians and residents working at ACC. The evaluation tool was designed to differentiate primary and follow-up visits to facilitate data analysis. It was assumed that counselling skills are not related to the type of patient visit, but the latter could affect the type of questions discussed during these visits. Primary patients composed 39.3% of total observations. The percentage of men in the sample was 66.7% and the women 33.3%. These and other characteristics of patient visits are presented in Table 1.

The mean duration of a patient visit was 19.14 minutes (sd \pm 8.15). The mean age of patients was 49.03 (sd \pm 13.06).

Table 1. Characteristics of patient visit

Item	%
Patient assessment by cardiologist	50.8
Patient assessment by resident	49.2
Primary visit	39.3
Follow-up visit	60.7
Scheduled appointment	83.3
Not scheduled appointment	16.7
Emergency visit	11.1
Planned	88.9

Counseling skills

Data analysis was carried out separately for dichotomous items (with yes-no responses only) and items that included also “N/A” response, as combined data analysis could artificially distort the proportions of “yes” and “no” responses. Question 3 related to offering a sit to a patient was also excluded from data analysis. It was not applicable, because in all observed cases patients were either lying on examination table or sitting on chair at the time when the cardiologist entered the examination room. Items were analysed both individually and by domains. For the latter, the items were collapsed into groups and a sum score for each domain was calculated. The following domains were evaluated: greet, tell, help, explain, and return. The items included in each domain are listed in Appendix 2.

The mean sum score was 16.46 (sd±3.73) ranging from 9 to 26. It was hypothesized that physicians would be compliant to counseling standards by 85% meaning that the hypothesized value of total score would be 30.6, on average. One-sample t-test was performed to detect possible difference between actual and hypothesized scores for provider counseling skills. Data analysis revealed that the observed score for cardiologists’ counselling skills was by 14.14 lower than the hypothesized one, resulting in a statistically significant difference (Table 2).

Table 2. Difference between actual and hypothesized score for providers’ counseling skills at ACC

Actual score	Hypothesized score	Mean difference	p-value	95% Confidence Interval*	
				Lower bound	Upper bound
16.46	30.6	14.14	.000	11.19	15.10

A set of independent variables (provider, diagnosis, type of visit) was examined to reveal possible differences in the mean scores for counseling skills across these variables. It was hypothesized that the mean scores for provider counseling skills were identical across patient diagnoses and among cardiologists and were not associated with the type of patient visit (emergent versus non-emergent and scheduled versus not scheduled).

Patient diagnoses were divided into the following seven categories: Ischemic Heart Disease (IHD), Valve Heart Disease (VHD), Hypertension, Arrhythmia, Combined, Normal Study, and Others. The individual mean scores for counseling skills (across providers), as well as the scores for different diagnostic groups were compared using one-way analysis of variance (ANOVA). ANOVA revealed that the mean score for provider counseling skills is not different across patient diagnoses and among cardiologists.

The difference in the mean counselling scores by the type of patient visit was examined using independent samples t-test. It showed that the difference in the mean counselling scores was not significant between emergent and non-emergent visits, although the score was higher for the former. There was a statistically significant difference in the mean counseling scores between scheduled and not scheduled appointments (F-test assumed equal variances, $p=.596$). The counselling skills score for patients with not scheduled appointments was significantly higher than that of patients with scheduled appointments ($p=.013$) (Table 3).

Table 3. The difference in the mean concordance score for counseling skills between scheduled and not scheduled appointments

Scheduled appointments	Not scheduled appointments	Mean difference	p-value	95% Confidence Interval	
				Lower bound	Upper bound
15.89	19.22	3.33	.013	.74	5.93

Analysis was carried out to evaluate each of the counselling skills separately. The percentages of demonstrated skills for each domain were calculated excluding N/A responses. Analysis of the initial part of patient-provider communication (Greet) indicated that a staff member other than physician present in an examination room had never been introduced to a patient and/or his/her family member. The other weakest aspect of this domain was that physicians rarely (3.4%) introduced themselves to a patient and/or family members (Table 4).

Table 4. Elements of Greet part of patient counseling

Item	% of cases with observed performance (n)*	# of N/A cases
Welcomes a client on his/her arrival	96.7 (59)	0
Meets a client in a comfortable/private place	95.1 (58)	0
Introduces him/herself	3.4 (1)	32
Introduces another staff members present in the room	0	1
Explains what to expect during visit	37.5 (21)	0
Smiles to a patient & relatives	39.0 (23)	0
Addresses a patient in a polite and friendly way	96.7 (59)	0
Asks about the reasons for his/her arrival	96.4 (27)	33
Asks about a change in the patient's condition	97.3 (36)	24

* The percentages were calculated excluding all missing cases and N/A responses

The Tell part of the instrument measured the skills of providers in addressing patients' situation, needs, and concerns. Information delivered to a patient should be understandable, useful, and personalized, so that the patient and his/her family members could make an informed decision regarding the proposed treatment. Overloading a patient with unnecessary information makes no difference to the client or tailored using professional terminology will not help the patient to learn about his/her health status and help him/her make a specific decision. This investigation revealed that in most cases patients receive specific information in an understandable manner, based on which they can make their own decisions (Table 5).

However, the use of visual aids and other educational materials was not a frequent practice at ACC. Verbal explanations supported by a visual aid increase a patient’s understanding of his/her disease and treatment alternatives, help him in making a correct decision, and contribute to a better compliance to treatment and health outcomes.

This investigation revealed that none of cardiologists informed patient about existing categories of payments for surgical procedures at NMMC. Though this is a responsibility of the administrative staff of the hospital, being informed at the time of admission about services provided at NMMC, charges, and payment categories according to their social status is the right of each patient.

Table 5. Elements of Tell part of patient counseling

Item	% of cases with observed performance (n)*	# of N/A cases
15. Explains the essence (flow) of disease	88.3 (53)	1
16. Explain used terms	88 (22)	36
17. Uses visual aids	68.4 (13)	42
18. Provides educational materials	40 (8)	38
20. Explains the reasons of referral	94.4 (17)	43
21. Explain what will be performed at a referred institution	94.1 (16)	44
31. Informs about categories of payment for surgical procedures	0	59

** The percentages were calculated excluding all missing cases and N/A responses*

Data analysis was carried out to evaluate physicians’ supportiveness for patients and their family members to express their complaints, feelings, and concerns and to reach a decision. The items measuring this were combined in the Help domain of the instrument. It was revealed that the adult cardiologists questioned and listened patients carefully allowing them to express their feelings, needs, and wants (Table 6). Health related concerns could be private for many patients making them feel confused, worried or afraid, which can affect patient decision-making. Avoiding criticism, uninterrupted encounter, and effective communication with patients, observed during the majority of patient-provider encounters at ACC, could lessen patients’ worries and increase their trust toward providers.

Some issues were not raised by the cardiologists. Table 6 shows that almost the half of patients were not asked about preferred institution or provider in a case of referral and only two-thirds of patients received a list of health care facilities, where appropriate services were offered. Patients’ involvement in development of the own treatment plan was encountered in only 68.2% of visits. The other weaknesses of provider counselling skills indicated by this investigation were lack of suggesting patients a time to think about the proposed treatment and getting their commitment to follow the prescribed treatment.

Table 6. Items of Help part of patient counseling

Item	% of cases with observed performance (n)*	# of N/A cases
10. Ask open-ended questions	90.2 (55)	-
11. Facilitates patient expressing his/her feelings	85.2 (52)	-
12. Avoids criticism on patient's thoughts	93.4 (57)	-
13. Communicates effectively even though it is rather difficult	85.2 (52)	-
14. Interrupts encounter	91.8 (56)	-
22. Asks about preferred providers/institutions	55.6 (5)	52
23. Provides a list of possible providers	66.7 (6)	52
25. Discusses alternative/complementary treatment	85.0 (17)	41
26. Involves a patient in treatment development plan	68.2 (15)	39
27. Suggests time to think about proposed treatment	78.6 (11)	47
28. Reviews treatment plan	100 (36)	24
29. Gets patient's commitment to follow treatment	72.1 (31)	17

* The percentages were calculated excluding all missing cases and N/A responses

In Explain part of patient counselling the provider explains patient how to carry out his/her decision and often gives instructions. As shown in Table 7, the adult cardiologists talk about reasons for recommended treatment, such as cardiac invasive procedure and/or surgery or medical treatment, in almost all cases. This may help patients and family members to weigh advantages and disadvantages of and make an informed choice regarding the proposed treatment. Important instructions should be repeated to increase the patient's understanding and ensure compliance to the treatment. The latter skill was observed in 73.3% of cases. The weakest skill in this domain was that, in most cases, the cardiologists failed to ask patients and their family members about having questions and/or concerns (Table 7).

Table 7. Items of Explain part of patient counseling

Item	% of cases with observed performance (n)*	# of N/A cases
24. Talks about reasons for recommended treatment	96.0 (24)	41
33. Asks about having questions and/or concerns	13.6 (8)	-
34. Summarizes the important issues discussed	73.3 (44)	-

* The percentages were calculated excluding all missing cases and N/A responses

Treatment proposed to a patient, such as cardiac surgery, may completely change his/her lifestyle for a certain period of time. If medical treatment is prescribed to the patient, s/he should know how long it would last and how frequently s/he should come for follow-up visit. Informing a patient about side effects of prescribed treatment may help him to have a preliminary action plan and immediately refer to a health care provider if problems occur. Having emergency preparedness plan may prompt the patient to seek medical care before his/her health status becomes life threatening. This investigation revealed that though the adult cardiologists discuss duration of treatment and related issues in about two third of observations, only 29.6% of observed patients were invited to come back in case of emergency or for any time they have a need for returning to the clinic (Table 8). However, 94.2% of patients were assigned a follow-up visit.

Table #8. Items of Return part of patient counseling

Item	% of observed perform. (n)*	# of N/A cases
30. Discusses duration of treatment and follow-up	65.9 (31)	13
32. Informs what to expect as condition get better/worse	63.4 (26)	18
35. Invites to come back in case of emergency, etc.	29.6 (16)	5
36. Plans the next visit	94.2 (49)	7

* The percentages were calculated excluding all missing cases and N/A responses

Mean sum scores for all domains were calculated and compared to the hypothesized values (85% of the maximum possible score) using one-sample t-test comparison of means. The analysis indicated that for all domains of patient counselling, the adult cardiologists gained significantly lower scores than the hypothesized (Table 9).

Table 9. Difference between actual and hypothesized scores for each domain of counseling skills

Domain	Act. mean score (mean± sd)	Hypoth. mean score (max)	Mean difference (H-A)	p-value	95% Confidence Interval	
					Lower bound	Upper bound
Greet	4.66 (±.89)	7.65 (9)	2.99	.000	2.77	3.22
Tell	2.11 (±1.45)	5.95 (7)	3.84	.000	3.46	4.21
Help	6.44 (±1.71)	10.2 (12)	3.76	.000	3.32	4.19
Explain	1.27 (±.78)	2.55 (3)	1.28	.000	1.08	1.48
Return	2.18 (±1.06)	3.4 (4)	1.22	.000	0.94	1.51

These findings justify the need of initiating activities to improve the counselling skills of cardiologists at NMMC.

Study limitations

The study involved direct observations of patient visits that could influence provider performance and recording. However, the research previously conducted at NMMC that involved observations of patient-provider encounters convinced the assessment team that the presence of ANP team members did not significantly influence provider performance. In

addition, other ways of data collection such as audio taping or videotaping could either lead to partial loss of information (e.g. nonverbal expressions) or were costly.

The study had limited generalizability as the results might be restricted to the physicians in the ACC. In addition, small sample size did not allow detecting possible differences across patient diagnoses, among cardiologists, and between emergency and planned visits, as well as among cardiologists and cardiology residents. Nevertheless, as a pilot study, this investigation showed the initial picture of provider counselling skills at ACC, so that conclusions and recommendations valuable for further research activities and improvement interventions on its basis could be made.

Discussion

The study hypothesized that the mean score for provider counseling skills would be 30.6, while the actual mean score was found to be 16.46, by 14.14 (95% CI: 11.39; 13.30) lower than the hypothesized one. The mean sum scores for all domains of counseling skills were significantly lower than the hypothesized means.

Though statistically significant difference was observed between the actual and hypothesized mean scores for the Greet domain of the counseling skills, the analysis of each item included in this domain indicated that the adult cardiologists and cardiology residents were rather strong in initiating patient-provider relationships. In most cases patients were welcomed in a private and comfortable place, treated friendly and politely, asked about reasons for arrival and change in health status. A good initiation of contact builds trust toward the physician increasing patient's understanding of his/her disease and compliance to treatment [4]. In a health care facility, where a case management approach is practiced, it is especially important to create good and trustful relationships between the patient and physician, as the latter carries the primary responsibility for medical care delivered to a patient while being in the hospital and after discharge.

The study revealed that there was no statistically significant difference in the mean score for counseling skills across primary patient diagnoses and among physicians, as well as between emergent and planned patient visits. The reason for not detecting a difference in mean scores for counseling skills across these variables could be attributed to small sample size of the study. However, it was revealed that the mean score for counseling skills was significantly higher for not scheduled patient visits than for scheduled ones. One possible explanation is that the patients arriving the clinic without scheduled appointment were mainly emergency cases with higher need to receive comprehensive information at the visit to make an immediate decision regarding their medical care. The latter hypothesis is supported by higher (although not significant) mean score of counseling skills for emergency visits when comparing to the planned visits. The lack of statistically significant difference here could be due to small sample size.

One of the areas that needed improvement was making it a routine to introduce another staff member present in the examination room or cardiologist office and introducing himself/herself. Introducing another staff member present in an examination room or a physician's office is not common at NMMC. However, it is essential for a patient knowing the name of his/her primary cardiologist or a physician assessing his/her health status. This will enable the patient to address questions directly referring to the provider or to come back

to the same cardiologist at NMMC assuring the continuity of care. In addition, smiling to the patient and family members, which was rarely observed in this study, may help alleviate patient's fear and anxiety, facilitate expressing feelings, and make him/her feel more comfortable.

Patients should be told what to expect and what will be performed during a visit, which was encountered in less than 50% of cases. However, the possible explanation for such a low percentage is that nurses record patient information in the structured encounter forms (SEFs), perform electrocardiography (ECG), measure patient's weight and height and some other tests before patient is seen by a cardiologist. During this time nurses could discuss these issues with the patients. Most of observations were started at the time when a cardiologist entered the examination room, so that it was impossible to determine whether the patient was informed about what to expect during a visit was discussed by nurses.

The Tell part of patient education was comparatively well implemented at the ACC. The weak areas were use of visual aids and education materials and informing patients about categories of payments for surgical procedures. Six education brochures for patients undergoing cardiac surgery are in process of publication under the aegis of ANP. Availability of patient education brochures should increase the use of visual materials by physicians during patient-provider encounters leading to better understanding of discussed issues by patients and their family members. Patients can be informed by nurses about the existence of categories of payments for surgical procedures at NMMC during patient admission to the clinic.

Asking about preferred health care provider and giving a list of possible institutions, where these services are available, should also be improved at the ACC. According to policies and procedures on patient rights adopted by NMMC, every patient should be fully informed about health care facilities where appropriate services are offered. Thus it is the patient's right rather than provider's wish to choose preferable health institutions among offered ones. Another issue, which deserves more attention in future quality improvement activities, is patient's involvement in developing his own treatment plan, which increases compliance to treatment and improves health outcomes [4,10].

Among the issues related to explanation of treatment alternatives to patients the weakest point was asking patients and their family members about having questions and concerns. Patients may not feel comfortable asking additional questions or request a physician to repeat a part of explanations. Considering this cultural behavior especially among older generation, to increase patient's understanding of his/her condition, it is necessary to summarize important issues discussed during the visit, repeat the information that the patient should remember, and encourage him/her to ask questions. This will also help a physician to check patient's understanding and provide him/her with additional information on issues that were left unclear.

The Return part of patient counseling included discussion of treatment and follow-up duration, possible outcomes of prescribed treatment, etc. Patients may feel more comfortable knowing that they are welcome to return to a health care facility if problems arise or emergency occurs, whereas this advice was given by providers in less than one-third of patient-provider encounters at the ACC.

Conclusions and Recommendations

Effective counseling is a key intervention targeted to change patient behavior and improve health status. Though the patient should take responsibility to carry out preventive/curative measures to improve or maintain his/her health status, his/her participation requires adequate counseling on related topics. The findings of this investigation indicated several weak areas in patient counselling, based on which some specific recommendations can be made to improve this practice at ACC. ACC physicians are advised to:

- Introduce themselves, as well as other staff members present in an examination room or cardiologist's office to patients and their family members
- Explain what to expect during a visit in more details
- Use visual aids while providing explanations about a disease or treatment to support patient's understanding
- Ask a patient about preferred health care provider/institution and provide him/her with a list of these institutions, if referral is to be made
- Involve a patient and his/her family members, if appropriate, in developing of treatment plan, so that s/he can feel more responsible for made decision and, possibly, more compliant to treatment
- Encourage patients to ask questions or clarify issues that remained unclear
- Invite patients to come back in case of emergency or any time they feel a need for it
- Establish self-assessment process to improve physicians' counseling skills at the ACC and other departments of NMMC.

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Appendix 1: Checklist for Physician Counseling Skills

Date: _____

Visit starts: _____

Visit ends: _____

Cardiologist: _____

Resident: • **Y**

• **N**

Observation: • **Complete**

• **Incomplete**

Patient visit: • **Primary** • **Follow-up**

Scheduled: • **Y** • **N**

Emergency visit: • **Y** • **N**

Patient Gender: • **Male** • **Female**

Patient age: _____

Diagnosis: • **IHD** • **CHD/AHD** • **Hypertension**

• **Arrhythmia** • **Others**

• **Normal Study**

#	Item	Y	N	N/A	#	Item	Y	N	N/A
1.	Welcomes a client on arrival				19.	Asks about change in patient's condition			
2.	Comfortable/private place				20.	Explains reasons of referral			
3.	Offers a sit				21.	Explains what will be performed at a referred institution			
4.	Introduces him/herself				22.	Asks about preferred providers/institutions			
5.	Introduces another staff				23.	Provides a list of possible providers/institutions			
6.	Explains what to expect during the visit				24.	Talks about reasons for recommended treatment			
7.	Smiles to a patient & relatives				25.	Discuss alternative/ complementary treatment			
8.	Addresses a patient in a polite/friendly way				26.	Involves a patient in development treatment			
9.	Asks about reasons of arrival				27.	Suggests time to think about treatment			
10.	Asks open-ended questions				28.	Reviews the treatment plan			
11.	Facilitates a patient expressing his feeling				29.	Gets patient's commitment to follow treatment			
12.	Avoids criticism on patient's thoughts				30.	Discusses duration of treatment and follow-up			
13.	Communicates effectively though it is rather difficult				31.	Informs about discounts for surgery			
14.	Interrupts encounter				32.	Informs what to expect as condition gets better/worse			
15.	Explains the essence (flow) of disease				33.	Asks about questions/concerns			
16.	Explains used terms				34.	Summarizes the important issues discussed			
17.	Uses visual aids				35.	Invites to come back in case of emergency, etc			
18.	Provides educational materials				36.	Plans the next visit			

Appendix 2: Items Included in Each Counseling Domain

Greet (9 items)

1. Welcomes a client on his/her arrival
2. Meets a client in a comfortable/private place
3. Offers a sit
4. Introduces him/herself
5. Introduces another staff members present in the room
6. Explains what to expect during visit
7. Smiles to a patient & relatives
8. Addresses a patient in a polite and friendly way
9. Asks about the reasons for his/her arrival
19. Asks about a change in the patient's condition

Tell (7 items)

15. Explains the essence (flow) of disease
16. Explain used terms
17. Uses visual aids
18. Provides educational materials
20. Explains the reasons of referral
21. Explain what will be performed at a referred institution
31. Informs about categories of payment for surgical procedures

Help (12 items)

10. Asks open-ended questions
11. Facilitates a patient expressing his/her feelings
12. Avoids criticism on the patient's thoughts
13. Communicates effectively even though it is rather difficult
14. Interrupts the encounter
22. Asks about preferred providers/institutions
23. Provides a list of possible providers/institutions
25. Discusses alternatives to/complementary treatment
26. Involves the patient in development of treatment plan
27. Suggests time to think about proposed treatment
28. Reviews the treatment plan
29. Gets the patient's commitment to follow prescribed treatment

Explain (3 items)

24. Talks about the reasons for recommended treatment
33. Asks about having questions/concerns
34. Summarizes the important issues discussed during the visit

Return (4 items)

30. Discusses duration of treatment and follow-up
32. Informs what to expect as condition gets better/worse
35. Invites to come back in case of emergency
36. Plans the next visit