OPENING CEREMONY

Public Health:
An Armenian Perspective

1. Introduction

As I was getting ready for this talk, I realized the challenges of speaking in front of such a distinguished audience by presenting something that is new to most of you, has information value, is appropriate for the occasion and more important is not boring. Following some deliberation, I decided to make it personal since you can tell some stories that your audience has not already heard, and make it appropriate by using the country and its people to illustrate some relevant concepts. Thus, the Armenian in my title refers to both the nation and my family name. As a public health professional and researcher my journey over the past 40 years has been weaved with a lot of things Armenian.

Public Health is about people and we hope that over the next few days, you get to be introduced to this country and its people, you may find out about the following facts:

- Armenians have a very rich cultural and written heritage of over 2000 years
- As a country at the crossroads of civilizations it has been a battleground of all super powers throughout history. and as a result the nation has been subjected to a continuous series of massacres and deportations (An invasion every 6 months for over 100 years starting in the seventh century). As in a travelogue, McLean says, Armenians as a nation have developed the art of becoming rich between two massacres.
- The nation has developed one of the oldest Diasporas in world history spanning all major centers of civilization. Examples include the Armenian Kingdom of Cilicia that

turned out to be a most wonderful Mediterranean expression of Armenian culture for over 1000 years before the country was wiped out of its Armenian inhabitants in the First World War. Also, the Diaspora developed major centers where the culture thrived in Amsterdam, Vienna, Venice, Paris, Moscow, Isfahan, Madras, Calcutta, Jerusalem, Cairo, Beirut, etc.

- Thus, despite the tragedies it has faced, this nation has been a major catalyst and contributor to world civilization and the world economy.

As a person, I am the product of the Armenian Diaspora. I was born in Beirut and privileged to get some of the best schooling available in Armenian, French, English and Arabic.
Over the years, whether with my mentors, colleagues, or my own students, I have noted different pathways that led them to choose epidemiology as a career. My choice for a career in public health and epidemiology was made as a medical student in the mid 1960s at the American University of Beirut. In the summer of 1965, I joined a small group of my fellow second year medical students on a research assistance ship with Dr. Nadim Haddad in field studies of the epidemiology of trachoma and its vaccine trials in the southern border villages of Lebanon. This experience was critical for my choice of public health and epidemiology. As one of the first ophthalmologists ever to become an epidemiologist, Nadim was able to get us excited about the whole field and its potential over sandwiches under an olive tree close to the villages where our field surveys and vaccine trials were taking us. I was soon to realize that epidemiology was as “scientific” as what we were exposed to in biochemistry and physiology. This experience had the congruence of fieldwork and a committed mentor and it was definitely more effective than all the lectures on epidemiology and public health that we had in the classroom.

Following graduation from medical school and later from the Department of Epidemiology at Johns Hopkins University with Abraham Lilienfeld as my advisor and a host of leaders in the field as my professors, I was back at the AUB as a chronic disease epidemiologist. Within a year the civil war erupted in Lebanon. The public health and other issues related to the war were very acute and serious. That is when a shift of interest towards the use of epidemiologic methods for studying war related issues as well as disasters started to assert itself in our professional reality. In an active professional life at times you do not have much choice as to the problems you are engaged in. So in an era where education of public health professionals is becoming more specialized, I still believe a general background is necessary for every graduate from our schools.

It was during this period that I developed an outlook in my personal and professional life for difficult times: how to turn a moment of adversity into positive achievement. An adverse and horrible situation like the civil war around us had led many of our colleagues into a long period of professional retrenchment. With Huda Zurayk and other colleagues we developed systems for assessment and investigation of health problems during the war.

In 1988, the massive earthquake in Northern Armenia was an opportunity for the Gorbatchev Soviet Union to open up to Western assistance. As part of a diasporan Armenian assistance group we were in Yerevan within 3 weeks of the earthquake. In the absence of any effective health monitoring system in the country, we initiated a rapid case-control study of determinants of hospitalized injuries from Leninakan (Giumri), and within a year we were monitoring the health of about 35,000 people from the earthquake region, as a cohort, for the long term health effects of this major disaster. This latter longitudinal cohort approach was unique not just for Armenia and the Soviet Union but also had not been done on this scale in previous earthquakes. This was also an

opportunity to introduce a number of modern epidemiologic methods to a country in the Soviet Union where epidemiology had a very traditional infectious disease-microbiology base.

In both Beirut during the civil war and in post earthquake Armenia, our investigations were part of surveillance and monitoring systems of the health of the population and would serve the needs for decision making of public health programs in addition to generating a very rich research database. War and disasters are an opportunity to study extreme situations and their effect on disease and health.

During the rest of this talk I will develop the idea that although many of the problems in public health are global, our understanding of the local situation will definitely help us understand and deal with our global problems. My examples will be from the Armenian historical and current context.

A Historical Perspective

I will start my historical retrospective by presenting two Armenians who antedated their time by being at the forefront of public health.

A. Hovannes Tutunji:

Hovannes Tutungi, also referred to as the "oriental" and "Tutunji from Van" in the XVII century Armenian sources, is an unusual priest with an adventurous life story. The word Tutungi in Arabic-Persian means someone who sells or deals in tobacco.

He is probably born in the first quarter of the XVII century since in 1650 he is already a full-fledged priest. In 1650, he is in Constantinople most probably to collect funds for the

reconstruction of the churches of Vaspurakan (Van) region following the earthquake there. In 1662, he is sent as an envoy by the Catholicos of Echmiadzin to collect funds from the Armenian communities of Poland to pay the debts of the Catholicossate. Having made his collection Tutungi goes to Constantinople and gets nominated as the Armenian Patriarch there on two occasions (1663-4 and 1665-7).

In 1678 between September 17 and 27 he appears in Cairo, Egypt, where he is getting ready for a voyage to Ethiopia. On September 27, 1680, having spent exactly two years in Ethiopia, he is back in Cairo and Alexandria and soon he reaches Livorno, Italy, by sea. His travelogue to Ethiopia is one of the most valuable accounts of the time about that region. He is probably one of the earliest non-Africans to have visited and described the sources of the Blue Nile (This travelogue is preserved in two manuscripts in Matenataran-Yerevan and in the Armenian Catholic monastery of Bzommar-Lebanon) ***reference***.

Based on a number of references to his name, he probably spends the years 1680 and 1681 in Italy and France. On February 2-12, 1683, he is in the Versailles as a member of an Armenian delegation that meets Louis XIV to solicit support for the liberation of Armenia from the Ottoman rule. (He describes how he accompanies the king in a visit to the gardens of Versailles under construction at the time).

In 1692, Benoit de Maillet, the French consul of Egypt reports to Paris that Tutungi is back in Cairo and provides an account of his earlier two year journey to Ethiopia**.** In 1698, Tutungi is in Trebizond on the Black Sea where he probably stays as a bishop until his death in 1703.

Two poems from the seventeenth century titled "About Tobacco" and "The Story of Filthy Tobacco" decry the harmful effects of

tobacco in the classical Armenian literature. These poems are unusual in their denunciation of tobacco use. The author of the first poem is identified as Hovannes or John while the second poem is anonymous but also probably authored by Hovannes because of similarity of content and style.

We present here the poem “About Tobacco” that has Hovannes as its author. The clear arguments against the use of tobacco developed by Hovannes in his own time, contain a strong prevention message, more than 250 years prior to any association being established about the relationship of tobacco to major morbidity and mortality. Overall the poem develops a strong argument to stop smoking on religious, moral, economic, and esthetic grounds.

In this brief presentation of what we know about Hovannes Tutungi, we realize that his life was as exciting and interesting as his work. His voyages probably gave him a more universal human perspective than most of his colleagues. He is probably the first person to describe addiction to tobacco and for our purposes his activities spanned all the continents covered by this Conference.

JOHN II
ABOUT TOBACCO

If you ask the Holy Scriptures,
Tobacco is ugly and hideous,
Like bees that escape smoke,
Angels shun its horrid stench.

Any one hooked on tobacco,
Does untold harm to the soul,
Harm to the soul and woe to the flesh,
Sacking his home with his own hands.

Many are forlorn and faltering,
Their homes are bare, nook and cranny,
They have no money to save their soul,
But they do borrow to buy tobacco.

Some remind you of starving dogs,
That roam around from house to house,
Sniffing around to find tobacco,
Their heads covered with ashes.

Others are used to tobacco,
They are sleepless as lepers,

All day, all night or morning,
They can never stop smoking.

The heart blackened in the belly,
The soul deprived of light,
He disregards the day of death,
And does not pray for eternal life.

Many are those who for its sake,
Would set fire to all they own,
steal from home to buy tobacco,
And smoke it in the company of dogs.

They blow smoke from their noses,
Like a black snake from the mouth,
A thousand woes upon their souls,
For carrying out devil's orders.

Some, when sitting at the table,
Do bring forth the tobacco,
And willingly smoke with the Infidel,
Adulterating orally with alien folk.

You, miserable, infirm person,
Do not incinerate your innocent soul,

Do not disavow the wisdom of light,
Reconsider, do not smoke tobacco.

If one foregoes all evil deeds,
Adultery and profanities,
And if one stops smoking tobacco,
One will quickly find redemption.

He who really loves to pray,
And offers alms to the orphans,
Will escape the eternal fire
And inherit the Heavenly Kingdom.

While those with no redemption,
Will never find absolution,
Their sons will eat no other food,
Than what they had with tobacco.

But you, children of the Kingdom,
Do not reside with malevolence,
Smoking the tobacco of corruption,
If you want to remain in Communion.

Because the mouth used to that filth,

That inhales the tobacco of sin,
Is not worthy of Holy Communion,
Such is the evil of addiction.

Many blessings of the Divine
Will descend on those persons
Who will disown that affliction,
And pray to enter into the Kingdom.

Oh John, floating on sin,
Remain awake with your prayers,
Whoever you see smoking tobacco,
Voice your wailing to that person.

Worms will have taken over his soul,
When it is time for the Judgment Day,
Where all creatures will be gathered,
To give account to the last Court.

Standing there, facing Christ
And all twelve apostles,
And church fathers all together,
Ruling on matters concerning all.

The non smoker, the one who repents,

Will be blessed by the righteous hand,

Will hear the voice of the Father,

And will reside with
Abraham.

Translated into English by Haroutune Armenian and Tatoul Sonentz

B. **John Hovannes Wortabet**

The second Armenian figure I want to highlight lived about two hundred years after Tutungi. John Wortabet was the son of an Armenian preacher in nineteenth century Lebanon. In 1870, he was one of the professors of medicine at the newly founded medical school of the American University of Beirut. He was probably the first officially recognized epidemiologist from the Middle East, since he was elected to the London Epidemiological Society. His early investigations of epidemics of trichinosis at the sources of the Jordan river were published in the Lancet in the 1880s. He was a model of the physician who went beyond the narrow boundaries of clinical medicine of his time. He developed one of the earliest Arabic-English dictionaries and wrote a series of articles in Arabic in the popular magazines and publications of the time trying to educate the larger population groups in public health and prevention. He also investigated a major epidemic of typhoid fever with a few thousand victims in the city of Beirut following the establishment of a piped water distribution system in the city.

Some Historical Epidemiology and parish records.

One of the problems in public health program development, planning and policy setting that we face in (much of the world outside) areas outside Western Europe and North America is the

absence of valid and dependable vital records that will allow defining priorities and reviewing time trends of demographic, mortality and morbidity indicators. Fortunately, alternatives to state run databases have been identified that could provide such information. One such alternative are the records of church parishes.

Armenian churches have recorded information about deaths, marriages and baptisms for over 300 years from about two-dozen countries of the diaspora.

Beginning in the early 1980s we conducted a series of studies of patterns of infant mortality, general mortality trends and epidemics using these parish records as our primary source of data. The small communities of the diaspora served as a microcosm that reflected what was occurring in the larger societies that surrounded them. Thus, we were able to identify 2 epidemics of what was probably influenza in the small Armenian parish of Belgrade in early 18th century, 3 epidemics of cholera in the Armenian Catholic parish records of Kutahya, Turkey, in the mid-nineteenth century when Snow was investigating cholera in London. We were able to get an estimate of the speed with which the great influenza pandemic progressed from Dakka in the Bengal to Cairo, Egypt, in 1918 using again the Armenian parish records.

The short and long term effects of genocide and war were also studied using these records. We were able to show that during the post World War I period and in the Armenian refugee populations of Lebanon and Palestine infant mortality were 2 to 3 times larger than in the non-refugee Armenian groups. Thus, these survivors of the genocide continued to pay the price of the massacres and deportation with higher mortality rates for another 25 years. In the Armenian parish records of Thessalonica, Greece, and during the Nazi occupation in World War II, we observed massive mortality in the community as a result of famine and slaughter. Again

reflecting in a small way what was happening in the population at large.

One of the most poignant public health stories from the genocidal period of World War I are the experiments conducted by Professor Wilson from the Medical School of the University of Cairo. In 1916 a French battleship was able to rescue the survivors of the Armenian villages of Musa Dagh in the Northeastern corner of the Mediterranean. These refugees were brought to Port Said, Egypt. Within a few weeks of their arrival in Port Said a major epidemic of pellagra developed in this refugee population. Wilson, who was experimenting with nutritional interventions to control the disease in the Cairo asylum, initiated a controlled trial in these Armenian refugees comparing the regular rations with a ration that was high in protein. The results were so dramatic that Wilson had to cancel his experiment and start everyone on his high protein diet. Confirming the hypothesis that pellagra was a nutritional disease.

ISSUES OF HEALTH SERVICES AND PUBLIC HEALTH IN ARMENIA

The above brush strokes hopefully gave you a feel of things Armenian in Public Health. Next, I would like to give you a brief overview of a more current situation of public health and health services in Armenia.

In February 1991 and on the eve of independence, I published an article in an Armenian paper in Boston about health care issues of Armenia.
The article started with a premise that the health care system like almost all other economic sectors of the Armenia was part of the greater Soviet health care system and had a high level of dependence on that larger system.

The major health problems of the country included; Major destruction of health care facilities following the December 1988 earthquake in the country, endemic diseases such as the familial paroxysmal polyserositis, and some infectious conditions, inadequate services, poor health care funding, issues of quality of care and the lack of private health services. Other problems inherited from the Soviet system included a highly medicalized structure where the focus of public health was primarily on sanitation and infectious diseases.

After about 14 years of effort and assistance from various international agencies, some of the same problems persist in the system. Priority issues include:

1. Since independence Armenia has striven to assimilate into the Western reality and the market economy.
2. Despite this high regard, health services still lag far behind Western standards and represent a specialist driven, highly inefficient system.
3. Due to lack of resources at both the individual and governmental level, health services, especially primary care services are woefully underutilized.
4. Many health professionals are under-employed; facilities are underutilized and quickly becoming antiquated.
5. There is a desperate need for revitalized health care financing and delivery systems founded upon the current and future economic and political realities of Armenia.

FUTURE PERSPECTIVE

As we project towards the future of health services in Armenia it is imperative that:

1. A more entrepreneurial approach is developed in developing the system.
2. Solutions need to be discovered at the local level.
3. All problems need to be monitored in order to have action that is responsive to the needs both locally and nationally.
4. A culture of quality needs to be developed at all levels.
5. The shadow - under the table - health care economy needs to be eliminated.

Some years ago one of our faculty members at Johns Hopkins visited a country in Eastern Europe. Upon his return to Baltimore he was asked about his impression about the health care system. He responded:

-The system has got the right anatomy but little physiology.

In Armenia and in many of the countries of the region, currently, we are not just dealing with a lack of physiology but the anatomy is also structurally not able to stand on its own.

As I visit various services of the health care system in Armenia, I am surprised at the continuing diligence of the health care professionals who are on their jobs despite their pitiful pay. I have asked a number of times as to what keeps them working? My answer to that question is the dignity of having a job.

Beyond all the assistance from international donors and agencies, the health care system of Armenia has been running primarily on a capital of dignity invested by the health care professionals. A dignity that has become second nature when your history is pot marked by generations of repression and destruction and you have that continuing urge to survive and move forward .

Haroutune K. Armenian
September 16, 2005

Public Health: An Armenian Perspective

Haroutune Armenian

Armenians

- A very rich ***cultural heritage*** of over 2000 years
- Armenia a ***battleground*** of all super powers throughout history - the nation subjected to invasions, massacres and deportations
- One of the oldest ***diasporas*** in world history spanning all major centers of civilization. Armenian Kingdom of Cilicia, Amsterdam, Vienna, Venice, Paris, Moscow, Isfahan, Madras, Calcutta, Jerusalem, Cairo, Beirut, etc
- Major ***catalyst*** and ***contributor*** to world civilization and the world economy

A Personal Viewpoint

- Congruence of fieldwork and a committed mentor more effective than all the lectures in the classroom.
- In an active professional life at times you do not have much choice as to the problems you are engaged in. A ***generalist background*** is necessary for every graduate from our schools.
- How to turn a moment of ***adversity*** into positive achievement.
- War and disasters are an opportunity to study extreme situations and their effect on disease and health.

Hovannes Tutungi

- 1650 Constantinople – Armenian Patriarch 1663-4, 1665-7
- 1668-70 Ethiopia and Egypt
- 1680-3 Italy and France – Louis XIV
- 1692 Cairo – Egypt
- 1698 Trebizond
- 1703 Death

ABOUT TOBACCO 1
1670s

- If you ask the Holy Scriptures,
- Tobacco is ugly and hideous,
- Like bees that escape smoke,
- Angels shun its horrid stench.

- Any one hooked on tobacco,
- Does untold harm to the soul,
- Harm to the soul and woe to the flesh,
- Sacking his home with his own hands.

- Many are forlorn and faltering,
- Their homes are bare, nook and cranny,
- They have no money to save their soul,
- But they do borrow to buy tobacco.

ABOUT TOBACCO 2
1670s

- Many are those who for its sake,
- Would set fire to all they own,
- Steal from home to buy tobacco,
- And smoke it in the company of dogs.

- Oh John, floating on sin,
- Remain awake with your prayers,
- Whoever you see smoking tobacco,
- Voice your wailing to that person.

- The non-smoker, the one who repents,
- Will be blessed by the righteous hand,
- Will hear the voice of the Father,
- And will reside with Abraham.

John Hovannes Wortabet

- Son of an Armenian preacher in nineteenth century Lebanon.
- Founding professor of the American University of Beirut, School of Medicine
- Member of the London Epidemiological Society
- Epidemics of trichinosis at the sources of the Jordan river - the Lancet in the 1870s
- Articles in Arabic in popular magazines

DR. WORTABET: AN OUTBREAK OF TRICHINOSIS.

454 THE LANCET,] [MARCH 19, 1881.

AN OUTBREAK OF TRICHINOSIS (1) FROM EATING THE FLESH OF A WILD BOAR.

BY JOHN WORTABET, M.D.,
PHYSICIAN TO ST. JOHN'S HOSPITAL, BEYROUT.

THE village of Khiam, where this disease has recently broken out, lies not far from the principal sources of the Jordan, which, losing themselves in the plains of El-Huleh, form a large marsh. From the thick jungles of papyrus which occupy that marsh a large wild boar was shot and brought to Khiam on the 25th of November. This was a great treat to the poor villagers, who can rarely afford to indulge in butcher's-meat, and many of them ate the flesh, partly raw and partly half-cooked. The meat was observed

THE LANCET,] [AUGUST 4, 1883. 183

ANOTHER EPIDEMIC OF TRICHINOSIS NEAR THE SOURCES OF THE JORDAN.

BY JOHN WORTABET, M.D.,
PHYSICIAN TO THE HOSPITAL OF THE KNIGHTS OF ST. JOHN, BEYROUT, SYRIA; CORRESPONDING MEMBER OF THE EPIDEMIOLOGICAL SOCIETY, ETC.

IN a paper which appeared in THE LANCET, March 19th, 1881, I gave an account of an outbreak of trichinosis from eating the flesh of a wild boar, near the sources of the Jordan. Two hundred and sixty-two persons ate of the animal (November 25th, 1880), and when I visited the place

الامراض المعدية والوقاية منها

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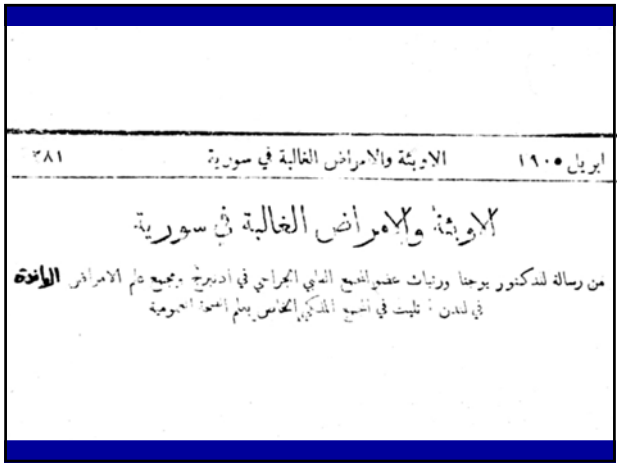
لجناب العالم العامل الدكتور يوحنا ورتبات

قوانين الصحة في المشرق

من مقالة تليت على المجمع الطبي الجراحي في ادنبرج وطبعت في مجلة ادنبرج الطبية
بقلم الدكتور يوحنا ورتبات احد اعضاء ذلك المجمع



٣٨١ الاوبئة والامراض الغالبة في سورية ابريل ١٩٠٥

الاوبئة والامراض الغالبة في سورية

من رسالة للدكتور بوجنا ورئيس عضو المجمع الطبي الجراحي في ادنبرج بجميع علم الامراض **الواردة** في لندن : تليت في الجمع المذكور الخامس بعلم الصحة العمومية

Historical Epidemiology in Armenian Church Records 1

- ***Lack of vital records*** antedating the XX century for most countries.
- ***Alternative sources*** include parish records.
- Armenian diasporan church records studied in 16 countries - over 300 years
- A ***microcosm*** of the larger society

Historical Epidemiology in Armenian Church Records 2

- Epidemics of influenza in 1700s Belgrade
- Cholera in Kutahya in the 1800s
- Influenza pandemic of 1918
- World War I – genocide and refugees in Lebanon and Palestine
- Wilson and Pellagra in Musa Dagh refugees
- World War II – Thessalonica, Greece

ISSUES OF HEALTH SERVICES AND PUBLIC HEALTH IN ARMENIA

February 1991

- High level of ***dependence*** on the greater Soviet health care system
  - Highly ***medicalized*** system
- Many factors in favor of a potential for an ***independent*** system
- Need for well defined policy and plans:
  - ***System changes*** that will occur in stages and at all levels of the health care system.
  - Retraining and ***re-education*** of health care personnel
  - Development of modern physical ***facilities***.
  - Development of a management ***information system***.

14 Years later - Priority Issues in Armenia:

- Health services still lag far behind Western standards - *specialist driven, highly inefficient*.
- Health services, especially primary care services are woefully *underutilized*. Many health professionals are under-employed; facilities are quickly becoming *antiquated*.
- Need for revitalized health care *financing and delivery systems*
- Level of *corruption* as well as lack of concern for *quality* of care.

FUTURE PERSPECTIVE

- 1. A more *entrepreneurial* approach in developing the system. Solutions need to be discovered at the local level.
- 2. All problems need to be *monitored* in order to have action that is responsive to the needs both locally and nationally.
- 3. A *culture of quality* needs to be developed at all levels.
- 4. The *shadow* health care economy needs to be controlled.

Outcomes

- 1960s ***"The system has got the right anatomy but little physiology."***
- 2000s - a lack of physiology but the anatomy is also structurally not able to stand on its own.

- The dignity of having a job has to be transformed into the dignity of achieving healthy outcomes.