

## 41<sup>ST</sup>. BAILEY K. ASHFORD MEMORIAL LECTURE

### Medicine in the 21st Century: Fulfilling the Social Contract

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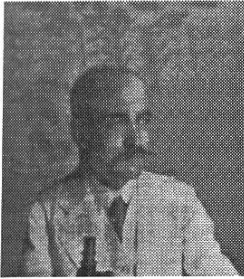


Figure 1. Dr. Bailey K. Ashford's

It is a great privilege for me to join you in this academic celebration of the University of Puerto Rico School of Medicine and to deliver the 41st Bailey K. Ashford Memorial Lecture.

Medicine, medical education, research and clinical practice have encountered changes and stresses in the

past two decades that rival the impact of earlier changes which took place at the start of Dr. Bailey K. Ashford's career (1)(Figure 1). Changes in his time, were driven by the Flexnerian revolution in American medical education. They were the result of three basic requisites published by Abraham Flexner in his report to the Carnegie Foundation published in 1910.

- Medical schools be university based.
- Medical faculties be engaged in original research.
- Students participate in active learning.

Kenneth M. Ludmerer notes in his book "Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care" that by 1920 "an implicit social contract was established to guide this evolution"(2).

- "Society would provide the necessary financial, political and moral support of medical education and research".
- "In exchange, medical faculties would remember that they existed to serve, and the measure of their success would be the quality of their academic work and their success at ensuring that medical practice in America was conducted according to high, professionally determined standards" (2).

Bailey K. Ashford, along with William Osler, Walter Reed and many other outstanding physicians were the heroes who led this American Medical Renaissance. Their thirst for knowledge laid the foundation for the great medical discoveries that would follow.

Dr. Ashford's recollection of slipping out of a formal

reception with Dr. Frederick Banting and listening to him describe the work that led to the discovery of insulin in 1922 "under a swaying electric light bulb beneath the palms" reveals the excitement and dedication of both men and many others of their generation (1).

I now realize that fifty years later, I like many of you, have walked in the footsteps of Dr. Ashford.

First, in the global Smallpox Eradication Program I taught smallpox surveillance and laboratory diagnosis in Sao Paulo, Brazil at the Instituto Adolfo Lutz, and in Rio de Janeiro at the Instituto Oswaldo Cruz -between 1966-1969. Dr. Ashford visited Dr. Cruz and his deputy, Dr. Lutz in 1916. The architecture of Dr. Cruz's Institute clearly influenced Dr. Ashford's plans for the Tropical Medicine Institute of Puerto Rico.

I then helped develop Community Health Centers as part of the Office for Economic Opportunity in rural North Carolina between 1973-1978. These were field stations and outreach clinics as Dr. Ashford might have called them for delivering rural health services in our time. And now, I serve as Chairman of the Board of Commissioners for the Joint Commission on the Accreditation of Health care Organizations which is advocating patient safety and the continuous quality improvement of health care organizations. Meeting standards and giving quality performance were the key attributes for success in all of Dr. Ashford's endeavors. Like for you, he also serves as a role model for me.

After Dr. Ashford's time, Medical Education and Practice evolved dramatically during the 20th century. These changes were described by Ludmerer under three broad headings.

A primary emphasis was first placed on EDUCATION between 1910-1945. Senior as well as junior faculty were almost all teachers first and then either practitioners or researchers second.

With the establishment of the National Institutes of Health, the period of 1945-1965 was focused heavily around the primacy and development of BASIC RESEARCH in the medical sciences.

While basic research has flourished since that time, clinical practice and health care financing brought many changes starting in 1965. Medicare and Medicaid support for the clinical care of the elderly and the poor led to major new sources of revenue for clinical faculties, medical

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centers and teaching hospitals. This stimulated the expansion of CLINICAL PRACTICE in these facilities, their medical staffs and levels of compensation for academic faculty. These changes triggered what Ludmerer describes as the Second Revolution in Medical Education and Practice, which began in about 1975 and resulted in a:

- Decline in clinical research and expansion of clinical practice.
- Conversion of a scholarly faculty to a clinical faculty
- Deterioration of the quality of the learning environment.

By 1990, American medical education began to revert to a corporate proprietary orientation quite similar to that which occupied it in the Pre-Flexnerian Era. Ludmerer notes -“this constituted a breaking of the social contract that had guided the development of medical education and research very successfully for most of the 20th century”.

The changes have created great conflict among physicians. Much as Hillel questioned the role of the individuals in society (figure 2), today’s 21 st century version of this question causes the physicians much disquietude.

Medical Education and Practice in Puerto Rico evolved

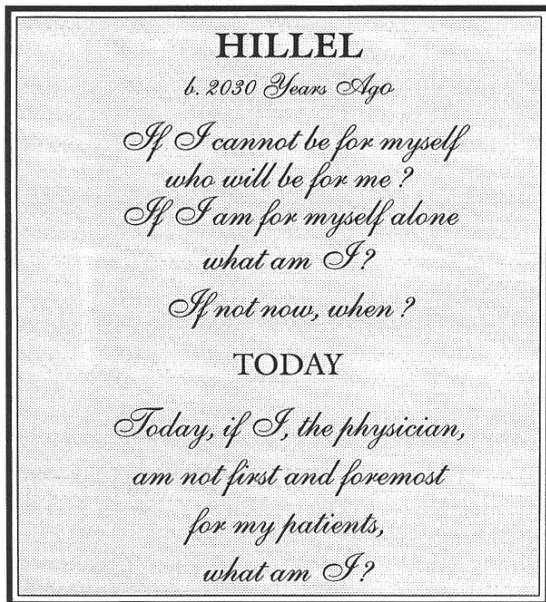


Figure 2.

dramatically over this same period of 35 years. The creation of a First Class Medical University and Health Center was a tremendous accomplishment. And in the field of regional health planning, the Bayamon project - based on the inspired leadership of John B. Grant, Guillermo Arbona,

and Norman Maldonado, stands to this day as a model for all nations (3,4,5).

That model, however, was impacted dramatically by the forces of the second revolution in health care. Dr. Carlos Girod described the ascendancy of the Bayamon Region Health Care System and the 6 factors which led more or less to its subsequent dissolution (6). Time, regional development, changes in economics, finances and population all contributed to its decline. Today, a model for the delivery of health care services, for medical education and for research must be developed for Puerto Rico as well as all of the United States.

Basic research is being developed on an international base and has been analyzed by many of your Ashford Lecturers. Therefore, I would like to focus on meeting the needs of medical education and health services in the 21st century. In doing so, I will turn to Dr. Ashford.

How would he approach these challenges?

Based on his autobiography and simply put -I believe he would be bold, practical, creative, focused, community oriented and very committed.

He described the nature of the commitment -the duty of a physician very explicitly. <sup>7</sup>

- “The doctor’s mission from this time forward, as I see it, is not so much a question of relief of pain, or of prevention of death, as it is a question of salvaging this man, this woman, this child for one hundred percent efficiency in the future. There must be a thousand ways of doing it.”
- “The sort of physician who will dominate the future is the one who never thinks he has done his duty, or even that he has accomplished anything worthwhile, until he has shown the victim how it was that he got sick, why it was that he got well, and how he can probably keep well.”

Dr. Ashford’s prescription for re-establishing the social contract to support the preservation of health and the provision of medical services in the 21st century might include the following principles

- Identify the public’s need for improved health and health care services
- Develop a community and person centered strategy.
- Empower the individual and community to advance the quality of their health and life by placing an emphasis on preventative -primary care
- Patient safety must constitute the first priority of all health care services.

**1. Community Empowerment.** Community Empowerment is the first and most critical element in building a successful health care system. The need for services and their mode of delivery must be defined by the people and the

institutions of the community if they are to achieve maximal success. They cannot be impressed from without.

The services of the hospital can only be effective if they meet the needs of the people and the institutions which constitute the community. The dynamic relationship that links a community and its hospital was described by Kretzmann and McNight (8). Each institution draws from, relies on the other and is to a degree defined by the other. Health is one of a community's greatest assets. It is the responsibility of all who constitute the community to maximize health and its close companion, quality of life.

A stunning example of the dynamic relationship between community and health care was presented at the Conference Center of the Rockefeller Foundation in Bellagio, Italy in 1995 (9).

Twenty-five years ago a crowded ghetto community had outgrown its cramped quarters in the waterfront district of Dakar Senegal (10,11,12) Plans were made to move the entire community to a large tract of open land in the Pekin district several kilometers inland. The community and its leaders said they would move only if good quality health care was provided. They had started a cooperative pharmacy to purchase essential medicines for poor people in their community. This small venture in community sponsored health service served as a catalyst which led to the development of Centre de Sante, outreach clinics, food pantries and pharmacies for what is at present a community of 1.5 million people. This entire system is community operated. While governmental grants and consultants provided some technical input over the past 20 years, the Pekin project is a marvelous example of a health care system designed by, and operated by a community. Interestingly, they prefer to hire part-time physician specialists to provide consultation services because -they work harder, and in the long run cost less than full time physicians in the Department of Health.

Community empowerment and involvement will be an essential element of health care systems in the 21<sup>st</sup> century.

**2. Person centered strategy.** One of the challenges before us is to develop a variety of health services in our communities. Few people choose to live in institutions. Yet modern health care with its life saving interventions often forces people to become institutionalized far away from their homes and friends.

The Pulborough Life Care Center is a model being developed in the United Kingdom to build within a community, not only comprehensive primary and some secondary levels of health care services, but also assisted living, elderly apartments, and sheltered housing for disabled people requiring some assistance. Educational and recreational resources - will be part of this center located right in the middle of the town (13). This concept

dramatically brings health care into the very center of a community. It also brings the community into the health care system in a person and family centered way. Implementation is in process at present. The challenge will be to establish it in a more lasting manner than its predecessor, community oriented primary care (14).

**3. Empower the individual to lead a healthy life.** Dr. Ashford would, almost certainly focus his attention on prevention, - public health and primary care. Based on his approach to anemia control among the Jabaro's, I am certain that he would try to keep interventions simple, direct and cost effective. In the 21<sup>st</sup> century you might want to include some of the following interventions in your preventive - primary care plans.

*a. Immunizations* are going to be developed extensively as a result of molecular genetics and information derived from the human genome studies. Our challenge will be to deliver a comprehensive set of immunizations to protect the public from a much expanded list of illnesses and other health problems.

*b. Control of Common diseases and conditions.* Asthma is one illness to be targeted-Cases are often clustered in communities where houses are infested with mites, roaches and other allergenic substances. Epidemiological study and intervention is needed to control asthma in these settings.

*c. Regional education* of children, parents, cooks and owners of restaurants and food processing companies to control epidemic morbid and indeed colossal obesity. The calories hidden in commercial foods are responsible in part for -

- Epidemic type II diabetes mellitus
- Epidemic atherosclerosis and coronary artery disease
- Epidemic obesity and severe degenerative arthritis

*d. Risk factor reduction* - Exercise and quit smoking programs should be community - not just clinic based. School sports should be re-introduced to reinforce physical fitness. Use of seat belts and helmets should be publicized and responsible gun control must be developed throughout our society .

*e. Antibiotic Resistance* must be prevented by implementing an island-wide best practices guidelines to ensure appropriate antibiotic prescribing.

*f. End of Life Care* should be developed as a high quality support service available to all, when their time comes, wherever they may live in Puerto Rico.

These are six major areas on which you can build a community based, quality health care system that will augment our 20<sup>th</sup> century health care model.

They will restore a social contract that guarantees service to the society and its communities as the basis for all health care.

**4. Patient safety.** The terrible problem of medical errors and patient safety would surely vex Dr. Ashford as much as it vexes - you and me. This terrible problem in modern health care can be boiled down to one question and some grim facts.

*Question* - If complying with standards and performances measures = quality in hospitals and office practice, do they also ensure patient safety?

*Facts* - the Harvard Medical Practice Study in the early 1990's - estimated from rates of adverse events, that there were 1.3 million iatrogenic injuries and 180,000 deaths annually in the USA. (=3 jumbo jet crashes every 2 days; annual death rate in autos = 45,000)(15).

Many studies have been done since the publication of this report and the outcomes do not give a rosier picture.

Sentinel events have been defined as the most serious of medical errors.

*Definition* - Root case analysis has revealed that the vast majority of these errors are caused by systems errors, not solely by personal errors. Thus, the Joint Commission for the Accreditation of Health Care Organizations (JCAHO) has developed a broad array of interventions to prevent errors from occurring.

*Chronology* - The monthly JCAHO Newsletter Sentinel Alert has been widely acclaimed. There have been a reduction in errors reported to the Commission following publication of several issues. KCL related deaths, for example, have fallen dramatically since publication of the JCAHO Sentinel Alert in February of 1998.

The JCAHO is now centering the entire accreditation process - first and foremost around patient safety. It will be a valuable supporter and resource for the design of safety into health care systems throughout the United States and through Joint Commission International, its international subsidiary, throughout the world.

Patient safety should be given a top priority in the regional health care system of the future in Puerto Rico.

### Conclusion

The health services of the future must be built upon a social contract by which society provides the necessary financial, political and moral support of medical education and research.

In exchange, medical faculties must remember that they exist to serve.

In the coming decades -medical progress and health care systems will require a community based, rather than a medical center based setting for optimal development. The design of these systems will harken back to the pioneer work of Dr. Ashford and his successors, Drs. Grant, Arbona, and Maldonado.

By focusing on community empowerment, a person centered strategy for systems development, preventive primary care and patient safety - you have the potential to build a forward looking high quality health care system.

To fulfill the social contract for the twenty-first century. Don't look to the mainland! You have an outstanding tradition and history of medicine in Puerto Rico. Look within, and in doing so, set an example and a course for others to follow.

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