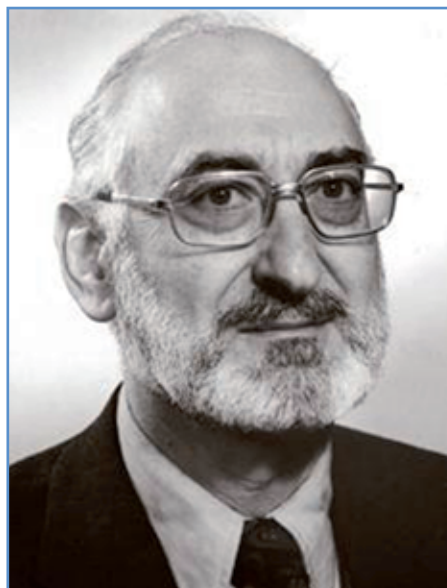


# Avedis Donabedian: The Giant

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## ABSTRACT

“Giant” is the most frequent word in commemorating Avedis Donabedian. Rarely there was such agreement among scholars worldwide to define the role of a scientist in the field of Public Health. And it’s impossible to disagree. Avedis Donabedian had a really huge role in the progress in Public Health studies. It’s not exaggerated even to say that his insights influenced all scientific research.

## THE LIFE

The life of Avedis Donabedian is fascinating. As in other cases [1,2], he is son of a persecuted people so he experienced pain and violence of persecution ever since he was a child. He was Armenian and Sir Muir Gray, director of Better Value Healthcare (BVHC) and partner in the Oxford Academic Health Science Network, said about him: “Avedis Donabedian was an Armenian and his nationality was in many ways as important to him as they were for Archibald Cochrane his Scottish roots” [3].

Avedis Donabedian was born in 1919 in Beirut, Lebanon, during the last time of the genocide of Armenian people. His parents were from Hoghe, a village located at the center of Turkey, now called Harput, not far from the capital city. His paternal grandmother, a self-taught midwife, was very anxious to

give him an education. So she sent him to a good college, the Euphrates College, directed by American missionaries and then he emigrated to Beirut. In fact, the Armenians' life in Turkey was very hard at those times. In Beirut he began to study medicine at the American University. His mother remained in Harput with her two daughters until the beginning of deportations. We know the Avedis's youth through his own interview that he granted to Edwards Berkovitz [4]: "Sometimes they're called massacres, sometimes genocide, but basically they consisted of gathering all the more prominent Armenian men and shooting them, collecting them into a group and shooting them and burying them in mass graves. Women and children and some older men were deported, which means they were kicked out of wherever they were and sent on forced marches all the way down through the desert, through Iraq, down into Syria. Some came as far as Lebanon and Palestine. Along the way they just died-from starvation, from illness, from direct attacks, from being thrown into caves, from being pushed into water. Many, many died. The estimates are one million, a million and a half-nobody knows. My mother went through all of that. All my other family members died. My sisters died, but my mother was very brave, very tough, very resourceful, very intelligent. She hadn't gone to school at all. My father had to teach her after they got married, teach her how to read and write Armenian. But she survived. Meanwhile, my father, who was in medical school, was more or less safe, because there were no depredations or anything like that in Beirut. But there was conscription, so he was conscripted into the Turkish army. Imagine! On the one hand the Turks were killing Armenians and on the other, Armenians were conscripted into the army. He hadn't finished medicine, so he was taken in as a non-commissioned officer, and served in the army in some medical capacity. Afterwards, when the war was finished, my mother came all the way and met him. He thought she had died and suddenly she shows up. My mother says, "I arrived in the nick of time. Had I been a week later, he was going to marry a German nurse." Whether it's true or not we don't know, because my father never confirmed it. He just smiled. So, after horrendous experiences, she joined him. They decided since the war was over they'd go back to Beirut and continue my father's studies. I was born in Beirut during the second phase of the medical school experience for my dad. When he finished medical school, he went back to Palestine where he'd found a place to work and settled in a very small town, all Christian, called Ramallah, which has since become infamous, but at that time was an all-Christian, very small town. When I grew up it had only three thousand inhabitants, all Christian, surrounded by Muslims. He worked there as a village doctor, the quintessential village guru/general practitioner. Absolutely a model of the person who did everything. He was very devoted to his patients, tried hard to keep up by reading medical journals and ordering books. He had a great deal of curiosity about his art and practice, but mainly a very humane person, a very lovely person. That's where he lived all his life". Avedis took his first steps there, learning Arabic and Hebrew with his brothers and other children in the street and speaking Armenian at home. Armenians were Christians, but not Orthodox. They were Protestants. Avedis attended a school of Quakers missionaries in Ramallah, where accepted the diversity of religion, opinion, thought, and opened the mind, stimulated curiosity. He enrolled in medicine, in Beirut. "There weren't many choices, so I decided I would be a doctor. I don't think it was a very reasoned choice. My father was a doctor; I became a doctor. My brother was afraid of blood so he became an engineer. I was afraid of blood as well, but I became a doctor". Beirut liked very much the young Avedis "Beirut was very cosmopolitan and you met all kinds of people from all over the world. It was a lovely town, not so large as now, still some open spaces. Some trees, groves. It was a very nice, elegant, quiet kind of life. Much changed since then. It was fun. I enjoyed my years in Beirut. I met

Dorothy there and later we married”[4].

Avedis got a job at the American University, where he did “everything no one else wanted to do”. He practised especially as general doctor, also performing some teaching in physiology and pharmacology, nutrition...shortly, a bit of all. However his main job was to take care of patients and students paying even a small service, a “health plan” (a kind of health management organization) for the University. After few years of this activity, Donabedian wanted to learn more so he chose Public Health and in 1953 went into the United States and settled in Harvard with a scholarship, while his wife received a scholarship to Boston University to continue her studies in nursing.

Why Public Health? And why Harvard? “My main job was taking care of patients, students; I was a college doctor taking care of students. We also took care of faculty, we also took care of workers. We had a little something that we would now call an HMO, actually, a little health plan. We had a little building that we called an infirmary and I was the doctor at the infirmary. Later I was director of the Student Health Service, or called the University Health Service because we also took care of faculty and workers. Nobody paid any fees; it was financed by the university. We had access to the hospital. It was an ideal practice situation. After some years in that capacity, I decided there were things I didn’t know. I didn’t know how to run an infirmary. I knew nothing about administration. I didn’t know how to keep track of supplies. I did not know how to make budgets. I knew nothing about the administrative work I was supposed to do as administrator of the University Health Service. I am a doctor, period. So I decided I had to learn, but I didn’t know how you learned. I also had a professional interest in infectious diseases and the way that infectious diseases spread amongst students. We had a population we cared for and therefore we could see the pattern of illness and how people got ill, often with the same disease. And the same disease general diagnostic category showing very interesting patterns. Mrs. Smith would get sick and then we’d have fifty people like Mrs. Smith. We’d call it Mrs. Smith’s disease. We didn’t know what they were doing, not in books. But there were very interesting patterns of illness and subtle variations. I said, “I want to understand more about this,” so I went to the dean and said, “Look. There are two things I don’t understand. What are these ‘things’ that are spreading in this population, and I want to understand how to run the clinic.” He said, “You have to go to the School of Public Health. The dean of the Harvard School of Public Health is visiting Beirut. I’ve arranged for an appointment, I went and described to him what I wanted. He said, ‘You have to come to Harvard and you have to study epidemiology and health services administration.’ I didn’t know what epidemiology was, I didn’t know what health services administration was, but I did want to go to the United States. That’s for sure. And I also wanted to work. So I got a scholarship from Point Four, they used to call it, and came to Harvard. My wife got a scholarship at Boston University and continued her nursing studies. So that’s how we came to the United States”[4]. The history of Public Health must be grateful to John Snyder, the dean at Harvard who did that proposal to Avedis. However the most important persons in Donabedian’s professional life were: Franz Goldmann and Leonard Rosenfeld. “I come to the United States, I need a sponsor. I talked to the people at the School of Public Health and said: ‘I want to come to the United States.’ They were very unhappy with me because they trained me to go back and help my people. And I said again: ‘I don’t fit there. There really is no future for people like me. My professor, my major professor and advisor, was also a refugee from Germany, a Christian whose family was Jewish and at one point they had switched. He had experienced persecution in Germany, and he understood my situation”[4].

In 1955, Donabedian concluded his Master in Public Health. Theoretically,

according to agreement, he had to return to Lebanon and bring back in his country the acquired skills but his main teacher and supervisor, Franz Goldmann (himself a refugee from Germany, with a Jewish family), presented him to Leonard Rosenfeld, an authoritative researcher who agreed to sponsor and hired him as research assistant in a project. “I stopped being an academic doctor, stopped being a clinic physician; I became a non-clinician doctor who was working on a research project with Dr. Rosenfeld, who was also a MD but had not been practicing for a long while”. Avedis recounted that one day Rosenfeld said to him: “Try to find and read all the material written so far on the quality of medical care, and give me a summary in six months”. “I have not stopped” he said laughing, 40 years later [6].

Leonard Rosenfeld became the most important person for his career, he shaped his interests and formed him in Health services research [5]. Following Rosenfeld, Donabedian developed a special interest in quality evaluation in different areas and studied methods to evaluate health care in the communities. In those years he worked on prenatal care, relationship between symptoms and needed effective treatment, follow-up of older people discharged from the hospital, chart review related to pre-defined quality standards and standard of care in different types of hospitals. When that project ended, after a brief time spent teaching epidemiology and social medicine at the New York Medical College, Rosenfeld recommended Avedis for an assignment at the University of Michigan, in the School of Public Health, where from 1961 he organized Health care administration and continued academic career, becoming one of the most authoritative faculty members. In those years he developed a multidisciplinary program with doctors, sociologists, economists, psychologists, management experts, epidemiologists, statistical, engaged in the descriptive analysis to analyze the health system, from a point of view of the health care policy at Health care management.

## THE SCIENTIST

Avedis Donabedian learned a lot from his studies in epidemiology and statistics, as many other scientist. However he had an original intuition: he realized that there was a need to put things together. He asked to himself: what do the words “effectiveness” and “efficiency” really mean in Public Health? He began to see the relationships between things that others did not notice: a fascinating exploration of a new world that slowly opened the front, complete outsider with knowledge of epidemiology and statistics and medical practice made in Jerusalem and Beirut.

He wondered: “What are the values that appear to regulate Public Health system?”.

He began to analyse rules, concepts, values, history of this system and he was alone to do it in the 50s and 60s. From an analytical work, the synthesis emerged slowly and Avedis got courage to publish it: *Evaluating the Quality of Medical Care*, a milestone of Public Health published in 1966.

To do it, he lived in the library for a year, without teaching, just reading, doing synthesis and thinking. From that starting point it was born a new season for health care research and policy. The team was composed by a doctor and veterinary surgeon, Nathan Sinai, a social psychologist, Ann Arbor, an economist, the same Donabedian, then a sociologist and an expert in organizational behaviour and they began to study medical care from different points of view: how the health care system in the US work, including strengths, critical issues, access, quality and improvement opportunities. The team members had to use their disciplinary skills to help better understand the system and to help solve

the problems. They were also called to the US Congress to make reports and advice. When Medicare was founded, Donabedian went there as a professor, as a technician, describing the possible scenarios, but remaining neutral between the different policy options. He did not want to do politics directly. But he began to be heard. It took more than 10 years of work before exiting from anonymity, but since 1975 about his three watchwords: structure, process, outcome became a paradigm of the analysis of medicine and its organization. Criteria and quality standards became the subject of debate and effectiveness, efficiency, adequacy, accessibility, satisfaction of operator and the patient became bricks of modern thought on quality of health care. These are the bases of the work of those who, even today, are dedicated to improving the quality of assistance to treated people worldwide. Many of them have been his direct students, the same ones who affectionately called him “Mister structure, process and outcome”[5], and many others followed his lesson.

Avedis Donabedian was author of almost 200 publications and 11 books. His synthesis: structure, process, outcome was cited in numerous publications. Today this synthesis is the seed of all subsequent evolutions of organizational thinking in public health. It's always considered the primary source of inspiration. Sir Muir Gray appreciated so much this text to insert it among the ten most important texts for Public Health. He said that “It is an extraordinary book, only 200 pages that summarize the work of a whole life”. This is his evaluation about *Introduction to Quality Assurance*. Gray [7]. Donabedian introduces the concept of optimality, at a time when demand and needs are greater than the resources available - says Gray - the optimality is a more appropriate target [3]. Once reached, the value is at its highest point. The previous classic Donabedian's text was the three-volume work *Explorations in Quality Assessment and Monitoring*, published in 1980, where he described not only the structure, process and outcome but also its unifying model of benefit, risk, and costs. The strength of this model is in its ability to describe for the first time an evident phenomenon in health care: increase the used resources used as well as the benefits, until the last stop growing so configuring what some called the law of “diminishing returns”. By contrast, the damage increases in direct proportion to the investment of resources. Each unit increase in the used resources corresponds to a growth of one unit in the volume of health care and a unit of damage. In fact, there may be a gradual increase of the damage if every new unit available for assistance was dispensed to patients in lower health or most at risk. The result is getting a point where the investment of additional resources leads to a reduction of net benefit, calculated by subtracting the damage from the benefit. Sometimes this aspect is defined “health gain”. In this regard, Donabedian's text is extraordinarily clear: the optimality is a balanced position between health improvements and the costs of such improvements. This definition implies that there is a relationship ‘excellent’ or ‘optimal’ between the costs and benefits of care, below which it is possible to obtain more benefits to costs that are low in relation to the benefits and at the same above which further benefits are achieved at costs too high in relation to the same benefits. Doctors and patients often wish that health care is the most effective possible way, but at a time when demand and needs are greater than the available resources, the optimality is a more appropriate target.

In the last ten years of his life, Avedis, although he suffered for a series of trouble for a tumor, continued to travel in the world, invited by the most authoritative and careful health reformers. He always travelled together with his inseparable and beloved wife, Dorothy, a nurse, who worked lifetime to the aid of underprivileged children.

In 1990 Rosa Sunol asked him if she could call on his behalf, in life, a foundation that she was building in Barcelona to provide stability and movement



to the culture of quality, still fragile, in Spain. He agreed amazed [6]. Today the Foundation Avedis Donabedian is the most prestigious private institution of the Spanish language that deals with rigor, honesty and spirit to research the issues of quality in Spain and Latin America. Another Foundation Avedis Donabedian was created in Argentina, in 1994. In Israel there is a library Donabedian. Also in Italy a small, artisan reality, trying to be helpful on the web: the Documentation Center Avedis Donabedian ([www.ars.marche.it/cdq](http://www.ars.marche.it/cdq)), was founded [8].

Rosa Sunol, actually Director of Avedis Donabedian Institute-Autonomous at the University of Barcelona, likes to remember him: “Donabedian was also a man of deep culture, a poet and a great lover of literature. He read easily in six languages (Armenian, Arabic, Hebrew, English, French, Spanish, wrestled with the Italian) was a good player and Hispanist of medieval Spanish literature, as well as deep knowledge of Santa Teresa of Avila and other classical authors. One of the funniest memories was attending the discussion with the old dean of the Faculty of Public Health of Michigan on the accuracy of the translation of a biblical text. They were both over 80 years old, seated on the floor and debate but very politely, to exhaustion, the meaning of words in Aramaic, Greek, Hebrew and English, surrounded by dictionaries”[6].

## THE MAN AND THE POET

In Armenian, the name Avedis means “good news”, the surname has been widely cited by American pronunciation (donabidian), while it’s understandably preferred the traditional Armenian pronunciation (Donabedian). The most recent portraits paint him as a gray-haired man, with glasses, a slender figure and a little bit worried that in some images cracks a smile [5].

Avedis Donabedian wrote with a black fountain pen. He wrote all his monumental work by hand, with a small, round, smooth, clear, understandable and elegant calligraphy as his ideas. In the paper there were thin and thick lines. He also wrote by hand the poems and the letters he sent to his friends in the world. By pen he also did hand corrections or comments to articles that someone sent him. [6] The book “An introduction to quality assurance in health care” also was written by pen, in the final stage of what the editor of the book described as a “battle with a greedy cancer that weakened his muscles but left intact his mind” and was published in 2003, three years after his death at the age of 80. He was also a poet. About this art, which he practiced lifelong, Avedis said, just one month before dying, in an interview with Fitzhugh Mullan that when he was young, he wrote love poems. In mid-life he wrote religious poems. Towards seniority he started writing about old friends, old loves and his youth experiences and again, shortly before his death, his poetry had a religious background [9]. Writing poetry was very important to him. Avedis was Armenian, he grew up in Palestine with friends Arabs, Jews, Christians, he went to school in Lebanon and he spent much part of his adult life in the United States. All these experiences enriched his work as a physician and as a teacher, but he said that the poetry got him the deepest enrichment. Professor Donabedian was lover of literature and a fluent reader in six languages. He didn’t like to confront people or to buck scientific trends. His strategic approach was to establish connections with “friendship and solidarity among all the different students he had throughout the world and to build bridges of understanding and appreciation among people and countries.” He profoundly touched the lives of many people. Julio Frenk wrote: “For the many dimensions of his generosity, everyone who knew Avedis Donabedian is indebted to him. But to owe something to this extraordinary man is a paradoxical debt, because it has forever enriched our lives.” Donabedian wrote poetry throughout his life. Shortly before his death, he remarked: “It is

the poetry that tells the most about who I am” [9].

Duncan Neuhauser, Professor of Health Management at Case Western Reserve University, asked him in 1997 to send a book of his verse. Avedis responded: “There is no book nor, probably, there will be. My poetry is definitely out of fashion, it is immersed in a romance antiquated and in addition to insufficient virtuosity. For the most part, I wrote for myself, not for my own pleasure, but for the need to deal with in some way painful things in my life. “But your poetries,” replied Neuhauser, “crosses the border between our austere professional work and our human condition full of emotions ... with poetry you say to future generations that our search for a better health care was conducted by women and men passionate and sensitive” [3]. We choose one of Avedis’s poetries to propose in this paper [8].

## DEPARTURE

*I do not go, as the poet says,  
Raging against the dark.  
There is no darkness where I go  
Only sweet light  
Pure as summer’s day.  
My one regret, love of my life,  
Perting from you, and you  
Dear friend, and you  
All others, cherished, loved,  
Sinew and sap of my old life,  
And in my new, recurrent gifts,  
As I wait upon its blessed shore  
The joy of your arrivals.*

Shortly before his death, he remarked: “It is the poetry that tells the most about who I am” [10]. In these sweet, warm and deep poetic verses we can recognize the same man who said: “Ultimately, the secret of quality is love. You have to love your patient, you have to love your profession, you have to love your God. If you have love, you can then work backward to monitor and improve the system” [10].

Avedis Donabedian died on November 9, 2000 and Dorothy shortly after. But his search is not over.

Avedis has left a circle of students and followers in all corners of the world. His global influence has been facilitated by the translation of his books and articles in many languages. As Julio Frenk, Executive Director of WHO Evidence and information for policy, wrote in Avedis’s obituary [11], everyone who had the privilege of learning from extraordinary this teacher had been the recipients of his inexhaustible generosity. The care of his lectures and counselling to students was proverbial. But our debt is not just intellectual. The spirit of true mentor - a kind of study that is in danger of extinction - was involved not only with the transmission of knowledge, but also with the total personal development of his students, both by active intervention and providing a paradigmatic role model.

## References

- [1] Bucci R. The far-sighted: Alessandro Seppilli. *IJPH* 2011; 9;8;2: 217-20.
- [2] Bucci R, Colamesta V, La Torre G, Ernst L. Wynder: A pioneer of no tobacco world. *Epidemiology Biostatistics and Public Health* 2013; Volume 10; Number 2: e8918-1 e8918-7.
- [3] "Avedis Donabedian: Introduction to quality assurance in healthcare". Book review by Sir Muir Gray. In Rodella A. *Presentazione in Rodella A (ed). [The Master and daisies. The quality of health care according Avedis Donabedian]*. Roma: Il Pensiero Scientifico Editore, 2010. VII-XXVII.
- [4] Berkovitz E. History of Health Services Research Project. Interview with Avedis Donabedian. April 16 1998. <http://www.nlm.nih.gov/hmd/nichsr/donabedian.html>
- [5] Rodella A. *Presentazione in Rodella A (ed). Il Maestro e le margherite. La qualità dell'assistenza sanitaria secondo Avedis Donabedian*. [The Master and daisies. The quality of health care according Avedis Donabedian] Roma: Il Pensiero Scientifico Editore, 2010. VII-XXVII.
- [6] Gardini A. *Il mastro artigiano della salute pubblica [The Master Craftsman of Public Health]*. Janus 2005; 17.
- [7] <https://twitter.com/muirgray/status/266158340034424832>
- [8] <http://ars.marche.it/cdq/html/avedis.html>
- [9] Fitzhugh Mullan. A Founder of Quality Assessment Encounters A Troubled System Firsthand. *Health Affairs*, 20, no.1 (2001):137-141. doi: 10.1377/hlthaff.20.1.137
- [10] Best M, Neuhauser D. Avedis Donabedian: father of quality assurance and poet. *Qual Saf Health Care* 2004;13:472-473. doi: 10.1136/qshc.2004.012591.
- [11] *Bulletin of the World Health Organization*, 2000, 78 (12).

