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A Revival of Paul Dudley White An Overview of Present Medical Practice and of Our Society

René Favaloro, MD

Paul D. White was born in Roxbury, Mass, on June 6, 1886. He graduated from Harvard Medical School in 1911 and became a House Officer at the Massachusetts General Hospital (MGH) the same year. An important landmark in his life was his trip to London, where he studied under Sir Thomas Lewis in 1913. He returned to the MGH in 1914. He became an instructor in medicine at Harvard Medical School in 1921. He was a member of the founding group of the American Heart Association and was its president from 1941 to 1943. He was also a founding member of the International Council of Cardiology in 1946 and was its president the same year. He was president of the International Society of Cardiology from 1954 to 1958, and in 1957 he founded the International Society of Cardiology Foundation. (Core biographical information comes from the excellent book *Take Heart* by Dr Oglesby Paul. He was a resident at Harvard Medical School, which included 2 years of study of heart disease under Paul D. White. I am grateful to my friend Dr Tom Ryan, who wisely gave it to me as a present for the purposes of this lecture.)

Dr White wrote 12 books and ≈758 scientific articles. He won hundreds of well-deserved awards. He always kept an open mind for new developments. On his return from England in 1914, he brought with him the exciting new ECG developed by Einthoven in 1903. He was the first to use it in the United States for clinical research.

I met him in London during the VIth World Congress of Cardiology. He was present during the discussion I held with Charles Friedberg on the early development of coronary artery bypass graft surgery. After the discussion, I had the chance to speak with him briefly. I also had the pleasure of participating in a symposium in his honor in New York in December 1971. On that occasion, I had the privilege of sitting next to him and exchanging ideas and friendship for more than an hour. He talked about his trip to Latin America and Argentina. At 85 years old, he had a clear mind and looked in good health despite having had a heart attack in 1970. I was impressed by his remarks and judgments but even more so by his humility and modesty.

Paul D. White died on October 31, 1973, at the age of 87.

If we analyze his life carefully, we will realize that Paul D. White left an important legacy for all of us.

The Legacy

First Message: Clinical History Stands Above Any Technological Advances

By 1925, Paul D. White had 2 chief interests: the practice of medicine and clinical research. He truly believed that the clinical record, which starts with the interview, stands above any technological advances. His modest, simply furnished office at the outpatient clinic of the MGH, and later at 264 Beacon Street, witnessed him counseling innumerable patients. (At the national headquarters of the American Heart Association in Dallas, there is a permanent exhibit of his modest Boston office.) He certainly loved his patients as human beings.

“Listen to what the *patient* can tell you—it may be more important than anything else you do!”^{1(p83)} he repeatedly emphasized to his students. Besides giving his patients a chance to describe the history of their illness and the symptoms in their own words, he also had the valuable opportunity to observe the psychological implications and the characteristics of each personality, and only then would he perform a careful and detailed clinical examination.

Second Message: All Patients Are Equal

Among Paul D. White's patients were many of the great names of the 20th century from America and abroad: presidents, politicians, businessmen, writers, artists, bishops, and prominent physicians and scientists. However, most of his patients were ordinary people.

One of his former students, Dr Royal Schaff, watched him “delivering the best care that he could for anybody and everybody, from the President of the United States to the poor little lady coming in from the clinic. Everybody was equally welcome. He treated them all as gentlefolk, not as kings and not as paupers, but with universal humanity that obviously sprang from the heart.”^{1(p85)}

Third Message: Team Effort

In this era of marked individualism, this is another important legacy that goes beyond medicine. Dr Ernest Craige, who trained with Dr White, emphasized: “I was always struck by his concern for each member of the professional team as well as the other employees—cleaning ladies, dietary, etc. He had some good words for the nurses who worked there and

From the Favaloro Foundation, Buenos Aires, Argentina.

Reprint requests to René Favaloro, MD, Favaloro Foundation, Ave Belgrano 1746, 1093 Buenos Aires, Argentina. E-mail refav@ffinme.edu.ar (*Circulation*. 1999;99:1525-1537.)

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encouraged them to renewed efforts on behalf of the patient."^{1(p89)}

Dr Gardner Middlebrook, an intern at the MGH, described how on Christmas morning in 1944, in the midst of World War II, Dr White appeared at the hospital with a bouquet of roses in his arms, proceeded to give a Christmas greeting and several of the flowers to the nurse, and then walked slowly around the wards giving each patient a rose with friendly words. Only a great man with a great soul would do this.

Fourth Message: Respect for the Physicians, Particularly for the Referring Doctors

Throughout his life, he related easily and warmly to other doctors. His criticism was always constructive. Because of his experience and knowledge, he was consulted frequently by colleagues. Dr Ernest Craig clearly described Dr White's relation with the referring physician: "Not infrequently the case had been mismanaged or at least drastic alterations in the program were urgently indicated. In his conversation with the referring physician, Dr White would avoid any hint of censure for what had been done to that point. He adroitly guided the analysis of the case such that finally the referring physician would enunciate the correct course to be followed. At this point Dr White would agree enthusiastically with the conclusions reached by this revelation. The referring doctor learned something from the consultation and was grateful for the experience and the manner in which it was handled."^{1(p89)}

Fifth Message: Modest Fees

Paul D. White was always modest in his fees. His records showed that on December 6, 1943, his charges varied from \$15 to \$35 (only once did he charge \$50). On December 6, 1963, they went from \$5 to \$25. They were so modest that they upset some of his young assistants. To very wealthy patients, he suggested that a generous check be given to a worthy medical cause. (Several anecdotes in this regard can be found in the book *Take Heart* by Oglesby Paul, pp 91–94.)

Sixth Message: Clinical Teaching and Clinical Research

Paul D. White's life has always been closely related to his patients. The practice of medicine constituted the prerequisite for his teaching and clinical research. His early obligation with Harvard Medical School at the undergraduate and graduate levels gave him the chance to properly use all the knowledge acquired in his clinical practice.

His teaching was done with equal care whether at the bedside of a patient or in the conference room at the basement of the Bulfinch Building of the MGH. At the beginning, only recently graduated American doctors sat in his classes, but as he gained prestige, more and more young physicians came to Boston from all over the world. His teaching also comprises the innumerable lectures he gave in America, mainly through the American Heart Association, and his countless commitments abroad.

His books also play a significant role, beginning with *Heart Disease*, published in 1931. The *New England Journal of Medicine* commented that it was "the most important

practical publication on the subject of heart disease that has appeared in this country during the past decade or two."

He devoted a large amount of time to public education and urged widespread support for the American Heart Association's heart disease prevention cause. He was in enormous demand as a speaker. He appeared in different places throughout the country and on the most important American television programs. At the time that Dr White received the Distinguished Volunteer Service Award from Mrs Richard Nixon in 1969, Dr Michael DeBakey wrote him a letter of congratulation: "I know of no one who has worked so tirelessly and fervently to make people conscious of the need to work toward eradicating heart disease."^{1(p130)}

Seventh Message: Prevention

Undoubtedly, Paul D. White's greatest contribution to mankind was his prescription for a healthy way of life. The central component of his philosophy was its emphasis on the value of regular physical activity.

Paul D. White began to speak about the positive benefit of physical exercise in the late 1920s. In 1927, he wrote: "Walking is probably the best exercise because it is easy for anyone to accomplish and easy to grade from the slowest shortest walks to the most rapid and longest."^{1(p188)}

The value of bicycling, which was one of his favorite forms of exercise, was mentioned in a 1937 article for *Hygeia*. He opened many bicycle paths, including a pioneer path in Chicago in 1956. He supported various safe-bicycling associations. He was made Honorary President of the Bicycle Touring League of America.

He also encouraged stair-climbing instead of elevators. There are many anecdotes in this regard. Shortly after the Eisenhower heart-attack episode, he addressed the National Press Club in Washington. The club was on the 13th floor of the National Press Building. Griffing Bancroft, a member of the Board of Governors of the National Press Club at that time, wrote: "... a couple of members would meet the guests in the lobby of the building and an elevator was held to whisk them up.

Dr White was so met and one of the escorts remarked how nice it was to have an elevator waiting. Dr White spied the stairway and said: 'Why not walk?' With the newsmen staggering in his wake, he strode up the thirteen floors, arriving for the reception as fresh as could be. Our colleagues collapsed into chairs."^{1(p194)}

His propensity for walking or bicycling rather than riding in a car and for climbing stairs rather than using the elevator became legendary. He also emphasized the value of physical effort as an antidote to anxiety and emotional stress.

If we bear in mind that in his structure for a healthy life he included the control of hypertension and obesity, the opposition to cigarette smoking, and the moderate use of alcohol, we realize that he was a pioneer in the promotion of prevention and rehabilitation of heart patients.

Eighth Message: Humanitarianism

Sir John Parkinson, during the Second World Congress of Cardiology (Washington, DC, 1954), delivered the Laubry lecture "Leadership in Cardiology" and defined Paul D.

White as “an ambassador of good will and hope to cardiologists all over the world.” His innumerable trips overseas were ostensibly for lectures and teaching. However, his underlying purpose was to promote friendship and understanding between scientists in all parts of the world so as to contribute to a better climate for global progress in medicine as well as for the maintenance of world peace.

At the opening session of the First World Congress of Cardiology (Paris 1950), he said: “We who are ‘médecins du coeur’ would also like to perform the miracle of healing the troubled world of today by a universal bond of spiritual brotherhood and medicine from the heart.”^{1(p214)}

Consequently, Paul D. White made 6 trips to Russia between 1961 and 1966. In 1964, he attended the Fourth Dartmouth Conference, held in Leningrad. In his talk, he reviewed his own experience in preventive medicine and concluded with a quotation from Sir William Osler from a lecture given in Montreal in 1902: “There is room, plenty of room, for proper pride of land and birth. What I inveigh against is a cursed spirit of intolerance, conceived in distrust and bred in ignorance, that makes the mental attitude perennially antagonistic, even bitterly antagonistic to everything foreign, that subordinates everywhere the race to the nation, forgetting the higher claims of human brotherhood.”^{1(p258)}

“I truly regard myself as a citizen of the world,” he emphasized—and he certainly was. He always supported democracy and freedom, even under difficult circumstances.

Ninth Message: Disarmament and Peace

During the Cold War, he openly fought for peace and promoted an international scientific brotherhood for this cause: “From the days of the First World War when I personally encountered many of the tragedies and very little of the so-called glories of war, I have been interested in world peace. More recently I have been painfully distressed by the horrors of the Second World War and its aftermath of cold wars and active conflicts all over the world. For many years I have treasured the idea of the possibility that the physicians of all nations, with only the health and happiness of their patients to consider, might bring together not only their colleagues in a united crusade against disease but their multitudes of patients, to promote international friendship, and thereby world peace.”²

Although he strongly disagreed with the Russians in many aspects, after a number of trips he made they eventually started to trust him. In 1961, he became the first American to be elected to the Academy of Medical Sciences of the Union of Soviet Socialist Republics (USSR). In July 1964, he said in Leningrad: “Why cannot the USSR and the US sign further agreements, as they have already done with at least some success for health and some of the arts and sciences, though often too meagerly and too slowly, against other common enemies in the world which can lead to war which include hunger, poverty, ignorance, and unhappiness without forcing ourselves on peoples who do not need or want help? I believe that if we could do this open-heartedly and adroitly we might very well save the world years and years and years of Cold War and worse, and if it could be done open-heartedly and accepted as such, how really marvelous it would be.”^{1(p257–258)}

Thus, it should not be a surprise that he attended the World Congress for General Disarmament and Peace in Moscow in the mid-1960s and that he went to China in 1971. Besides fulfilling duties as a physician, Paul D. White devoted his life to dreaming of a world with social justice and solidarity.

Tenth Message: Optimism

Optimism is part of a positive attitude toward life. In 1951, when talking about the importance of this attribute to medicine, he mentioned: “It is quite certain that biologic effects also result from cheerfulness, optimism, courage, and joy. A chance to counteract the harmful effects of pain, sorrow, and anger is possible through the inculcation of a happy disposition. We know that clinically there are definite effects from the application of this idea. Helpful psychotherapy and the best practice of medicine depend on it in considerable parts.”^{1(p185–186)}

The Practice of Medicine in America

I will digress for a moment from the life of Paul D. White to address a subject of utmost importance, health care, and see whether Paul D. White’s legacy is being followed.

In accordance with the principles of American society, medicine in the United States was originally practiced without regulations and with absolute freedom. Patients were able to select their doctors and hospitals, and charges were the consequence of this relationship. “Fee-for-service” established the parameters of health care.

Medicine could not avoid the influence of the technological revolution of the past decades. Slowly and steadily, we have benefited from the incorporation of new tools that allow us to improve the diagnosis and treatment of our patients. Indeed, they have had a tremendous impact in the field of cardiology and cardiovascular surgery. The pharmaceutical industry has also contributed enormously to the enlargement of our armamentarium. We have undoubtedly managed to improve the quality of life of our citizens and increase the overall life expectancy to 76 years. But all these advances have been very costly. The use of high-technology medical care, regardless of the benefit obtained, has been cited as a major factor in healthcare cost in the country.³

We cannot deny that the fee-for-service method of payment is primarily responsible for the enormous escalation of health expenditure in the United States: from \$141 per capita, ie, 5% of gross domestic product (GDP), in 1960 to \$3621 per capita, ie, 14% of GDP, in 1995. While the Consumer Price Index for all items rose from 30 in 1960 to 157 in 1996—an increase of 430%—it rose from 22 for all medical care in 1960 to 228 in 1996—an increase of 923%.⁴

After 5 years of near-stability, health spending is expected to rise as a share of GDP beginning in 1998, climbing from 13.6% in 1996 to an estimated 16.6% by 2007.⁵ By 2010, healthcare expenditures are projected to be 18% of GDP.⁶ Physicians have been responsible for 75% of all healthcare expenditures.⁷

Fee-for-service encourages physicians to prescribe services that are often unnecessary. This system also increases hospital costs, because many procedures are performed in the hospital. From 1982 to 1987, the physicians’ total charges for

Medicare patients rose by 76% (from \$15 billion to \$27 billion). However, the older population did not expand by 76%, nor did old people's demands for care grow by 76%. The cause seems to be the doctors' interest in higher income. In this 5-year period, surgical services increased by 85%, physicians' visits by 52%, consultations by 127%, diagnostic radiographs by 133%, and clinical laboratory services by 84%.⁴ During my stay in the United States until 1971 and my continuous traveling in subsequent years, I have seen medical practice being highly rewarded. All the fellows we had trained were making large amounts of money even by practicing at the community level.

In the 1960s, health care was not called an industry.⁸ By the mid to late 1980s, it had become the nation's largest industry⁹ (almost a trillion dollars a year), a growth that brought some deleterious effects:

1. The diagnosis is based mainly on the use of sophisticated technology. I agree with Zonerich and Spodick¹⁰ when they say that "many, if not most, cardiologic diagnoses could be made by use of patient history and the physical examination, supplemented by simple noninvasive procedures, such as the ECG and chest roentgenogram." However, proficiency in bedside cardiac auscultation has been seriously degraded.¹¹ A nationwide investigation of trainees in internal medicine and cardiology and third-year medical students carried out some years ago demonstrated that programs with structured teaching in auscultation existed in only 27% of medicine and 37% of cardiology programs.¹² Contemporary teaching rounds often take place in conference rooms and not at the bedside. Internal medicine topics are also taught during lunch hours in conference rooms.¹³

2. The complex relationship between the physician and the pharmaceutical and technological industries, called by Relman¹⁴ the "medical industrial complex," leaves aside some ethical concerns.

The profuse use of randomized trials supported by the industry with the help of complicated mathematical formulas deserves my frequent criticism. I analyzed these facts in one of my recent publications.¹⁵ In the last World Congress of Cardiology recently held in Rio de Janeiro, 39 symposia were organized by pharmaceutical companies. By sheer coincidence, each one of them dealt with subjects related to the pharmaceutical formulas of the organizing company. It is one thing to support a congress, but another matter to organize a symposium!

Managed Care

Managed care is defined as any system that manages the delivery of health care in such a way that the cost is controlled.¹⁶ It is thought to be a relatively recent phenomenon, but it is in fact more than 100 years old. The concept of prepaid care evolved mainly because of the many immigrants that came to the United States in the 1800s.¹⁷ As Block¹⁸ points out, "the early plans were socialist in their approach, with little, if any, grasp of the potential for profiting from their plans, a marked contrast with many of today's plans. The early managed-care organizations and their physicians were continuously attacked by their mainstream physician

colleagues for being socialist incompetents who could not succeed in traditional practices."

The percentage of employees enrolled in managed-care plans has increased steadily in the past 10 years: it rose from 25% in 1987 to 75% in 1996.¹⁹⁻²¹ In 1996, 149 million Americans were enrolled in managed-care plans. By 1997, there were 160 million.²²

Managed care comprises a variety of organizations. The main ones are the Health Maintenance Organization (HMO), the Preferred Provider Organization (PPO), the Point of Service Organization (POS), and the Integrated Delivery System (IDS). PPO and POS plans allow enrollees a wider choice of providers than the "pure" or traditional HMOs do. The growth in the managed-care market is now primarily in these hybrid products.²³⁻²⁵

It is undeniable that managed care has indeed reduced costs. And it has even produced some salutary effects: patients stay in the hospital far fewer days; many surgical procedures are now safely performed in day surgery; many medical practices (mainly diagnostic tests) have been standardized, thus simplifying their use; and more attention is given to health promotion, disease prevention,²⁶ and the management of chronic diseases.

Even though a large portion of the healthcare delivery system is still under nonprofit control, in the fast-growing HMO sector, nearly 70% of HMOs are investor-owned,^{27,28} profit being the most important goal.¹⁸ Faceless investors seek return on equity on the basis of the profitable manipulation of the interaction between the healthcare provider and the healthcare consumer. Thus, health care is subjected to the same pressures as faced by any other business.²⁹ The companies compete to report favorable results to shareholders³⁰ with substantial margins (20% to 30% of the total revenue), claiming that those are the amounts that would be expected in any business.³¹ Thus, a chief executive of a for-profit HMO can be paid as much as \$16 million a year in salary and stock options!¹⁴ Today, most physicians will agree with Dr Kraus that managed care is money management, and the people who make the money are the ones running the healthcare corporations.²⁴ Profits have been decreasing in the past years. It has been suggested that 1998 could see a return to major rate increases to maintain or enhance profit margins.^{32,33}

In the managed-care system, patients lose their freedom to choose their doctors. The primary-care physician (or gatekeeper) determines whether the patient will be granted further access to the healthcare system, including referral to specialists and diagnostic tests. To lower costs, patients are kept at the primary level. This results in inappropriate treatment and inadequate diagnosis. Consequently, the doctor-patient relationship, always considered the basis of our profession, is subverted by the demands of managed care.³⁴ When this trusting relationship is not present, something irreplaceable, unique, and always desirable in our daily duties is lost.

Each health-insurance plan determines different exclusions and limitations. As we know, incentives that encourage doctors to practice cost-effectively include risk sharing, performance-related payment, and bonuses and withholds.^{35,36} It is necessary to remark that some doctors receive bonuses at the end of the year according to their indication of

medical services: the less care they provide, the bigger bonuses they get!

The plans often include confidentiality clauses—better known as gag rules or gag clauses—between managed-care organizations and contracting physicians that limit the physician's responsibility to freely communicate with their patients. An AMA study of 200 HMO physician contracts found gag language in almost every one of them.³⁷ Nevertheless, because of public restlessness, some managed-care organizations have dropped several restrictions and gag clauses.

In relation to managed care, a physician may experience anger, denial, depression, negotiation, and, finally, resignation. Market-driven health care creates conflicts that threaten our professionalism.³⁸ It will be extremely difficult for a physician who was dismissed from a managed-care organization to be accepted by another one. The incentive to remain employed is so strong that many physicians in a capitated system may not provide all the services they should, may not always be the patient's advocate, and may be reluctant to challenge the rules governing which services are appropriate.³⁹

Public concern, discontent, and distrust have grown as enrollees become increasingly aware of the stupendous profit-oriented practice of their managed-care plans and the restrictions that limit their healthcare obligations. The corollary of the public concern is that more than 1000 bills affecting managed-care plans were introduced in state legislatures during the first 6 months of 1996,⁴⁰ and more legislative interventions can be expected.⁴¹ It is hoped that the Congress-sanctioned measures will also improve the quality of health care by the managed regulated system.

Several studies have tried to measure the health outcome of patients in managed care against patients in the fee-for-service plans. They have found largely mixed results—virtually any position one would want to take on their attributes can be supported by the current literature.^{42–60} The main reason for the discrepancy lies in the difficulty of obtaining an adequate evaluation of quality. The methods we have for measuring service quality are still quite primitive.

Even the Health Employer Data and Information Set 3.0, a study supported by the National Committee for Quality Assurance,^{61–63} failed to reach conclusive results.⁶⁴ Hellinger⁶⁵ pointed out that relatively few studies compare the effectiveness of care in managed-care plans with that in traditional indemnity plans after 1990. Furthermore, few data are available on newer models of HMOs and on plans that invest heavily in information systems and rely on financial incentives to alter practice patterns. Knowledge about how different types of financial incentives affect quality is a fundamental component for further studies.

What will happen in the future? Certainly, we cannot go backward. However, for a system to succeed, it should encourage physicians to function as trustworthy advocates and to avoid being influenced by economic interests without disregarding cost concerns.^{66–70} Kassirer firmly believes that to survive, managed-care plans will have to show that they care about more than profits; that they do not skimp on care; that they support their just share of teaching, research, and the care of the poor; that they no longer muzzle

physicians; and that they offer something special (including control of costs) by managing care.⁷¹

Pellegrino remarks that “. . . for centuries good physicians have treated patients who could not pay, have exposed themselves to contagion or physical harm in responding to the call of the sick, and have sacrificed their leisure and time with their own families—sometimes too liberally—all out of commitment to serve the good of the sick.”⁷⁷

The guidelines that distinguish our profession from a business or craft will contribute to the moral foundation of any healthcare system and will prevent us from treating our patients as nonhumans, as statistics, commodities, or exchangeable pieces within a large, profitable structure. The correction of inefficiencies and the elimination of unnecessary expenses (both present in fee-for-services and managed-care modalities) should not be achieved at the expense of the degradation of our profession.

As Everett Koop remarks, the greatest challenge is to guarantee access to basic health care for everybody, according to the tenets of the Hippocratic Oath: “I will do no harm to my patients and I will follow that system or regimen which according to my ability and judgment I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous” and to overcome the tenets of the Hypocritical Oath: “I will do no harm to the corporate bottom line and I will follow that system or regimen which according to my ability and judgment I consider for the benefit of my patron!”¹⁸

As our discussions address the increase in medical costs, we pay little attention to the escalating number of the uninsured: it rose from 37 million in 1994, to 40.3 million in 1996,⁷² and it may reach 60 million by the year 2000.⁷³ The existence of the uninsured and the underinsured is closely related to poverty.⁷⁴

In 1996, the number of people below the poverty level was 36.5 million. It is important to remark that there was a significant increase in the number of the very poor, ie, those whose total income was <50% of the poverty threshold. In 1996, as many as 14.4 million people were in this category.⁷⁵ The poor often require more intensive and expensive care than more affluent patients do, and the outcome of their treatments tends to be less certain.^{76,77} The federal funding cuts in health care initiated in 1981 were detrimental to poor patients. Massive cutbacks in social programs to aid high-risk populations, especially poor women and children, have already resulted in a demonstrable decline in health status among minorities and the poor.^{78–80}

In June 1996, I delivered the opening lecture at the World Congress of Cardiac Rehabilitation held in Buenos Aires (complete report on request). I dedicated most of the lecture to the analysis of socioeconomic status as another risk factor. After reviewing the literature on the subject,^{81–141} I was able to show that the following factors influence mortality.

1. Education: as the level of education increases, the mortality rate decreases.
2. Income: there is a marked inversely proportional ratio between family income and risk of death.
3. Profession: after jobs were classified into 5 different categories (from professionals to unskilled workers), it was

clear that a low job level is inversely proportional to the presence of all causes of death, ie, the lower the job level, the higher the risk of death.

4. Employment: unemployment clearly increases the risk of death.

5. Living conditions: the observations indicate that living conditions have a high influence on incidence of mortality.

The clearest evidence stems from our own specialty: there is a consistent relationship between socioeconomic status and the incidence, prevalence, and mortality of cardiovascular diseases. I concluded that social inequality is indeed another risk factor.

For many institutions, caring for patients of lower socioeconomic status entails longer hospital stays and a greater use of resources. The magnitude of the differences (ranging from 5% to 25%) has an obvious implication for hospitals that care for substantial numbers of poor persons.⁷⁶ This situation is aggravated by the fact that since the late 1970s and early 1980s, several large urban areas have lost all or most of their local hospitals.¹⁴² Poverty¹⁴³ and the percentage of black residents¹⁴⁴ in a hospital's community are the strongest prediction of hospital closure. These considerations are extremely important, particularly for the estimated 17.7% to 18.5% of the US population categorized as medically indigent.¹⁴⁵

I think it is very clear that the principles of Paul D. White's legacy are not being followed. The significant changes that we have already analyzed are factual, undeniable evidence.

One hundred fifty years after the AMA first defined itself in terms of its Code of Ethics, it appears that, not unlike 150 years ago, a sense of moral crisis pervades American medicine. The 1847 Code of Ethics remains a benchmark against which we can measure moral progress or regression. Its introduction, written by John Bell, is still appropriate for our times: "To resolve the crisis facing American medicine, physicians 'must be true to themselves, by a close adherence to their duties, and by firmly yet mildly insisting on their rights; and this is not with a glimmering perception and faint avowal, but rather with a full understanding and firm conviction.'"¹⁴⁶

Today's Society

I fully agree with Kassirer when he says that "the embracing of market values in health care reflects a change in society as a whole. Because individualism and competition are increasingly celebrated, the principles of the marketplace now permeate our personal lives and even capture our judgment."¹⁴⁷

And those principles are money, power, and pleasure. Globalization is the new god. Its motors—liberalization, privatization, deregulation, and of course, the absolute need for competitiveness—have been presented as the main theological arguments. Led by an "invisible hand," the market will achieve optimum results.

In the course of a lecture that I gave at the University of Tel Aviv in May 1995,¹⁴⁸ I quoted some data collected by Riccardo Petrella¹⁴⁹ in December 1994:

1. More than 1000 million people live in absolute poverty. This is more than 3 times the population of the European Community.

2. Approximately 900 million adults are illiterate.

3. Approximately 2000 million people are deprived of potable water.

4. Approximately 100 million people, a figure equivalent to the combined populations of France, Spain, and Belgium, are homeless.

5. Approximately 800 million people go hungry every day.

6. There are 150 million undernourished children below the age of 5 years.

7. Fourteen million children under 5 years old die every day.

Since then I have been thoroughly following the data published every year in the Human Development Reports for the United Nations Development Program (UNDP). Their analysis is based on the Human Development Index.

In 1995,¹⁵⁰ they already pointed out: "The world has become a global financial village. During 1965–1990, world merchandise trade tripled, and trade in services increased more than 14-fold. But the poorest 20% of the world's people have benefited little from the increased globalization of economies. In world trade, their share is only 1%—and in world commercial lending, a scant 0.2%.

More than three fourths of the world's people live in developing countries, but they enjoy only 16% of the world's income—while the richest 20% have 85% of global income."

In 1996,¹⁵¹ they showed that all but the richest quintile saw their income share fall, so that by 1991, more than 85% of the world's population received only 15% of the world income—yet another indication of an increasingly polarized world.

The *Human Development Report 1997*¹⁵² was devoted to the eradication of poverty from a human development perspective. Although it was dramatically reduced in many parts of the world, 25% of the people in developing countries remain in severe poverty: 1.3 billion people live on incomes of less than \$1 a day. In Latin America, 35.1% of the people (165.6 million) are poor, and 18.8% (86.3 million) are indigent.¹⁵³ In industrial countries, more than 100 million people live below the income poverty line, set at half the individual median income. Thirty-seven million are jobless. The poorest 20% of the world's people have a miserable 1.1% of resources, down from 1.4% in 1991 and 2.3% in 1960. And the share continues to shrink. The ratio of the income of the top 20% to that of the poorest 20% rose from 30 to 1 in 1960, to 61 to 1 in 1991—and to a startling new high of 78 to 1 in 1994.

Poverty is particularly dangerous for children. Malnutrition and illness prevent the normal development of their brains and bodies. Some 160 million children are moderately or severely malnourished. Some 110 million do not attend school.

According to the *Human Development Report 1998*¹⁵⁴ released on September 9, of the 4.4 billion people in developing countries, ≈60% (2.6 billion people) lack basic sanitation. Almost 33% (more than 1.3 billion people) have no access to clean water. Twenty percent have no access to modern health services. Twenty percent of children do not

attend school beyond grade 5. Approximately 20% do not have enough dietary energy and protein. Worldwide, 2 billion people are anemic, including 55 million in industrial countries. In developing countries, only a privileged minority has motorized transport, telecommunications, and modern energy.

More than a billion people live in inadequate shelter, without running water, electricity, roads, or, in most cases, security or tenancy. Between 30% and 60% of the people in developing countries live in illegal settlements, and \approx 100 million are thought to be homeless.

Consumption patterns and levels show huge inequalities:

1. Although in industrial countries (excluding Eastern Europe and the Commonwealth of Independent States) per capita private consumption expenditure is \$15 910 (at 1995 prices), in South Asia it is \$275, and in sub-Saharan Africa it is \$340. Public consumption per capita is \$3985 in industrial countries but \$183 in developing countries.

2. As much as 76% of global consumption expenditures originates in industrial countries, which have only 15% of the world's population.

3. The 20% of the world's people who live in the highest-income countries consume 58% of the world's energy, 65% of electricity, 87% of cars, 74% of telephones, 46% of meat, and 84% of paper—86% of total expenditure. In each of these categories, the share of the bottom 20% in the lowest-income countries is $<10\%$.¹⁵⁴

Although the United States has one of the highest levels of per capita food consumption in the world—it ranks fourth in calorie intake—30 million of its people, including 13 million children <12 years old, are hungry because of problems in access to food.

Commercial advertising plays a significant role in consumption. An average American, for example, watches 150 000 advertisements on television in his or her lifetime. Advertising is now a \$435-billion-a-year business (\$101 billion in the United States alone). If all forms of marketing are included, the figure rises to nearly \$1 trillion. At the social level, local and national boundaries are breaking down in the context of the globalization of social standards and aspirations in consumption.

The Human Poverty Index (HPI) shows the distribution of progress and measures the deprivations that still exist. The HPI-1 measures poverty in developing countries by using such variables as the percentage of people expected to die before age 40 years, the percentage of illiterate adults, and the deprivation in social services reflected by the percentage of people without access to health services and safe water and by the percentage of underweight children <5 years old. The HPI-2, introduced in the 1998 Report, measures human poverty in industrial countries, where human deprivations vary according to different social and economic conditions, drawing on the greater availability of data.¹⁵⁴ The lack of basic capabilities such as health and literacy has a bearing on poverty beyond income and unemployment, because those factors determine the inclusion of a person in the life of a community. Therefore, in industrial countries, poverty needs to be monitored in all its dimensions.

Seventeen industrial countries were analyzed with the HPI-2. The United States, with the highest per capita income, has the highest level of human poverty (16.5%), followed by Ireland (15.2%) and the United Kingdom (15%). Sweden has the lowest HPI-2 (6.8%).

In 1997, the percentages of functionally illiterate people—those who cannot meet even the basic reading requirements of a modern society—were 20.7%, 21.8%, and 22.6% for the United States, the United Kingdom, and Ireland, respectively. New surveys show that in 12 European and North American countries, the percentage corresponded to 18% of adults on average. Another 29% do not have the ability to be trained in skilled employment.

Environmental damage is having a strong impact on life. The 1998 report analyzes the relationship between poverty and environmental degradation and shows that although the poor suffer the consequences of the damage, they are seldom the ones who contribute to it: “The damage falls disproportionately on those least able to bear it.”¹⁵⁴ By even the most conservative estimates, at least 500 million of the world's poorest people live in ecologically marginal areas.

The damages are alarming¹⁵⁴:

1. Pollution and wastes are exceeding the planet's capacity to absorb and convert them. Animal carbon dioxide emissions have quadrupled over the past 50 years, from 5740 million tons in 1950 to 22 660 million tons in 1995. Sulfur dioxide emissions have more than doubled, from 30 million tons in 1950 to 71 million tons in 1994. Air pollution from industrial emissions, car exhaust, and the burning of fuels at home kills more than 2.7 million people every year—mainly from respiratory damage, heart and lung disease, and cancer.

2. The world's forests—which bind soil and prevent erosion, regulate water supplies, and help govern the climate—are shrinking. Since 1970, the wooded area per 1000 inhabitants has fallen from 11.4 to 7.3 km². However, only 1 hectare of tropical forest is replanted for every 6 hectares cut down. A sixth of the world's land area—nearly 2 billion hectares—is now degraded as a result of overgrazing and poor farming practices. Desertification already costs the world \$42 billion a year in lost income.

3. The overuse of fertilizers and pesticides causes serious water pollution problems in industrial countries, where they are used most widely. As many as 50 million Americans may be drinking pesticide-polluted water. The world's poor are again the most affected. Pesticides pose a major occupational health hazard for poor farmers and farm workers, who are easily exposed to dangerous levels, because they use them without training or protective clothing and are often unable to read even simple instructions. As many as 25 million agricultural workers in the developing world—11 million of them in Africa—may be poisoned each year, and hundreds of thousands die. Nevertheless, in the most recent years, other substances with less harmful effects have been used.

4. In developing-country cities, an estimated 20% to 50% of domestic solid waste remains uncollected. With rising consumption, cities in most industrial countries confront ever-growing mounds of garbage. Poorly managed domestic solid waste seriously threatens health. In areas lacking sanitation, waste heaps become mixed with excreta, contributing

to the spread of infectious diseases. Again, it is the poor who suffer most. They live near waste disposal sites, and their children are waste-pickers.

5. The industrial waste generated in industrial communities, primarily from toxic effluents from mines, chemical producers, pulp and paper plants, and leather tanning factories, also plays an increasing role in environmental pollution.

Human life is further threatened by crime, accidents, and violence. In the United States, incidents of violent crime have fallen 3 years in a row, and between 1995 and 1996, the number has declined from 3 to 2.7 million, the lowest level since surveying began 24 years ago.

Nevertheless, in February 1997, Judith Havemann (Washington Post Service) reported that the Centers for Disease Control and Prevention found that the United States had the highest rates of childhood homicide, suicide, and firearm-related deaths of any of 26 of the world's richest economies. The suicide rate alone for children ≤ 14 years old was double that of the rest of the industrialized world. Etienne Krug, the medical epidemiologist who conducted the study, said that according to some researchers, the low level of funding for social programs might be a cause of the high rate of violent death among children in the United States. Others, he said, attribute the violence to the high numbers of working women, the high divorce rate, and the social acceptability of violence. However, Stephen Teret, director of the Johns Hopkins Center for Gun Policy, claims that much of the problem stems from the fact that there are more than 200 million handguns in US homes—and many are kept loaded.¹⁵⁵

Perhaps they forgot to take into account the influence of TV, with innumerable programs in which killing and murdering are the main and sophisticated subjects that became the favorite attractions of our youth.

Another problem is posed by national and international conflicts. The report of the US National Defense Council Foundation shows that there were 71 conflicts triggering violence of different types in the world in 1995. All of us should remember that in other times, wars were fought between armies; however, in the wars of the past decade, there have been many more casualties among civilians than among soldiers. During this period, 2 million children have died as victims of war, between 4 and 5 million have been physically disabled, more than 5 million have been driven to refugee camps, and more than 12 million have become homeless.¹⁵⁶

These are shameful statistics that project a long shadow on future generations and their efforts to achieve stability and social cohesion.

Final Comments

The World Health Report, released this year by the World Health Organization (WHO), analyzes several important facts and makes some projections for the next millennium. It is clear from the report that a significant number of deaths are related to poverty, social injustice, and lack of education in developing and industrial countries.¹⁵⁷ Gro Harlem Brundtland, director of WHO, remarks that if we want to improve health, we will have to eradicate poverty.

TABLE 1. Income Distribution (World Bank, 1997)

Region	Income of Poorest 20%, %	Income of Wealthiest 20%, %
Europe and Central Asia	8.8	37.8
South Asia	8.8	40.0
United States and Canada	5.3	41.0
East Asia and the Pacific	6.9	44.3
Middle East and North Africa	6.9	45.4
Latin America and the Caribbean	4.5	52.9

The Board on International Health of the Institute of Medicine clearly specified that “the health of individuals is shaped by many factors: biological, economic, social, educational, and environmental. They emphasized that the major factor that reduces years of healthy life is poverty and its consequences, including poor nutrition and sanitation: many people are sick because they are poor, and poor because they are sick. Social policies are as relevant to health as health policies.”¹⁵⁸

In 1947, the American historian W.E. Du Bois wrote in an editorial for the *Chicago Defender*: “What is wrong in this civilization, in our work, our technology, and our distribution of wealth? Why do most human beings suffer desperate poverty in this civilization of more and more abundance, wealth, luxury and power?”

Over the past 30 years, the global growth in income has been spread very unequally—and the inequality is increasing. Consider the relative income shares of the richest and poorest 20% of the world's people. Between 1960 and 1991, the share of the richest 20% rose from 70% of global income to 85%, while the poorest declined from 2.3% to 1.4%. By 1991, more than 85% of the world's population received only 15% of its income. In 1997, the World Bank reported the distribution of global wealth and confirmed the disparity (Table 1).

In my home country, the highest difference is in Buenos Aires (1.9% versus 68.6%). The gap is significantly wider than in the rest of the Argentine provinces (5.4% versus 48.1%). In the United States, the income of the richest 40% is 72.6% of the total income, whereas the income of the poorest 40% is a meager 12.5%.¹⁵⁹

As we know, the market-driven mechanism is based on the theology of *laissez faire*, according to which everything, especially in economic life, will work out for the best in the end: if the horse is fed amply with oats, some will pass through to the road for the sparrows.¹⁶⁰ Nevertheless, in the past 20 years, the income of the richest families has increased 30% (to \$117 500). On the contrary, that of the poorest families has decreased 21% (to \$9250). The income gap has widened by 127% in New York City. The distribution in the District of Columbia beats all the records (\$149 508 versus \$5293).¹⁶¹ It is quite clear that the poor are still waiting for some of the fortunes of the rich to be spilled over them.

Furthermore, while the middle class is becoming increasingly poor, the upper class must seek shelter in “fortresses” to avoid facing the problems coming from the outside. So-called “gated communities” abound in the United States. These are protected areas with private security guards whose salaries

TABLE 2. The World's Priorities? Annual Expenditure

Basic education for all	\$ 6 billion*
Cosmetics in the United States	\$ 8 billion
Safe water and sanitation for all	\$ 9 billion*
Ice cream in Europe	\$ 11 billion
Reproductive health for all women	\$ 12 billion*
Perfumes in Europe and the United States	\$ 12 billion
Basic health and nutrition	\$ 13 billion*
Pet food in Europe and the United States	\$ 17 billion
Business entertainment in Japan	\$ 35 billion
Cigarettes in Europe	\$ 50 billion
Alcoholic drinks in Europe	\$105 billion
Narcotic drugs in the world	\$400 billion
Military spending in the world	\$780 billion

*Estimated additional annual cost to achieve universal access to basic social services in all developing countries. Source: *Human Development Report 1998*.¹⁵⁴

are paid by the residents themselves. In 1970, there were only 4000 gated communities; by 1996, there were almost 100 000.¹⁶²

Since 1996, there has been a significant decrease in the social welfare budget in the United States. The new policy seeks a \$55 billion reduction within the next 6 years. The same policy is being applied in most countries, including the Netherlands and Sweden, prominent leaders in social regulations to protect low-income and unemployed people.

Is this the best approach to improve budget deficits? What are people's real expenditure preferences, particularly in the industrialized countries? An answer to this question is suggested by the UNDP Report 1998, which compared different "priorities" with the annual additional cost to attain universal access to different social services in the developing countries (Table 2).

I have to confess that I am really worried about the reduction in the social protection budget, which includes that of the health system, all over the world. Is this the right direction?

I think it would be more appropriate to reduce the military budget. The UNDP emphasizes the importance of this immediate need. With the end of the Cold War and because of budgetary restrictions in the industrialized countries, world military expenditure was reduced by 3% per year between 1987 (when the highest amount was spent) and 1994. However, the ensuing "peace dividend" of \$935 billion was not used to finance either social development or environmental improvements. According to the projections of the UNDP Report 1994, if the annual reduction of 3% in military spending were sustained between 1995 and 2000, the peace dividend could be \$460 billion (\$386 billion in industrialized countries and \$74 billion in developing countries).¹⁶³

It is surprising to see which countries export 86% of conventional arms to developing countries: the United States, Russia, France, China, and the United Kingdom, in decreasing order—all permanent members of the Security Council!¹⁶³ To take just one example of the trend, Russia invoiced \$1600 million in 1994 and \$2700 million in 1995! In 1997,

the United States exported \$11 000 million and Russia \$3500 million in armaments. Two-thirds of it went to 10 developing countries (3 of them very poor countries: Afghanistan, India, and Pakistan). In recent years, several industrial countries have increased their subsidies for armament so as to enlarge their exports. The tremendous corruption of commercial transactions must be noted. Unscrupulous middlemen share their profits with those responsible for sales and purchasing.

If developing countries were capable of making adequate use of 24% of the \$125 billion that they spend on armaments per year, most of the primary healthcare (immunization of all children, elimination of severe malnutrition and reduction of moderate malnutrition, and provision of safe drinking water for all), education (reduction of adult illiteracy, universal primary education, and education of women to the same level as men), and population costs (provision of a basic family planning package to all willing couples, and stabilization of world population) could be covered. Many poor countries still spend much more on weapons than on health and education combined. "Whether this spending brought increased security to the average citizen of these countries is doubtful. In developing countries, the chances of dying from social neglect (from malnutrition and preventable diseases) are 33 times greater than the chances of dying in a war from external aggression."¹⁶³

Although the US Defense Budget has been reduced in recent years, it still reaches \$290 billion (in 1980, it was only \$142 billion). Several projects have been elaborated to correct the social injustice in developing countries. They are still waiting to be carried out. For instance, only Norway, Sweden, Denmark, Belgium, and Holland assign 0.7% of their GDP for assistance in developing countries, according to the aims of the United Nations Assembly in 1970.

Recent analysis shows that the world's 225 richest people have a combined wealth of more than \$1 trillion, equal to the annual income of the poorest 47% of the world's people (2.5 billion). Industrial countries have 147 of the richest 225 people (\$645 billion combined); developing countries have 78 (\$370 billion).¹⁵⁴

It is estimated that the additional cost of achieving and maintaining universal access to basic education for all, basic health care for all, reproductive health care for women, adequate food for all, and safe water and sanitation for all is roughly \$40 billion a year. This is <4% of the combined wealth of the 225 richest people in the world. Wouldn't it be possible to impose a tax on the ultra-rich to help the poor?

Over these years, I have been reading reports on several major global debates. These reports use impressive words that remain only that—words, words, and words, like beautiful butterflies in the air, distant from the realities of our planet.

I believe it is time to talk less and act more. I think it is time for a new social contract, like the one proposed by Jean-Jacques Rousseau in 1762. Riccardo Petrella believes it should include the following: (1) a basic needs contract (to overcome inequalities), (2) a cultural contract (to foster tolerance and dialogue among cultures), (3) a democratic contract (to improve the government of the world), and (4) an earth contract (to achieve a sustainable development), based on 4 principles: (1) the right to work, (2) the fight against

poverty, (3) the protection against social risks, and (4) the advancement of equality of opportunities.¹⁶⁴

If the mechanisms of this market-driven society are not modified, it will be extremely difficult to improve our present healthcare system.

Octavio Paz, another Nobel Prize laureate, already warned us in 1968: “It is necessary to destroy contemporary monopolies—from the State, a party or private capitalism—and find new and truly effective forms of popular and democratic control of the economic and political power and also of the means of information and education. A plural society, without majorities and minorities: in my political utopia we are not all happy but, at least, we are all responsible. Above all and first of all: we must conceive feasible and less inhuman, costly and foolish models of development than the present ones.”

Although my comments display some pessimism, we know that setbacks have been followed by progressions throughout the history of humanity. Like Paul D. White, I would prefer to be optimistic and think that eventually we will find a way to amend the faults of our society.

I graduated from the University of La Plata, in my home town. The University of La Plata was deeply involved in secondary education, understanding that in this stage of youth could be found the key and the basis for the molding of the future man. For this purpose, we were given a deeply humanistic formation. We should, however, understand that various types of humanism exist and can be defined. Ours included all the ethical demands related to human dignity.

After my graduation, I became a country doctor in the small village of Jacinto Aráuz in the southwest of the Pampas. With the help of my younger brother, who was also a doctor, we turned an old house into a clinic, which became the only surgical center in that area. Thousands of patients were operated on during the first 12 years of my practice. Most of our patients were Protestants or Jews, a proportion atypical for Argentina. It was a region where farmers owned small lands and where they had to work hard to survive. There were a lot of poor people living in shanties with neither electricity nor water supply. I spent long hours in close contact with them. I still remember the beautiful babies I delivered, mostly at night, illuminated by a kerosene lamp. I was following the basic principle that I had been taught at my university—that every graduate has a social commitment.

At the Cleveland Clinic I always worked on a very modest salary, turning down innumerable profitable offers from private organizations. Approximately 25% of the patients operated on in our Institute of Cardiology and Cardiovascular Surgery in Buenos Aires have no insurance or social protection. We provide them with the same medical assistance and facilities as we do for everybody else. Our patients must always mean the same to us: poor or rich; Catholics, Protestants, or Jews; white, black, or yellow. They have a soul and a body and a social scenario.

During my years in Jacinto Aráuz, when going back home, I was frequently captivated by beautiful sunsets—believe me, the sunsets in the Pampas are amazing (perhaps because of the dryness of the climate and the strong winds pounding on the clouds). On those occasions, I used to stop my old car in

the middle of the country road, and while the skies were lit up by constantly changing iridescent colors, my dreams and utopias intermingled with the clouds. Social injustice was present in my mind in those unforgettable moments, and it has been ever since.

Perhaps you will understand why in 1971 I decided to return to Argentina, where I could be more useful to my community. In these 27 years, ≈400 cardiologists and cardiovascular surgeons have been trained in our Foundation and are scattered at present all over Latin America.

As I said in Tel Aviv in 1995: I would cease to exist if I were not confronted, both within and outside my profession, by challenges related to the ethical development of humans. Singer Joan Manuel Serrat says, “without utopias, life is nothing but a long and sad dress rehearsal for death.”

I would like to express my gratitude for the nomination to deliver the Paul D. White International Lecture. This year I reached my 75th birthday and the 50th year since I graduated from medical school.

I think the best tribute I could pay to Paul D. White was to present to you some of the problems that are degrading our profession and the social injustice of our consumer society. We are still waiting for the results promised by the market-driven mechanism. The “invisible hand” remains invisible!

I hope I have been properly understood. I do not want to sound like a priest. Of course, I am not privy to the truth—these are only my sentiments, and I let them flow honestly and responsibly. They are open to debate. I think this platform was the proper place to deliver them, first because I love the United States, my second home, where there is an innate sense of solidarity, evidenced, for instance, by the continuous donations made by people of all social classes, and second, because I have the absolute certainty that academic freedom is the main feature of the American Heart Association.

I will finish my presentation with the last stanza of our national poem, *Martín Fierro*:

Yet don't let anyone take offense,
I don't plan any folks to gail;
If I've chosen this fashion to have my say,
It's because I thought it the fittest way,
And it's not to make trouble for any man,
But just for the good of all.¹⁶⁵

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