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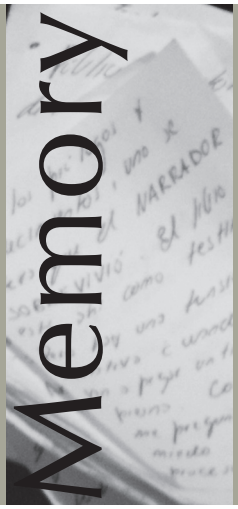

An epidemiological assessment of Argentina

Balance epidemiológico argentino

Carrillo, Ramón[1]

ABSTRACT This text is the transcription of Ramon Carrillo's opening speech at the 2nd Conference of Epidemiology and Endemic Diseases on October 6, 1947. It was originally published in 1949 in the book *Política sanitaria argentina* (Argentine public health policy), which includes articles, conferences and official speeches by this man who, in 1946, took office as Public Health Secretary and later became the first Public Health Minister of Argentina. In the words of the author himself: "one of the triumphs of contemporary medicine resides precisely in that it has solved - or almost solved - the serious problems of infectious diseases; if these diseases continue to persist in certain aspects it is due exclusively to government negligence regarding the things that directly affect the life and health of the people." Such words serve to remind us of the social character of the health-disease-care problems in social groups. The reprinting of this speech in the section "Memory and History" seeks to highlight the relevance of public health thought formulated 65 years ago that continues to speak to the current situation of public health in Argentina.
KEY WORDS History, 20th Century; Health Public Policy; Epidemiology; Communicable Diseases; Health Inequality; Social Medicine; Argentina.

RESUMEN Este texto de Ramón Carrillo (1906-1956) corresponde al discurso de apertura de la 2ª Conferencia de Epidemiología y Endemias, del 6 de octubre de 1947. Fue publicado originalmente en 1949 en el libro *Política sanitaria argentina*, que reúne artículos, conferencias y discursos oficiales de quien, en 1946, decidió asumir el cargo de Secretario de Salud Pública y, posteriormente, fue el primer Ministro de Salud Pública que tuvo la Argentina. En palabras del propio autor: "uno de los triunfos de la medicina contemporánea reside, precisamente, en haber resuelto -o casi resuelto- los graves problemas de las enfermedades infecciosas y que si aún siguen imperando en algunos aspectos se debe pura y exclusivamente a la despreocupación de los gobiernos por las cosas que atañen directamente a la vida y a la salud del pueblo"; lo que no hace más que recordarnos el carácter social de los problemas de salud, enfermedad y atención de los conjuntos sociales. La transcripción de este discurso en la sección "Memoria e historia" tiene el propósito de destacar la vigencia de un pensamiento sanitario formulado hace 65 años, que interpela la realidad sanitaria argentina actual.
PALABRAS CLAVES Historia del Siglo XX; Políticas Públicas de Salud; Epidemiología; Enfermedades Trasmisibles; Desigualdad en Salud; Medicina Social; Argentina.

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When at a crossroads, we ask ourselves which direction and which road will lead us most directly to our destination. And when we make our choice, we must not to set our sights on the brightest and easiest horizon; it is better to take the steepest road if in doing so we avoid erring.

In the great issues of epidemiology, we are at a grand crossroads. We must neither build up our hopes nor choose the wrong path.

There are doctors and hygienists still alive today that witnessed the revolutionary transformations in bacteriology and epidemiology that took place at the end of the last century. Only yesterday the miasma doctrine was used to explain the spread of infectious diseases. At the turn of the century, many chapters of epidemiology were still impregnated with the Hippocratic assertions sacred to medicine for 24 centuries.

IDENTIFICATION OF DISEASE AGENTS

However, in just 50 years epidemiology has outpaced 2,400 years of progress. Epidemiology has identified one by one the agents causing each disease and discovered the serum or vaccine that treats or prevents them, thereby practically eliminating the great pestilent plagues that have decimated humanity since biblical times: cholera, plague, yellow fever and many others.

Medicine had found a fertile path with immunology – and just when it seemed that its end was to be reached, antibiotics such as penicillin and streptomycin appeared as if from behind an unexpected hill in the landscape, offering unlimited possibilities and an infinite horizon. It is not reckless to assert that a new era is beginning and therefore that it would be wise to carry out a speedy technical readjustment of our healthcare organizations in order to obtain the maximum benefit from these new medical advances and recent biological findings.

EPIDEMICS AND ENDEMIC DISEASES

The fight against infectious diseases has a resemblance to the military arts. The invention of a new weapon also implies new offensive and defensive tactics, and from war to war, earlier instruments of destruction seem feeble when compared to later ones. The same happens in the war against epidemics and endemic diseases.

The progress is so quick that ideas are outdated almost as soon as they are conceived. Behring, the creator of the anti-diphtheria serum, offered his medication to humanity and saved thousands upon thousands of children but, at the same time, announced melancholically, as if it were a prophecy, that the serum he had discovered did not solve the problem of diphtheria and that somebody else would improve the procedure with the application of an active vaccine. In 1911, it was in fact he who created the vaccination system that was used until the discovery of anatoxins – the very discovery that Behring had portended 25 years earlier.

The pathology of infectious diseases entails two aspects: the individual and the collective. The problem of the individual case is taken on with a strictly scientific point of view in clinical or therapeutic research. It is from the daily examination of our observations that we extract materials useful for making progress in the clinical aspects of infectious diseases. The collective problem, that is, the consideration of epidemic and endemic diseases from a social point of view, framed as purview of the State, is the problem that I have interest in promoting to you as Public Health Secretary of Argentina. I wish to ask for your invaluable advice so as to decide upon the specific measures to protect our population from certain harms that affect our society and take the lives of Argentine workers every day, tormenting in particular our poor rural classes who are scantly protected and have much less health education.

In order to outline my reflections and concerns about these issues for you, I will attempt to provide you with a public health assessment on the status of our country in the field of infectious pathology, with the sole purpose of later listening to your respected comments.

ARGENTINE PUBLIC HEALTH ASSESSMENT

The peak of the progress of immunological science may be established at 1910, which was

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followed by a period of little change and then finally the start of the antibiotics era in 1935.

The year 1910 marks a very important point of progress in Argentina, because that year initiated a break with the country's past in terms of infectious diseases. Therefore, we will take 1910 as the base year for statistic and demographic references.

During that year, diseases such as smallpox and typhoid fever ravaged not only areas outside the city, but also important neighborhoods within the city of Buenos Aires. Gradually, these and other infectious diseases were controlled to the point of disappearing from the epidemiological map. However, the results seen are not yet satisfactory, as some diseases that should no longer exist continue to cause devastation, due to the lack of organization and power of the Argentine public health system as well as to the lack of health culture and education in the population. Ignorance, filth, undernourishment, and antihygienic housing are the true breeding grounds of microbes. From this point of view, public health is a cultural and educational issue.

In 1910, infectious diseases in childhood accounted for 25% of the total number of causes of death; these were reduced to less than 10% at the beginning of the antibiotics era in 1935. Diphtheria produced a mortality rate of 72 per 100 thousand inhabitants between the ages of 1 to 14 years; this rate decreased to 9 per 100 thousand, representing an 88% decline. Mortality due to measles within the same age range was 27 per 100 thousand and decreased to 6, which meant a 77% decline. Mortality due to scarlet fever, in the same age range and time period, fell from 27 to 7 per 100 thousand, a 73% decrease. Whooping cough mortality dropped from 20 to 5 per 100 thousand, also a decrease of 73%. The mortality rate due to tuberculosis for all ages was 224 per 100 thousand inhabitants; it has already decreased to less than 100 per 100 thousand in the whole country, and in the city of Buenos Aires it is approaching the basal rate of 70 per thousand. This means that, if proper measures are taken, tuberculosis will no longer be a social disease but rather an endemic disease.

For pneumonia, which seemed to be resistant to immunological action due to the wide variety of concurrent antigens, the mortality rate decreased 30% in a period of 15 years, between 1920 and 1935. The rate for bronchopneumonia mortality decreased 25% in the same period.

Puerperal diseases, which caused a mortality rate of 34 women per 100 thousand inhabitants in 1910, decreased to 17 in 1935, which means that 50% of the women that death might have claimed were spared. Death by severe enteritis in all ages decreased 85%, and by typhoid fever, 90% during the period we are considering.

In short, the public health assessment mentioned above shows satisfactory success, and we can predict that, as the era of antibiotics and prophylaxis well organized by the State advances, a huge number of causes of death will close to disappear, as has happened in other countries. Such successes would be a source of pride for our civilization and national culture.

I do not believe that poliomyelitis, brucellosis and other endemoepidemic diseases that still concern the authorities because no specific plan or definitive solution exists to address them will continue to be problems for much longer. The enormous scientific and technical efforts being undertaken both in our country and abroad will inevitably lead to a favorable outcome.

One of the triumphs of contemporary medicine resides precisely in that it has solved – or almost solved – the serious problems of infectious diseases; if these diseases continue to persist in certain aspects it is due exclusively to government negligence regarding the things that directly affect the life and health of the people. A positive sign of this achievement in medicine may be noticed when studying the average human lifespan. In our country, the average lifespan in 1900 was 42 years. At present, as thousands of lives that were inevitably lost are now being saved, we are reaching an average life span of 60 years, although this number is inferior to the average lifespan of 67 years reached in other countries. Man's life expectancy has been extended thanks to the striking decrease in mortality due to contagious and infectious diseases.

The 20-year difference between the 60-year lifespan in 1947 and the 40-year lifespan in 1900 is mainly due to a decrease in infant mortality.

At the beginning of the century, the number of children that died between the ages of 0 to 5 years was so great that in just that age range the country lost the same number of people as it did

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in the ages of 5-100 years. Today, the parameter of maximum destruction of human lives has shifted by 50% towards the age of 60 years. In other words, half of all deaths occur between 0 and 5 years of age, and the other half between 50 and 60 years of age; a minimum percentage of deaths occur between these two extremes.

On the other hand, statistics show that of all deaths due to infectious diseases, most occur in rural areas, where the prophylaxis and treatment of these diseases are not organized in the same way as in urban areas.

HEALTH STATUS OF RURAL AREAS OF ARGENTINA

The struggle for health should be intensively focused on eradicating Argentine endemic foci in the interior of the country, finding a way to put an end to malaria, anchylostomiasis, puerperal infections, endemic enteritis and communicable diseases. The numbers indicate that in the rural areas, infant mortality for all ages is much higher than in the cities of Argentina. The number of deceased children and adolescents in our country increases almost vertically as we leave the big cities and head north or south, crossing the fertile fields of our country. Similarly, the number of women that die during or after delivery increases, so that maternal mortality in rural areas is one-third higher than in urban areas.

I have thus highlighted the great health problem of our nation, a problem which should profoundly concern us given that the biological reserves of the country are found precisely in the rural areas that we so often ignore. The so-called "poor" province of Santiago del Estero – which rather than poor is "forgotten" – has one-fifth the population of the city of Buenos Aires but produces the same number of births – that is, children – as the populous and prosperous capital city. More than one-half of all Argentine children are born in rural communities, and it is they who enrich – via extensive domestic migration – the urban areas and labor force of Argentine industries. The cities of Buenos Aires and Rosario would have been depopulated if that almost unavoidable phenomenon of migration from the country to the city had not occurred, since the number of births in these cities is not enough to replace the population lost to death in urban areas.

If we increase the standard of health in children from rural areas, we would at the same time assure the essential minimum number of workers needed for the country's industrialization, a process that is currently restricted to the big cities, and we might make up for the serious phenomenon of depopulation of the rural areas.

Pneumonia, influenza, severe enteritis, typhoid fever, salmonellosis, diphtheria, measles, scarlet fever and whooping cough, fiercely pursued by doctors and preventive measures in the cities, has taken possession of children from rural areas. We have to direct our efforts to these areas to rectify, at least in part, the health and demographic imbalances in Argentina.

Tuberculosis and syphilis have the same destructive toll in adults in rural areas as those diseases we described as typical during childhood, and more than one person would be surprised to learn the details observed by our health representatives in Chaco, Formosa, Misiones or Corrientes. Rural morbidity and mortality rates currently show that the number of human lives lost in rural areas is equal the number lost in the whole country in 1900, when rural sanitation, serums, vaccines and penicillin were unknown.

LOCAL HEALTH DELEGATIONS

More than three million Argentines live in rural communities that lack any kind of healthcare organizations, which means that one-fifth of our country's population lives in the prehistory of hygiene and social medicine. With enormous sacrifice we have established health delegations in rural areas, constantly combating difficulties regarding materials and many other things, but we are on our way to solving this situation and, God and time willing, we will solve it.

It is not necessary to draw up complicated calculations in order to have an idea of how much a health program would cost that could put an end to this state of things, a state that I have soberly outlined without entering into detail, as the matter is sufficiently dramatic and distressing. The

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municipal government of the city of Buenos Aires, within the limitations imposed by its budget, invests 20 Argentine pesos per inhabitant per year to provide services of prophylaxis and sociomedical care. The initiative of the United States is to invest 4 dollars per inhabitant just in its struggle against venereal diseases. The best organized healthcare mutuals in the country invest 40 pesos per member per year in medical treatment alone, without illness subsidies or any other sociomedical benefits.

If we invested in the whole country the same amount of money per inhabitant that the municipality of Buenos Aires invests, in other words, 20 pesos per inhabitant per year, we would reach the conclusion that the public health budget should be 320 million pesos, that is, double the current budget. Naturally, everyone knows that 20 pesos per inhabitant per year in the city of Buenos Aires is barely enough to maintain – poorly – the city medical services; this number therefore represents the cost of putting rural medical services at the same level as those of the city of Buenos Aires. Indeed, this would be economical, given that in the United States it is estimated that the losses due to illness amount to 40 billion pesos per year. Argentina having one-tenth the population of the United States, we could estimate –supposing that our health care system is equally as efficient as that of the US – that our annual losses due to illness would amount to 4 billion pesos. This figure agrees with studies done by Argentine doctors that estimate the deficit due solely to tuberculosis to be 300 million pesos per year.

These figures offer an approximate but illustrative idea of how the public health status of a country can affect its economy, calculated in national currency, as it impacts upon what in a country's economy is called labor productivity.

In order to ease our conscience, we should make clear that this situation is not specific to Argentina but can be seen almost in every country of the Americas. These countries in general have a better organized public health system than our own, and if they do not do more it is because they lack the resources to do so. We might have the resources, but we lack good organization. Only now is the structure being formed, as the result of a slow and arduous process aimed at gradually centralizing medical care and sociomedical services.

While the social security system organizes the health protection of the lower classes using the contributions of the beneficiaries, from the bottom up, the State has to keep acting from the top down using the technical structures we possess, invigorating these structures and accordingly extending their reach. Only with a convergent movement going from the individual to the State and from the State to the individual can public health issues be rationally solved and financed. In ten years, it would not be surprising to see these different levels consolidated into a single system of care that is somatic, mental and social, preventive and curative, prophylactic and therapeutic.

BASES FOR AN IMMEDIATE HEALTH PROGRAM

It is not necessary to invent new strategies in order to decrease mortality and morbidity rates due to infectious diseases. The same principles that allowed for the elimination of pestilent diseases and the reduction to 10% of ordinary endemics may be perfectly adapted to a simple and practical program with immediate efficacy. This program has been presented in greater detail in our five-year plan for public health, but I would like to highlight for you the basic points of this program as regards communicable diseases.

a) The prior establishment of *health statistics* and exact descriptions of causes of death. In this field – and almost all fields – our country lacked precise statistics, and without precise statistics effective interventions cannot be planned. The confidential certification of cause of death "makes honest" the mortality and morbidity tables in Argentina. We recently carried out an experimental family health census encompassing sixty blocks in the city of Buenos Aires. The results are not publishable, as they would reveal a national disgrace difficult to attenuate, even if it were to be claimed that the neighborhood chosen for the survey possessed characteristics of poverty, ignorance and neglect. That neighborhood of Buenos Aires has the same or worse sociomedical conditions as the indigenous camps in Formosa.

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b) Creation of a *network of laboratories* oriented towards the early diagnosis of all communicable diseases, starting with the use of common serological tests and the usual processes of microbial identification, as the interior of the country lacks such laboratories and even lacks technicians able to carry out such tasks. At the end of this year, the Central Laboratories of Catamarca and San Luis will be opened.

c) *Health education*. If health information campaigns are addressed incorrectly, they can be quite costly. Health promotion materials should be inexpensive, direct and effective. For this purpose, the Institute of Healthcare Education (*Instituto de Educación Sanitaria*) has been created and within a few days will initiate its activities. The best course of action would be to use teachers as a natural path to ensure that family health information reaches the home through the child attending school. Public health could have 40 thousand agents in schoolteachers that, if well trained, would carry out this civilizing task, contributing a new cultural element that puts in the hands of the masses a set of principles and ideas that would help them live more healthily.

d) The installation of *rural health units* will also soon come to pass. They will be equipped with a doctor, a dentist, a midwife and public health nurses or visiting health professionals, nothing more nor less than agents of the public sector cordially proffered to help protect rural families.

e) The extension and expansion of *public health works*. Sanitation and engineering works for towns with less than 3,000 inhabitants are crucial in order to put an end to water-borne diseases.

f) The socialization of health care, which is very different from the socialization of medicine, will allow us to control communicable diseases through the following three action instruments: 1) healthcare centers or, more precisely, healthcare units, working with the health centers in each province; 2) the creation of the "family doctor"; 3) the organization of the Family Health Registry. We will refer briefly to the Health Registry as the other two principles – health units and family doctors – are well known to you all as action measures in comprehensive medicine.

The Family Health Registry would collect in a single file the medical and social problems of the community in all aspects related to health and illness, taking as the physiopathological unit the family, not the individual. Only by possessing such documentation is it possible to fight against both the biological and social factors of illness. The Family Health Regimen would allow for the action of the public health authority to be coordinated with preventive medicine, clinical medical care, social assistance, and social security, gathering all these forces and making them converge in the difficult task of saving the human personage, of reconstructing and building our biological architecture. In the same way that we have organized a Civil Registry, a Military Registry, a Civil Identification Registry, and so on, we must organize a Family Health Registry, where the human wealth of the country can be recorded. The registry of such human wealth is much more important than the registry of properties and of the State's assets.

HEALTH AS THE BASIS OF HAPPINESS

At the start I said that we should be prepared to move forward in medicine through more difficult paths. I will not give myself over to false hopes that we have already succeeded based on the mere verification of epidemiology's great achievements; those achievements, in the context of the problem as a whole, are still small. Nor will I indulge in naïve optimism by presuming that the fundamental matter, which is the natural health of man as the basis of his happiness and well-being, can be achieved through the construction of expensive hospitals, large factories for producing drugs or an efficient organization of doctors. The ideal situation is that man enjoy natural health that results from the harmonic development of his somatic, mental and social activities and not as a sort of negative state of "lack of illness" – which is how doctors understand health today – that we try to maintain or recover using all possible means, resorting to more or less effective but artificial options: serums and vaccines, vitamins and penicillin, hormones and scientific diets, periodical exams, doctors and nurses. We will be getting closer to truth and to the true goal of medicine

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when all of these things become less necessary. Medical science and medicine will show triumph the day we have to close hospitals because they are no longer necessary and we have to reduce the activity of the pharmaceutical industry due to lack of consumption. This is already happening in countries such as Sweden, where tuberculosis hospitals have had to be closed due to lack of patients. The desire of humanity and the objective of all of us has to be precisely that: to discover the secrets of natural immunity, to avoid the early onset of degenerative and mental diseases, to prevent the causes of these diseases and to extend life in an organic balance that makes life worth living. The new path leading to this almost utopic goal seems to be, at this moment, the arrangement of human life within physical, biological, social and economic environments that overcome the contingencies of heredity, poverty and cultural deformation, unless that, by overcoming this type of directed medicine we practice today, we can discover the mysteries beyond histologic and physicochemical structures, beyond the processes that lead to neurosis, madness or crime. If that happened, the universe, which is nothing but the ultimate result of the integrative functions of our nervous system, would immediately transform, and we would witness how men would return to the harmony of their physiologic and mental being. Only then would the universe be made for man's happiness. It would be a dream come true, even if the universe itself continued to be impossible to reach and to comprehend, because it is confused with God and eternity.

CITATION
Carrillo R. An epidemiological assessment of Argentina. Salud Colectiva. 2012;8(Suppl 1):S93-S99.

The translation of this article is part of an interdepartmental collaboration between the Undergraduate Program in Sworn Translation Studies (English < > Spanish) and the Institute of Collective Health at the Universidad Nacional de Lanús. This article was translated by Marcelo Ranieri and Giuliana Riveira, reviewed by María Victoria Illas and modified for publication by Vanessa Di Cecco.