EVIDENCE RELATING TO ACCEPTABILITY OF STERILIZATION INDIVIDUAL, SOCIAL, LEGAL, MEDICAL, RELIGIOUS AND PROFESSIONAL. (THE PUERTO RICAN EXPERIENCE)

José Nine Curt, M.D.

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Table 3) Death from diarrhea-enteritis should read:

The number of deaths due to diarrhea during one year per one hundred thousand (100,000) population.

Table 4) Infant mortality should read:

The number of deaths among children under one year of age during one year per one thousand (1,000) live births.

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PART I - The Setting:

It is a great pleasure and a great honor to talk with you this morning. First I must thank Dr. Ira Lubell for having invited me to address you today. I hope my presentation will draw some comments from you.

Allow me to discuss the limited topic of today in a broader context: in terms of a forest and its trees. A tree alone is something of beauty, but it is also part of the beauty of the forest. A dead tree means the forest is in trouble. There are those of you who are concerned with one or several different kind of trees, and there are those of us who are concerned with trees, and also with the entire forest. We deal with what is fertilizing all of the roots and where the leaves are falling. Allow me to discuss this forest with you.

We live in a world in rapid transition. The only stable thing is "change". Specifically, institutions are under constant siege. Governments, universities, the churches are severely affected.

Even though scientific advances during the past fifty years equal those of the entire history of mankind, our ability to apply these advances for the benefit of all our people has been slow at best. Research has continued. Its application has improved. However, new problems keep surfacing.

Advances in communications have repercussions constantly on every individual, on every nation.

The isolation of the coffee picker in the mountain town of Utuado in central Puerto Rico or of the sugar cane cutter near Yauco on our southern coast is something of the past. He is aware of the problems of the world. He has his own problems also. He may still have to carry water into his home. He may have to walk several miles to a paved road. He is aware of the improvements in life, of the benefits that other people have. He asks himself why he does not have some of these benefits. And he sees those, some of us perhaps, who have ascended in the socioeconomic scale and he wonders. We are suspect.

Our children see poverty, inadequate education, a contaminated environment, continued discrimination, and they accuse us. And we accuse ourselves, even though we have done more than any other generation to try to correct centuries of injustice and inequality.

May I remind you of the former Attorney General of the United States of America, Ramsey Clark's observation: "When you put poor education, poor employment, poor housing, and probably most important poor health on the map, and then put high crime on it, you have marked the same place every time." And I ask myself, how are we as professionals serving this world?

Within this context I would like to briefly offer you a few details about Puerto Rico.

Puerto Rico is a small island 30 by 100 miles with a population density at this moment of over 800 persons per square mile.

Our island was under Spanish domination for four hundred years. Our language, Spanish. We have developed a culture combining ingredients from our Taino Indian ancestors, from our African ancestors, from our Spanish ancestors, and from several waves of immigrations over the centuries.

We inherited a strong family structure from the Spanish, and the Roman Catholic Church. We first rebelled against foreign domination in 1513 and have been asserting ourselves ever since.

Our own constitution, within an alliance with the United States, was written in 1952 and our first governor elected.

Beginning at the turn of the century we became part of the large metropolis, the United States, with its many more resources, unencumbered by a long imperialist history and developing rapidly. Our problems of underdevelopment became more acute by comparison, but their solution more hopeful as well as more complex. We immediately were faced with a new culture, democracy, participation, equality, and free education.

Politically, three tendencies existed under the Spanish empire and later under the United States influence. We have those who want to assimilate completely to the metropolis; those who want separate political and even economic power; and those in a central movement, the most popular, who attained the present status of free associated state with the United States of America.

Political developments in 1940 led to a reorientation of our political effort, away from discussions of political status within or outside the union, and toward policies which would accelerate our social and economic development.

Several factors can be said to have been the key to our remarkable development since 1940.

1) Policies of the New Deal era in the United States brought favorable attention to our island in terms of policy decisions affecting socio-economic development and an accelerated technical and financial assistance in implementing these policies.

2) The great emphasis on a public educational system brought wider educational opportunities to most Puerto Ricans. As a result Puerto Rican leaders were able to participate in our accelerated development.

3) Changes in the political structure and strenuous efforts in political education resulted in an honest and able public administration.

4) Extensive public health campaigns were carried out and a direct result was the tremendous reduction of the communicable diseases.

5) Industrial development was predicated on the development of light industry, primarily employing women and I suspect encouraging further efforts in family planning, and government's partial encouragement of migration to the mainland United States.

The culmination of the development over the past thirty years has been the marked political maturity of our people. Participation in the political process, both by voting and serving in office, is not an end in itself. Politics is a means to solving social problems, exercising social justice, improving the life of all Puerto Ricans.

All of our institutions have responded to some extent to the change occurring during the past thirty years. Government, and in turn the universities, have been the primary instruments of change. But the church, and other establishments have also demonstrated a degree of flexibility. More important is the fact that these organizations do not exist for the well-being of those who belong to them, but rather for the well-being of our people as a whole.

I want to emphasize through our discussion that we are a small and compact nation. Our present priority, beyond our identity, is to lessen the gap between the rich and poor, improve the quality and the use of our educational system, and to develop to a greater extent the individual capacity and productiveness of our people.

PART II - Some Socioeconomic Indices in Puerto Rico

Let me offer you some socioeconomic indices of progress in Puerto Rico during the past thirty years.

As I noted before Puerto Rico is one of the most densely populated nations in the world. Population density was 546 persons per square mile in 1940, and 792 persons per square mile by 1970.

Total population in 1860 was 583,000 persons, but by 1899 had increased to 950,000, with large waves of immigration to Puerto Rico. By 1942 we had 1,900,000 persons, due in part to a rapid reduction in the mortality rate. By 1972

the population had reached 2.7 million people.

Our rapid reduction in mortality resulted from implementation of effective public health measures during the first half of the century.

In 1947 we registered the highest birth rate for the island, 43.2 per 1,000 persons. From 1950 to 1960 the population decreased rapidly, due in large part to migration to the United States.

As of 1970 housing units in Puerto Rico numbered 730,000. Some 85% had electricity; 70% had potable drinking water; 60% had access to sewer services. The higher proportion of all these services are in urban areas.

Education

Illiteracy rate in Puerto Rico has dropped to 9%. We are satisfied by the educational progress of our population. We are still a developing country. The median education for persons 25 years of age or older in Puerto Rico in 1970 was 6.9 years of schooling, a vast improvement over 4.6 years registered in 1960.

We also found that nearly half on the entire population over 10 years or older could speak English. In comparison to other developing countries in our hemisphere, this is quite an accomplishment. However, there are rural-urban differences still.

Of Puerto Rico's total school enrollment, 831,000 students in 1970, there were 63,000 at the college level. This is another notable accomplishment for a developing country of 2.8 million people.

However, in spite of our educational improvement poverty is still far from being eradicated in Puerto Rico.

Family median income rose from $1,268 in 1960 to $3,000 in 1970. Despite these gains nearly 60% of Puerto Rico's 564,000 families were living below the officially classified poverty level. Some 72,000 families, (13%) earned between $500 and $1,000 in 1970. An additional 77,000 families (14%) had earnings between $1,000 and $2,000 in 1970. However, although there is poverty reflected in these statistics, the situation was infinitely worse in 1940. We were then known as "The Stricken Land".

. Per capita income in Puerto Rico at present is about $1,500 but still 50% of our families are under $3,000, earning $652 per capita.

Income gains were made by both men and women. While male annual income still averages more in 1970, the gap between the sexes has narrowed. During previous decades male income rose a little more than double its 1940 level. Female earnings nearly tripled.

The annual economic growth of Puerto Rico during the past thirty years has fluctuated between 8% and 10%. Population growth dropped over the same period from 2.5% to the present 1.4%. This is a point that we would like to emphasize, the relationship between population growth, economic growth, and educational improvement.

We relate our population growth to our economic development. We feel that nations must maintain more than a 6.7% annual increase in economic growth over the percentage registered in population growth.

Our data shows that 20% of the population owns or participates in 51% of the income. These are at the top of the social scale. In other words, 80% of the people in Puerto Rico still are only participating in 49% of the wealth of the island.

PART III OVERVIEW OF HEALTH IN PUERTO RICO

The health of our people is and continues to be a source of great concern for both the nation and for us in government.

We believe that:

The concept of individual health is generally accepted to be not merely the absence of disease but the physical, mental, social and economic well-being of the individual.

Every individual has the right to good health as does the family and the community.

It is government's obligation to see

that health services are available for the use and benefit of the nation.

These health services should be of the highest quality, offered in an integrated manner, accessible to all persons equally and consonant with the economic reality of the country.

Health is intimately realted to the economic and social evolution of a nation: future problems and alternatives will become more complex in the health area in keeping with this development. Remedies are based to a great extent on the re-structuring of society and the institutions offering the basic services which the individual deserves and which are due him.

Health planning therefore is intimately related to socioeconomic planning.

The improvement in the health of the people of Puerto Rico has been dramatic, going hand in hand with the educational, social, and economic progress.

Let us briefly analyze what has happened in the health area in Puerto Rico during the past 30 years.

Vital statistics such as the decrease in the birth rate, the decrease in general mortality, the decrease in infant mortality, in maternal mortality, in stillbirths, and the increase in life expectancy all testify to the amazing progress in health in Puerto Rico.

Let us review the change in some selected health indicators from 1936 to the present.

1) Birth rate — The number of live births during one year per one thousand (1,000) population.

Year	Rate
1936	39.5
1940	39.8
1950	38.5
1960	32.2
1970	24.8

2) General death rate — The number of deaths occuring during one year per one thousand (1,000) population.

Year	Rate
1936	19.9
1940	18.4
1950	9.9
1960	6.7
1970	6.5

3) Death from diarrhea-enteritis — The number of deaths due to diarrhea during one year per one thousand (1,000) population.

Year	Rate
1936	474.4
1940	405.2
1950	138.0
1960	39.6
1970	8.6

4) Infant mortality — The number of deaths among children under one year of age during one year per one thousand (1,000) population.

Year	Rate
1936	127.3
1940	113.4
1950	68.3
1960	43.7
1970	28.6

5) Maternal mortality — The number of maternal deaths per one thousand (1,000) live births.

Year	Rate
1943	3.7
1950	2.4
1960	0.5
1970	0.3

(6) Life expectancy

Year	Rate
1920	38 years
1940	46 "
1950	60 "
1970	71 "

Many factors have contributed to the

improved health of our people. Among those we can note industrialization and consequent economic improvement, provision of an uncontaminated water supply, and the scientific discoveries which have placed new techniques and efficient remedies for disease in our hands.

The indispensable initiative of the citizen and his active participation in resolving health problems, has contributed greatly to our achievement in quality and distribution of services.

In looking to the future, we will have to confront new problems in the health sector.

We can foresee that infectious diseases will possibly be eradicated.

Chronic physical diseases (coronaries, vascular lesions, cancer, diabetes, etc.) will continue to increase in incidence.

. Of even greater concern in the near future will be the disproportionate increase in the social pathology which affects our society. I feel that drug addiction, alcoholism, family disorganization, mental health problems and milder psychological problems will increase considerably. Their cure will be difficult. To prevent them will be even more difficult, particularly since we are still exploring and identifying both the immediate and distant etiological factors which determine their occurrance and severity.

However, we feel that one of the problems of the greatest priority is and will continue to be how to obtain an equitable and just distribution of health services for all the people.

We find ourselves with certain barriers confronting our aspirations which I would like to discuss briefly.

1) The economic barrier

We find that within a democratic system with capitalistic characteristics, he who has the most money is he who obtains or believes he obtains the best in health services.

2) The geographic barrier

The rural population does not have access to the health servies available to the urban population. The regional health system is planned to eliminate this barrier.

3) The so-called intellectual barrier

We find that in general terms those persons of the highest educational and economic level tend to use health services earlier. The poor person tends to use health services when he is really sick.

Those of the highest socioeconomic levels are not content with a prescription but rather request studies as part of diagnosis. The physician serving the poor must generally depend on the prescription.

Therefore, a plan which has as an objective the equitable distribution of health services and, therefore, health, must eliminate these barriers. At the same time I reiterate the best quality of service must be made available to all the people at the least possible cost to the nation.

PART IV — FAMILY PLANNING, STERILIZATION, HISTORICAL BACKGROUND

The problem of population growth in reference to Puerto Rico was brought into the open in 1925 when Dr. Pedro Lanauze, a physician, organized a birth control league in Ponce. This institution soon disappeared as the result of the controversy aroused. Little else was heard concerning the problem until 1932 when another birth control league appeared in San Juan. However, as Zalduondo states: "The pressure of the church and the apathy of the people brought a quick ending to the efforts of the league".

During the 1930's the great economic depression in the United States gave rise to several relief programs. These were extended to Puerto Rico. One of the federal relief agencies decided to establish a series of maternal health clinics as part of medical services. These were extended throughout the island after a successful trial with the pilot clinic at the hospital of the School of Tropical Medicine.

Yet, these programs were soon discontinued. Further relief programs to Puerto Rico were established but efforts to re-establish the clinics did not materialize.

In 1936 maternal health clinics under

the direction of Dr. Belaval were reactivated with private sponsorship.

In 1937 Puerto Rico passed a law legalizing sterilization for socioeconomic as well as medical reasons and directed the Health Department to offer family planning services.

The Health Department quietly offered family planning services at the maternal health clinics, but no major effort was made to launch an educational campaign. As a consequence the clientele of these clinics dropped considerably.

In 1946 the Association of Population Studies was started as a voluntary agency. It evolved into what is known as the Family Planning Association of Puerto Rico in the late fifties. The Association received initial financial support from the Planned Parenthood Association of America because funds could not be obtained in the island. This agency has had an island-wide program but its services have been limited lately and Mrs. Zalduondo, the Executive Director of the Family Planning unit for many years, gave in 1962 the following as the greatest handicaps to their program: (9)

1. Indifferent attitude of the government
2. Hostile attitude of the church
3. The Catholic indoctrination of physicians and other personnel against contraceptive services
4. Indifferent attitude of the press
5. Hypocrisy of civic leaders who themselves use contraceptive services but deny them to the poor
6. Ignorance of the public
7. Lack of financial support

Our personal impression is that the topic of family planning in Puerto Rico has been an accepted one for a long time and it is not taboo or hidden under the rug. It has had wide social acceptance. We find that there is a pragmatic attitude on the part of the people in respect to family planning. We find that young women want fewer children in spite of a commitment to their church.

Historically there was formal attack on the birth control movement during the early 40's with the excommunication of community spokesmen, legislators, citizens. The church viewed the family planning efforts as anti-church and anti-clerical. Verbal battles were carried on over a period of years during which time the people and the political parties came to accept family planning as a way of life.

In 1960 the church backed the formation of a political party provoking a confrontation with the established government party. The result was that the party which had been in power since 1940 won that election by one of its largest margins ever. As far as was observed church attendance did not drop appreciably.

Puerto Rico remained a Catholic country with family planning programs. This represents another demonstration of the subtle changes in attitudes and values of the Puerto Rican people, running parallel with socioeconomic development and political maturity. (8), (11).

Another relevant aspect about the family planning services is that they are offered as part of the health programs in the island. Our interest is to integrate family planning as part of maternal health care. Thus, the people conceive of family planning as part of a health program, as a health measure.

In our teaching at the medical school we expose our students to family planning clinics. When they go into service they understand that the key to a good maternal and infant care program commences with good family planning services.

In reference to sterilization I would like to refer to several studies that have been carried out throughout the years, by Dr. Harriet Presser, Dr. José L. Vázquez Calzada, (10), Dr. Raúl Muñoz, Dr. Manuel Paniagua (5), and other investigators.

In 1968 Dr. Vázquez Calzada tried to relate general education and the use of contraceptive methods in Puerto Rico. Dr. Vázquez Calzada used the island-wide Master Sample Survey of the Department of Health (3), (4) which consists of a four-times-a-year collection of health related information. Women

between the ages of 15 and 49 and married, widowed, divorced or separated from their husbands at the time of the survey were interviewed. The sample under consideration amounted to 634 women. The findings:

There is substantial knowledge on contraceptive methods in this population group. Less than 2% stated they had no knowledge of any method, and nearly 30% stated that they knew about seven or more methods.

On the average, five different methods of contraception were known to the group. This figure was slightly higher for the urban zone residents than for those residing in rural areas.

The number of methods known increased consistently with age up to about the age of 35. The decline observed for the 35 and older group might be attributed to a reduced level of exposure to this knowledge or to lower levels of instruction attained among its members.

The number of methods known is strongly related to the educational level of the women. On the average, 3.6 methods were known to females with no schooling, and 7.6 methods were known to those with 13 or more years of schooling.

Economic status, measured in terms of annual family income, was shown to be directly related to the educational level and the number of methods known.

Housewives and wives of agricultural labor force members know fewer methods than those in other occupations. There seems to be no difference in this knowledge level between Catholic and non Catholic women.

The best known method of contraception is the pill. Nine out of every 10 women interviewed stated that they knew about it. Second in order, was female sterilization and the condom was third, with 87 and 66 percent respectively.

A general description of each known method or its form of usage was requested from the women interviewed to assess their degree of knowledge. Sterilization emerged as the best known method. The rhythm was very poorly known.

A higher level of knowledge was found to be directly related to schooling, urban residence and lower age groups.

Again, there seems to be no relation to the religious variable.

Knowledge about contraception came earlier in their married lives for women in the younger age groups, urban-zone residents and higher educational levels.

The interviewed women stated that their sources of information on contraception were their parents (3%), husbands (3%), mass communication media (7%) and medical and paramedical personnel (24%). Sixty percent indicated other relatives and friends as their sources of information.

Nearly three fourths of the interviewed group had used contraceptive methods at some time in their lives. Use was lower in the younger and older age groups of the sample. Ninety percent of the women with 13 years or more of schooling, but only 57% of those with no schooling used a contraceptive method.

Sterilization (male or female) was the method most frequently used. Thirty five percent of the women in this sample had been sterilized. Second in popularity to sterilization is the pill (20%); I.U.D. was used to a lesser degree.

In the late 1940's (1947-48), as determined from an island-wide study carried out by Paul K. Hatt, (1), 7% of women had been sterilized. A study conducted six years later by Hill, Stycos and Back (5) revealed that this figure had increased to 16%. Nevertheless, such a sharp increase in the prevalence of sterilization did not bring a decline in the island's fertility rate. Sterilization, although widely practiced, was performed essentially on women after they had had many children.

In 1965, information on sterilization was collected through questions introduced in the Master Sample Survey and directed to women 20 years of age or older with at least one marital union. (6)

The analysis of the information derived from a sub-sample consisting of

women aged 20-49 who had at least one birth (that is, ever-married mothers in reproductive ages) shows that over 34% of them were sterilized.

Sterilization is common among mothers in all age groups with a low in the age group 20-24 (18.7%) and a high in the 35-39 group (46.7%).

The prevalence of sterilization is higher in women in their 30's than in women in their 40's. All these findings point to the fact that it is a widespread practice with a trend towards the younger ages of the reproductive span.

Sterilizations were markedly high among women married for less than 5 years (11%), being highest for the 15-19 years of duration-of-marriage group.

Parity was a determinant of sterilization. The highest prevalence was found among women with 3 and 4 total births. Nearly 13% of women with only one birth were found to be sterilized, many of them due to medical rather than contraceptive reasons.

Nearly two thirds of all sterilized mothers were 20-29 years of age at the time of sterilization and nearly the remaining third were 30-39 years of age. The median age for the group was 26 years. Under the assumption that sterilized mothers in the group would otherwise be fecund from age 15 to 49, this early sterilization age would result in a reduction of their potential reproductive span to about one-third.

The median age of marriage of sterilized mothers in stable first marital unions was 19 years and the median number of years of marriage at the time of sterilization was six. In light of these findings and with the assumptions that first marriages remain stable and second, the women remain fecund until the age of 45, the median reproductive span within marriage of this group would be reduced from 26 years to six.

Over 50% of all sterilized mothers had 2 or 3 births at the time the operation was performed. The proportion of sterilized mothers with only one birth was about 4%.

As compared to figures in earlier studies, sterilizations in 1965 were done after fewer pregnancies. This fact combined with the increase in the practice of sterilization led us to project that it would have an impact on the fertility of Puerto Rican women.

The extent to which sterilization limits fertility assessed through a comparison of the mean number of births per mother in sterilized and nonsterilized women at the end of their reproductive span shows the following:

a) for sterilized women 20-49 years of age - 3.9
b) for non-sterilized women 45-49 years of age - 7.0

The evaluation of the role of sterilization in the fertility decline over time, has to take into account the impact of other fertility control factors.

Further analysis of the effect of these factors has provided evidence that the high prevalence of sterilization and its trend towards early occurrence in the reproductive age span, played a major role as a fertility control measure in Puerto Rico up to 1960.

PART V - CONCLUSIONS

The complex picture I have described to you reflects our concern with the total development of our country.

I have presented specifically the correlation between the natural growth of the population, the educational progress, the health status and the economic growth of the country.

We have planned to attain a demographic structure consistent with the economic development of our nation.

We must avoid the tendency to consider factors such as health, education, population growth, demographic structure, economic growth as isolated factors. All of them impinge on one another. Thus, integral national planning is necessary.

We have many problems still to overcome.

1. Educational level of the nation.
2. Economic and social development
3. Communication among:
   General public
   Health establishments.
   Medical schools
4. Religions and myths.
5. Integrate family planning as part of health services and emphasize its potential health benefits.
6. Increase the number and availability of health specialists and technicians.
7. Modify standards and constraints by governments and institutions.
8. Surgical finality of the operation and its complications.
9. Timing of the procedure regards parity.
10. Psycho-sexual implications of sterilization.
11. Others (6), (8)

Let me conclude by saying that not only are we coping with the present, we are essentially dealing with the future. Thoughts become recommendations. Recommendations will become policy. Policies must be evaluated. There will always be the question of whether we have done the right thing, at the right time.

We must stress the necessity for continued research and evaluation not at the expense of action, but as the means to re-orient if necessary our efforts. I feel very strongly that universities must participate in the continued research demonstrations and evaluations, not only in national experiences but in multi-national programs.

The problems of our developing nations, affected by demographic changes which inhibit economic progress, are indeed acute. The responsibility of more powerful nations to help our developing nations must be implemented within a role of mutual respect and dignity.

At the same time, it might be proper for our nations to restructure their societies to liberate their people from the real ailments of poverty, inadequate housing, disease, illiteracy, inadequate education, unemployment, and the other problems which go hand in hand with "underdevelopment."

I thank you.

JOSE NINE CURT, M.D., M.P.H.
February 27, 1973

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Note

(a) The sections referring to the history, socioeconomic indices and the health status of Puerto Rico are based on the publication, Health in Puerto Rico (1972) by Dr. José Nine Curt, M.D. M.P.H. (8)

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