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An analysis of the planning and evaluation functions in a state controlled health care delivery system : a case study of the Cuban health care system

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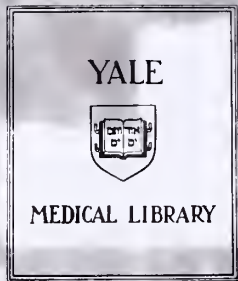


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HEALTH PLANNING IN CUBA

DONALD MOORE

1981






AN ANALYSIS OF THE PLANNING AND EVALUATION
FUNCTIONS IN A STATE CONTROLLED HEALTH CARE DELIVERY SYSTEM:
A CASE STUDY OF THE CUPAN HEALTH CARE SYSTEM.

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for
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May 1981



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To my dear Joan:
I am forever grateful.

To my beloved son, Kwame:
I hope that this work will some day be
an inspiration for your own intellectual,
academic and political pursuits.

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INTRODUCTION

Cuba is a republic occupying the largest island in the Caribbean Sea (1). It had an estimated population in 1980 of ten million people (2). Sometimes referred to as an archipelago, Cuba commands the main entry to the Gulf of Mexico, with an area of 114,524 sq km (44,218 sq miles) and lies in a semi-tropical zone (3). It is a communist state with a planned economy (4). Most of the health care facilities are owned and operated by the state which finances almost all of the health care delivery. Access to available health care is guaranteed by law and for the most part is free of charge (5). The government considers health care to be a human "right" and in some instances a "need" (6). The purpose of this research is to analyze the planning and evaluation functions in the Cuban health care system and show how they affect the structure, process and outcome of health care (7). The methodology will be a descriptive and evaluative retrospective analysis of the medical manpower, medical facilities, economic conditions, health status and government's role in the Cuban health care system before and after the revolution in 1959.

The objective of this explanatory study is, using the Cuban health care system as a model, to show how state control (public ownership of facilities, public financing of health care, state control of medical education, etc.) of the health care system affects the planning process. Thompson defines planning as "the forecasting of the optimal achievement of selected objectives per unit of available resources (8)." We will measure the effectiveness of the planning process in Cuba by the level of achievement of the selected objectives. These objectives will be defined theoretically in terms of accepted standards of health care (9) and operationally as enunciated by the Cuban Ministry of Public Health (MINSAP) (10). The components of the health care system will be evaluated in terms of structural, process and outcome measures (11).

An exhaustive review of the literature on the planning functions in state controlled health delivery systems is beyond the purpose of this study. However, a critical look at health care planning functions in selected countries with varied economic systems will provide a perspective for analyzing the Cuban system. In addition, a critique of the literature on the political and economic determinants of health care will serve to establish the theoretical framework for the hypotheses that will be developed in this research.

Hegelian dialectic, "the truth is the whole," provides internal and external validity to health service research as it does other scientific disciplines. The Marxist method of disciplinary analysis of health and human services focuses first on the analysis of the entire sociopoliticoeconomic system and then use the understanding of the whole (system) as a necessary basis for the analysis and understanding of the parts (services)(12). Navarro maintains that "to focus on forces and actions within medicine to understand its ideology, composition, function, distribution, production or whatever is to ask the wrong questions and therefore cannot lead to the right answers (13)." In this respect, he feels that most research in health services from a Western perspective, functionalist in nature, i.e. they focus on the parts in order to later comprehend the whole, obfuscate and limit the understanding of the realities of the determinants of health.



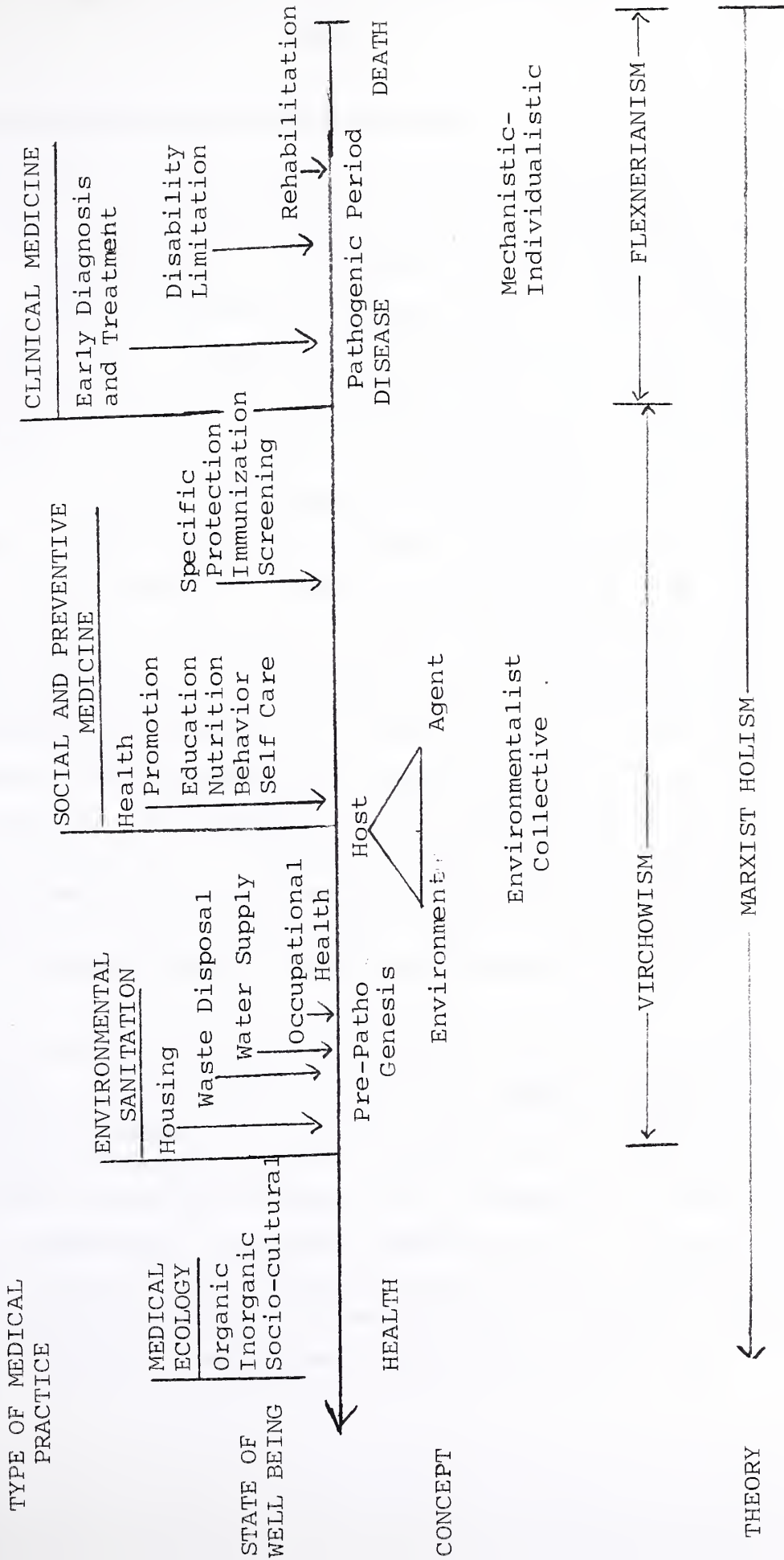
THEORIES OF THE SOCIAL, POLITICAL AND ECONOMIC FORCES AND THEIR
IMPLICATIONS IN MEDICINE

The proceeding analytical dialectic is an attempt to put in focus the dominant ideologies, theories and tenets that shape and therefore characterize Twentieth Century Western Medicine. This necessitates inquiry into the social, political, and economic forces that influence the society as a whole of which medicine is a significant part. In order to understand the conflict of forces in Western medicine it's necessary to analyze the conflict between the Weberian and Marxist interpretation of reality. Similarly, to understand the philosophy and goals of Western medical care systems it's necessary to conceptualize the practice of medicine in the individualistic-mechanistic vs environmentalist-structuralist approach. Also, to understand the nature of control and power in medical care delivery systems of Western societies it's necessary to understand the mode of production of medical services under Flexnerianism vs Virchowism: Flexner being a proponent of clinical medicine with its mechanistic - individualistic approach and Virchow being an advocate of social and preventive medicine with its environmentalist - structuralist orientation.

This is a somewhat biased perspective due mostly to the fact that my experiences and education are overwhelmingly American and Caribbean. The advantage of this perspective, however, is the fact that for over half a century, the social, political and economic ideologies most dominant in Cuba were North American in origin. To understand the planning and evaluation functions in Cuban medicine, it is necessary to understand the philosophy and goals of the system, the rationale for power and control and the conflicting forces that struggle for control. It is within this theoretical framework that we hope to describe and analyze the planning and evaluation functions in the Cuban health care delivery system.

Figure 1a

THE COMPREHENSIVE PUBLIC HEALTH MODEL OF HEALTH AND DISEASE



THE INDUSTRIALIZATION OF WESTERN MEDICINE

Technological determinism, founded in the works of Max Weber, has provided the framework for the development of the ideology of industrialism. It advances the idea that the industrial nature of technology defines social organizations in their entirety (14). Proponents of industrialism fatalistically and deterministically accept the dictum that the technologic process leads inevitably to the industrialization of society. Industrialization, they maintain, has transcended and made irrelevant and archaic the categories of property, ownership and social class. Control and power become divorced from ownership and pass to the managers of capital and subsequently to the technocrats with the skill and the knowledge needed to operate the bureaucracies of industrialization. An intriguing characteristic of industrialism is that it is supposed to be a universal process, i.e. all societies, regardless of their political structure or present stage of development will progress towards the urban industrial model. This theory of convergence emphasizes the convergent tendencies of industrial societies to a roughly similar design for organization and planning. The convergence begins with modern large scale production, heavy capital requirements, sophisticated technology and elaborate organization (15).

Ivan Illich's theories fall under the general category of industrialism. In his monograph entitled, Medical Nemesis: The Expropriation of Health (16), Illich espouses the ideology of industrialism as the main force in shaping our societies and warns of the "rising irreparable damage" that accompanies industrial expansion in medicine. An ardent supporter of the convergence theory, he maintains that the major health issues facing developed and underdeveloped societies can be defined in terms of varying stages of industrialization. Developed countries, of which the

United States is a classical paradigm, evolve to a stage of over-medicalization. This means the centralization, bureaucratization and professionalization of medicine. For example, the industrialization of medicine leads to a cadre of bureaucrats (regulators, hospital administrators, etc.) in the medical sector - indistinguishable from those in the more traditional industrialized sectors. Thus, the now passe, class conflict and ideologies such as capitalism and socialism are irrelevant in explaining the underdevelopment or maldevelopment of health in the Western world. Therefore, the issues in health are manifested as conflicts between controllers of the medical bureaucracy (the managers and technocrats who are indispensable to the running of a medicalized society) and the consumers of the health care. Illich goes even further and asserts that "the medical establishment has become a threat to health (17)." He then outlines the damaging ways he feels that modern Western medicine cause "clinical", "social" and "cultural" iatrogenesis. Planning strategies for the solution of clinical iatrogenesis (morbidity and mortality from direct medical care) and social iatrogenesis (addictive dependency of the populace on medical care institutions) include: 1) the deprofessionalization and debureaucratization of the mode of production in medicine. 2) the reduction of the collective responsibility for health care; and instead, self-discipline, self-interest and self-care should be the individual's guiding principles for health maintenance. For cultural iatrogenesis (the loss of autonomy of the patient and the creation of his dependency on the medical establishment), Illich recommends breaking down the centralization of the medical industry and returning to the market model. With the competitive market model, he argues, the motivation for social interaction will be those of enlightened self-interest and a desire for survival (18). This theoretical framework for understanding and managing the problems of health care in some Western societies is very much alive today among health planners, academicians and critics.

For solutions to problems such as maldistribution, cost and access, Friedman and Kissel have proposed that the licensing and regulation of healers should disappear and concerns of where, when, how and from whom to receive care should be left to the choice of the individual. To a lesser extreme, the intent of the Reagan administration in the United States to massively deregulate the health industry and dismantle federal agencies and social programs demonstrate the popularity of some aspects of Illich's solutions. The new wave of interest in self care, the use of non-physicians to provide medical care, physician advertisement, medical malpractice suits, patient rights and informed consent is evidence of the de-medicalization of the American society.

THE UNDERDEVELOPMENT OF HEALTH IN WESTERN SOCIETIES

Western social scientists such as Rostow (19), Parsons (20), Hoselitz (21), Kahn and Weiner (22), and others, in their analysis of development in Western societies start with the assumption that development is the transformation of underdevelopment. In their analyses, the features of developed countries are abstracted, part and parcel, as the paradigm of human progress and compared and contrasted with similar features of underdeveloped countries. It therefore follows, from their perspectives, that development involves the transformation of the features of the latter to the former. Consequently, the modus operandi for development should follow the path previously taken by developed societies. This dialectical analysis has led many researchers of health services in the underdeveloped countries to compare health service indicators, such as bed-population ratios, with indicators of developed ones, thereby, myopically accepting the premise that the indicators of developed countries can be used as models or targets for the underdeveloped ones.

The rationalization and explanation for underdevelopment of some Western societies forwarded by these social scientists is the scarcity of resources (23). Thus, the underdevelopment of health is due to the scarcity of health resources. Walt Rostow has elaborated this approach in his treatise, Stages of Economic Growth (24). He assumes the stages to be universal and that they apply to all countries, regardless of their political or economic structure. In essence, like Illich, his theories fall under the ideology of industrialism. Rostow defines the characteristics of the stages of growth as:

- 1) the traditional society; one with limited production functions based on pre-Newtonian science and technology.
- 2) the preconditions for take-off, a society in the process of transition to one that can "exploit the fruits of modern science," Rostow maintains that this stage of preconditions arises not endogenously but by some external intrusion by more advanced societies.
- 3) taken off stage; characterized by rapid rate of investment and growth.
- 4) the drive to maturity.
- 5) the age of high mass consumption.

Based on the Rostowian Model, the critical features of development are contained in the third or take-off stage of growth. He identifies two features that propels the process of development: "the diffusion of values" and "the diffusion of capital." Therefore, development is construed as a phenomenon of acculturation and diffusion of institutional and organizational values, together with the skills, knowledge and technology, from developed to developing countries. They further argue that countries do not break with underdevelopment because they lack resources for investment capital.

The solution to underdevelopment, they would argue, lies in the diffusion of capital from the richer, developed countries to the poorer, underdeveloped ones, thereby stimulating their economic development. Rostow's "stages of growth" theory is

widely accepted among Western international health planners, academicians and social scientists for explaining the underdevelopment of health and the distribution of health resources in poor Western societies. According to Navarro, this theory rationalizes and justifies the present relationship between developed and developing countries. It presents the developed countries as models to be emulated by the poor countries and shows underdevelopment to be due to an assumed scarcity of resources in underdeveloped areas and not "to economic structures and the pattern of economic relationships between poor and rich countries." The fault of underdevelopment, he continues, is therefore left squarely on the shoulders of the poorer nations (25).

THE POLITICAL ECONOMY OF HEALTH AND HEALTH CARE

Vicente Navarro, in his collection of medico-political essays entitled, Medicine Under Capitalism (26), discusses the theme that "the same political and economic forces that determine the nature of capitalism and imperialism also determine the underdevelopment and maldevelopment of health and health resources in capitalist societies." Furthermore, he develops the thesis, a priori, that the maldistribution of human health resources is brought about by the same determinants that cause the underdevelopment of these countries.

In order to understand the composition, functions and nature of health care sector, Navarro feels that one has to investigate the degree of ownership, control, and influence that primarily the corporate, and to a lesser extent the upper middle classes, have on the organs of production, reproduction and legitimization in the society.

Over the last century, a variety of explanations for underdevelopment have been popularized ranging from the "population problem" developed by Malthus (27) to the "problem of industrialization" advanced by Illich. Still, others such as Rostow, Parsons and Hoselitz see industrialization as necessary for the "take-off" from underdevelopment. Navarro, maintains that these explanations "do not clarify but further obfuscate the actual economic and political causes of underdevelopment." Citing Cuba (28) and China (29) as two of the very few countries in the sphere of underdevelopment that have controlled and almost solved their malnutrition problem, he argues that they had to break with their maldistribution of political and economic power to allow them to use industrialization differently - "not for the benefit of the few, but for the benefit of the many. The real problem that the progressive forces in those countries faced in solving the problem of malnutrition," he continues, "was not the process of centralized industrialization, but the centralization of economic and political power in the dominant oligarchies allied with the corporate transnational interest, which determined that centralization." He concludes that the experiences of both China and Cuba would seem to indicate that the type of industrialization that exists in developing countries is a symptom but not a cause of their problem. Thus, to change centralized industrialization, first there has to be a break with the centralization of economic and political power.

From this same perspective, Navarro also sees the over-medicalization of Western developed societies as a symptom of the class structure, ownership and control of the health care system rather than the deterministic consequence of industrialization. In his critique of Illich, Navarro points out that Illich's focus on consumption leads him to erroneously believe that social,

cultural and clinical iatrogenesis, i.e. the expropriation of the individuals health, results from the manipulation and effect of the bureaucracies in the individual's sphere of consumption. Navarro argues that the main determinants of peoples' behavior are in the world of production: "Indeed, in our capitalist system what the individual might have depends on what he might do ... Thus, to understand the 'sphere of consumption' we have to understand the 'world of production' (30)." He maintains that the manipulation of addiction and consumption by medical bureaucracies is not the cause of medical nemesis but is a symptom of the basic needs of the economic and social institutions in industrialized capitalist societies. The bureaucracies are mere socialization instruments to those needs, i.e. they reinforce and capitalize on what is already there - the need for consumption. This need for consumption - this "commodity fetishism" - , the Marxist believe, is intrinsically necessary for the survival of a system that is based on commodity production (31). Thus, the owners and controllers of the means of production of the health care delivery system must promote continual artificial dissatisfactions and dependencies in human beings that direct them to further consumption because without it the system would collapse. Navarro believes that the individuals loss of autonomy and subsequent creation of dependency starts with the worker's loss of control over the nature, conditions and product of his work - in essence, his alienation from, and the expropriation of his work. Consequently, the most important components of one's life, creativity and worthiness, are not realized in one's daily work. Having been denied his self-realization at his place of work (the sphere of production) he has to look for this realization in the sphere of consumption. Ironically, this hope of fulfillment during leisure time turns out to be an illusion, according to Navarro, an illusion that always has to be satisfied with the always unsatisfied and unending consumption (32).

Navarro claims that another consequence of focusing on the sphere of consumption and not the area of production and its class relations, is that it leads Illich to misunderstand the nature of bureaucracy and the bureaucratization of work. He points out that within the process of production, technology and its requirements do not determine the hierarchical division of labor but, instead, the latter determines the type of technology used in the production process. Braverman (33) has shown that the bureaucratic form of managerial organization preceeded the scientific revolution and not vice versa - Also, this form of organization (Taylorism (34)) was created by the need of the employer (manager) to structure and control the process of work - for the purpose of minimizing cost and maximizing profits for the owners.

Illich and other industrialist theorist argue that the hierarchical order within the health care team is explained by the different degrees of control over technological knowledge that each team member has. Notwithstanding, in the US, within the health care team the leader is usually the physician, most often an upper-middle-class white male. Below him there is the nurse who is usually from a lower-middle-class background and female. The attendants, ancillaries and service workers who are at the bottom of the hierarchy are for the most part female, non white and from a working class background (34). The technological knowledge developed and used in medicine has changed enormously since the Flexner Report in 1910 but the class composition of the health care team has not changed significantly. Navarro believes that the Flexnerian Revolution and the development of scientific medicine served to strengthen but did not create the class distribution of responsibilities within the health care system. He feels that it is primarily the class structure and class relations in the society that determine that distribution.

He further postulates that this class structure and hierarchy militate against the provision of comprehensive medical care: "while most of the needs of the patients in our populations are those of care, most of the strategies within the health team and health sector are directed by the 'expert' in cure, (the doctor)(35)." The care strategy requires a collaborative (horizontal) distribution of responsibilities in addition to the more familiar authoritarian (vertical) distribution (36). The care strategy, by its very nature, includes both the patient and family in the responsibility of health care. However, the joint provision of care, by the patient himself, his family and all members of the health team is seriously handicapped by class oriented roles and functions that are, not distributed according to the need for them, but primarily according to the hierarchical order of class structure and class relations. In his analysis of clinical iatrogenesis, Illich concentrates on medical cure as the measures of effectiveness of health care. However, in developed Western societies the leading causes of morbidity and mortality are chronic conditions. Thus, the degree to which a system provides supportive and attentive care (LTC, home health care, hospice, rehabilitation) to those in need is a better indicator of the effectiveness of medical care (37). Illich therefore misses this point when he rejects medical care (cure) and opts for self-care. He would also reject a care oriented system because it would prevent "self-reliance and autonomy" by increasing the dependency of the individual on the health care system (cultural iatrogenesis).

Illich writes that cultural iatrogenesis is due to the culture of industrialism. By focusing on the industrialized medical bureaucracy as the enemy and dismissing such concepts as social class as irrelevant, Navarro argues that Illich misses the point that medical bureaucracies are the servants of a higher category of power, the dominant classes. Navarro and others have shown that this power in health in Western developed societies is primarily one of class, not professional control (38).

Members of the corporate class (owners and managers of financial capital) have a dominant influence on the funding and reproductive organs of the health industry (commercial insurance agencies, foundations and teaching institutions). On the other hand, the members of the upper middle class (executive and corporate representatives of middle-size enterprises and professionals, primarily lawyers and financiers) have dominant influence on the health delivery institutions (community hospitals long term care facilities, health centers, clinics etc.). Similarly, in the executive and legislative branches of government that oversee and regulate the activities of the health sector, the medical profession is minimally represented. The medical bureaucracy, therefore administers but does not control the health sector. Its power is delegated to it by the corporate and upper middle classes. Navarro admits that those classes share similar, but not identical interests, however, if a conflict appears, class interest will dominate professional interest (39). Navarro points out that the main conflict in the health sector recapitulates the conflicts in the overall social system. Therefore, the well recognized conflict between providers of medical care and consumers is only a small part of the greater class conflict: one between the upper classes who represent approximately 20% of the US population and the lower middle and working class. With respect to the distribution of skill and roles in the medical sector, Illich maintains that what gives the medical profession its power is exclusive control over these skills and roles. Navarro, on the other hand believes that these skills and roles only serve to legitimize and reinforce the power that is already there as a result of the class structure. He concludes, therefore, that the democratization of the medical sector, i.e. its dehierarchization and deprofessionalization, is not possible in a class structured society. A change of the latter is prerequisite to change the former.

A major fault in Illich's strategy of self-care is that he assumes the cause of disease to be primarily individual, and thus, the therapeutic response should be individually oriented. This absolves the economic and political environment from the responsibility for disease and channels the potential response to the individual who is much less threatening. Thus our mechanistic ideology of medicine is an individualization of a collective causality that by its very nature should require a collective answer (40). For example, whereas most of our Twentieth Century diseases are occupational and environmental to a large degree (cancer, accidents, heart disease, stroke etc.), the therapeutic response in individually oriented (health education in prevention and clinical medicine in cure). Navarro points out that not surprisingly, this emphasis on the behavior of the individual, not the economic system, is welcomed and even exploited by those forces that benefit from the lack of change within the system. He suggests that a far better strategy than self-care and changes in life style to improve health within the individual would be to change the economic and social structure that conditioned and determined the unhealthy individual behavior to start with.

THE FALLACY OF SOME THEORIES OF UNDERDEVELOPMENT IN THE HEALTH SECTOR

According to Rostow(41) and others the causes of underdevelopment of health and its consequent maldistribution of health resources is due to: a) the scarcity of entrepreneurial values and technology in the poor countries, b) the scarcity of capital and c) the presence of dual economies: the unequal distribution of health resources between the cities and the rural hinterlands, with Western "hospital - based" medicine in the cities and indigenous, "less developed" medicine in the rural areas.

Navarro, on the other hand, contends that underdevelopment of health resources in Latin America results from exactly the "conditions for development" explained by Rostow. He notes that the available evidence show a dominance of cultural values abstracted from or generated from developed to developing societies. Frank(42) has pointed out that in Mexico, the Spanish version of Reader's Digest has a higher circulation than the total of Mexico's eight largest magazines. Also, in 1973 UNESCO reported that 70% of the TV programs in Latin America originated in the United States (43). Complementing this cultural diffusion is the "value - laden" technologic diffusion. Fucaraccio (44) has indicated that 80% of Latin American equipment is imported, mostly from North America. This is the same technology that Illich has pointed out as foreign to the social, cultural or environmental parameters of underdevelopment and can do more harm than good in the process of development. Labor saving technology may cause unemployment or underemployment. Formula milk may cause morbidity and death from malnutrition (45). In addition, this capital intensive technology diverts vital investment from less glamorous but more cost-effective and more needed technology.

In general, the diffusion of capital does not go from developed to developing countries but vice versa. In 1969 US companies took out of Latin America one billion more in profits, than they invested there (46). Frank(47) has pointed out that the largest part of the capital that multinational corporations own in underdeveloped countries did not come from the developed countries but were acquired in the former. Human resources generally flow from underdeveloped to developed countries. In the health sector this flow is very evident among doctors and nurses. In 1971 the flow of foreign trained physicians to the United States was equivalent to half the output of the US 120 medical schools (48). In 1975 almost 1/5 or 61,446 of the active physicians (366,425)

in the US were foreign trained, mostly in developing countries. As a result, these underdeveloped countries have lost millions of dollars in human capital investments, and perhaps much more in human lives and misery from unavailable health care.

In 1968 The United Nations Economic Council for Latin America (UN-ECLA) (49) reported that the main reason for underdevelopment in Latin America is the nature, subject and control of economic and social investment leading to a pattern of production and consumption of more and more consumer durables (automobiles, refrigerators, TVs). This benefits the foreign and national controllers of capital but it is not conducive to equitable distribution of resources in the particular Latin American nations. According to Navarro, the overall cause of lack of health services coverage of the whole population is not the scarcity of capital and resources in the health sector, but the maldistribution and mal-use of those resources. He continues that the pattern of consumption of the lumpenbourgeoisie and the middle classes (15-20% of the population in Latin America), meant to benefit a limited percentage of the population, can also be seen in the distribution of resources. They follow an inverse relationship to the need for them. This maldistribution by type of care, by region, by social class and by type of financing is determined by those same parameters that define the socioeconomic underdevelopment. Navarro concludes that it would be unhistorical to expect that changes towards equity can occur with the present distribution of resources, within and outside the health sector, without changing the economic and cultural dependency and the control by the upper classes of the mechanism of control and distribution of those resources. King(50) and Navarro(51) have both indicated that Cuba has shown that in the world of underdevelopment, an egalitarian society is required in order to achieve an equitable distribution of health resources.

THE POSSIBLE REPLICATION OF CLASS RELATIONS IN SOCIALIST SOCIETIES

Supporters of the convergence theory cite the USSR and Eastern European countries as examples of socialist societies which, because of their high degree of industrial development increasingly, resemble Western industrialized societies. They are characterized by a predominance of the bureaucracy as the primary social formation, with managers and technocrats having replaced the dominant classes in those societies. Navarro maintains that such a perspective is short sighted. He points out that the evidence shows that the bureaucracies of Eastern Europe, including the USSR are not the primary controllers of social and economic activity but are subservient to a higher authority, the political party (52). In many socialist countries, the party becomes indistinguishable from the state and thus, the planning, regulatory and administrative responsibilities of the state bureaucracies are subject to the dominant influence of the upper echelons of the party. Navarro argues that it is the higher echelons of the party that have created the bureaucracies and not vice versa. Bureaucratization in Eastern European societies was not a result of industrialization, instead it developed from the need for the party to control the process of production and industrialization. Thus the power of the party is manifested and expressed through the bureaucracy. Navarro postulates that the party became a dominant class when: 1) it began to use its control over the process and means of production to optimize production towards the goal of capital accumulation, at the expense of workers; 2) it used its political control over the production trade and service bureaucracies to optimize its control by the centralization and hierarchicalization of these bureaucracies at the expense of democratization. According to Sweezy (53) in the 1920s both the Stalinists and Trotskyists in the USSR believed that democratization of the process of production was impossible in an underdeveloped society. Also, they felt that the need for capital accumulation had to be the first priority.

These beliefs led to the centralization of power that created bureaucratization at the expense of institutional democratization.

During the Cultural Revolution in China, the battle against elitism and the bureaucratization in the medical sector was part of a wider conflict - one between large segments of the peasants and industrial working class, and the party elite that had become a "dominant class" (54). In Cuba, the fight against bureaucracy stimulated by Che Guevara in the mid sixties represented a much wider political conflict within the Communist Party - one against the Escalante group that wanted to give priority to capital accumulation and efficiency of the system over democratization of that system (55). Similarly, in Chile, the conflict in the health sector between large segments of the population and the Chilean Medical Association was part of a larger conflict over socialization and democratization of the society. Navarro maintains that the opposition of the medical profession to Allende was because in encouraging the democratization of the health institutions, he was a threat to the perpetuation of its social class as well as professional privileges (56).

In summary, the struggle against bureaucratization that occurred in China, Cuba and Chile were part of a much larger and important conflict, i.e. the struggle for the disappearance of class structures and for the political and economic democratization of those societies. Navarro concludes that the experience of socialist societies does not show that socialism and capitalism converge but that socialization of the means of production is a necessary but not sufficient condition for democratization. He believes that class structure and class relations may reappear and be perpetuated in socialist societies, not because of industrialization but because of political centralization of power.

In Cuba, polio was eradicated many years before the US, because of the significant cooperation between the government and mass organizations during the immunization campaigns in the early sixties(61). This cooperation was possible only because of the political integration of these mass organizations with the state. Numerous examples exist that demonstrate the relationship between deliberate political action and health status. The above examples, although not intended to be exhaustive, demonstrate where collective efforts in planning and implementation have resulted in improvement of health for large segments of populations.

Professional interest in medicine, as in other economic sectors, focuses on the issue of control. Physicians, being mostly from the upper classes, do have significant influence in the health sector. A historical analysis of medical manpower in the US demonstrates that dating back to the pre-Flexnerian era, healers have had almost exclusive control over their profession. Entry, certification, treatment method, financing and access to medical care was almost exclusively within the purview of the practitioner. One merely needed to be of a certain social stature and have the appropriate contacts to enter the medical field. As a result of the fee-for-service method of paying for medical care, the medical care delivery system was organized as a cottage industry (60). The first real change to occur in the industry was in 1910 when corporate interests such as the Carnegie and Rockefeller Foundations supported and sponsored the Flexner Report (63). This report focused on the issue of quality of care and sought to control entry, certification and the method of medical practice in the US. The effects of the Flexnerian Revolution was to limit entry into the medical profession through control of its reproductive and legitimizing organs (medical schools and state health departments). Although the control that the medical profession had in the system became more concentrated among the fewer doctors, their overall influence as a group in the system was diminished over the ensuing decades. As medicine became more industrialized, sophisticated and expensive, prepaid group practices such as Ross Loos, Kaiser Permanente, Puget Sound and eventually

POLITICAL POWER, PROFESSIONAL INTEREST, THE STATE AND THEIR
IMPLICATIONS ON THE PLANNING FUNCTIONS OF HEALTH CARE DELIVER SYSTEMS

It is a verified truism that political and economic forces affect health status. China, USA, USSR, Cuba, North Vietnam, Canada, Japan and many other countries have had substantial improvements in their health status indicators following deliberate political efforts (legislation, etc) to improve access to health services. The underdevelopment of the rural health care sector in China was overcome as a result of the specific approach to rural health care launched during the Cultural Revolution (1966-1969)(57). By 1976 the barefoot doctors, mostly in rural China, numbered 1.3 million and they were assisted by 3.6 million health workers and midwives. This approach increased the availability of health care and contributed significantly to the improved health status of the Chinese peasants. A similar situation occurred in North Vietnam following independence from the French in 1954 (58). In the decade following independence, a comprehensive health service reaching every village in the country was implemented. This health service was rooted in the agricultural cooperatives that were established following the land reforms which radically changed the mode of production. A network of cooperative farms and villages were the basis for the production and distribution of food. Improved nutrition coupled with the decentralization of health services made a significant impact on health status. This collective effort, linking public health measures with agricultural needs resulted in the eradication of small pox, cholera and plague. Typhoid, diphtheria and polio became virtually extinct. There was substantial reduction in malaria, trachoma and tuberculosis. Leprosy was controlled. Infant mortality fell from 400 per thousand in 1945 to 33.7 in 1968 (59). In the US death by accidents for ages 15-30 was reduced by a third between 1973 and 1978 due mostly to the federally imposed 55 mile an hour speed limit following the oil crisis (60).

Health Maintenance Organizations began employing doctors on a salaried basis. The effect was to proletarianize a significant number of doctors thereby further eroding the profession's control in medicine. By the early sixties, the Federal Government became a third partner in the control of the medical profession primarily through financing of medical education and the control of medicare and medicaid fees. Despite these trends over the last seventy years, the medical profession still has a significant influence over the entry, certification and treatment methods employed in the profession. Most physicians in the U.S. still derive their income on a fee-for-service basis. The profession has maintained the control over specialty and geographic distribution of doctors despite federal efforts to the contrary. Therefore, in planning for medical services in the U.S. health delivery system, the medical profession is still a most powerful force to contend with, both from the perspective of their social class and their domination over the education, training, licensing and organizing of the medical manpower.

The dimensions of professional control in medicine in Great Britain is quite different. Most physicians are employees of the National Health Service (NHS). Susser (64) and Navarro (65) have pointed out that in 1911 when Lloyd George's government passed the national health insurance, there was strong opposition by the medical profession. According to their analysis the medical profession lost its battle against the corporate and dominant classes who had redefined the concepts of health and the types of health services required according to the needs of the capitalist mode and relations of production. The economic needs were productivity of the system and the political needs were quieting social unrest. Thus, they conclude that the changes in the definition of health and health services occurred not because of, but in spite of the medical profession. Following World War II, these

same forces led to the implementation of a NHS in Britain in 1948. The effect was to proletarianize most of the physicians in Britain, thus severely limit professional control in the system. Nonetheless, physicians still maintained a dominant influence over the processes of planning, regulation and administration of the health sector(66).

In summary, the political power in medicine is shared by the dominant classes and the medical profession. Their interests are similar (due to the class composition of doctors) but not identical. There is significant evidence that when conflict appears the groups that have dominant control are the same ones that had that control from the very beginning - the dominant or corporate classes. State intervention in medicine in situations where the pluralist power prevails also results in the profession's loss of control. An example is the change in the therapeutic practice to provide abortion on demand in the US. This was due to the response of the courts (the state's organ of legitimization) to the radicalized women's liberation movement(67).

THE MECHANISMS OF STATE CONTROL IN THE HEALTH SECTOR

There are a variety of theories(68) that have been presented to explain the Western system of power in the various economic sectors of which medicine is one of the largest. The countervailing pluralist theories state that the society has no dominant class, groups or elites. Competing blocs of interest exist but none have dominant control over the state, which is assumed to be an independent entity. On the other hand, the power elite theorists postulate that pluralism applies to only a limited segment of the society. Instead, a small number of elite groups dominate the different branches of the state. The pluralist and the power elite theories which use Weber as their point of departure, differ from the theories of economic determinism, structural determinism and corporate statism

which use Marx as their point of departure. The economic determinists believe that the economic needs of capitalism determine the nature of the political system. The view most widely held by the structural determinists is that the structure of capitalism explains and/or constrains everything: i.e. there are objective laws of motion in capitalism that wholly determine how classes operate. Corporate statist view the state as the direct instrument of the capitalist class or one of its components, the corporate class. Weberian doctrine state that the role of the state is to assure the survival of the economic system (69). Both the labor and conservative governments in Britain and the Republican and Democratic administrations in the US have declared that maintaining the "health" of the economy is their primary role and main concern, with all other state functions conditional and dependent on its survival and continued improvement. Thus, to have social services or to expand their benefits depends on a healthy expanding economy. It therefore follows, that when conflict appears between what is considered to be the needs of the economy and other needs such as expanding or maintaining social services, the former will always take priority. Both the Carter and Reagan administrations in the US have demonstrated this in their policies by drastically reducing food stamps, AFDC (welfare), medicaid and a variety of social programs in order to treat inflation and cut corporate taxes. The rationale for such policies is that increased corporate profits will stimulate investment that will result in greater productivity, which is perceived as necessary to save the troubled economy. Thus, at the time when the social programs are most needed (high unemployment, inflation, etc), they are cut back in order to protect the "health" of the economy.

Now that we have looked at the relationship between political power and the state and examined the nature of state activity in the economy, let us now explore some the mechanisms by which the state controls the health sector.

State control in the health sector may range from complete ownership of health facilities, financing all health services, and the financing and control of health manpower. At the other pole, the state may adopt a laissez faire attitude and allow the market forces to operate. The former characterizes the socialist state while the latter would represent the pristine capitalist state. Over the last century, capitalist states have increased their involvement in the health sector because the production and allocation of health resources are perceived as public responsibilities. Training, research and the delivery of services are increasingly financed from public funds. These factors coupled with Keynesian economic policies has led many to believe that Western capitalist societies have become mixed economies. Cochrane (70) has argued that because of the NHS, differences in consumption of medical care by social class is virtually extinct in Great Britain. Similarly Bice and others (71) have postulated that medicare, medicaid and other social programs have equalized access to medical care in the US and if any differences do exist, they are skewed in favor of the lower classes. Navarro (72), on the other hand, believes that the growth of state intervention in the health sector of Western capitalist societies "results from the growth of social needs which are determined by the process of capital accumulation and by the heightening of the level of the class struggle." In essence, the growth of the state and the expansion of medicine within it is both a cause and the product of the expansion of monopoly capital. From a Marxist perspective, the growing socialization of production necessitates increasing state intervention to ensure private capital accumulation and profitability. Navarro adds that the increased state intervention requires ever increasing revenues that are almost always insufficient to pay for them. Thus, the state is in continuous fiscal crisis.

The response is to treat the economy by cutting expenditures for social programs, centralizing power in order to better plan the economy and increase productivity and efficiency to further rationalize the system. The result is the "inverse care law" - those most in need for social services receive the least.

CONCLUSION

Hopefully, this chapter will have served to lay the foundation for the analysis of the planning and evaluation functions of the Cuban health care delivery system. It should be recognized that state control of planning in Cuba, although similar in many respects to Western capitalist societies, differs fundamentally in theory, goals and objectives. The hypothesis that will be discussed in the following chapters should therefore be evaluated in light of these differences.

CHAPTER II

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CHAPTER II

THE METHODOLOGY FOR THE ANALYSIS OF THE PLANNING AND EVALUATION
FUNCTIONS IN THE CUBAN HEALTH SYSTEM

Planning and evaluation are functions of decision making in the production and distribution processes of the manufacturing or service sectors of society. The inherent lack of specificity in the definition of products in the service sector makes planning and evaluation functions less amenable to rigorous hypothesis testing. Planning implies a deductive process, yet, it is extremely difficult to develop, a priori, causal relationships between planning and the structure, process, and outcome of health services. Evaluation of health care, on the other hand, is mostly an inductive process that should be always viewed with constructive skepticism, especially in the area of outcome. Health status results from a variety of causes, situations and conditions, of which health care delivery (medical care, public health, self-care) is only a part.

This study, although developmental in purpose and employs descriptive, analytical, comparative and historical methods, is in an uncontrolled setting and uses variables which at times lack specific definitions or highly developed standards or norms. Our conclusions will therefore be limited to logical and plausible associations and connections between variables.

The theses that will be explored in this research are as follows:

- 1) State control of the health care delivery system was a necessary condition for planning socialized, rational, comprehensive and effective health care in Cuba.

II) Effective planning and evaluation functions in Cuba have resulted in improved structure, process and outcome of health care for the Cuban people.

State control of the health care delivery system, the independent variable in hypothesis I, will be measured by:

- 1) Public ownership of the health facilities.
- 2) Public financing of health care.
- 3) Government control of the education, deployment and practices of health manpower.

The measures for the components of the dependent variable are as follows:

- 1) Socialization; degree of access and control of health care by the masses.
- 2) Comprehensiveness; the range of health services available to all.
- 3) Rationalization; the level of organization of the system as a functional, productive and distributive unit.
- 4) Effectiveness; the ability of the health care system to meet the health needs of the population as defined by the planning process.

In hypothesis II, the independent variable, effective planning and evaluation functions will be measured by the ability of the planning process to:

- 1) Identify needs.
- 2) Develop solutions to satisfy these needs.
- 3) Implement these solutions.
- 4) Monitor and evaluate the solutions.

Measures of the dependent variables are:

1) Structure/process; the organizational characteristics and policies believed to be conducive to good health care, i.e. number and specific type of hospitals per population, number of physicians per population, health and public health expenditures, availability of services, treatment practices, etc.

2) Outcome; infant mortality, maternal mortality, cause specific death rates, life expectancy, etc.

The remainder of this chapter will be an analysis of hypothesis I, beginning with a historical development and analysis of planning in Cuba from the time of the revolution to the present. The subsequent chapters will cover the implementation of specific solutions to Cuba's health problems and evaluation of the effectiveness of those solutions with respect to the specific health care goals.

THE REVOLUTIONARY GOALS CIRCA 1959

In January of 1959 when the Rebel Army marched into Havana, a substantial number of physicians, health workers and students were among the ranks. The overthrow of the Batista dictatorship, referred to as the "triumph of the revolution," was also the triumph of the Cuban Medical Federation (Federacion Medica de Cuba, FMC). Dr. Ernesto (Che) Guevara, addressing an assembly of the federation remarked, "Of all the professions, it is the medical profession which has given most to the Revolution"(1). The Cuban Revolution germinated in the rural hinterlands and spread rapidly to an ideologically developed working class, but it was also strongly supported by the progressives within the professional and privileged classes (2). While the revolution gave structure to professional idealism, the rapid change of events and escalating socialization of the society soon brought out the ambiguities and contradictions between the interest of the medical profession and the revolutionary ideals. "The triumph of the revolution" merely implied that the seizure of power was just the beginning of a continuing revolutionary process. For the creation of the "hombre nuevo" ("new man"), the goal of the revolution, progressive social, political and economic changes were necessary conditions (3). This "new man" would work and produce for the common good in response to moral, rather than material incentives. At the onset, the revolution was neither socialist, communist nor social democratic.

It was basically eclectic. The revolution in 1959 occurred in a context of social reform that was determined by a long history of political struggle of the urban proletariat and a very large rural proletariat that for many years, were led by Marxist unions. This social reformism was eloquently vocalized by Fidel Castro in his speech of self-defense in a Batista court following the 1953 attack on the Moncada Barracks in Santiago:

"... More than half of our most productive land is in the hands of foreigners. In Oriente, the largest province, the lands of the United Fruit Company and the West Indian Company link the northern and southern coasts. There are two hundred thousand peasant families who do not have a single acre of land to till to provide food for their starving children. On the other hand, nearly three hundred thousand caballerias of cultivatable land owned by powerful interests remain uncultivated ..."

He then goes on to address public health:

"... There are two hundred thousand huts and hovels in Cuba; four hundred thousand families in the countryside and in the cities live cramped in huts and tenements without even the minimum sanitary requirements... The State sits back with its arms crossed and people have neither homes nor electricity..."

On health care Fidel commented:

"... Only death can liberate one from so much misery. Ninety percent of the children in the countryside are consumed by parasites which filter through their bare feet from the ground they walk on. Society is moved to compassion when it hears of the kidnapping or murder of one child, but it is criminally indifferent to the mass murder of so many thousands of children who die every year from lack of facilities, agonizing with pain... And

when the head of a family works only four months a year, with what can he purchase clothing and medicine for his children?... Public hospitals which are always full, accept only patients recommended by some powerful politician..."(4).

Following the "triumph of the revolution" a guiding principle that directed the actions of the new revolutionary government could be found in the aphorism "the task of a revolutionary is to make the revolution." This was expressed in the immediate liberal social reforms, such as the agrarian reforms which broadened land ownership, and the urban reforms which halved or abolished rents on most housing. Coupled with a rigorous, successful literacy campaign, these reforms gained a great deal of popular support and enthusiasm for the revolutionary process. These quick pay-off measures and short-run solutions, however, exacerbated problematic political realities. As the U.S. intensified its hostility towards Cuba, it became apparent to the revolutionary leaders that the social reformism had to yield to more long-run strategies.

By 1961, when the Cuban revolution became labeled as "socialist" (5), the polarization within the medical "class" had become more acute. Despite the harmony between the professional interest of the doctors and the ideals of the revolutionaries expressed by Che Guevara in 1959, the class nature of the medical profession prevented the integration of many physicians into the revolutionary process. In 1959 the Ministry of Public Health (Ministerio de Salud Publica, MINSAP) was given "broad powers in matters related to health services"(6). No new organizational direction was apparent at that time, but as expected, the power of the Ministry was first used to purge the Batista collaborators and counter-revolutionaries.

According to Danielson (7), many physicians who were purged or felt insecure or confused by the rapidity of events, had little time to comprehend the revolution, or work out their own compromise before they were recruited in masses to the United States. Many physicians immediately fled the country, while many others, those who had served in the rebel army, revolutionary sympathizers, and opportunists, were named to sanitary posts, hospital directorship, university posts and other favorable positions. Navarro reports that of the 6,300 physicians in Cuba in 1959, 3,000 left the country during the first five years following the revolution (8).

In 1961, facing an almost formidable task, MINSAP began the first plan for a comprehensive national health care system. Many of the problems of the health system that the revolutionary government inherited had existed in Cuba since the 1930's. A 1934 report of the International Labor Office (9) commented on the "plethora" of physicians in Havana. Similarly in 1957 a national conference on the "medical crisis" by the Cuban Medical Federation (FMC)(10) echoed the same concerns. This underscored the urban-rural contradiction between the privileged urban minority and the marginal rural majority. Not only was there a maldistribution of health manpower but health facilities were equally maldistributed.

From the very beginning, the revolutionary government had prioritized health care as a major social concern. This was a necessary condition for the creation of the "new man." As Fidel promised in 1953: "The problem of the land, the problem of industrialization, the problem of housing, the problem of unemployment, the problem of education and the problem of the people's health: these are the six problems we will take immediate steps to solve

along with the restoration of civil liberties and political democracy"(11). Fidel closed his defense before the Batista court with the words, "History will absolve me."

THE FIRST PLAN FOR A COMPREHENSIVE NATIONAL SYSTEM OF HEALTH SERVICES (1962 - 1965)

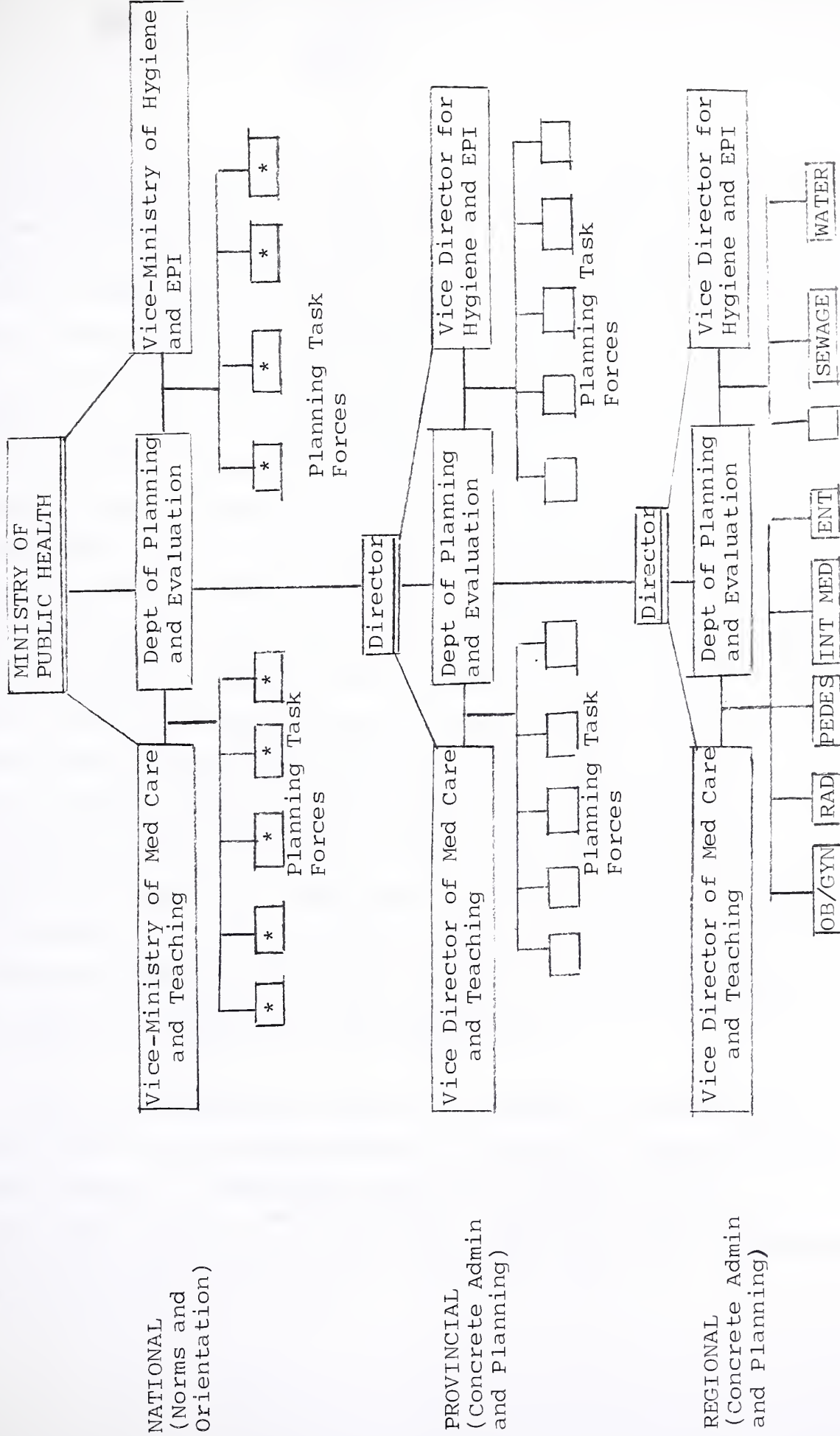
When the revolution took state power in 1959, there were three revolutionary movements with diverse ideologies. They were the 26 of July Movement, the Directorio Revolucionario and the Popular Socialist Party (PSP). Many professionals and technicians had fled the country leaving wide gaps in the state apparatus. These positions were filled, for the most part, by militants from those movements who had not had much experience as administrators, planners or public servants. As Che Guevara had pointed out, that period was characterized by a significant amount of "ad hocery" in public administration and "guerrilla tactics" brought into government (12). In essence, there was a great reliance on individual initiative to solve administrative problems, without the existence of proper mechanisms for collective decision making and planning. This, along with the lack of sufficient trained personnel, led to a very centralized administrative direction(13).

It was within this type of organizational atmosphere that the first organizational plan for a comprehensive national system of health care services was conceived, developed and implemented by MINSAP in 1962 (Fig.1). This plan, which was significantly revised in 1965, included many of the formal structural features of contemporary Cuban medicine. The new organizational structure called for a decision making and planning process that was highly centralized in plan preparation and decentralized in implementation.

FIGURE 1

STRUCTURE OF THE HEALTH PLANNING PROCESS IN CUBA

CIRCA 1965



NATIONAL
(Norms and
Orientation)

PROVINCIAL
(Concrete Admin
and Planning)

REGIONAL
(Concrete Admin
and Planning)

* Professors and Chairman from medical schools

It created decentralized provincial and regional levels responsible for concrete administration and planning and a national level responsible for norms and orientation. All levels integrated the public health functions of medical care, health protection, long and short range planning and scientific improvement of health workers. Danielson, Roemer and others have pointed out that this plan appeared to be a close adaptation of the Czech variant of the Eastern European and Soviet models (14). Nonetheless, it also reflected the Cuban experience between 1959 and 1962 which undoubtedly called for some form of national health planning. The Cuban population was highly mobilized to deal with counter-revolutionary forces, natural disasters and foreign aggression. At the same time, the increased military organization of the Cuban society, the socialist declaration in 1961, the increased aid from socialist countries following the U.S. embargo and the rising tide of internal political polarization all contributed to the most comprehensively nationalized system at a time when the health system was already leaning in that direction. Although the model called for normative centralization and administrative decentralization, it was unclear at that time what functional mechanisms would have to be developed to coordinate the different vertical levels. For such a system to work, the new norms would have to be sufficiently understood at regional and provincial levels. Misunderstanding at these levels might make procedures and practices seem arbitrary and bureaucratic.

The early experience with the new model did create the impression that the new structure was an arbitrary application of socialist formulas. Unnecessary paperwork flooded the new provincial and regional administrators. Detailed reports were required of the administrators and often they were of no operational interest to the national office.

Danielson has commented that the new socialist period between 1961 and 1963 increased the influence of those who sometimes applied the Czech model in a somewhat mechanical fashion (15). Quite expectedly, the new socialist government's commitment to organization, procedure and rational systematic planning conflicted with the agenda of those whose immediate concerns were the direct delivery of services and the implementation of specific programs. This conflict between "unit and system" continued until 1965 when it was resolved in a uniquely Cuban form.

The period from 1959 - 1961 was marked by a surge of rural and urban public health expansion. Aside from the well recognized rural deficiency, a major fault in the organization of health services in the prerevolutionary government was the disparity between the high degree of formal centralization of authority reaching from the national to the municipal levels (without intermediate administration levels) and the detached, semi-autonomous organization of operational units: general and specialty hospitals, dispensaries, first-aid stations, etc. Many of these operational units were administered by separate vertical agencies roughly under the direction of the ministry but with politically appointed officials. This inefficient structure led to greater lack of accountability and corruption (17). Danielson has noted, that it was no surprise that one consequence of the new governments burst of investment into the health sector was to make the old structural inefficiencies more costly and more apparent, while inexperienced administration and social disruption added new inefficiencies (18). This was somewhat buffered by the fact that most of the new investments were being channeled through a separate administrative unit to the rural sectors. The rural

focus, for the most part, meant the construction of primary facilities where the risks for poor planning was less than for conspicuous urban investments (19). By 1961 it was becoming more obvious that the shrinking resources and the greatly expanded services called for more sophisticated health planning. Many new inefficiencies were being discovered. Isolated facilities were sometimes too elaborate for their low utilization and in relation to referral patterns. At times, locations were inappropriate or occasionally too luxurious. It also became apparent that too many small general hospitals were being built in the rural areas (20). Finally, the paradox of rural expansion was that more preventive and primary services led to more, not less, curative secondary and tertiary services. The immediate rural expansion between 1959 - 1961, therefore, sharpened the long standing contradiction between the underdeveloped rural hinterlands and the overconcentration of sophisticated services in the capital. The inefficient structure and ineffective process of the Cuban health care delivery system in 1961 pressured for a rational network of services.

According to Danielson, there were a substantial amount of informal and extra-institutional developments that signified real change in the health care delivery system that either preceded or superceded the formal structural reform in 1962 (21). New social programs, political mobilization and pressures from external forces stimulated the development of new relations between the health sector and the other sectors. In addition, new patterns of social interaction developed that were not explicitly prescribed by the formal model. It is on these points that Danielson has concluded (correctly I might add) that the mechanical application of an external master plan (borrowing from the Czech model) was not the Cuban experience. He argues that the plan was forced to

adapt to a milieu of intense social and political activity, especially from the rural sectors with their own pressures for systematic rationalization from the bottom up. Danielson goes on to speculate that these dynamics would be different if the plan had been promulgated at a different time. The "revolutionary style," derived partly from the relative inexperience of the new administrators and some degree of technical incapacity referred to both by Navarro (22) and Danielson (23), led to a great deal of improvisation. Also, the transitional nature of events, the imprecision of vertical lines of authority and the absence of centralized norms for administration were conducive to innovation and, at times, the shortening of lines of communication via informal means with opening of new channels among different organizations (24). In summary, this period evoked constructive energies by moral and political persuasion. Various degrees of flexibility in health organization were tested and many innovative styles of leadership and organizational skills were developed.

As the first plan unfolded, the health system, like other social sectors, remained in a state of flux. External pressures were created by the U.S. blockage which, in effect, started in July of 1960 when Eisenhower cancelled Cuba's sugar quota (25). Also the various legislations that subsequently led to the nationalization of the urban pharmacies after 1962 had effectively banned the sale of a long list of medicinal products that were redundant or without medical quality. The constant threat of counter-revolution and sabotage led to the creation of hospital vigilance committees in 1960. The constant threat of invasion exacerbated by the unsuccessful invasion at Playa Giron (Bay of Pigs) in April of 1961 and the threat of nuclear war

during the Missile Crisis in October of 1962 involved many physicians in emergency planning in collaboration with the army and other defense organizations.

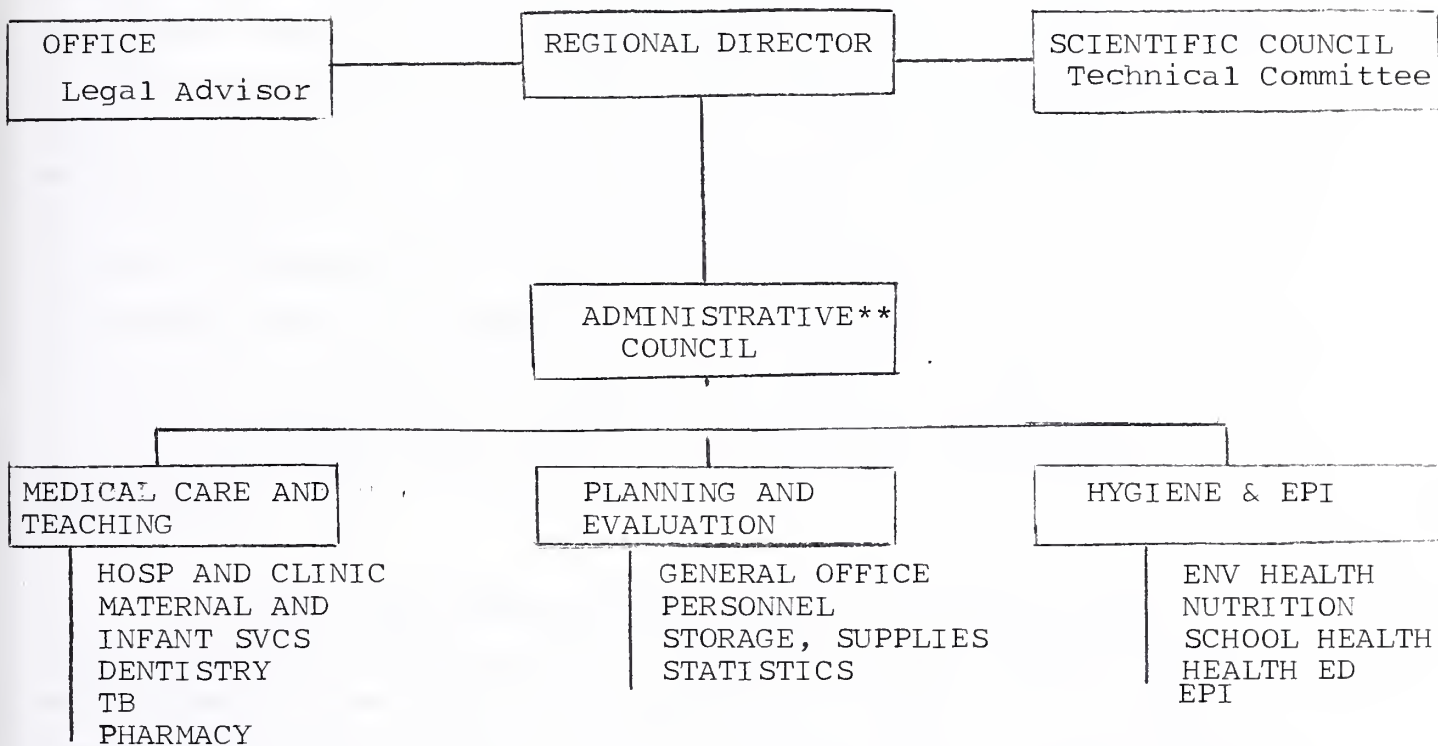
As methods for dealing with practical situations developed, the functional character of the newly organized health system began to take shape. Technical conferences were held on national, provincial and regional levels to establish norms and guidelines for many practical matters of health care delivery and organization. Specific campaigns such as the 1962 polio vaccination were successfully launched. These programs involved interspecialty and interorganizational task forces which were loosely attached to the vertical hierarchy established in 1962 (26). Other practical programs included the establishment of a national chain of hospital libraries in 1962. Also, guidelines and regulations for hospital administration, medical care evaluation and medical record review committees were developed. The self-determination of medical specialty was ended by the creation of hospital residency specialization programs and the review by examination of all specialty credentials (27). The involvement of the ministry in the various technical and scientific activities served to recruit and develop a vertically linked technical cadre under the direction of an increasingly prestigious national technical direction (28). It also served to broaden the influence and exposure of the university professors who were inevitably drawn into the process. Figure 2 illustrates the structural integration of the Ministry of Public Health at the regional level in 1962.

The new organizational structure promulgated in 1962 raised the accessibility of vital information to all parts of the system while it created vertical integration in an otherwise centralized structure. For example, the directors of regional hospitals and

FIGURE 2

REGIONAL DIRECTION OF THE MINISTRY OF PUBLIC HEALTH *

1962



** Members include: the Regional Director; 1 representative from Hygiene and EPI, Medical Care and Teaching, Planning and Evaluation, Scientific Council, Regional Facility.

* Adapted from Ross Danielson, Cuban Medicine, New Brunswick, N.J.: Transaction, Inc, 1979.

THE CONSOLIDATION OF THE COMPREHENSIVE NATIONAL SYSTEM OF
HEALTH SERVICES (1965-1971)

Danielson refers to the period between 1965 and 1971 as the consolidation of the comprehensive national system. It was during this time that the contemporary system had consolidated most of its structural characteristics and the functional nature of the system gained more precise definitions. In 1965 the area polyclinic was established as the point of departure of all health planning (30). Before embarking to a detailed discussion of the origins and plan for the structure and function of the area polyclinic, we will try to develop a picture of the vertical (national, provincial and regional) and horizontal levels of organization of the health system in which the polyclinic would become the focal point. We will also try to isolate the implicit and explicit goals of the system that had developed over the first six years of the revolutionary experience.

In 1961 the Integrated Revolutionary Organizations (Organizaciones Revolucionarias Integradas, ORI) became the established as the socialist government in Cuba. It included the three dominant revolutionary movements that took state power in 1959: the 26th of July Movement, the Directorio Revolucionario and the Popular Socialist Party (PSP). The aim of the ORIs was to establish a coalition political movement that could lead the development of the Cuban Revolution and direct and form part of the state apparatus(31). From 1961-1962, the PSP, the group with the most dominant influence in the ORIs and led by Escalente,

health centers were directly accountable to the regional directors of health services despite the fact that each institution was administered independently. Navarro points out that this regionalized scheme differs from other regionalized systems such as in Puerto Rico or Chile where the health center is administratively dependent on the hospital (29). As a consequence of the various public health campaigns (against gastroenteritis, leprosy, malaria, tuberculosis) and pediatric vaccination programs, new channels were established for an active interface between health structures, other supporting structures and community organizations. Also, informal bonds were formed between the new system and the informal networks that had emerged in the early years of the Cuban medical revolution.

controlled the task of integration and leadership in a very rigid and sectarian fashion. They appointed many people from their own ranks to positions of state leadership, irrespective of their competence. Their style of leadership led to the bureaucratization of both the ORIs and the state and a separation of the party and the masses. The realization of this situation by the leaders of the Cuban Revolution led to the "campaign against sectarianism" in 1962 and the replacement of the ORIs by the United Party of the Socialist Revolution (Partido Unido de la Revolucion Socialists, PURS)(32). The process of democratization of the socialist revolution began with the worker election of candidates for membership in the PURS. This marked the new stage of party formation in which, as Che Guevara remarked, "the masses are the ones to chose those of their fellow workers who will later on become members of the Party"(33). The process of party formation ended in 1965 when the Communist Party of Cuba was established. It was, for the most part, based on PURS. In 1966 the direction of the Communist Party of Cuba was outlined by Fidel Castro on the sixth anniversary of the founding of the CDRs. He declared, "We don't say we will reach socialism, but rather, via the path of socialism, we will reach communism. An we will reach communism by the road of Marxism-Leninism. We will reach communism through revolutionary and scientific interpretation of reality"(34).

It is from here that we will take our point of reference in discussing the ultimate political and decision making power in Cuba today. In 1965, this power was controlled by the Communist Party and the mass organizations. The functions of planning administration, regulation and supervision were carried out by the central and local governments. In 1969 there were 70,000 Communist Party members in Cuba (35). During this period one of the main functions of the Communist Party was to lead the mass organizations

and coordinate the administrative and planning agencies at each vertical level of government. The smallest political unit in the party was a productive unit such as a university, factory, hospital etc. Members of the Party had to be elected as "exemplary workers" by the other workers in the productive units before they could be appointed into the party. The top authority in the Communist Party was the Central Executive Committee of 100 members elected by the provincial executives. The provincial executives were elected by the regional executives, that were elected by successive levels of the vertical hierarchy, beginning with the productive unit (36). In addition to the Party, there are several mass organizations that have participated (under the leadership of the Communist Party) in the decision making process in the health sector, since the revolutionary government took state control. These are:

- 1) The Committee for the Defense of the Revolution (CDR), which are block organizations established in 1960 following the explosion of four bombs during a speech by Fidel Castro in the Plaza de la Revolucion in Havana (37). The main objective of these neighborhood organizations was the mobilization of the population against "foreign and internal enemies" of the Revolution (38). From the early sixties, their responsibilities have included assisting with immunization campaigns, environmental and preventive health programs, cleaning and repairing streets, the construction of schools and parks, neighborhood vigilance and food distribution programs (39).
- 2) The Federation of Cuban Women (FMC), a voluntary organization of Cuban women over 14 years old, was created in 1960. The aims of the organization are; to teach through every activity, to raise the consciousness of women and stimulate them to carry out effectively their tasks in society, to teach women their role in socialism and to

represent specific interests and aspirations of women(40). In 1961 the FMC health brigades served as auxiliaries to the Armed Forces Medical Services during the Playa Giron (Bay of Pigs) invasion. They have taken an active role in campaigns for eliminating illiteracy, creation for child care centers, the integration of women in the labor force, sponsoring of special agricultural programs and school activities. The health representatives of the FMC have participated in vaccination programs, child care programs, blood donation campaigns, environmental sanitation programs and the fight against parasitic diseases (41).

3) The National Association of Small Farmers (ANAP), established in 1961 following the first agrarian reforms, include small land owners who either obtained land through the agrarian reforms or held it previously. It functions as the agricultural trade union and protects the interest of the small farmers. The organization also participates in campaigns related to rural health services (42).

4) Trade Unions, that function to defend the workers' rights, improve production and participate in programs of occupational health (43).

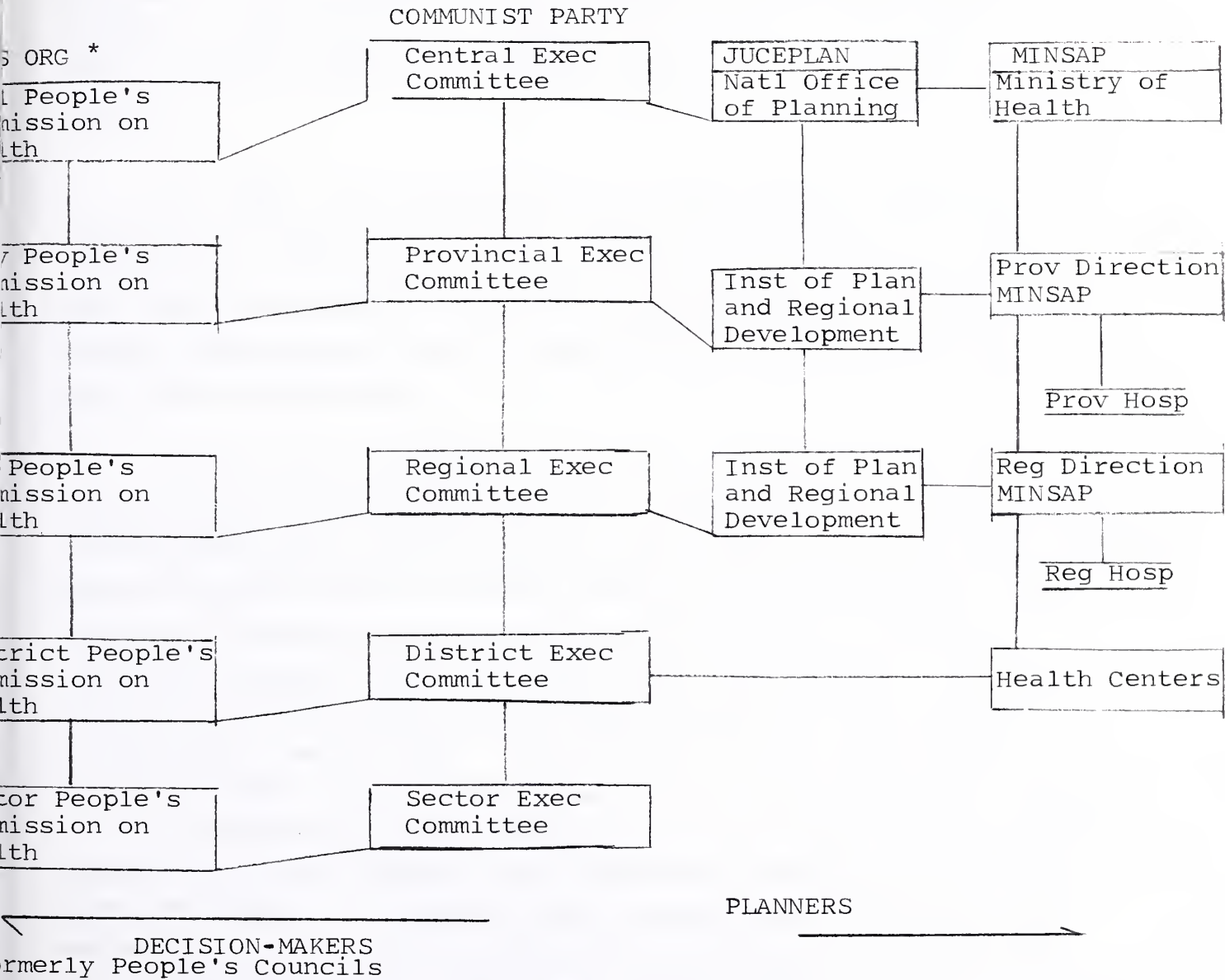
These mass organizations participate at the various vertical levels of the government and before 1965, they formed committees known as People's Councils. These councils had various sub-committees and after 1968 the health sub-committee became known as the People's Commission on Health.

The National Planning Office (JUCEPLAN) is the top agency for socioeconomic planning in Cuba. This office contains the National Unit of Statistics and exist at the various vertical levels of the government. Among its functions at the national level is the coordination of the long-and short-term plans of the different ministries.

The National Planning Office determines the final amount and type of resources to be allocated to the various ministries (44). Figure 3 illustrates the relationship of the decision makers and planners in the Cuban health system following the establishment of the Communist government in 1965.

FIGURE 3

DECISION MAKING AND PLANNING IN CUBA, 1968



Theoretically, the health services in Cuba in 1965 were administered, planned and supervised by the Ministry of Public Health (MINSAP), according to the priorities established by the political bodies at the national, provincial, regional and local levels. At the national level, the Minister of Public Health and the two Vice-Ministers (Hygiene and Epidemiology, Medical Care and

Teaching) served as political appointees and members of the Central Executive Committee (See Figures 1 and 3). In addition to the two Vice-Ministries, MINSAP also had a Division of Planning and Evaluation consisting of three offices: one on norms and procedures, another on planning and a third on statistics. A similar administrative structure existed at the provincial and regional levels.

In 1965, the administration of each health institution (hospital or health center) was directed by an executive committee comprising the director, clinical and auxiliary department heads, employee representatives and local members of the Communist Party. The top administrator was the director who was also chairperson of the executive committee.

Despite the relatively sophisticated level of structural organization of the health sector in 1965 and the many new horizontal relationships that had developed between the Ministry of Public Health and the various health related organizations and agencies, the system had not yet accomplished the goals of socialization, comprehensiveness, rationalization and effectiveness. Private practice and mutualism (prepaid group practice) still existed to a significant degree (45). On the other hand, a new concept of ambulatory care had to be developed to ease the bottleneck created by the diminishing private and mutualist practices. Bureaucracy also plagued the system despite early efforts at democratization of the state apparatus. Consistent with Navarro's observation of other socialist systems, the socialization of the means of production was a necessary but not sufficient condition for the democratization of the Cuban health system (46). One result of the early organizational planning and administrative policies and practices was that the Party and the State became "intertwined and interlinked."

The signs of the single identification of party/state were recognized within the Communist Party from as early as 1967 and by 1970 Fidel Castro commented that two consequences of the identification of party/state were the bureaucratization of the party and limited involvement by the population in running the state (47).

An interesting phenomenon of this period was the elimination of budgeting in 1965 as a tool for the control of allocation of funds. This was part of the governments campaign against bureaucracy (48). Non-monetary resources were allocated to the various ministries from JUCEPLAN, and from there to the different institutions at the provincial, regional and local levels. These allocations in the Ministry of Public Health were based on requirements determined by the Division of Planning and Evaluation resulting from norms, procedures and programs defined by the advisory planning groups as well as requests for resources by the health facilities directors. For example, a hospital did not receive a specified amount of pesos for particular items; instead, they received the items directly. In essence, money was no longer used as interchangeable units of transactions within the health sector. The objective of this experiment was to diminish the monetary transactions in the economy and lessen the bureaucracy's control over the budget (49). Despite the ideological appeal of this action, working without interchangeable units proved so administratively cumbersome that budgeting was restored by 1972 (50).

THE ORIGINS OF THE AREA POLYCLINIC

The concept of the area polyclinic reflected the uniquely Cuban solution to the problem of rationalizing the health care. Since 1965, the polyclinics have served the role of integrating the curative-préventive functions and the clinical-social-environmental dimensions of the health system.

The essential features of the area polyclinic were contained in the rural health centers that were proposed for a Rural Health Service in 1959 (51). These health centers were administratively independent of the hospital and they integrated the public health responsibilities for a specific area. They emphasized popular participation in health promotion and the people's health councils were clearly precursors of the later area health commissions. Danielson has postulated that the decision to emphasize the polyclinic in 1965 was merely part of the decision to improve and expand outpatient rural health centers linked to a rationalized system of hospital services (52).

The counterpart to the rural health center in the urban areas was the small mutualist clinic or the dispensaries of the large, hospital-based, mutualist programs (similar to the prepaid group practices in the US). Like the rural health centers, the mutualist programs provided comprehensive medical care and for a long time had set an important tradition of physician employment and group responsibility for health care rather than the individual responsibility in the more traditional fee-for-service private practice. Unlike the polyclinic however, the mutualist programs did not emphasize sanitary and preventive functions. They were not properly integrated with hospital and specialty services and did not use auxiliary personnel effectively. They made inefficient use of physicians and health facilities and were not defined by a specific geographic base.

Mutualism had existed in Cuba from as early as 1559 when Cuba's first titled physician, Licenciado Gamarra, negotiated a contract with the Cabildo of Havana (local governing body) to provide medical care for a list of citizens (igualados) in

exchange for their payment of a regular small sum (igualala)(53). This occurred at a time when the few physicians who were recruited to Havana did not stay long because the prospects of making money was so poor. The first recorded mutualist quinta or clinic was a private endeavour in 1840 by a Frenchman named Francisco Maria Normand (54). He started his clinic at the time when mutual aid societies, created among Spanish ethnic groups and certain occupational groups, were encouraged to develop group prepayment contracts with physicians and clinics, and eventually establish their own quintas de salud (health clinics) and hire their own physicians (55). Normand advertised his services to the "businessmen of Havana, captains of ships and to the general public." Women and blacks were excluded, however (56). This was probably, in part, due to the fact that the lower prepaid rates would not be profitable when applied to a population with a high risk of becoming ill. As mutualism developed in the ensuing decades, the brewing conflicts between the mutualist practitioners and the fee-for-service physicians became apparent. In 1928, the First National Convention on Mutualism, sponsored by the Cuban Medical Federation (FMC), called for the prohibition against mutualist services for well-to-do patients, the suppression of "industrialism", and the provision of mutualist services to members only and not to pensioners. Many physicians had become irritated by the fact that many "desirable" private patients were taking advantage of the relatively inexpensive prepaid plans; thus, further restricting the lucrateness of fee-for-service practice. "Industrialism" was seen as a cause of the development of large hospital centers that had a tendency of requiring physicians to work as "mere wage laborers"(57). By 1934 approximately 36 percent of Havana's population was covered by some type of mutualism, which employed over half of all physicians and owned more than half of Havana's hospital beds. At least

socialist government had to address. From 1962-1963 the Ministry of Public Health sought to rationalize mutualism. Under the regionalization plan, many mutualist clinics eliminated redundant inpatient services, programs were standardized and membership was made transferable between different clinics. There was also some attempt to direct services towards specific geographic areas. Some mutualist clinics were converted directly into MINSAP polyclinics, even before 1965, while others served the dual function of area polyclinic and mutualist program (60). In 1967, the budget of Mutualism was included in MINSAP's budget and by 1970 Mutualism was formally ended with the closing of new membership, the elimination of monthly dues and the equalization of attention to members and non-members (61).

The concept of the area polyclinic in Cuba resulted also from some aspects of the Czech and Soviet experiences. The experience with polyclinics in Czechoslovakia had shown that this type of structure led to hospital services that were highly specialized while the hospitals tended to be less than optimum size. At the same time, outpatient services were overspecialized without adequate support facilities. The Soviet experience was similar. Thus, the Socialist experience with the polyclinic concept was the advancement of medical technology and the elimination of private practice, however, there was the problem of overspecialization of the polyclinic. Nonetheless, the decision of the Ministry of Public Health in 1965 was to establish and emphasize the polyclinic and the "health area" as the base of health services delivery and administration in Cuba. Thus, while the larger hospital units continued to be the basis of hospital organization, the polyclinic was regarded as the core of the health system.

two distinct types of mutualist practice developed. The more established mutualist practices or "old mutualism" as referred to by Danielson, had been organized and developed by the Spanish immigrants and commercial associations. They were large and had a high concentration of beds and hospital facilities. The new mutualist groups were generally small and had a high concentration of physicians. The increased number of physicians in Havana, resulting from expanded classes at the university, created larger numbers of poorer physicians who could be employed by the new mutualist programs. In essence, "the marginal clinics expanded on the backs of the marginal physicians"(58). By 1957, the old mutualist programs had mobilized and the newer programs had expanded considerably. New mutualism continued to inefficiently use physicians while the larger older mutualist programs continued to make inefficient use of hospital beds and facilities. A consequence of the revolution on urban health services was an increase in mutualist membership. This was because the goal of most people who had to use public facilities, which were considered second class, was to achieve the economic status necessary to join mutualism. The early reforms of the revolution substantially increased the disposable income of most of the poorer citizens. In 1966 mutualism included more than half of Havana's population and it had expanded greatly in other parts of Cuba (59). The increase of mutualism after the revolution did have some positive effects such as buffering some of the effects that the mass migration of physicians might have had on the urban population. It also lessened certain pressures on the public services as they underwent reorganization between 1959 and 1965. On the other hand, there were many internal problems of mutualism that the new

THE ORGANIZATION OF THE AREA POLYCLINIC

The area polyclinic was designed to provide, integrate and be responsible for clinical, environmental health, community health and other related social health services. It covered a specific geographical area and population of about 25,000 people. Some ranged from 7,500 people in the rural areas to 60,000 people in some urban municipalities (62). Under the leadership of a physician-director the task of the polyclinic was to provide primary services and define, orient and direct the health area population to the system of hospital and specialist services. For this purpose, the polyclinic was given administrative independence from the hospital. This differs from the other socialist prototypes, including the Czech model, where the polyclinic is a direct administrative extension of the regional hospital (62). This administratively independent unit was integrated into the administrative structure of MINSAP in the following ways: 1) The polyclinic director, along with other health officials, was a member of the regional technical or scientific committee that was responsible for regional health planning (See Figure 2). 2) Hospitals, laboratories and other health organizations were charged with specific obligations to the polyclinic. 3) While the polyclinic had its own core of full-time staff, hospital physicians were required to work part-time in nearby polyclinics, providing primary care and specialty services. Also, polyclinic staff physicians were required to serve for short periods in the regional or provincial hospital. This last measure was designed to provide a community focus for the hospital based physicians and provide continuing education for the polyclinic physicians. This requirement also was in conformity with Cuban policy of training primary care specialists instead of general practitioners. Between 1965 and 1971, the clinical team of the polyclinic comprised physicians and

nurses working in the areas of internal medicine, pediatrics OB/GYN and dentistry. They were supported by part-time primary specialists from neighboring hospitals. Many general practitioners left their solo practice to serve in polyclinics where they continued to provide their traditional general services (64). Under the polyclinic arrangement of primary services the role of nurses changed as they began to assume greater clinical responsibilities(65). All services and medicines that were administered in the polyclinics and hospitals were free of charge. Drugs purchased in pharmacies were sold at nominal prices and certain medicines, such as insulin were entirely free or provided at very low cost. Pharmacies that were nationalized after 1962 were made directly responsible to the area polyclinic while their supply and technical direction fell under the purview of MINSAP(66).

In providing direct community services, the area polyclinic was divided into geographically defined sectors. A field nurse, sanitarian and sometimes a social worker was assigned to each sector. Based on the geographical situation, first aid posts were established in some sectors, staffed by volunteers, auxilliary nurses and, especially in the rural areas, by teachers. Many folk practitioners and midwives served as auxiliary personnel in these first-aid posts (67).

The significant structure that provided horizontal integration between the polyclinic and the community was the Area Health Commission. These Commissions, assembled in 1968, often included representatives from the various mass organizations (CDR, FMC, ANAP, CTC, etc.). It was thought to be the most widely representative body of its kind in Cuba (68). The Area Health Commission which was chaired by the polyclinic director, focused on a mixture of

health planning and community planning, and as a result, there was a tendency to be concerned with broad range matters such as quality of life and the general well-being of the area population.

In summary, the period between 1965 and 1971 marked the consolidation of the comprehensive national system of health services in Cuba. It was during this period that the process of regionalization was completed to the level of the health area, which was served by the polyclinic. By 1971, the planning emphasis was directed to developing health sectors within the polyclinic. Substantial ground was covered in rationalizing the health care services as mutualism and fee-for-service was phased out. The socialization of the mode of production in medicine continued but the system was a long way from democratization. A decade had passed since the "triumph of the revolution." Most of the organizational structures were now intact. This was now a time for the leaders of the revolution to evaluate the system for effectiveness, reevaluate goals and develop the system to its maximum potential.

THE PROCESS OF DEMOCRATIZING THE CUBAN SOCIETY

The "revolutionary offensive" ended in the year 1970, at which point the Cuban people became involved in an exhaustive self-critical analysis. The offensive started in 1968 and was an attempt to mobilize the resources of the country in order to reach dramatic new levels of economic and social development to serve as a base for the development of the communist society(68). Following the failure to reach the goal of ten million tons in the sugar harvest of 1970 Fidel remarked, "The heroic effort to increase production, to raise our purchasing power, resulted in imbalances in the economy, in diminished production in other sectors and, in short, in an increase in difficulties"(69). Indeed, Cuba had not failed to

mobilize its human and material resources and workers did respond to moral and political persuasion. The sacrifice had been enormous, but the scale of mobilization was beyond the administrative and political structures of the society (70). It became apparent to the Cuban leaders that the production techniques and the level of mechanization were unequal to the 1970 production targets. By 1970 Cuba was almost completely socialized. There were now new pressures to develop programs and strategies that would more securely guarantee economic stability and labor productivity and, at the same time, ease the sacrifices demanded of the Cuban people. It would become necessary to move away from the reliance on large campaigns of voluntary mass mobilization and develop structures that could lead to better mechanisms for democratization of the mode of production and decentralization of the state's administrative apparatus.

We will now explore some of the intense social experimentation and strategic planning that occurred both in the health sector and the general society following the retrospective analysis and self-criticism of the "revolutionary offensive." By 1970 the class structure of the Cuban society had changed significantly. As mentioned before, the society was almost completely socialized. The last vestiges of small businesses had been closed to preempt black marketing. Institutional racism and sexism was undermined by the socialist policies of income leveling, equalization of educational and employment opportunity and active recruitment of women into the labor force (71).

From 1973 - 1975, resulting from the debate and criticism of the first 14 years of the revolution, it was decided to implement experimentally some of the reform proposals in the province of Matanzas. The evaluation of this experience would then serve as a practical base for the formulation of a democratic socialist state (72). The key ingredients of the Matanzas experiment were

the separation of the party and the state and the creation of elected popular assemblies at the municipal, regional and provincial levels. In the autumn 1975, a new Socialist Constitution was adopted by universal plebiscite. The Constitution reformulated the successful features of the Matanzas experiment for general application in the nation. In 1976, the system of popular people's assemblies (asambleas de poder popular) was extended throughout Cuba, under the guidance of the Communist party which held its first national congress in December of 1975. The regional level of the assembly was eliminated because it was thought to be excessively hierarchic but the number of provinces was increased from 6 to 14 to maintain a certain level of functional regionalism(73). The political territory was also divided into 169 municipalities each containing no less than 30 but no more than 200 districts. The People's Power (Poder Popular) assemblies at the municipal and provincial level would be elected by secret ballot by the residents living in those municipalities and provinces. According to the new constitution, all state organs - Poder Popular - are elected and accountable to the population. The guiding principle of the state is that all authority comes from the people. In essence, all responsibility is brought from the bottom up and all accountability flows from the top down.

Candidates for election to the People's Power assemblies can be nominated by any citizen; however, in practice most candidates are chosen by the local CDR. By law, there must be at least two candidates for each position and all citizens over 16 years of age (excepting those in prison or those who have asked permission to emigrate) are eligible to vote (74). Although voting is not compulsory, a high percentage of people do vote. For example, 92% of the registered voters in Matanzas Province voted in the 1974 elections. In the election, delegates are elected to the Municipal Assembly of the Peoples' Power. In urban areas, an average of one delegate is chosen for each 1,000 registered voters (an election

district), while there is approximately one delegate for each 100 inhabitants in low-density areas(75). Each Municipal assembly elect their own president, vice-president, secretary and two counsellors, who will become members of the executive committee. For the most part, only the top officers in the Municipal Assembly are full-time representatives, while most other members continue working at the jobs they had when they were elected. The Municipal Assembly of Popular Power is elected for a period of 2 1/2 years and meets at least once a month. The Assembly has highest authority for the exercise of state functions at the local level. When the Assembly is not in session, the executive committee carries out its responsibilities. The delegates of the Municipal Assembly of People's Power elect delegates to the Provincial Assembly of People's Power (PAPP) and the deputies to the National Assembly of People's Power (NAPP).

The Provincial Assembly has approximately one delegate for every 10,000 citizens. They serve a term of 2 1/2 years and meet at least once every three months. The PAPP is the top state authority at the provincial level. This assembly elects a full-time executive committee consisting of a president, vice-president, secretary and several counsellors.

Deputies to the National Assembly of Peoples' Power are elected for a five-year term. It is the supreme organ of the state and meets at least twice a year. It elects the Council of State (similar to the executive committees at the lower levels) consisting of the president, vice-president and twenty-three members that assumes the responsibility of the National Assembly when it is not in session.

The People's Power Assembly at each level of the state appoints the personnel to the administrative agencies responsible for administering the institutions, programs and activities for which that level of government is responsible. In order to assure that a certain level of service is provided nationwide and, at the same time maintain local control of these services, each service agency has dual accountability to its appropriate People's Power Assembly for administrative direction, and to its superior administrative units of that ministry for normative direction. Thus, the significant change here was that the ministries became normative and planning agencies, not administrative bodies. They, in coordination with JUCEPLAN, elaborate the norms and standards of the productive and service units (hospitals, factories, schools), but the political and administrative direction is provided by the People's Power Assembly at that level. On July 26, 1974, when Fidel Castro introduced the experimental forms of Popular Power in the province of Matanzas he explained:

"The key principle is that all productive and service units which provide their goods and services to the community have to be run and controlled by the community... This means that schools, health centers, shops, bars, factories, cinemas, recreational centers, and all other centers are, and shall continue to be, run and administered by the Popular Power of each locality. There will be some activities and units that, because they work for the whole country, will be controlled by the National Popular Power.

This decentralization does not mean, however, that every community or province is going to fly on its own... They will have to follow certain norms so as not to allow disparities and inequities across the country... A hospital, for example, cannot do whatever it pleases. It will provide similar medical services with similar

norms of quality, similar for the whole country... Otherwise, the local Popular Power will be the unit of government responsible for what happens in that hospital, how it is being run, how the staff responds to the needs expressed by the population... In the previous period of the revolution, before today, the community received the services of the hospital or the health centers. These units, however, were run from the Ministry of Health. From today on, they will be run in the communities"(76).

Other institutional changes reflecting the democratization of the Cuban society is the new role of the labor unions. Before 1970, union officials were appointed by the Communist Party and they served as mere guardians of party and state policy(77). This stemmed from the definition of the Cuban state as a workers' state, thus it was believed that no antagonism should exist between the workers' interests and the state's interests. The rationale was that in carrying out state policy, the unions would also be carrying out workers' policy(77). However, by 1970 experience had shown that the theory was quite different from the practice(78). It was felt that the unions should regain their autonomy and their officials should be directly elected and accountable to the workers. In 1973, the Thirteenth Congress of the Cuban Trade Unions (CTC) approved the principle and practice that the primary authority of the union official was derived from those who elected him/her(79). Also the union functions were established. They include the defense of the workers' interest nationally and in the workplace; developing, along with the government, workers' wages and conditions of work, adult education for the workers, workers safety, hygiene, and social security; the distribution of goods, vacations and other forms of compensation(80). In that same year the Congress also established the autonomy of the unions. At the conclusion of the Congress Fidel Castro remarked: "Unions and management have

different tasks and modes of intervention that do not always coincide. Each one has its own sphere of responsibilities.... the unions cannot see themselves as part of management. They do represent the workers and, as such, have to be counterbalances to management"(81).

During this same period there were substantial changes in labor relations and practices. During the sixties, in an attempt to emphasize moral incentives as a way of maintaining and strengthening productivity, every worker occupying the same job received the same pay, regardless of output. Again practice differed from theory. This practice demoralized many of the more productive workers and this realization led to a change in policy(82). With the new policy each worker gets the same base salary for the same job, however, the total income depends on the workers' overall productivity. The effect of this new policy was an increase in productivity and absenteeism declined substantially(83).

Another development of worker control in the workplace was the establishment of Labor Courts in productive or service units with more than 25 workers(84). These courts, of about 5 members, are elected by the Workers' Assembly and function to assure fairness in the workplace. They hear complaints between workers and management, make a decision that is discussed by the Workers' Assembly and the proposal for action is communicated to the local People's Power. The People's Power then has to make a decision and communicate the reasons for that decision to the Workers' Assembly.

In summary, during the first decade of the revolution, the Communist Party led, organized, directed and administered the state

in Cuba. As a result, a great centralization of power in the state took place. Also because of the party/state identification, this power and control was also concentrated in the Cuban Communist Party (PCC). What was supposed to be a short lived provisional identification of party/state became relatively permanent during the sixties. This led to the bureaucratization of the state, and at the same time, the party became insensitive to the masses. The realization of these mistakes, following the failure of the Gran Zafra (sugar harvest) of 1970, led the leaders of the revolution to develop new institutional structures to democratize the society. One aim of the new changes was to separate the party from the state. In 1975, the new bylaws of the Communist Party(84) stated: "... the Party cannot confuse itself with the state, nor can it supplant itself for the other." The new Cuban Constitution(85) adopted in 1975, explicitly provides for leadership of the Cuban Revolution by the Communist Party but at the same time it states that the Party does not direct or administer the state. Based on the new constitution, the party can only submit policy proposals to the People's Power through its elected representatives. If such policies are rejected, all the party can do is resubmit or withdraw it. Also in order to keep the party in touch with the population, the party bylaws require that all positions taken by the party have to follow consultation with mass organizations. The new function of leadership assigned to the party should take place by persuasion, education and example (86).

Despite these many changes since 1975 one cannot assume that the Cuban society has been totally democratized. Democratization is a constant process. It is an objective to be reached as soon as possible, but in the mean time many linkages still exist between the party and the state. Navarro reports that 40% of the elected members of the Municipal People's Power are also members of the

Communist Party (87). These percentages are even higher at the national and provincial level. He postulates that this situation will remain so for a long time because the high prestige that members of the Communist Party have made them very electable.

Another point that Navarro makes concerning Cuban Democracy is that one of its major strength is the fact that it is a direct democracy (88). The population is called upon to decide on any major policy to be taken by the People's Power assemblies and political power is not delegated to full time representative or politicians; instead, to individuals who continue working and living among their fellow workers and residents.

Finally, I should point out that in addition to democratization of the state's control of the mode of production, a more standardized legal and judicial process was established during this period. By the late seventies it was quite evident that the quality of life in Cuba had improved substantially since the "revolutionary offensive" and to many observers Cuban socialism had become "a splendid example of a dialectical revolutionary struggle towards freedom, democracy and justice" (89).

MEDICINE IN THE COMMUNITY

The changes that occurred in the Cuban society after 1970 resulted from an evaluation of the conditions at that time. Despite the substantial improvements in the quality of life of the Cuban citizen in the first 12 years of the revolution (substantial progress had been made in addressing the six problems identified by Fidel Castro in 1953), the goal to create a socialist democracy eliminated any room for complacency among the leaders of the revolution. Revolution had become a way of life for the Cuban people. The revolutionary process had been the Cubans' answer to the problems of colonialism and slavery by the Spanish, hegemony and later economic strangulation by the US, human and material resource exploitation by multi-national corporations and political and civil rights suppression by local despotic dictators. The struggle for change has been the hallmark of Cuban history since Columbus landed there on October 27, 1492.

The history of medicine in Cuba has followed a similar pattern. The revolutionary spirit in Cuban medicine can be found in the works of the Cuban physician, Thomas Romay y Charcon (1764 - 1849) (89) who called for more humane treatment of slaves, small-pox vaccination programs, reforms in medical education, hospital development and pharmaceutical regulation. This same spirit characterized the accomplishments of another great Cuban physician, Carlos J. Finlay (89) known for his discovery of the transmission of yellow fever by the Aedes Aegypti mosquito in 1881. Finlay was a great champion of the scientific method and the unity between social and clinical medicine. Prepaid group practice providing comprehensive medical care (considered a relatively new innovation in the US) was well established in Cuba by 1934, almost a century after the opening of the first mutualist clinic in 1840.

Although the pre - 1970 developments in Cuba were enough to impress many foreign observers, the changes in the health care system after 1970 were of revolutionary proportions.

By 1968 it was felt that the structural organization of the health sector was in its final stages with the establishment of the area polyclinic as the primary unit of neighborhood regionalization. Certain functional problems, however, became apparent by the early seventies. There was a problem of impersonality and discontinuity of care in the polyclinics and local hospitals. There was a contradiction between the professionalization and technical specialization of the Cuban health manpower and the socialist goal of leveling within the ranks of health workers. There was still a problem of integrating the community focus of the primary care workers and the almost distant community focus of the hospital based "higher-ranking specialties." Finally, due to the lack of continuity and the impersonality of care, frequent overcrowding and long waits due partly to the no appointment system, many patients quite often bypassed their polyclinic in favor of the emergency room at the regional hospital where they could often get quicker attention.

In 1972 the newly constructed Plaza Polyclinic became the site of an experiment to develop a new polyclinic-model with a community orientation (90). At the same time it would serve as a teaching center. This new model was based on the critiques of the model that existed at that time. The results from the Plaza experiment called for new patterns of medical training, a different method of organizing work in the polyclinic, and new mechanisms for community participation in health care delivery. Also the experiment elucidated many inherent faults in the prevailing

patterns of health care.

In 1974, the Assessment Commission for Medicine in the Community was assigned the task of developing the concept of community medicine within the Marxist - Leninist and socialist ideology of the Cuban health system (91). This interdisciplinary commission included leaders of the Plaza experiment and operated under the direction of the Ministry of Public Health. The Commission first sought to define community medicine under both capitalism and socialism. Under capitalism, they claimed, so-called community medicine programs are, in most instances, special programs for the poor, thus the word "community" clouds the issue of class contradictions. In a socialist state, they argued, a community of interests prevails and exploitation based on class is eradicated. As health care becomes accessible to all, public instead of private, popular instead of elitist, humane instead of mercantile, then community medicine is created. They concluded that the community aspect of medicine is therefore primarily a result of socialism. The next step became the integration of medicine into the community. It was the technical and political aspects of this integration that the Commission perceived as their task. After a thorough evaluation, they reported their assessment and recommendations.

Based on user complaints the Commission noted that there were long waiting lists, poor doctor-patient relationship in many instances, inadequate facilities and insufficient appointments. The Commission also reported that there was extremely high utilization at the regional and provincial hospitals and institutes. Particular mention was made of the overutilization of the emergency services at these hospitals for many problems which were not urgent. The Committee commented that many of these problems existed because there was a "non-correspondence between the conceptual and structural framework of the polyclinic."

This was evidenced in the polyclinics relative dearth of material and human resources. Also the idealistic staffing methods of exchanging personnel between the polyclinic and hospital made it difficult for patients to be seen by the same physician most of the times. The reverse was also true. Physicians had difficulty following their patients through the various stages of treatment. The constant movement of personnel and the somewhat diffuse concept of teamwork made it unclear at times who had the responsibility for a given patient. Many polyclinics were inadequately staffed with full-time doctors. As a result many part-timers who had polyclinic duties once or twice a week depended heavily on referrals. At the same time, the teaching physician, who worked under the same conditions, was also pressured to work in the same manner, removed from the community and its problems. Students who were directed towards the community based on their political interest, soon became frustrated by the non-correspondence between the concept and structure of the polyclinic. The hospital was still the main focus of technical training. The orientation towards prevention was not practiced; instead, the cure of disease remained the main focus of interest. In essence, "the physician was in the polyclinic, but his mind was in the hospital (92)."

The Commission strongly rebuked the medical profession for their mediocre participation in the community health service delivery:

"Although the purpose of our health system is to dispense increasing satisfaction of health needs of our people, the physician who is formed in the molds inherited from the past does not tend to practice this service-oriented medicine. Instead of serving, the physician tends to be served by the community and its people, in conformity with a medicine of consumption."

Finally, the Commission criticized the polyclinic for deficient teamwork, and the health system in general for insufficient lay participation. The latter was declared

unacceptable not only because it went against the objective of community-medical integration, but also because it did not reflect the dominant ideology of Cuban socialism. "In our country mobilization of people is significant in its own right, for it makes possible the construction of socialism and foments, with this social practice, the development toward a new revolutionary consciousness - a communist consciousness." The Commission's concept of medicine in the community was that the community should be the subject and not the object of health programs. The community should participate in planning, execution and control of these programs. The health team should adopt an advisory role, sharing its technical knowledge, and allow itself to be transformed in the process.

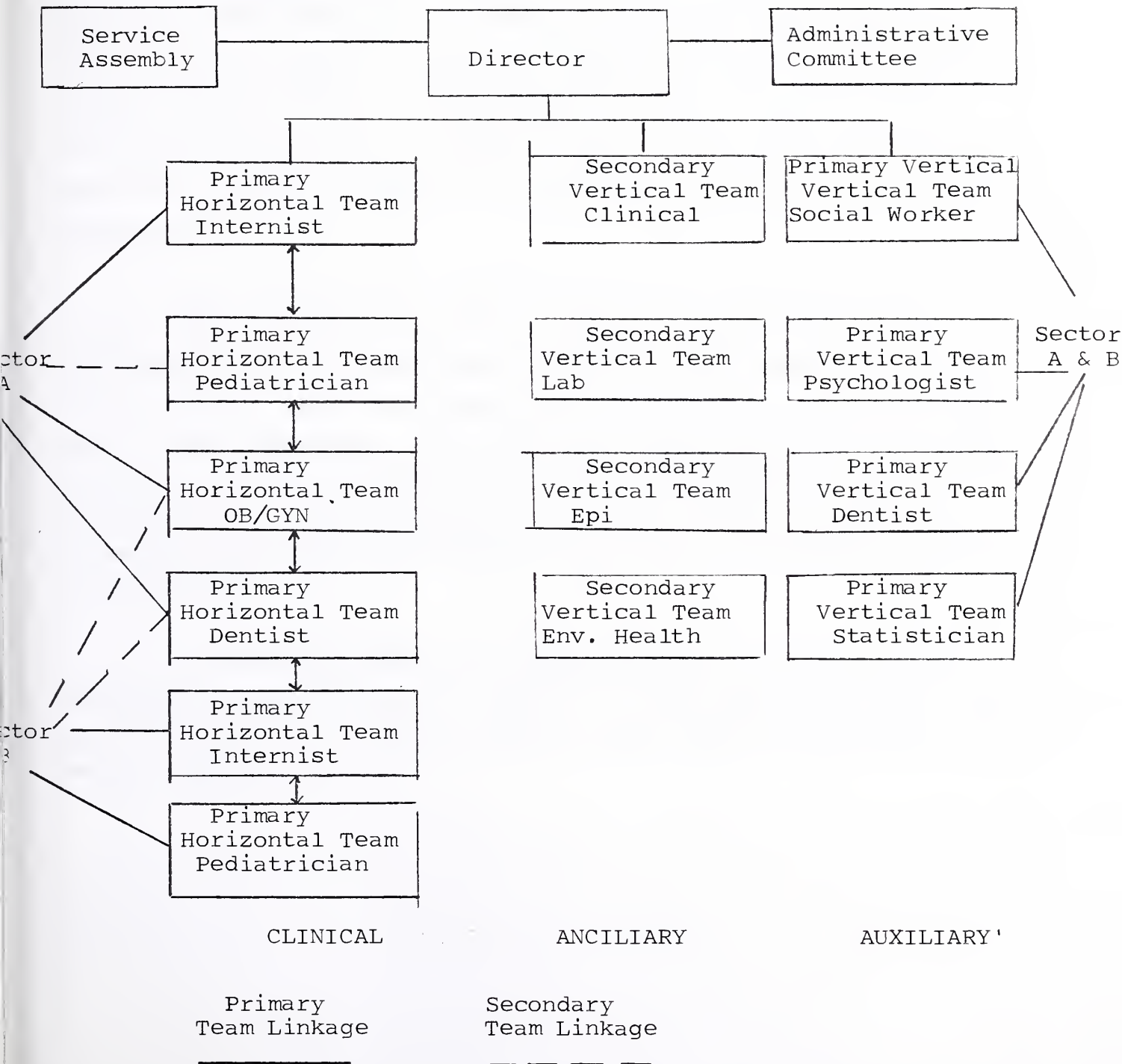
The findings of the Assessment Commission were incorporated into the new model of the area polyclinic following further refinement of the planning process by the Ministry of Public Health. Many of these features were already in operation in the Plaza experimental polyclinic and they were soon applied to another experimental polyclinic named Alamar. By 1976 there were five such models in operation and twenty were targeted for 1980 (93). The main feature of the new and contemporary model is its method of work. Each health area is subdivided into sectors. The staff of each polyclinic is divided into horizontal teams composed of a primary care specialist (internist, pediatrician, dentist, OB/GYN) and a nurse. The team is then given full responsibility of a health sector with a set of patients determined by the specialist on the team. Each pediatrician is responsible for about 1,000 children, each internist for 2,000 adults and each obstetrician-gynecologist for 2,000 adult women. Some physicians and nurses are part of a secondary horizontal team. An internist-nurse team may work exclusively in one sector but there may be only one OB/GYN-nurse team and one pediatrician-nurse team for two sectors. Thus an internist-team may have a secondary OB/GYN-nurse team and

secondary pediatrician-nurse team. Likewise the pediatrician - nurse team might have two secondary teams with physicians from the other specialties. The complete sector team also includes a sanitarian, lay health activists and sometimes a field nurse. At times, social workers, psychologists or hospital based specialists work with the sector team. Each geographic sector consists of 4,000 - 6,000 people. Each family belongs to the same sector and if a patient is dissatisfied with his sector, he may change to another. There are about five to seven sector-teams in each polyclinic. In addition to the horizontal teams there are also primary and secondary vertical teams. Primary vertical teams include social work, psychology, estomatology (dentistry), pediatrics, maintenance, etc. Secondary vertical teams include clinical, laboratory and environmental health and epidemiology. Every primary horizontal team has its own office in the polyclinic where it keeps the chart of all its patients. The significance of this is that all persons in the health sector have their own doctors with whom they can maintain a continuity of care.

The former requirement for hospital work by polyclinic physicians was replaced by home visits or related community work such as health education. To address the problem of lack of coordination between the primary care physician and the hospital based specialist, a system referred to as "intra-consultation" was developed. Pediatric and medical specialists go to the polyclinic on a regular schedule and are available for consultation. The primary care physician who makes a referral is required to attend the consultation with the patient and the specialist.

Figure 4

THE STRUCTURAL ORGANIZATION OF THE AREA POLYCLINIC, 1980



In an effort to control chronic diseases MINSAP established a series of national health priorities that guide the work of the primary care team. This policy is referred to as dispensarizacion. Targeted and chronically ill patients are systematically monitored by their sector physician. Target groups are children from 0-4 years of age and adults over 65 years old. High risk groups include hypertensives, diabetics, asthmatics, etc. Patients in these categories have a fixed minimum number of visits yearly. In certain categories, the team is required to make a home visit every six months in addition to the regular scheduled polyclinic appointments.

The new model for the area polyclinic has many implications on the Cuban health care delivery system. First it requires the utilization of more physicians than the previous model (94). It also created a role for a physician exclusively involved in primary care in the community. Most striking is the fact that physician dominance of the health system is being challenged. In the polyclinic the physicians role is modified by teamwork which in specific situations calls for the physician to yield team leadership to a non-physician.

In summary, medicine in the community is a system that emphasizes integrated primary care. It organizes the primary care practitioners into effective health care teams and links them directly to the community.

THE ORGANIZATION OF THE CUFAN HEALTH CARE DELIVERY SYSTEM IN 1980

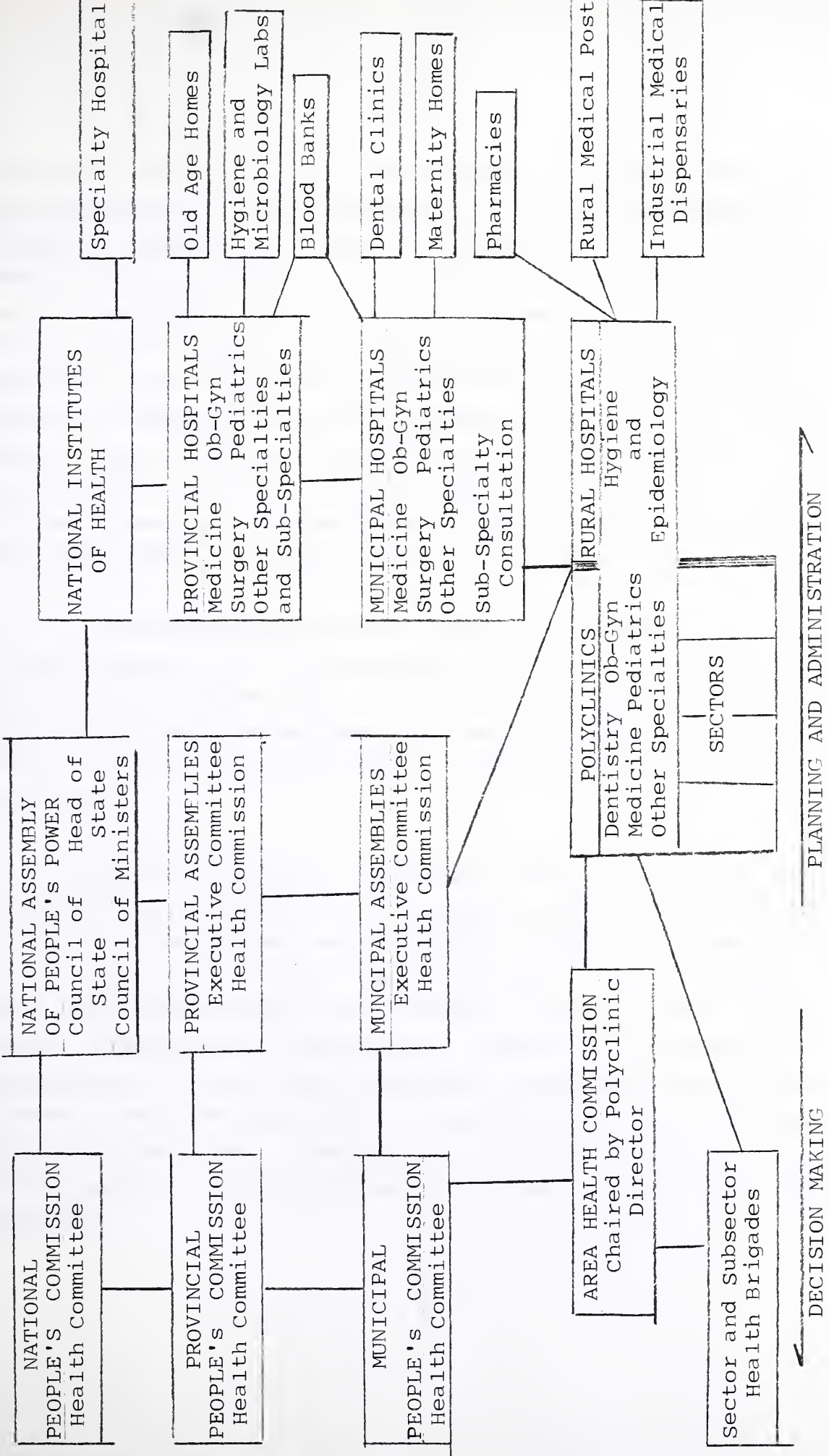
The organizational, political and administrative changes that occurred in the health system after 1974 paralleled the democratizing changes that accompanied the establishment of the People's Power. The former eight health provinces were divided into fourteen. The 39 health regions were abolished and replaced by 169 municipalities averaging 12 per province. Each province and municipality is in charge of their own health services. The provinces are responsible for provincial hospitals which deliver tertiary and secondary care and the municipalities are responsible for municipal hospitals and polyclinics which deliver secondary and primary care respectively. The type of services delivered at each level of care have to follow certain norms set by MINSAP, which are applicable to all similar units in the country. For example, a unit for open-heart surgery or a newborn special care unit can only exist at the provincial level. The political and administrative direction of a hospital or a polyclinic is the responsibility of the corresponding provincial or municipal People's Power assembly. At each level the assembly chooses an executive committee responsible for day to day operations. These committees appoint municipal, provincial and national directors of public health. As representatives chosen by the people and users of the facilities they control, they invite expression of any grievances and take steps to correct them. This may include discharge or disciplining of health personnel if necessary.

Under the policy of sectorization each doctor on a primary horizontal polyclinic team is responsible for specific patients in his geographic sector. In essence, each citizen has their own "private" physician team. With the exception of sectorization, the basic

MASS ORGANIZATIONS

GOVERNMENT

MINISTRY OF PUBLIC HEALTH



← DECISION MAKING

DECISION MAKING →

Figure 5

structure of the polyclinic has remained unchanged since 1968. The polyclinic as a whole comprises the "basic team" and is guided by a director, an administrative council and the service assembly which represents the entire work force of the polyclinic. The administrative council includes leaders of the secondary vertical teams (auxiliary departments), and the labor union. The polyclinic also has primary vertical teams that function in relation to specific problems a patient may have. The primary vertical team is composed of the regular polyclinic staff including psychologists, sanitary workers, social workers, etc. These members work as a team with an individual or family when problems require the cooperation of a specialist in the above areas.

The administrative structure of the hospital is similar to the polyclinic with the exception of the sector teams. To further direct future Cuban doctors towards community medicine each municipality contains at least one teaching polyclinic where medical students and interns are trained parallel to their hospital rotations.

Medical and dental education, formerly under the supervision of the Ministry of Education is presently controlled by MINSAP. In addition, the MINSAP administrative structure has been reorganized to accommodate its widened responsibilities in professional education, pharmaceutical production and distribution, health resource planning and international relations. Presently approximately 13% of Cuba's physicians along with other health care personnel are providing care in underdeveloped and developing third world countries (94). The Ministry of Public Health is responsible for the task of assigning these individuals to more than twenty countries.

THE EFFECTS OF STATE CONTROL ON THE PLANNING AND EVALUATION FUNCTIONS
OF THE CUBAN HEALTH CARE DELIVERY SYSTEM

Immediately following the seizure of the state apparatus by the revolutionary movements in 1959, the Ministry of Public Health was given broad powers in the area of health activities. The first effort of the ministry was to begin to develop a comprehensive system of health care delivery. Equalized access to the health services was soon guaranteed by law and inpatient and outpatient care was made free. The problem of availability of services due to the maldistribution of resources was addressed by the development of a rural health service and the establishment of numerous rural health centers. In addition, a mandatory two year rural residency for all new medical graduates and health professionals was established. By 1965 the goal of a universal and comprehensive health system was achieved.

The process of socialization of the mode of production in medicine occurred at a slower pace. Although most of the rural health services were under government control early in the revolutionary period mutualism existed relatively independent of MINSAP until 1967. Most pharmaceutical companies were not nationalized until 1963. Although there are certain sectors in the Cuban society that are not completely socialized even today, the health system was almost completely socialized by 1970. As socialization of the mode of production in medicine progressed, it was possible to systematically rationalize health service delivery. The initial phase of rationalization was by the process of regionalization started in 1962 with the first plan for a Comprehensive National Health Care System developed by MINSAP.

This plan was revised in 1965 to include the area polyclinic as the primary focus of all health services. In 1975, the plan was again revised and the concept of "medicine in the community" was developed. This concept represents the present level of rationalization of health services in Cuba.

With respect to the effectiveness of the Cuban health care system, there is no doubt that Cuba has made substantial gains in health status. Today Cubans have a life expectancy on par with the United States and Canada. Since 1973 Cuba has had the lowest infant mortality in Latin America. Diphtheria, malaria, poliomyelitis and malnutrition has been eliminated. By all standards, the health status of the Cuban people ranks well with that of the developed world.

The Cuban experience contains many features that demonstrate some basic principles in health planning. First, it reaffirms the principle that public health campaigns cannot be successful unless there is public participation in their planning and implementation. This is evidenced in the remarkable successes of the various immunization and other public health campaigns in Cuba that led to the elimination of many infectious diseases, the lowering of infant mortality and a general improvement in the health status of the Cuban population. One only needs to recall the Swine Flu affair in the US in 1976 to appreciate the significance of the fact that Cuba's first polio immunization campaign in 1962 took 5 days, with 85% of the population at risk vaccinated on the first day (95).

A second point is that the Cuban experience poses a strong contradiction to the argument used by many health planners, that lack of resources prevent the development of health in developing and underdeveloped countries. Instead, it was the maldistribution

of resources that caused the underdevelopment of health in Cuba. This seemed to have been the outcome of uneven control of the decision making process by different social groups and classes in Cuba. The Cuban experience has shown that a redefinition of social groups and their decision making power is necessary to reverse this process. This will occur only after the country has made a strong commitment to health as a human right.

It is a widely held view that dramatic achievements in health and other social services that have been accomplished in some developing countries is not without the high price of sacrificing peoples' freedoms and democracy. In Cuba, a plurality of forms of popular participation in the decision-making and planning functions of the state have evolved which give the population a wide margin of control in many aspects of their lives. These include their places of work, study, residence and enjoyment. Despite the fact that only one party has existed in Cuba since 1962, institutions for direct participation and control of health resources are evolving. Navarro has pointed out that the meaning and form of democracy are not absolute or universal (96). They depend on the specific historical and political circumstances of the particular country.

In conclusion, a historical analysis of the Cuban health care delivery system shows that without state control of health facilities, public financing of health care, and government control of health manpower: planning socialized, rational, comprehensive and effective health care in Cuba would probably not have been accomplished by 1980.

CHAPTER III
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CHAPTER III

EVALUATING THE EFFECTS OF PLANNING ON HEALTH SERVICES

In the preceding chapter of this thesis, the planning and decision-making functions in the Cuban health care delivery system were explored. According to the new Constitution adopted in 1976, the Communist Party provides leadership in the Cuban Revolution, but the state is administered and directed politically by the Poder Popular. As Raul Castro, Foreign Minister, explained, "The Party can and must make suggestions, proposals, recommendations ... but it must never 'hand down' decisions, never impose decisions, never instruct how to vote, never tell the Assemblies of the People's Power what to do or how to do it" (1). In the health care system, the Poder Popular is the top decision-making body but it has to consult with the mass organizations before a decision is made. These organizations remain the primary bodies for stimulating popular participation in preparing policy and for mobilizing the population to implement policy. The People's Power (Poder Popular) assemblies appoint directors to the Ministry of Public Health at the municipal and provincial levels to administer and direct health facilities, health manpower, health education, health programs and other health activities. Health planning is controlled by the national government (National Assembly of People's Power) and its planning organs (mainly JUCEPLAN). They then orient the various ministries through the Council of Ministers. In formulating a national plan, the provincial directors bring all the concerns of the local people to the provincial level where a plan is elaborated. The plan then moves to the national ministry and the national leadership of health planning. After formulating a national plan, all the ministry officials return again to the provinces, municipalities and health areas where each must be committed to successfully complete the plan (2).

The planning process includes all research institutions so that their research is relevant to the national health goals. This planning scheme, however, has evolved from 22 years of the revolutionary process and the planning structures and methods have varied significantly throughout this time. It would be very difficult to prognosticate how effective this present scheme will be in the long run; however, if one approaches the planning process from a historical perspective by analyzing its evolutionary forms, then one may be able to make some conclusions about how effective it might be. The purpose of this chapter is to show how the planning and evaluation processes over the last twenty years have affected the structure/process and outcome of health care in Cuba. The thesis that will be elaborated is:

Effective planning and evaluation functions in Cuba have significantly improved availability and access to health facilities and health manpower, resulting in improved health status.

Although it is often difficult to determine the degree of association between medical care and health status, especially in more developed societies, the fact that in 1958 many Cubans died from controllable diseases (infectious vs chronic degenerative) makes this association more discernable. The severe deficiencies of health services in many developing countries are usually attributed to their level of economic development. This in turn affects the social and political structures that determine the level of health service. Navarro, Romer, Stein and Susser and many others (3 - 5), challenge the validity of these assumptions, especially with respect to Cuba. In comparison to many Latin American countries at a similar or more advanced stage of economic development (as defined by Rostow,6), Cuba has a relatively high ranking on major health status indicators. The Cubans have developed a social and political system that permits them to give a high priority to health services and administer tested techniques in a rational way to solve empirically discovered health problems (7).

HEALTH MANPOWER IN CUBA, A HISTORICAL SURVEY OF MEDICAL ORGANIZATION (1925-1959)

The struggle of the medical class and the struggle within the medical profession before the Cuban Revolution was reflected in the historical development of the Cuban Medical Federation (FMC). It was established in 1925 and served to protect the majority interest of Cuban physicians until 1963, when it declared itself obsolete as a result of the revolution and ended its formal existence in 1966 (8). Its functions were replaced by the medical workers' union and scientific associations. Reflecting the spirit of the times, the Cuban Communist Party (PCC) and the Cuban Confederation of Workers (CTC) were also formed in 1925. By 1929 two parties had formed within the Federation. One group, composed mainly of younger physicians who were relatively well-off and did not work for mutualist programs, was called Renovación. They called for greater freedom for private practice, higher wages and better university training. The other principal group, the Unión Federativa consisted mostly of physicians who gave services to large mutualist programs. Following the first strike by the Federation in 1927 against the Centro Gallego, a large mutualist program, the First National Convention on Mutualism was held in 1928. It was here that the lines were drawn between the private practitioners and the mutualist practitioners which subsequently led to the formation of the aforementioned factions in the Federation. From the beginning there was a strong link between the government and the Federation. President Gerardo Machado attended both the founding convention in 1925 and the Convention on Mutualism in 1928. He was always surrounded by a group of medical supporters. In 1929 the connection between the Federation and the government became stronger when Renovación lost the National Assembly elections to Unión Federativa, led by Machado's Secretary of Sanitation and Charities (9). Machado's obvious support for the mutualist factions won him even more favor from the Spanish business colony which

dominated the ethnic mutualist associations (10). By 1930 tensions rose as the economy slumped and the suppression of dissent grew more violent, even to the outrage of the professional and middle classes. Following the assassination of a student labor leader and the death of a medical student, renewed protests led to the closing of the university and some fifty rebellious professors were fired (11). Members of the Marxist oriented Ala Izquierda Estudiantil (left wing student group) were imprisoned, including many medical students and professors. As Danielson points out, along with such distinguished thinkers as Raul Roa (later Foreign Minister of the Revolutionary Government), prison became a university for Marxist revolutionaries (12).

In the ensuing years there were many strikes against the large mutualist programs, not all of them approved or directed by the FMC. At the Second Convention on Mutualism in 1931, the FMC condemned the holding of multiple positions by physicians, a common practice at that time especially among mutualist physicians. In 1932, the FMC National Assembly eliminated the five-year waiting period between graduation from medical school and admission to the FMC. The result was a flood of new graduates from the turbulent university to the FMC. Reflecting the entrance of many new physicians to the FMC, who were not yet mellowed by the former five years of medical practice, Renoración split into two new parties: Reformista and the more radical Ala Izquierda. A new party AFPEL (Federated Group for Free Practice), reflecting the influence of U.S. medicine, was also formed (13). Just preceding the fall of Machado, the FMC called a general strike against the regional centers of the Spanish ethnic associations. This was one of the many strikes in the service sector that was occurring at that time. The fall of Machado led to the Democratic Socialist (14) government of Grau San Martin which

theoretically strengthened the position of the FMC. The fall of Machado also precipitated the resignation of many FMC executives, including its president. The new Government of Grau San Martin decreed the obligatory federation of all physicians. This prompted protests and demonstrations from the Spanish societies which prompted President Grau to subject the problem to further study. The physicians responded with protest at the Spanish Embassy. There was a great deal of anti-Spanish sentiment culminating in anti-Spanish riots. The National Assembly of the FMC extended the strike to all principal mutualist groups in Cuba (15). Finally in 1934 the conflicts between the FMC and the Spanish associations were cooled off with the governments assurance of a minimum wage and the submission of the other strike disputes to arbitration by the International Labor Office (ILO) under the League of Nations. A description of that period by Hugh Thomas (16) reflected the upheaval within the Cuban society and the medical profession:

Revolutionary demands existed on all sides; all parties declared themselves to be revolutionary and protest continued. In February, 30,000 tobacco workers struck ... and even doctors and nurses struck against Spanish private medical schemes, with extraordinary scenes at hospitals: patients were turned away, while doctors were seen stomping up and down the Prado singing the "International." No death certificates were given and coffins piled up. One doctor was shot and buried in a red flag. Bombs exploded throughout the island ...

Unable to restore order and consolidate power Grau was replaced by another physician president, Carlos Mendieta. With Fulgencio Batista as his strongman, Mendieta immediately suspended the decree of compulsory federation issued by Grau. In protest, the FMC expelled the Director of Sanitation, the physician who promulgated the order (17). The medical strikes continued against

mutualist plans and municipal hospitals. They were followed by government suppression and finally in March of 1935 the FMC was declared illegal and their offices destroyed (18). In 1938, there was a compromise and the FMC reappeared with a comprehensive platform calling for a minimum wage scale for physicians, prohibition on multiple position holding, improved hospitals, school health, sanitary provision for the poor, pharmaceutical controls, workers' accident protection, government support against professional intrusion, physicians' retirement plan and the control of the ethnic mutualist plans. This reflected the ideology of the Ala Izquierda, however, the FMC remained under control of the Union Federativa (19). The Ala Izquierda and many other liberals in the FMC, including the new medical school classes consolidated their power to form a new party called Accion Inmediata. The Accion Inmediata wielded considerable power in the FMC, and within the next decade many of the demands in the 1938 platform were met in one form or another (20). Also many of these demands were included in the 1940 Constitution, reflecting the power of physicians and other professional groups in the framing of the liberal constitution (21). In 1941 the Accion Inmediata won the leadership of the Havana Medical College and by 1943 they had control of the FMC. Single post, a physicians' retirement plan and a \$100 minimum monthly salary was decreed by the Batista regime in 1943 followed by compulsory federation in 1944. A Womens' Section of the Accion Inmediata was formed in 1943. By 1945 there were about thirty women among Havana's one thousand physicians. The FMC suffered greatly in the ensuing years from the anti-communist purges of Grau San Martin, elected president in 1945, and Carlos Prio, elected five years later.

The late forties and the decade of the fifties marked a period of bureaucratic entrenchment for the medical profession in Cuba. Professional protection of immobility rights and compulsory federation won in the early forties, seemed only to reverse the

gains made in the earlier periods. Multiple position holdings continued. The quality of medical education was thought to have declined in the inefficient organization of autonomous department hierarchies, but the university professors could not be moved. This stagnation lasted until early 1959 when many frustrated former members of the Accion Inmediata saw the fomenting revolution as a nostalgic return to the earlier revolutionary period. Many physicians who were involved in the medical and political struggles from 1925 to 1945 had come to the realization that socialism was a practical method of implementing the objectives of social medicine; for which they had struggled for so long.

In presocialist Cuba, the conflicts within the medical profession reflected the major organizational forms that competed for hegemony over the delivery of medical services. These were:

- 1) A small number of very large mutualist plans directed by the ethnic associations.
- 2) A large number of small private or cooperative mutualist plans.
- 3) Public assistance for the poor.
- 4) Private fee-for-service practice in the setting of the office, private clinic or a combination of the three categories above.

In addition to the conflict of occupational goals created by the different forms of medical practice, the Cuban government in many ways served to unify the medical profession around many issues of professional autonomy, civil rights, human rights, educational freedom and job security. The proletarianization of large segments of the medical profession by mutualism tended to radicalize many physicians in Cuba around labor issues that generally would not be of major concern to a medical class. The overlapping nature of many of these issues created a very fractionalized but radical and politically active medical profession. In 1934 about thirty of

Havana's physicians belonged to the Communist Party (22). After 1943 communists were always represented in the leadership of the FMC; however, they were made impotent by anti-communist purges.

In 1959 the reorganized Ministry of Health and Social Assistance moved into an office building to the Cuban Medical Federation. Because many progressives and revolutionaries left the FMC for the ministry, by 1960 the Accion Inmediata was controlled by physicians who opposed many of the new government's policies which they felt threatened the autonomy of the profession. Government supporters responded by forming the Party of the Revolution which won control of the FMC in 1961. Two years later the FMC declared itself obsolete. This was a result of the events in the first three years of the revolution and the consequent emmigration of 1/3 of the countries physicians (23).

MEDICAL EDUCATION AFTER 1959

Although it would seem that the revolution theoretically gave substance to the professional idealism of many Cuban physicians, it was in the area of medical education that the most profound changes within the profession started. In 1959 the University of Havana was the most influential institution of the professional class. Most influential physicians had faculty appointments at the university. On the other hand, faculty appointments served to make physicians influential and prosperous in their profession. By 1963 there had been substantial changes in the medical curriculum, the organization of departments and student careers. The rapid changes bypassed old procedural regulation and this created conflicts with the professional associations with their privileged immobility, while government control violated the ideal of university

autonomy. Many physicians felt that the government was blatantly violating the principles that the prerevolutionary struggles had gained for the Cuban professional and medical classes. The following conditions were in effect by 1963:

1) There was a change in the social origin of university students. This was a direct consequence of the policy established in 1960 of free tuition for all, and scholarships and special programs for disadvantaged students (24). The large percentage of lower class students in the university was also intensified by the departure of many middle and upper class students.

2) In 1962 there was an intensive program to increase the number of Cuban physicians. The new students in 1963 had not simply chosen a medical career; they had been called by the revolution. In a speech in 1962 Fidel Castro analyzed the "shameful flight of physicians" and called on the revolutionary youth, workers and students to volunteer for medical training. Of the 6,261 physicians in Cuba in 1959 it is estimated that 3,000 left the country by 1963 (25). As part of the campaign to attract students to the medical profession, physicians were paid the highest salaries of all professions in Cuba. They were also given special privileges such as double gas rations. This was in direct contrast to the relative marginal economic existence of a large percentage medical profession throughout Cuba's history (26). The educational reforms promulgated in 1960 also provided that all students, after completion of their baccalaureate degree (27), were free to study any career of their choice without restrictions by quota or monetary constraints. The effect of these policies was an enthusiastic response in the universities, high schools and among the working youth. Students in the humanities, law and social studies transferred to medicine. Many high school students chose a medical career. Almost 1/2 of the first year class in September of 1963 were working youths, many of whom were given preparatory courses before

entering the medical curriculum (28). The new class of over 1,000 medical students consisted of many women and blacks and was a 400% increase over the last prerevolutionary entering class.

3) By 1963, two additional medical schools were established at the Universities of Las Villas and Santiago de Cuba. Also the number of teaching hospitals were increased from four to seven.

4) Hospital internship was made a prerequisite for graduation from medical school. In the past, there had been about thirty internships positions available for an average class of about 200 students.

5) Consistent with the compulsory rural service requirement for graduates after 1960, the medical school curriculum was changed to include epidemiology, statistics, health service administration, and rural or tropical medicine.

6) In 1961 numerous radical reforms were introduced in the university organizational structure including direct participation in the university affairs by the Ministry of Education, and equally weighted faculty and student representation in the university administration (29). This ended the formal control of the faculty over university affairs and the formal autonomy of the university.

7) The budget of the university was expanded significantly and designed to more appropriately reflect the practical societal needs of the Cuban people (30).

8) Many new revolutionary organizations were formed on the university campus including the student and faculty militia, the new Federation of University Students and many others.

9) Finally, many foreign and young Cuban professors were hired to replace the large number of prerevolutionary faculty that left during the early years of reorganization.

In addition to the above changes, it is interesting to note that the medical faculty had no women in 1958 while there were about twelve in 1963 (31). Also in that same year, a Cuban report to

the World Health Organization stated that Cuba would someday offer medical support to other countries in the process of liberation(32).

Although many of the above changes by 1963 were structural in nature, many of the conflicts that occurred in medical education reflected a "class" and "cultural" revolution. The prerevolutionary faculty were often estranged from their new students. Curriculum innovation, changes in grading methods, the reorganization of departments, student and junior faculty power in university governance, the increased employment of women and other minorities threatened the former prestige and control of the senior faculty. The new students were feared by both the senior faculty and the "old students." Charges of reaction, counter-revolution and racism were constantly being made by the new students which no doubt, put many of the senior faculty on the defensive. This, unquestionably, created an unusually tense and belligerent milieu in the educational institutions.

In the ensuing years, Cuban medical education was changed significantly; mostly with the objectives of realizing the goals of the revolution and not necessarily the goals of education per se. For example, one response to the acute shortage of physicians created by the mass emigration was the shortening of the pre-internship period from six to four years for medicine and from four to three years in dentistry (33). Another significant structural experiment was the escalated vertical internship (34). This program, started in 1962, recruited medical students to vertical internships that offered early specialty certification in areas seriously affected by emigration or where the need for specialty services had increased based on the regionalization plan of MINSAP in 1962. Both these programs were terminated in 1965, the same year that the Ministry of Public Health turned its attention to the development of the area polyclinic. The preinternship curriculum was extended to five years

and the rotating internship was now compulsory for all students (35). The aim of medical education was now directed towards creating an integral physician, prepared to administer primary clinical services at the polyclinic level. He should also be prepared to integrate these functions with health education and community work. The rotating internship after this time included, in addition to rotations in the various clinical departments, a rotation through the Department of Hygiene and Epidemiology of MINSAP (36).

After 1965, the year that marks the end of the first period of transition in Cuban medical education; teachers and students, like other physicians, were required to give services in area polyclinics. Some polyclinics near teaching hospitals had developed specialized teaching functions. This community orientation of medical education, no doubt, was a significant factor in the development of the concept of "medicine in the community" that was to develop in the seventies and became the dominant form of medical practice in Cuba. By 1968 the medical orientation and the political complexion of medical students had changed significantly since prerevolutionary times. Competition among students was basically "socialist competition." Students studied in groups and the competition was between groups, not individuals. Students spent forty five days of each year in agricultural labor as they developed their clinical skills (37). One observer has pointed out that next to students political science, medical students had the highest percentage of young communist within their ranks (38). Up until 1968 the curriculum in medical schools was quite similar to what existed before 1959. Most of the changes that had been made were designed to upgrade rather than produce new types of physicians. After 1968, however, the teaching method in the Medical School of Havana was changed. Formerly done by

departments (e.g. surgery, internal medicine, pediatrics), that method was replaced by teaching of systems (e.g. circulatory system, nervous system, digestive system). This is done with the cooperation of all departments, including Hygiene and Epidemiology, which serves as a resource for other departments (39). Another curriculum change in 1968 was that epidemiology, family health, medical psychology, rural health, tropical medicine and social medicine were, for the most part, eliminated as separate courses while their teaching and their perspectives were expected to be integrated into virtually every course, with support from the department of epidemiology. This was also a deliberate attempt to maximize the influence of epidemiology through the clinical departments (40).

These new changes were motivated by pressure from the student body, in an attempt to avoid the excessive duplication inherent in the traditional methods. Besides the rotating internships, straight internships were developed in internal medicine, surgery, pediatrics, ENT and other specialties. Students would enter one depending on the specialty they intend to choose. By 1970, forty two residencies had been developed, each from two to four years duration; designed to prepare physicians to be applicable for certification in the specialty boards. The one year compulsory gov't medical service legislated in 1960 was expanded to two and later three years.

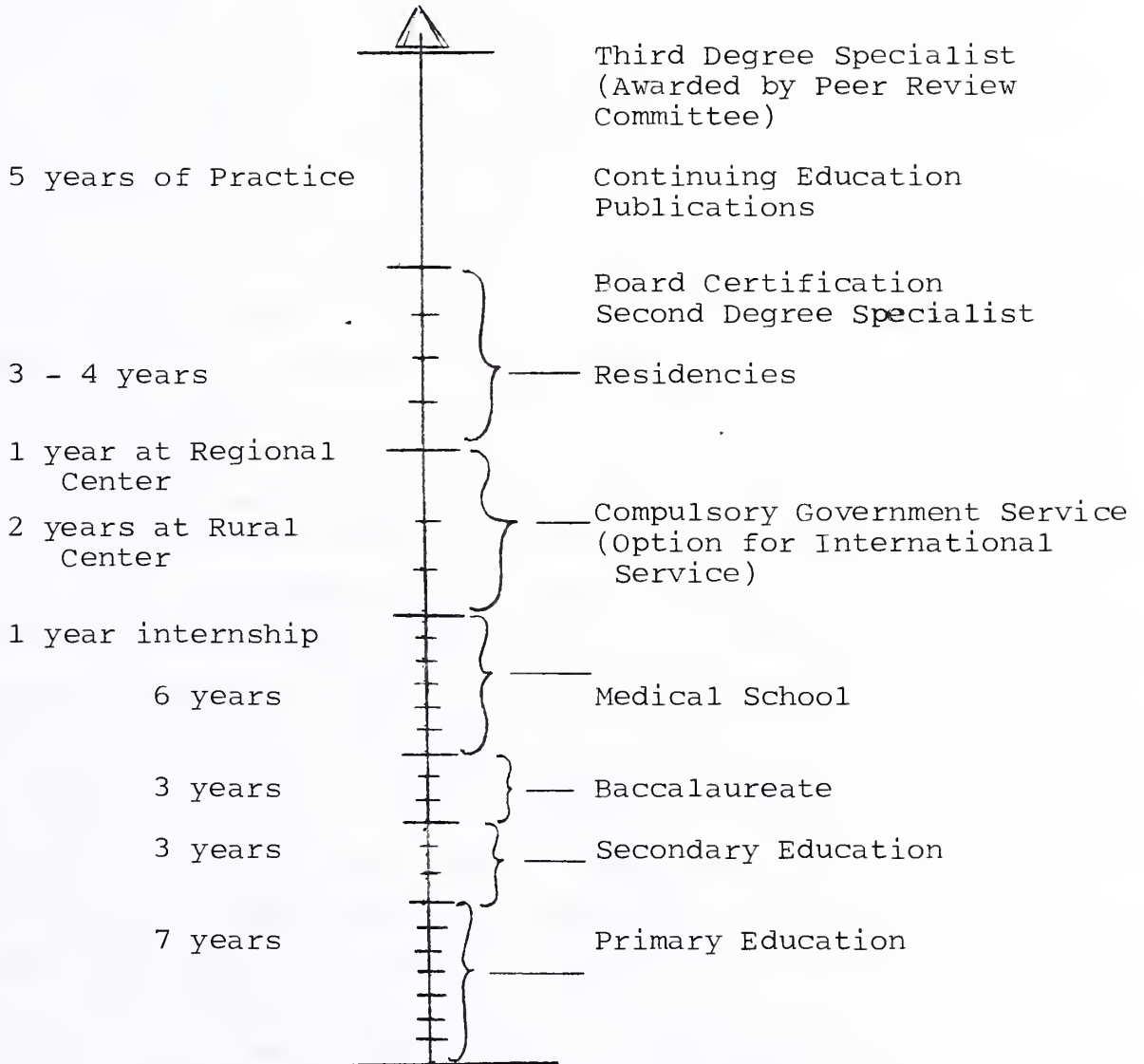
The educational process in Cuban medicine involves seven years of primary school, three years of secondary school, three years of the baccalaureate program (roughly equivalent to high school plus one year of community college in the U.S.) and six years of medical school (including one year of internship) (41). The first two years in medical school is devoted to basic sciences which also involves epidemiology and health service administration. The following three years are for clinical work. In the fourth, fifth and sixth (internship) years, medical students work in the agricultural labor camps.

along with a nurse and technical sanitarian, where they provided health services for approximately 2,000 sugar cane or other agricultural workers. The fifth year students and the interns attend two sessions of four hours every week at the polyclinic or health center, where they work under the supervision of a resident. During their fifth year of study, the medical students apply for an available internship that is regulated by the Vice-Ministry of Medical Care and Teaching of MINSAP. The first five years of the medical curriculum were administratively run by the Ministry of Education until the mid seventies when the supervision of both medical and dental education was transferred to MINSAP.

Once the internship is completed, the new physician serves two years of rural health service in a rural hospital or rural health center. In 1970, most physicians who completed their rural service went on to do their residency in one of the 38 specialties in medicine or four dental specialties. Each resident has to spend three sessions each week at the polyclinic or health center. Residents in one of the four public health specialties (epidemiology, hygiene or sanitation, nutrition and health service administration) study at the National Teaching Unit of MINSAP. Graduates chosen for these public health residencies had to be in the top 10% of their medical school class and must have shown particular dedication in their internship and rural medical service. Residencies vary from two to four years and lead to board certification or classification of second degree specialist. After a minimum of five years of practice, based on number of publications, experience, special courses and other continuing education activities, a physician may be granted the classification of third degree specialist by a peer review committee of that specialty. This classification scheme was developed in 1962.

Figure 6

MEDICAL EDUCATION IN CUBA, 1980



THE ACCESS AND AVAILABILITY OF PHYSICIANS IN CUBA

Cuba, like most developing and third world countries, had a severe maldistribution of physicians throughout the country. In 1934, Cuba had 2,454 physicians for a population of 3,962,684 (64 physicians per 100,000 inhabitants). Forty seven percent (1,200) of the physicians were concentrated in the City of Havana which had 450 inhabitants per physician (222 physicians per 100,000 population), while there were 2,250 inhabitants per physician (44 physicians per 100,000 population) in the interior (42). The 1934 International Labor Office (ILO) report commented on the "plethora of physicians" in Havana. At the same time the Province of Oriente had 3,153 inhabitants per physician (32 per 100,000). Of the 1,200 Havana physicians, 52% were involved with some form of prepaid group practice (mutualism), while only 15% treated public patients with the rest in private practice. Members of ethnic mutualist associations tended to be Spanish small merchants and artisans, while the members of the newer mutualist programs were predominantly Cuban middle class workers and professionals. On the other hand, patients on public assistance were predominantly black and mulatto and made up more than 1/3 of Havana's population. In 1957 a conference held by the Cuban Medical Federation again referred to the "plethora of physicians" in Havana. In 1959 there were 6,261 physicians in Cuba and there were 91 physicians per 100,000 population (1,100 inhabitants per physician). However, 65% of the physicians were concentrated in Havana (43). This distribution was much worse than in 1934. The City of Havana had 400 physicians per 100,000 inhabitants (240/100,000 in the Province of Havana), while on the opposite end of the island in Oriente Province there were only 38 physicians per 100,000 inhabitants (44). The Revolutionary Government's first major campaign was aimed at this maldistribution of health manpower. In 1960 Law 723 required medical graduates to spend one year in rural service. By 1963 1,500 physicians and 50 dentists had done rural service.

The departure of nearly 3,000 physicians from the country by 1963 resulted in a perceived shortage of physicians in Cuba. The number of physicians had decreased to 5,841 in 1962 (1,200 inhabitants per physician). The physician per population ratio was reduced to 83/100,000 (45). The response of the government was a massive campaign in 1963 to train more physicians at a faster rate. The result of this intensive effort was that 5,293 new physicians were trained between 1959 and 1970 bringing the total number of physicians to over 7,000 at that time. Of these physicians less than 10% were in part-time private practice and less than 2% were full-time private practitioners. Most of these private practitioners were in Havana and practicing before 1958 (46). Most of the new physicians were distributed throughout the island following the policy of regionalization based on the manpower needs of the country. Job opportunities were made available in physician shortage areas while positions were closed in over-concentrated areas. By 1971, 42% of the physicians were in the capital.

In 1963, 30% of all accepted university applicants were in medicine. The Havana Medical School graduated 395 physicians in 1965 and by 1970 the graduating class numbered 1,361. By 1970, 50% of all medical students were women. Having corrected the problem of supply, a quota was established in 1971 which reduced the number of students accepted by medical schools to 20% of all university applicants. At this point more attention was given to developing new types of auxiliary medical personnel such as medical and dental assistants and to upgrading other health professionals such as nurses.

By 1980, Cuba had approximately 15,200 physicians with one doctor for every 658 inhabitants (152/100,000) (47). About 50% of the practicing physicians are women. Grundy and others (48) have reported that in 1978 approximately 13% (1,500) of all Cuban physicians along with almost 1,000 other Cuban medical personnel were in more than 20 foreign countries giving medical assistance.

A majority of them were in Iraq, Angola, Libya and Ethiopia. In the Cape Verde Islands approximately 44 of the 62 physicians in the country were Cubans. In Guinea - Bissau at least half of the country's physicians are Cubans and in Sao Tome, Cubans make up 80% of the nation's physicians. Non-African countries that Cuban medical personnel have given assistance to include Vietnam, Laos, Guyana and Jamaica. Physician service abroad is usually one to two years and the Cuban physicians are paid a salary comparable to that of the native physicians in the country in which they are stationed. The physician's family remain in Cuba and continue to receive the full salary that the doctor would receive for domestic service.

In summary, Cuba has made outstanding progress in the area of physician manpower supply and distribution. Committed to providing first class medical care to all its people, the Cuban government has directed its manpower policy to train predominantly physicians to provide primary medical care, using primary specialists instead of general practitioners. In addition, Cuba has also fulfilled the promise it made to the World Health Organization in 1963: to provide medical assistance to countries in need during their process of liberation. This is truly a great achievement for a relatively poor developing country, considering the fact that the most developed countries, especially the United States, drain skilled human resources from poorer countries.

DENTAL, PARAMEDICAL AND AUXILIARY MEDICAL PERSONNEL

Although not as dramatic as medicine, the supply and distribution of dental personnel in Cuba was significantly improved in the twenty years of Cuban Revolution. Dentistry was brought to the University of Havana following the North American intervention at the turn of the century (49). It remained a separate professional organization from medicine and in some respects, due to its professional elitism, was more powerful. Dental schools managed to sharply curtail their number of students, notwithstanding many student protests against this measure. Unlike medicine, there were a limited number of dentists in Cuba in 1959 and the mass emmigration of dentists created a severe shortage by 1963 (50). Dentistry was subsequently unified with medicine and given the name estomatology. However, that did not serve to introduce large numbers of students into dental school. Dental posts were specified in the 1965 regionalization plans, however, some polyclinics did not have a dentist on the staff. In order to rationalize the dental services and maximize the use of scarce manpower resources, dentistry was developed in dental clinics instead of polyclinics, particularly in urban areas. By 1968 most polyclinics offered the services of an estomatologist, but they referred much of their dental work to dental clinics when they were accessible.

When dental services became free after the revolution, the increased demand overwhelmed the availability of existing services. Dental auxiliaries were rapidly trained and they worked as teams of about three auxiliaries with each dentist. During this same time, the high-speed drill was developed and was imported to Cuba (as part of the medical ransom that the U.S. paid in return for the mercenaries captured at the Bay of Pigs) (51).

This new technology coupled with the teamwork method, made effective use of assembly-line procedures in dental clinics to meet the increased demand.

Dentistry was rationalized based on the priority of serving children and making it possible for working parents to bring their children to clinics. Dental clinics were set up on a regionalized bases in the schools themselves. Students were treated during the school day, receiving regular check ups and fluoride applications. Some observers have postulated that the work of dentistry may be considered more "revolutionary" than medicine based on its more conservative prerevolutionary history. The dental profession was forced to make more innovative use of scarce personnel. Also, there appears to be a similarity between the horizontal team collaboration of physician and nurses in the 1975 polyclinic model and the roles developed earlier in estomatology (52). The number of university trained dentists in Cuba in 1958 were about 250 and by 1976 these were 2,291. From 1959 to 1976 a total of 1,204 dental assistants were trained and currently there are approximately 1,100 in the labor force (53).

The nursing profession and other auxiliary medical personnel have not progressed to the same extent as the aforementioned categories. Like medicine and dentistry, however, prerevolutionary specialty training was accomplished, for the most part, by non-systematic work experience. Prerevolutionary Cuba had six small nursing schools, three of them in Havana. With the exception of a small technical school for medical technicians there were no training facilities for most technicians and auxiliaries. Trained nurses worked mostly in mutualist centers. The public sector was cared for mostly by self-trained practical nurses or aids with minimal primary education. In 1959 there were a total of only 32 graduates of all auxiliary health occupations. By 1969 3,750 graduated. Between 1959 and 1976 there was a total of 61,674 graduates in auxiliary health occupations. Thus, most auxiliary personnel in Cuba today

graduated from schools planned and developed after the revolution. By 1968, 17,085 nursing and paramedical personnel had graduated from Cuban schools and 1,470 had completed specialty training after two years of practice (54). In 1960, the training of nursing auxiliaries was started in response to the expansion of basic health services. Regionalization required the training of technicians which was developed in 1963. By 1965, many of these programs had expanded and the specialty training of nurses was introduced. By 1968 there was a broad range of paramedical educational programs in Cuba and these programs were being increasingly decentralized. From 1959 to 1976 Cuba had trained 7,833 nurses, 2,517 specialty nurses, 25,899 nursing aides, 1,626 x-ray technicians, 4,993 laboratory technologists, 2,015 auxiliary technical sanitarians and 1,204 dental assistants (55). Navarro reports that as part of the overall policy of upgrading health personnel, "witch doctors" (curanderos) were integrated within the health service delivery system and were included on MINSAP's payroll. They were trained for a short period and then given positions as educators and assistants to auxiliaries in health posts and rural centers. In 1976 Cuba had a health care labor force of 138,201 people (56).

In summary, the training of health manpower in Cuba was directly related to the needs of the planned health care system. Priority was given to the training of physicians in the first ten years of the revolution. However, since 1970 a much greater emphasis has been placed on training paramedical and auxiliary health personnel. Many observers postulate that the training of physicians at the expense of other paramedical personnel may not have been the best use of the countries resources (57). Nonetheless, Cuba has developed and utilized its human resources in a systematic and rational way to provide access to quality health services, not only at home but in many parts of the developing world.

HEALTH FACILITIES IN CUBA

The first health facilities in Cuba were crude improvisations used to care for soldiers and immigrants (58). By 1600 the cities of Santiago and Bayamo in the Province of Oriente and Havana in the province of the same name had established general hospitals. By the late 1700s seven other cities had general hospitals which were former military health posts. In 1604 a small four bed specialty hospital for women was developed in Havana and by 1800 there were two other womens' hospitals in Puerto Principe and Trinidad. A leprosy hospital was established in Havana in 1681 and in Puerto Principe in 1764. The first mental institution was not established until after 1800 in Havana. Monasteries and cathedrals had a few shelters for the poor, the aged and the infirm, who were mostly old slaves and freedmen. For yellow fever and other epidemics houses were rented. War, migration, commerce and natural disaster created the need for hospitals in Cuba. Most patients, however, preferred to be cared for at home. It was mainly the homeless that used hospitals. The financing of hospitals depended on the charity of the church or the rich. The first leprosy hospital was financed by a wealthy Spanish man when his son was ordered secluded by the authorities (59). Confiscated properties from law violators were sometimes designated as hospitals. Garrisoned soldiers were discounted a monthly sum for prepayment of hospitalization. This was used to support many of the early municipal hospitals but after the separation of military and civilian hospitalization this source of financing was lost. The economics of colonization with the cabildo as the King's representative, left the hospitals chronically underfunded and local revenues were hardly sufficient (60). This changed in 1777 when Cuba became a captaincy-general. In addition, economic expansion at this time also gave the Cuban colony its first financial self-sufficiency.

Hospital personnel in the early Cuban hospitals included barber surgeons, stewards, chaplains, servants and maybe a visiting physician. Older women, called madres, provided many of the caring services. Sometimes these functions were provided by nuns. Friars and nuns were forbidden to act as medical practitioners; a role exclusively performed by barbers, surgeons and physicians. Prescription of drugs was the exclusive province of the physician. Teaching was an insignificant and informal activity before 1800.

In summary, the social and demographic categories that influenced hospital development and specialization in Cuba were: officer and common soldier, military and civilian, white and black, slave and freedmen, male and female, and adult and child. Medical categories that necessitated hospital specialization were 1) conditions requiring acute care versus those requiring custodial care, 2) contagious or dangerous versus non-contagious or innocuous conditions, and 3) physiological versus psychological conditions. Beds, wards and hospitals were separated along these lines. Aside from psychological and physical comfort, early hospitals and practitioners contributed little to the state of health and well-being of the population. In many instances some services were actually detrimental. Blood letting was the preferred treatment for fevers. Surgery often caused infection. In 1816, Thomas Romay y Charcon argued for the teaching of practical anatomy and clinical medicine in the military hospital. These reforms were subsequently implemented along with history taking, rounds with the professor, case presentation by students and professors, record keeping and follow-up review of patients (61).

In the last half of the nineteenth century, endemic yellow fever and the lack of adequate public facilities stimulated the development of small private infirmaries (quintas or casas de salud). Many of these quintas were established on a prepayment

basis by mutual aid societies of the Spanish immigrants. By the end of the nineteenth century the quintas of the main Havana ethnic centers grew and developed their own hospitals, caring for their own members and new immigrants as well (62). At the turn of the century the two significant municipal hospitals in Havana were: Las Mercedes, constructed in 1866; and Calixto Garcia, a former military hospital (63). Cuba's first school of nursing was established in the Mercedes Hospital with U.S. nurses serving as its first instructors. Its first class graduated in 1902.

In 1934 Cuba had about 12,200 beds (3.1 beds per 1,000 population) and more than half of the hospital beds were concentrated in Havana (64). There were 3,300 beds among the three largest ethnic mutualities. They had one bed per 23 members. The new mutualist groups had about 32 small facilities with hospital clinics and a few beds. The two large public hospitals, Mercedes and Calixto Garcia, had about 3,014 beds between them and four small public institutions with a ratio of 1 bed per 180 inhabitants (5.5 beds per 1,000 population). They had about one bed per 67 "poor" people (15/1,000) or one bed per 112 people not in mutualism (8.9/1000). There were very few private beds. Private physicians were involved mostly with office practice and they made home visits. The public hospitals provided the only free hospitalization. The large ethnic mutualities provided both hospitalization and dispensary services while the new mutualities provided home care and dispensary services with some hospitalization.

In the interior of the country there were about 30 small public hospitals with an average bed size of 67. They had a total of 2,089 beds and had a bed per population ratio of 1/1,700 (.6 beds per 1,000 population) There were only a few mutualities in the interior.

By 1959 Cuba had over 28,500 hospital beds with 4.2 beds per 1,000 population. There were 339 hospitals in the country with an average size of 83 beds. The maldistribution of hospital facilities had not changed much (65). While Havana only contained 22% of the

population, it had 54.7% of all beds, with a bed per population ratio of 1/71 or 14 per thousand. The province of Havana had 9.1 beds per 1,000. Oriente, one of the poorest provinces, with 35% of the population, had only 15.5% of all the beds in Cuba. It had a bed/pop ratio of 1/625 or 1.6 per thousand (65).

After 1959, the revolutionary government centralized the hospital services in Cuba based on a regional model that grouped facilities according to level of care (secondary and tertiary). The objective was to maximize the efficiency of the system and avoid the duplication of services. Many small inefficient urban hospitals were closed reducing the total number of hospitals from 339 in 1958 to 219 in 1969. The average hospital size was increased from 83 to 181 beds during this same period. Many new health centers were built in areas without health services. Of the new health centers, over 50% were built in rural areas. In the first decade of the revolution, the ratio of beds per 1,000 population in Havana was reduced from 14/1000 in 1958 to 12/1000 in 1969. Havana province had a reduction from 9.1/1000 in 1958 to 7.6/1000 in 1976. In Oriente it was increased from 1.6/1000 to 3.7/1000. Based on the regional equalization program 47.4% of the new hospital beds were placed in the province of Oriente. By 1969 about 25,847 new beds were added to the 15,179 beds that remained since 1959. In 1977 Cuba had over 46,000 beds with 200 inhabitants per bed or 5 beds per 1,000 population.

The new government also sought to reorient the health service system from the hospital to the community. There was a centralization of hospital care at the regional and provincial levels and a decentralization of ambulatory care from the hospital outpatient departments and health centers. In 1964, 32% of all medical visits occurred in health centers while in 1969, this increased to 65%.

Today, Cuba has a network of 345 polyclinics and 140 rural health posts providing mainly ambulatory services. There are 115 dental clinics. Primary health care is available and accessible to everyone within a short travel time. In 1963, there were two medical ambulatory visits per person per year and in 1975 this was increased to 4.8. Dental ambulatory visits are about 4 per person per year. In 1976 there were 257 hospitals in the country with 5 beds per 1,000 population. There were 148 general medical surgical hospitals, 25 maternity hospitals, 31 maternity-infant care hospitals and 19 psychiatric hospitals. In 1976, 27.2% of the beds were in pediatrics, 18.4% in OE/GYN, 54.4% in other specialties. Total bed utilization in 1975 was 81.2% with the highest in OB/GYN and the lowest in pediatrics (76.5%) (66). Of all child-births, 98% occur in hospitals.

The prioritization of health care in Cuba has allowed the government to make health facilities in Cuba available and accessible within a rational, comprehensive scheme of health care delivery. Roughly 85% of all health expenditures are from public sources. The remainder is derived from non-public sources such as payment by patients for a fraction of the cost of drugs and personal expenditures for non essential private health services (i.e. dental restorative care). It is estimated that Cuba spends about 10 - 15% of its GNP on health services (67). The young Cuban physician makes about 250 pesos per month (currently about \$310) per month, hardly more than that of the skilled manual worker. With seniority and further training his salary may rise to 500 pesos, but not nearly as high as the salary that physicians made early in the revolutionary period when the salaries were 600 pesos per month.

THE HEALTH STATUS OF THE CUBAN PEOPLE

Havana today is an exciting cosmopolitan city of about two million people (20% of the total population). The overwhelming majority of the buildings are more than twenty years old with many in the process of being renovated. This reflects a direct policy of the government to control the size and development of the city. Most development investments in housing and other facilities have been concentrated in the rural areas. Cities such as Santiago de Cuba in the previously underdeveloped province of Oriente have also developed substantially, reflecting the policy of regional equalization.

Sanitation facilities in the cities and rural areas are adequate. There is a high priority given to recreation. Parks are abundant and baseball diamonds are seen throughout Havana. All Cuban workers get a months paid vacation every year. The government finances travel and accomodations for vacations in cities inside and outside Cuba (mainly in the Socialist world). Cuban hotels are filled with Cuban vacationers and European and Third World foreign visitors. All foreigners, including North Americans, are treated with respect and dignity. Former exclusive private resorts, beaches and country clubs have been turned into public parks, vacation spots, museums and amusement parks.

The streets in Havana are well swept and safe for pedestrians. Public transportation is regular and dependable. In the cities vegetables and fruits are in relative abundance for purchase by the citizens. Presently, productivity is high in the manufacturing, agricultural and service sectors. Consumer durables such as private cars, regrigerators, televisions and stereophonic equipment are in more abundance as Japanese suppliers have made the prices of these items more affordable. Prostitution is not seen in the streets and gambling and alcoholism are rare. Street beggars or barefoot children are not seen in Havana. All children go to school clad in

uniforms representing their level of schooling. Truancy is rare. At nights most blocks are watched in the earlier hours by a female and in the later hours and early morning by a male. This responsibility is distributed among members of the CDR of which more than 80% of the citizens belong.

Cubans seem to express a certain optimism and determination about the future. Many feel that Cuban Socialism has come of age and many of the new challenges involve "objective difficulties," which are problems outside their control such as the oil shortage, natural disasters, the U.S. economic blockade (68). Cubans also in their foreign policy of Proletarian Internationalism play an active role in world politics. Nuclear war with the U.S. is considered a constant threat in Cuba and as a result there is constant mobilization of the population for readiness against a natural or man-made disaster.

There is a spirit of comradarie that exist in the normal relationship among Cubans. A good friend is referred to as "companero," but so is the friendly stranger in the streets. Also in addressing the Head of State one may say "Companero Fidel." De facto and de jure racism have been eliminated. The revolution has substantially improved the social and economic status of the Cubans of African decent. Most Cubans proudly acknowledge and cultivate their Afro-Cuban heritage. Billboards in the streets of Havana and Santiago verbalize the solidarity between the Cubans and their "African brothers."

In Cuba, through the process of income leveling the highest salaries are no more than seven times the lowest ones. Nearly all workers work a standard eight hour day. Rent is never more than ten percent of income. Most social services are free. Some items such as meat and gasoline continue to be rationed but many formerly

rationed items are now either not rationed or exist on a parallel market (i.e. the basic supply is rationed to the population and the surplus or alternative choices are sold in the open market (69).

Religion is still practiced freely in Cuba. The government no longer encourages or legitimizes Catholicism as it did before the revolution. As a result, the number of people practicing Catholicism has decreased substantially. Many other religious sects continue to thrive however, especially those of African origin that had been suppressed over the years by the Catholic majority.

In 1974 the Cuban Family Code was adopted. This document reaffirmed certain social principles and feminist reforms that emanated from over a year of heated public debate.

In addressing the subject of morbidity and mortality in Cuba, it should be recognized that the data prior to the revolution should be viewed with caution. There was serious under reporting of most diseases and mortality and morbidity statistics were incomplete and unreliable. The revolutionary government, especially since 1965 placed a high priority in establishing a reliable system of data gathering within the health sector - covering the entire population. In 1956, about 53% of all deaths in Cuba were reported and in the rural areas this figure was as low as 30%. By 1969, 98% of all deaths were reported and documented with medical certificates (70).

Malnutrition was a serious problem in Cuba before the revolution. In 1956, a study made by Catholic University of the agricultural workers, who comprised over 40% of the labor force, reported widespread malnutrition among most of the rural population. The agricultural worker was found to be 16 pounds below the national average. A three day survey of this group showed that only 4% of the rural population ate beef, 1% ate fish, 2.12% ate eggs, 11.2% drank milk and 3.36% ate bread (71). Other studies have also shown that

during this time 30% of the Cuban population suffered from malnutrition and 60% in the rural areas. Navarro has postulated that 80% of children in rural areas suffered from malnutrition before the revolution (72). By 1969 most of these conditions had been reversed. The average caloric intake in Cuba was above the established standard requirement and much higher than the Latin American average. This was due to specific policies implemented by the revolutionary government. Beginning in 1959, all children under 7 and adults over 65, the sick, pregnant females and miners received milk delivered to their homes free of charge. Food items such as meat, fish, poultry, butter, eggs, coffee, bread, rice, sugar and cooking oil were rationed to ensure equitable distribution. In 1979 Humberto Perez of the central planning office commented: "Rationing is a way to meet certain needs more efficiently and more fairly. It meets those needs in a more even-handed way than is done in capitalist countries where there is no formal rationing... The ration book does not necessarily signify a lower standard of living."

Radical changes in the socioeconomic development of the Cuban population has significantly improved their health status. The control of environmental diseases, the virtual elimination of malnutrition and improved access to good quality medical care have resulted in the increased relative prevalence of chronic conditions.

After the "triumph of the revolution" in 1959, systematic mass campaigns against preventable diseases were among the early efforts to reverse the underdevelopment of health in Cuba. Poliomyelitis, tuberculosis, diphtheria, malaria and tetanus were among the first targets.

Before 1962 about 300 cases of poliomyelitis were recorded each year. Since the vaccination campaign in 1962 no case of polio has been confirmed in the country.

The first anti-polio campaign was launched just prior to the April, 1961 Bay of Pigs invasion. The health officials had to overcome many obstacles including rumors that the intent of the vaccination was to "brainwash Cubans to become Communists." When it became evident that a strictly professionally administered, exclusively technical approach would fail the decision was made to fully involve the mass organizations, particularly the Committee for the Defense of the Revolution (CDR). At the municipal, provincial and national levels, the Ministry of Public Health met with technical representatives from the polyclinics and CDR representatives. The at-risk population was defined as all children under four and the planned procedures were developed. At a national meeting between MINSAP and the national leadership of the CDR a specific date for the vaccination was set in 1962 and the means of mass education were approved. Mass education involved posters, slogans and discussions employed through every media. The Federation of Cuban Women (FMC) discussed the plan with mothers and children at the day care centers and at their regular meetings. The Confederation of Cuban Workers (CTC) representatives posted announcements and had discussions of the importance of the campaign in most work centers. Student organizations were involved in discussion with the children at the schools. Newspapers, television, radio and billboards were used to educate the general public. Plans for transportation, storage and distribution all had to be coordinated. The first campaign took a total of five days with 85% of the target group vaccinated on the first day (73). One observer has reported on a small town that decided it was going to become famous for immunizing its at-risk population faster than any other. Using one adult volunteer for each child they lined the children up in the central square and at the ringing of a bell the candy vaccine was administered. The total time for immunization was under two minutes. According to the annual PAHO-WHO reports, 80% of all Cuban children under 15 years old (over two million) were vaccinated with polio vaccine in 11 days in 1962. In 1969 this task took three days and by 1970 it was down to one day. Today the entire at-risk population is vaccinated in only four hours with

an effectiveness of 98% determined by follow up surveys (74).

In 1958 death from tuberculosis in Cuba was 20 per 100,000 population and among the poor rates were much higher. Following the development of a systematic FCG program, improvements in the living conditions and an effective program of drug therapy, the serious complications of primary tuberculosis have virtually disappeared. In 1959, during a period of gross undernotification 18 cases of TF meningitis were recorded. The last case was reported in 1965. Between 1965 and 1976 the rate of cases of TF had decreased from 63.5/100,000 to 13.5/100,000. In 1977 there were only 2.3 deaths per 100,000 population caused by TB.

Until 1962 diphtheria cases were reported at an annual rate of around 90 per 100,000 population in Cuba. An immunization campaign was started in 1962 and a steep decline followed. By 1970 there were no cases of diphtheria reported in Cuba (75).

By 1968, Cuba had apparently achieved the eradication of malaria. In 1962 the morbidity of malaria affected over 3,500 Cubans (50/100,000 population) and it killed about 10 people. The successful attack on the anopheles mosquito involved widespread DDT spraying and mass campaigns to prevent the recurrence. (76).

In 1962, over 400 deaths from tetanus were recorded at a mortality rate of 5.5/100,000 population. Between 1965 and 1975 the number of notified cases of tetanus was reduced from 6.5 to .7 cases per 100,000 population (77). This reflected a decrease in the incidence of tetanus of over eighty six percent within a period of a decade. In 1975 there was a consensus among the health planners that tetanus, a preventable disease, should be eliminated. Subsequent analysis of all the cases of tetanus showed that over half the cases appeared in housewives. The epidemiologists observed that housewives

were not being vaccinated because they were neither in the schools nor the workplace where vaccination, follow up and control are most likely to occur. The decision was made to begin a campaign of national mobilization of housewives to insure that these women got immunized. The Federation of Cuban Women (FMC) was the mass organization selected for this task. 46,000 members of the FMC health brigades participated at the local level. They started by conducting a census to determine the amount of women that needed to be immunized. First and second shots of tetanus toxoid were administered to 400,175 women and 86,744 women received booster shots for five-year protection. In total, 486,919 women were vaccinated, representing 96% of Cuban housewives (77). By 1977 there were only 24 deaths from tetanus in Cuba, reflecting a rate of .3 deaths per 100,000 population (78).

Gastroenteritis, formerly the number one leading cause of infant death, has decreased substantially. Before 1965 approximately six infants per 1,000 live births died from gastroenteritis. As a result of improved infant nutrition and medical care, deaths from gastroenteritis in infants declined to approximately 2.5 per 1,000 live births by 1977. Thus it became the fifth leading cause of infant mortality following anoxia and hypoxia, congenital anomalies, pneumonia, and non hypoxic prenatal conditions (79). Morbidity from gastroenteritis in infants has not declined to the same extent as the mortality probably because the improvements in hygiene and sanitation have not been as remarkable as the gains that have been made in providing good nutrition and early hydration of these sick children.

According to the World Health Organization statistics, Infant mortality in Cuba was 37.6 per 1,000 live births in 1963 (79). These were probably spurious indices because of serious under reporting. MINSAP officials estimate the infant mortality rate at 60 to 80 deaths per 1,000 live births during the fifties. In 1970, following a steady decrease in infant mortality over the previous decade, the rate increased to 38.7 per 1,000 live births (80). In response, MINSAP launched a national program to decrease infant mortality. The goal was to reduce the rate to 20. Goals were also set to reduce the maternal mortality rate of 8.8 per 10,000 live

births in 1969 to 2.0. An analysis of the mortality and available resources was conducted with the aim of directing programs to areas of greatest need. Maternal education emphasized early prenatal medical care, breast feeding and good nutrition. In rural areas nutritional recovery homes were created. Free milk was provided for pregnant women and their newborns. High risk mothers were identified and given special care. Mass organizations were included in all areas of the program planning and implementation. By 1973, the IMR had fallen to 27.4 per 1,000 live births (the lowest in Latin America) and the maternal mortality rate had declined to 5.2 per 10,000 live births ((81). In 1976 there were less than 2,100 fetal deaths (11.2 per 1,000 live births). In that same year the WHO statistics reported an IMR of 23.3 infant deaths per 1,000 live births with a neonatal mortality of 15.1/1000 and a post-neonatal mortality of 8.2/1000

In 1979 MINSAP reported an IMR of 19.7 (82). The province of Havana had an IMR of 16/1000 in 1979. In the same province, the tertiary care maternity hospital named Americarios reported a rate of 10.4 infant deaths per 1000 live births (83). In 1979 Mayari Polyclinic in the mountains of Oriente reported an infant mortality rate of 12.6/1000 live births for the municipality with a neonatal rate of 10.08 and a post-neonatal rate of 2.58 (84). By 1976, maternal mortality was 4.2 per 10,000 live births (85). These are all outstanding indices of health status when one considers that the IMR was between 60 and 80 per 1000 live birth during the 1950s and as late as 1962 maternal mortality was 12 per 10,000 (86). In 1962 there were 6,000 fetal deaths approximating 24 for every 1,000 births.

As the Cubans enjoy a better quality of life, they also tend to live longer than their Latin American and Third World counterparts. In 1950 the average life expectancy in Cuba was less than 60 years.

Today over 80% of the population live past the age of 50 and in 1975 the expectation of life was 72 years for males and 75 years for females (87).

CURRENT HEALTH ISSUES IN CUBA

Many of the challenges that health planners face in Cuba today stem from economic progress and development. The leading causes of mortality tend to be chronic diseases associated with stress, the work environment and behavior. Among young and middle age workers (15-49 years old) accidents are now the third leading cause of death and among this same group the suicide rate has been rising. Also the rate of venereal disease has risen sharply since 1972. It is estimated that today 15 - 20 percent of all Cubans suffer from overweight.

The explanation for some of these patterns relate, to some extent, to more efficient systems for detecting and reporting health problems. Today, the gynecological norms set by MINSAP require that every woman is screened regularly for cervical cancer. If a woman misses her annual check up, she will be contacted by her CDR or FMC health representative. In the traditionally catholic pre-revolutionary Cuba, suicide and venereal diseases, if publicly revealed, could disgrace an entire family. Now they are treated as social issues and reporting is encouraged so that they can be treated and studied.

Cigarette smoking, associated with heart disease, some forms of cancer and respiratory diseases has been aggressively attacked by MINSAP. At the beginning of the revolution, there was a significant increase in cigarette consumption by young people. An analysis of the problem showed that cigarette prices were too low. This was also aggravated by the distribution of cigarettes (sometimes free) during student work periods and other occasions. The government responded with a series of price increases and policies that substantially

reduced the problem. The prices were increased over 1,000 percent. This was supplemented by a warning on each package of cigarette and extensive anti-smoking campaigns on various mass media. Since smoking became so expensive, most children could no longer afford it and indeed, many adults gave up the habit since it cost nearly \$60 a month for a pack a day smoker. A similar pricing method was also applied to alcoholic beverages.

Stress, which has been identified as an etiological factor in hypertension, cerebrovascular disease and coronary conditions, add significantly to the health profile of Cuba today. In addition, reckless driving, self inflicted violence and sexual irresponsibility probably stem from aspects of the traditional "machismo." These along with over eating, carelessness on the job, pollution, over crowding, urban noise, divorce and competition are prevalent in the Cuban society and many of these factors add to stress. Even socially productive work, if extended beyond certain limits, create harmful stress, due to the effects on the family and personal life. Contrary to the Western practice of "victim blaming" and the tendency to stress individual responsibility in the prevention and care for these environmental and behavioral diseases, Cuban medicine assumes that these problems require collective solutions. This collective approach involve the use of mass organizations in health education and health promotion. Epidemiology has gained more prestige and influence in health planning, and research has been directed to these problems and away from basic research. In 1976 occupational health was removed from the responsibility of the MINSAP Vice-Ministry of Hygiene and Epidemiology and a National Occupational Health Institute was formed (88) In 1978, a far reaching "Work and Safety Health Law" was enacted which defined the rights and responsibilities of the government agencies, workplace administrators unions and workers (89). It is expected that comprehensive control of toxic substances will increase with the new law and the growing availability of qualified personnel in environmental health.

A cornerstone to the effectiveness of health planning in Cuba is constant evaluation. The foundation for maintaining continuous evaluation in any health care delivery system is a comprehensive, accurate and timely statistical information system. Prerevolutionary Cuba, like other developing nations had a weak administrative structure and a poor data collection system. An early objective of the revolutionary government was to set up a meaningful statistical system that could collect, collate and analyze data at successive geographically defined administrative levels. In 1962 a conference of epidemiologists met to standardize reporting procedures. As a result, most Cuban epidemiologists prefer to relate trends and comparisons in health data to this date since before that time standardized procedures were absent. The most confidence is placed on data collected after 1965 since it was after this time that most distortions in rates due to underreporting had been corrected. The present system of data collection requires the directors at each administrative level to make regular statistical review of their areas of responsibility. Most foreign observers have been impressed with the fluency with which most local, municipal and provincial directors report the statistics and trends of their areas of responsibility. This in part due to their training in public health (all medical students study public health) and the effectiveness of the data collection system. Some observers feel that the current statistical system will be an inadequate instrument for epidemiology and evaluation in the next phase of evaluation of the Cuban health system (90). Until presently, the solutions to the problems of disease in Cuba had been well tested both in Cuba and elsewhere. In essence, there was enough known about their etiology treatment and prevention and the known solutions needed only to be applied effectively. In the future, the solutions to the major health problems will be the same as those in the developed countries where little is known about the causes and prevention of such diseases. Such solutions will employ uncertain methods which will

require close evaluation of their efficacy. Thus, certain more indepth epidemiologic aspects of institutional operations such as patient attributes and diagnoses will have to be included in the statistical system.

CONCLUSION

A major goal of the Cuban revolution has been the creation of a "new man" one who will work for the common good of all his brothers under socialism, motivated by moral rather than material incentives. One prerequisite for the creation of this "new man" was the development of a health care delivery system that could effectively and efficiently maintain the peoples health.

The first step towards these ends was apparently a re-definition of some basic principles of health service delivery. The best available health care was determined to be a basic human right and in some instances, health services were seen as needs for which the whole society had the responsibility to meet. Another basic principle was that since most diseases had a collective causality (i.e. alienation, occupational stressors, environmental conditions), a collective approach to prevention and therapy was necessary. This collective approach was conceived within the Marxist framework of holistic medicine as opposed to other capitalist approaches which tended to concentrate on narrower types of medical practice. The Marxist approach integrated clinical medicine, social and preventive medicine, environmental sanitation and medical ecology.

With over twenty years of experience and practice, many researchers now feel that the Cuban experience has strongly contested the theories of underdevelopment based on lack of resources. The first chapter of this thesis explored some of these theories and

in addition, analyzed the causes of the bureaucratization of medicine. The Cuban experience has shown that despite Cuba's relatively meager resources, the underdevelopment of health was due more to the maldistribution of those resources rather than the lack of them. The bureaucracy that existed in the Cuban health care delivery system before and shortly after the revolution was probably a consequence of the centralization of political and economic power more so than the result of industrialization as was thought by many Western planners and academicians. Political and economic power was concentrated within the dominant oligarchies before the revolution and later this power became concentrated in the Communist Party. Gradually, this power has been diffused to the mass organizations and the Poder Popular demonstrating that after the elimination of the class structure, democratization is possible in a developing socialist society.

The second chapter dealt with the planning functions in the Cuban health care delivery system and its effect on the structure and process of the system. In the early years after the revolution, there was an attempt to develop a comprehensive, socialized and rational health care delivery system. In 1959 the Ministry of Public Health was given broad powers over the health system. Most health facilities were nationalized and most health services were made free. The first plan for a comprehensive national health care system was unfolded in 1962. It called for normative centralization and administrative decentralization. In 1960 a mandatory one year rural health service was established. This was later extended to two then to three years. By 1965 a universal comprehensive system with a regionalized scheme of health services existed in Cuba. For the most part, they had corrected most of the maldistribution that had existed before. In 1965, the area polyclinic became the primary focus for the entire health system and by 1975 the concept of community medicine became the predominant focus of the Cuban medical system.

In conclusion, it would seem that the answer to Cuba's success in achieving a high level of development in health must be found in the political decision-making process. The survival of the revolution in Cuba depended fully on the support and participation by the people. The government won this by providing the people, especially those in the rural areas, with much more than they had before. Planning and constant evaluation was the key to overcoming the technological pessimism that most underdeveloped and developing countries face. Effective planning and evaluation functions significantly improved the availability and access to health facilities and health manpower resulting in improved health status, and thus a better quality of life. The irony of Cuban medicine is that now it has brought the Cubans to the level of the developed world - Cubans now die from heart disease, malignant tumors, cerebrovascular disease, influenza and pneumonia, and accidents.

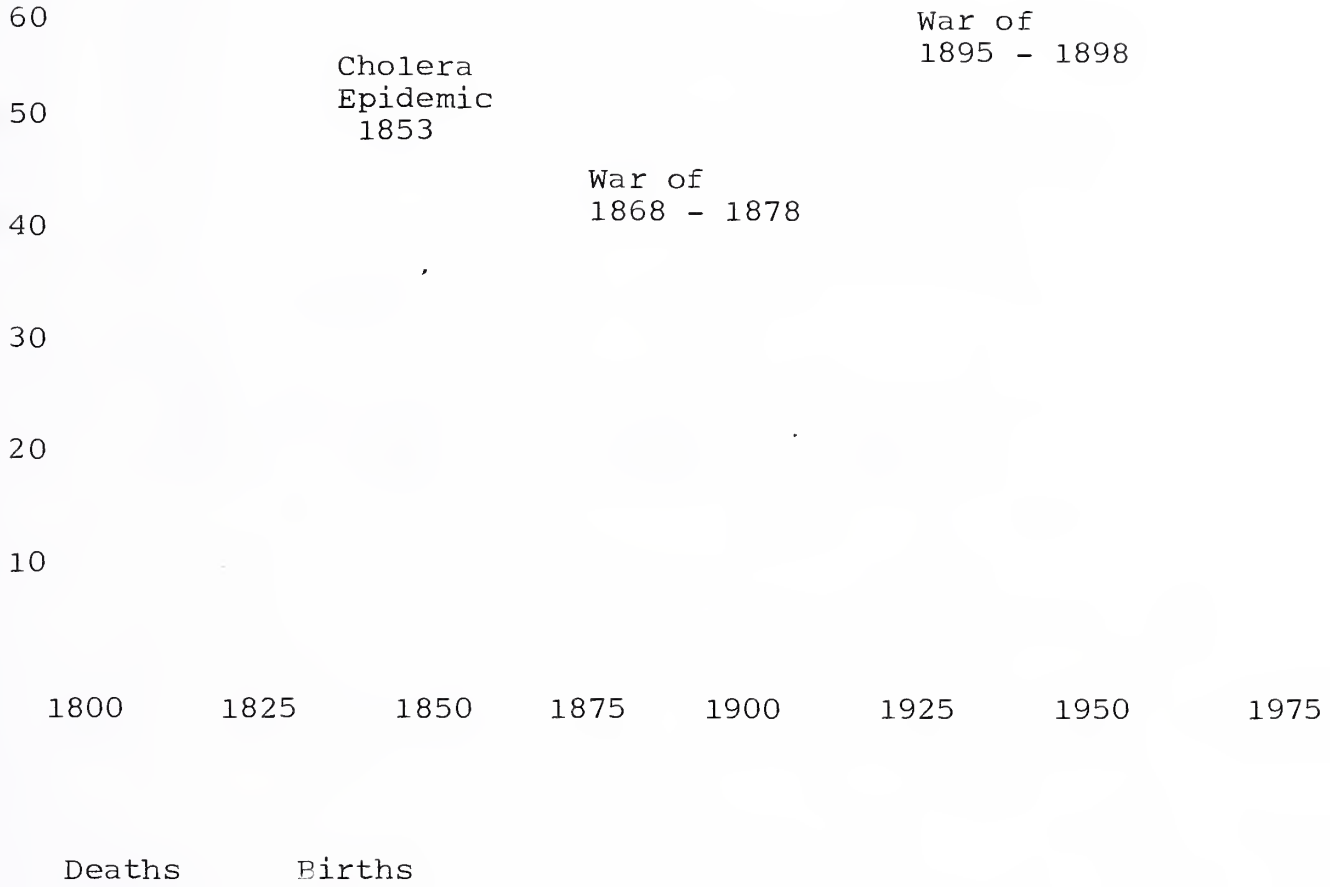
APPENDIX I

Firth Rate in Cuba 1953 - 1977

	<u>Population</u>	<u>Live Firths</u>	<u>Rate Live Firths/1000</u>	<u>Mortality</u>	<u>Rate Death/1000</u>	<u>Rate of Natural Increase</u>
	6,128,797	173,313	28.3			
	6,156,173	172,907	28.1			
55	6,279,474	172,668	27.5			
56	6,408,944	170,607	26.6			
57	6,539,282	170,946	26.1			
58	6,763,061	176,510	26.1			
59	6,900,888	191,207	27.7			
60	7,027,212	211,620	30.1			
61	7,134,003	231,811	32.5			
62	7,252,377	249,113	34.3			
63	7,414,886	260,244	35.1	49,610	6.9	28.2
64	7,612,277	266,554	35.0			
65	7,809,918	267,611	34.3			
	7,885,519	264,022	33.5			
	8,139,334	257,942	31.7			
	8,283,935	251,857	30.4			
	8,421,050	246,005	29.2			
70	8,551,390	237,019	27.7			
71	8,691,660	256,014	29.5			
72	8,862,045	247,997	28.0			
73	9,035,845	226,005	25.0			
74	9,194,134	203,066	22.1			
75	9,331,977	192,941	20.7			
76	9,464,300	187,555	19.8	52,907	5.6	14.2
77	9,596,956	170,074	17.7	55,957	5.8	11.8
78	9,766,956					
79	9,936,955					
80	10,000,000					

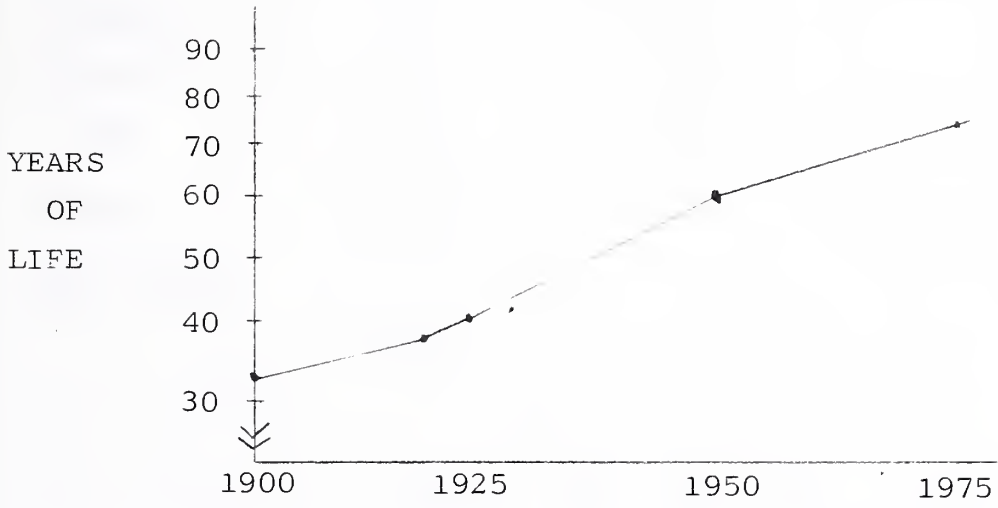
Source: Junta Central de Planificacion
 Publicacion 5. Direccion de Demografia
 Sept. 1977. Cuban Government
 WHO Statistical Abstracts 1963, 1976 - 1980

APPENDIX II

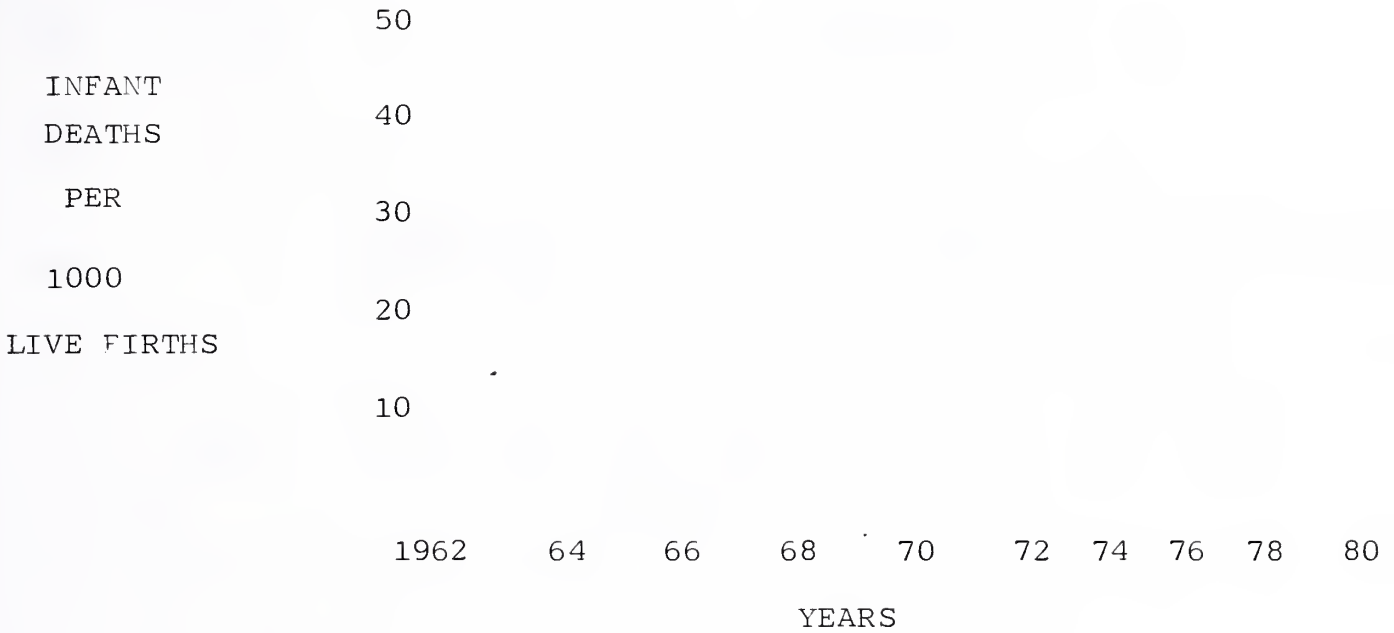


LIFE EXPECTANCY AT BIRTH

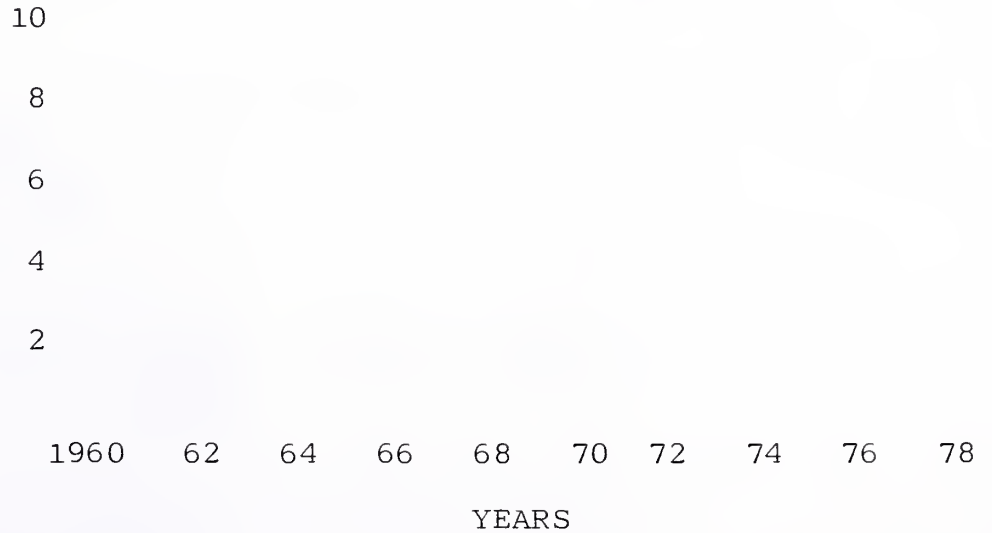
1900 - 1975



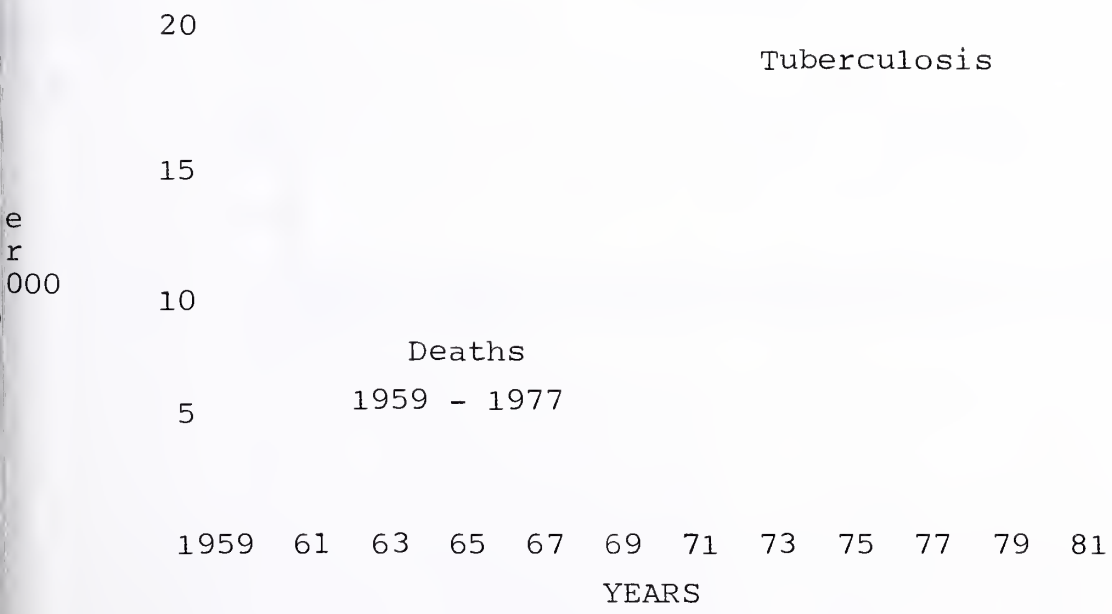
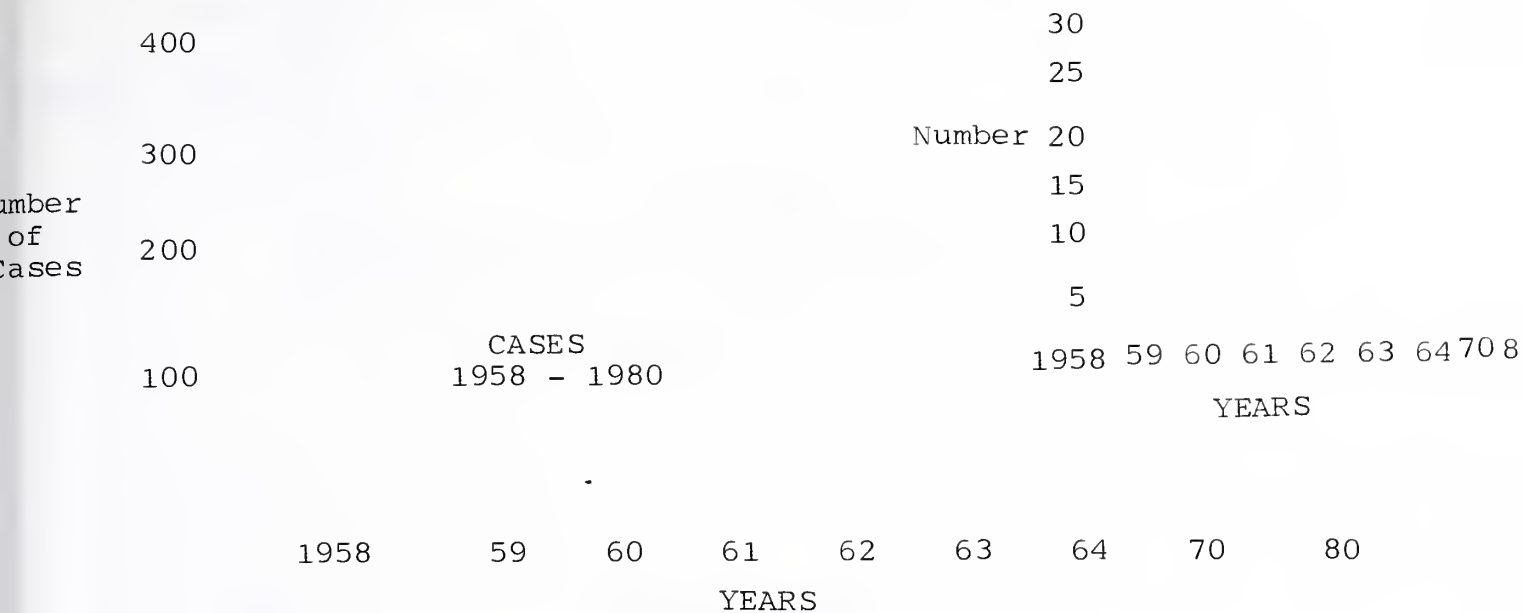
INFANT MORTALITY
1962 - 1980

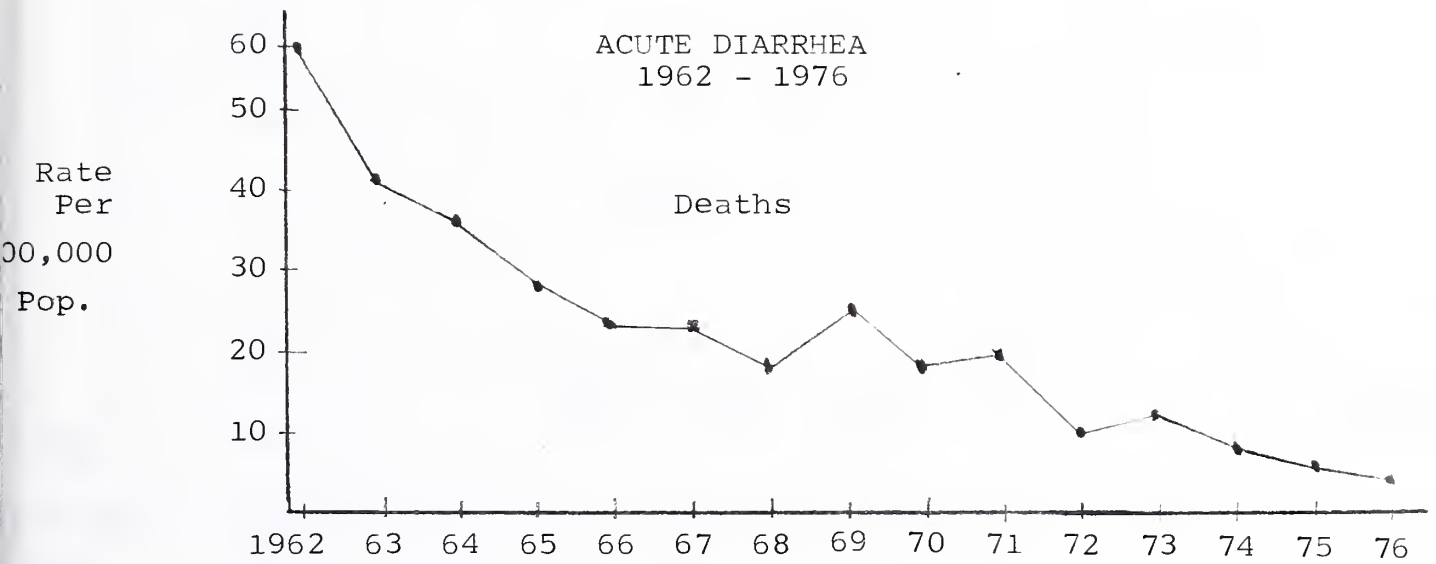
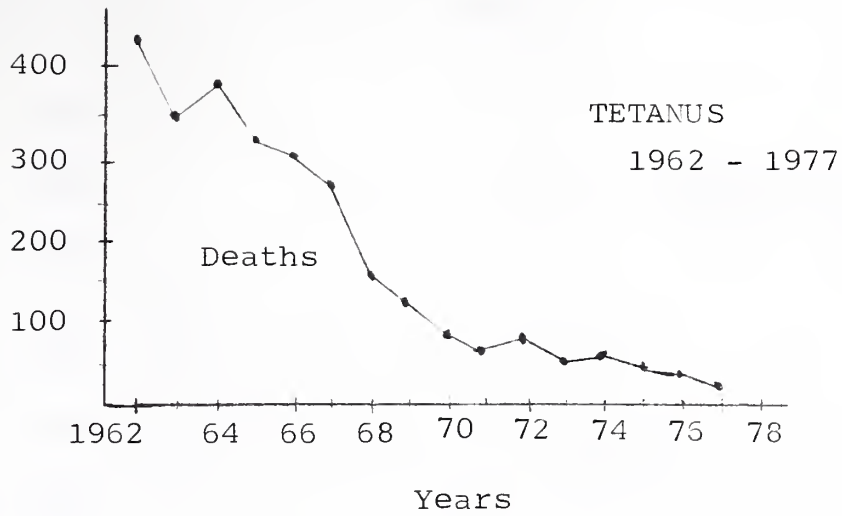


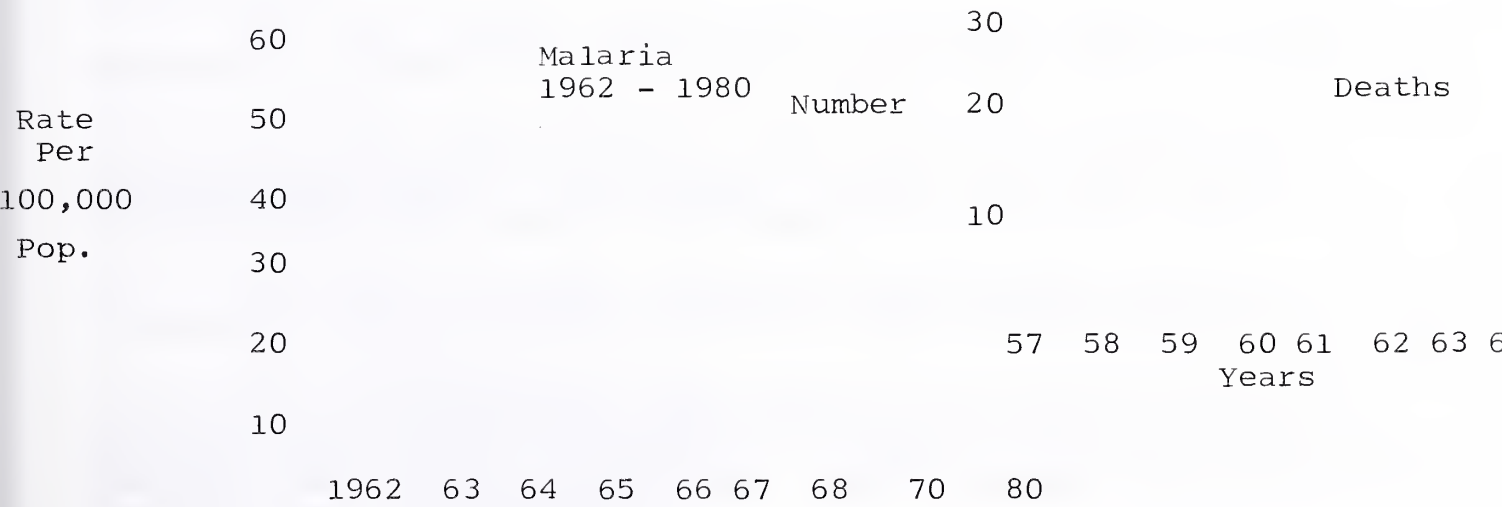
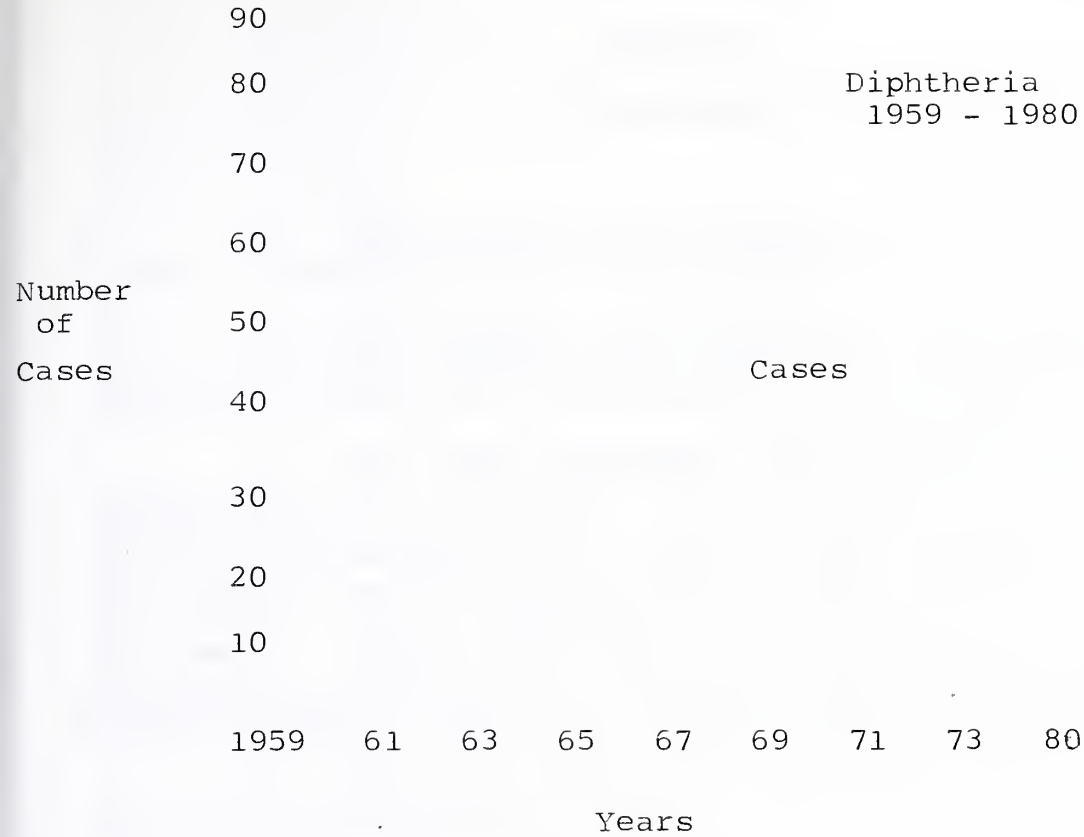
MATERNAL MORTALITY
1960 - 1976



ACUTE POLIOMYELITIS







Footnotes

Chapter 1

Theoretical Framework

1. Cuba gained Republican status on May 20, 1902 and Estrada Palma became the first president.

2. See Appendix I for additional demographic information. 1980 population of 10,000,000 also cited in Kenneth A. Friggs. "Reporter's Notebook: Cuban Showcase," N.Y. Times, April 26, 1981, p.A3.

3. The Cuban geographer Nunez Jimenez Las referred to Cuba as an archipelago. November - April is the vacation season, with temperatures averaging 80° F. May - October is the rainy season. The hurricane season is early fall. June - August is the summer with temperatures averaging 90° F especially in the eastern part of the island. The sea temperature is 75° F in the winter and 80° F in the summer. Average rainfall is 50 inches in the coastal areas and 60 inches in the interior. See Paula DiPierna. The Complete Travel Guide to Cuba (New York: St. Martin's Press, 1979), p 4.

4. The 1976 Constitution proclaims Cuba a Socialist State of workers and peasants ..."

5. Some drugs prescribed on ambulatory visits are at a nominal cost.

6. P.M. Eoffey, "Health Care as a Human Right: A Cuban Perspective, Science, Vol. 200, June 16, 1978, No. 4347, pp 1246 - 50.

7. For a description of quantitative measurements of structure, process and outcome see J.R. Griffith, Quantitative Techniques for Hospital Planning and Control (Lexington, Mass.: Lexington Books, D.C. Health and Company, 1972) pp. 331-337.

8. John D. Thompson, Applied Health Service Research (Lexington, Mass.: Lexington Books, D.C. Health and Company, 1977)p.166.

9. Standards for quality and the five As (availability, accessibility, acceptability, assessibility and accountability) for measuring the process of health care. These are also the five Ds for measuring the outcome of health care (death, disease, disability, discomfort and discontentment).

10. For a description of these goals See Z. Stein and M. Susser, "The Cuban Health System:" A Trial of a Comprehensive Service in a Poor Country," Int J. Health Services, Vol. 2, No. 4, 1972, p. 553.

11. Griffith, p. 334.

12. Vicente Navarro. Medicine Under Capitalism (New York and London: Prodist, 1976), p VII

13. Ibid.

14. Navarro, p. 104; Also see Max Weber. The Protestant Ethic and the Rise of Capitalism (New York: Scribner's, 1957).

15. John Kenneth Galbraith, The New Industrial State (Boston: Houghton - Mifflin, 1967), p. 389.

16. Ivan Illich, Medical Nemesis: The Expropriation of Health (London: Calder and Foyars, 1975).

17. Ivan Illich, "Medical Nemesis" Lancet, Vol.1 No.7863, 1974, p. 920.

18. Illich. Medical Nemesis: The Expropriation Health, p. 164.

19. Walt Rostow, The Stages of Economic Growth (Cambridge: Cambridge University Press, 1962).

20. Talcott Parsons, Structure and Process in Modern Societies (New York: The Free Press, 1960).

21. B.F. Hoselitz, Sociological Factors in Economic Development (New York: The Free Press, 1960).

22. H. Kahn and A.J. Weiner, The Next 33 Years (Deadalus, 1967), pp. 705 - 732.

23. See footnotes 19-22.

24. Rostow, pp. 4 - 39.

25. Navarro, p. 9.

26. Ibid., p. 4.

27. T. R. Malthus, "An Essay on the Principle of Population," (London, 1906), cited in E. Winikoff. "Nutrition, Population, and Health: Some Implications for Policy," Science, Vol 200, May 26, 1978, p. 895.

Chapter I

28. Navarro, p. 125.

29. Ibid.

30. Ibid., p. 113.

31. Ibid., p. 112.

32. Ibid.

33. H. Eraverman, Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century (New York and London: Monthly Review Press, 1974)

34. Navarro, p. 118.

35. Ibid, p. 117.

36. Ibid.

37. Ibid.

38. Ibid., p. 118.

39. Ibid., pp. 135 - 139.

40. Ibid., p. 207; Also See M. Turshen. "The Political Ecology of Disease," The Review of Radical Political Economics, Vol. 9, No. 1, Spring 1977, p. 49.

41. W. Rostow, The Stages of Economic Growth.

42. A. G. Frank, Latin America: Underdevelopment or Revolution (New York: Monthly Review Press, 1969)

43. UNESCO Report. Cited in Navarro, p.9.

44. A. Fucaraccio, "Birth Control and the Argument of Saving and Investment," Int. J. Health Serv., Vol. 3, No. 2, 1973, pp. 133-144.

45. B. Winikoff, "Nutrition, Population and Health," Science, Vol. 200, May 26, 1978, p. 889.

46. Navarro, p. 13.

47. Frank, p. 50.

48. New York Times Magazine, Sept 16, 1973, p. 79.
Also National Center for Health Statistics, Health Resource Statistics, Public Health Service, U.S. Department of Health Education and Welfare. Washington: U.S. Government Printing Office, 1976 - 1977 Ed.

49. UN-ECLA, Economic Survey of Latin America, 1968, Part 1, New York, United Nations, 1968, p. 71. Quoted in A.G. Frank. Lumpenbourgeoisie:Lumpendevelopment. Dependence, Class and Politics in Latin America (New York and London: Monthly Review Press, 1973)p.103.

50. M. King, "Reply to Book Review by A. P. Ruderman of Bryant," J. Health and the Developing World. In Int. J. Health Serv., Vol. 1, No. 4, 1971, pp. 415-416.

51. Navarro, p. 28.

52. Ibid., p. 121.

53. P. Sweezy & C. Bettelheim, On the Transition to Socialism (New York and London: Monthly Review Press, 1971).

54. Navarro, p. 122.

55. E. Foorstein, The Economic Transformation of Cuba (New York and London: Monthly Review Press, 1968).

56. I. Illich, Medical Nemesis, pp. 42 - 43.

57. Robert Hsu, "The Political Economy of Rural Health Care in China," The Review of Radical Political Economics, Vol. 9, No. 1 Spring 1977, p. 135.

58. M. Turshen, "The Political Ecology of Disease," The Review of Radical Political Economics, Vol. 9, No.1, Spring 1977, p. 48.

59. Ibid., p. 48.

60. J. Eyer and P. Sterling, "Stress Related Mortality and Social Organization," The Review of Radical Political Economics, Vol.9, No.1 Spring 77, p.32.

61. Polio was eliminated in Cuba from 1963. Cases were confirmed in the U.S. until 1973.

62. Most physicians developed their own private practice in the office setting in contrast to working for hospitals or corporations on a salaried basis.

63. Abraham Flexner, Medical Education in the United States and Canada, A Report to the Carnegie Foundation for the Advancement of Teaching, (New York: The Carnegie Foundation, 1910).

64. M. Susser, "Ethical Components in the Definition of Health," Int. J. Health Serv., Vol. 4, No.3, 1974, pp. 539 - 548.

65. Navarro, p. 120.

66. "Bevan and the Doctors," Lancet Vol.2, No.7839, 1973, pp.1196-1197.

67. Navarro, p.120.

68. Navarro, pp. 184-196.

69. Navarro, p.197.

70. A.L. Cochrane, Effectiveness and Efficiency: Random Reflections on Health Services (London: Nuffield Provincial Hospital Trust, 1972), p.70.

71. Navarro, p.185.

Chapter II

The Planning Functions in Cuba

1. Che Guevara, "Visita del Comdte. Dr. Ernesto Guevara al Colegio Medico Nacional: Declaraciones del Dr. Guevara sobre la clase medica," Tribuna Medica, Vol.20 January - June 1959, p.17.
2. M. Zeitler, "Cuba: Revolution Without a Plueprint," Cited in Irving Louis Horowitz, ed., Cuban Communism (New Frunswick, N.J.: Transaction, 1970), pp. 81-92.
3. Z. Stein and M. Susser, "The Cuban Health System: A Trial of a Comprehensive Service in a Poor Country," Int. J. Health Serv., Vol.2, No.4, 1972, p.551.
4. Fidel Castro, History Will Absolve Me (La Habana: Editorial de Ciencias Sociales, 1975).
5. S. Guttmacher and R. Danielson, "Changes in Cuban Health Care: An Argument Against Technological Pessimism," Soc. Sci. Med. Vol. 13C, No.2, June 1979, p.90.
6. Ross Danielson, Cuban Medicine (New Frunswick, New Jersey: Transaction Books, 1978), p.142.
7. Ibid., p. 128.
8. Vicente Navarro, "Health, Health Services, and Health Planning in Cuba," Int. J. Health Serv., Vol.2, No.3, Aug 1972, p.134.
9. Danielson, Cuban Medicine, p. 134.
10. Ibid., p. 139.
11. Castro, History Will Absolve Me.
12. Vicente Navarro, "Workers" and Community Participation and Democratic Control in Cuba," Int. J. Health Serv., Vol. 10, No.2, 1980, p. 199.
13. Ibid.
14. Danielson, p. 144. See Milton Roemer, "World Trends in Medical Care Organization," Social Research, Vol. 26, No.2, Autumn 1959, pp. 283 - 310.
15. Danielson, p. 144.
16. Ibid.
17. Ibid.
18. Ibid., p. 145.

19. Ibid.

20. Ibid., p. 136.

21. Ibid., p. 146.

22. Navarro, "Workers and Community Participation and Democratic Control in Cuba," p. 199.

23. Danielson, p. 147.

24. Ibid.

25. Center For Cuban Studies, "The U.S. Blockade: A Documentary History," Cuba in Focus, December 1979, p. 6.

26. Danielson, p. 148.

27. Ibid.

28. Ibid.

29. Navarro, "Health, Health Services and Health Planning in Cuba," p. 424.

30. Danielson, p. 163.

31. Navarro, "Workers' and Community Participation and Democratic Control in Cuba," p. 199.

32. Ibid.

33. Ibid., p. 201.

34. Center for Cuban Studies, "Cuba's Foreign Policy: Proletarian Internationalism," Center For Cuban Studies Newsletter, Vol. 3, No. 4- 5, Winter 1976, p.31.

35. Navarro, "Health, Health Services and Health Planning in Cuba," p.420.

36. Ibid.

37. Center for Cuban Studies, "Cubas Foreign Policy...", op.cit., p.27.

38. Navarro, "Health, Health Services and Health Planning in Cuba," p.420.

Chapter II

39. Ibid.

40. Adolfo Dominguez, "Stimulating Community Involvement Through Mass Organizations in Cuba: The Women's Role," Int. J. Health Educ., Vol. 20, No., 1977, p.58.

41. Ibid., p. 60.

42. Navarro, Health, Health Services and Health Planning in Cuba," p. 420.

43. Ibid.

44. Ibid., p. 421.

45. Danielson, p. 178.

46. Vicente Navarro, Medicine Under Capitalism (New York and London: Prodist, 1976), p.126.

47. Navarro, "Workers' and Community Participation and Democratic Control in Cuba," p. 200.

48. Navarro, "Health, Health Services and Health Planning in Cuba," pp. 421-422.

49. Ibid.

50. Ibid.

51. Danielson, op.cit., pp. 130-134.

52. Ibid., p. 165.

53. Ibid., p. 23.

54. Ibid., p. 76.

55. Ibid.

56. Ibid., p. 6.

57. Ibid., p. 104.

58. Ibid., p. 114.

59. Ibid., p. 115.

60. Ibid., p. 178.

61. Ibid.

Chapter II

62. Milton Roemer, "Health Development and Political Policy: The Lesson of Cuba," Journal of Health Politics, Policy and Law, Vol. 4, No. 4, Winter 1980, p. 574.

63. Navarro, "Health, Health Services and Health Planning in Cuba," p. 424.

64. Danielson, p. 169.

65. Ibid.

66. Ibid., p. 171.

67. Ibid.

68. Ibid., p. 175.

68b. Ibid., p. 191

69. Center for Cuban Studies, "Cuba's Foreign Policy...", op. cit., p. 33.

70. Danielson, op. cit., p. 192

71. Ibid.

72. Ibid.

73. Navarro, "Democratic Control in Cuba," op.cit., p. 207.

74. Ibid., p. 208.

75. Ibid.

76. Fidel Castro, "Speech of July 26, 1974," Granma Weekly Review, August 4, 1974.

77. Navarro, "Democratic Control in Cuba," op. cit., p. 200.

78. Ibid.

79. Ibid.

80. Ibid.

81. Ibid.

82. Ibid.

83. Ibid., p. 203.

84. Ibid.

85. Ibid., p. 213.

86. Ibid.

87. Ibid., p. 214; Also See Barbara Myers, "The Eyes and Ears of the People," Cuba Review, Vol.IV, No.4, December 1974, pp. 10 - 15 and 25.

88. Navarro, "Democratic Control in Cuba," op. cit., p. 214.

89a. Danielson, op. cit., p. 42.

89b. Ibid., pp. 80-89.

90. Ibid., p. 197.

91. Ibid., p. 198.

92. Ibid., p. 199.

93. Ibid., p. 202.

94. P. Grundy and P. Budetti, "The Distribution and Supply of Cuban Medical Personnel in Third World Countries," American Journal of Public Health, Vol. 70, No.7, July 1980, p. 717.

95. Evan Stark, "Overcoming the Diseases of Poverty," Cuba Review, Vol.7, No.1, March 1978, p. 26.

96. Navarro, "Democratic Control in Cuba," op. cit., p. 214.

CHAPTER III

The Effectiveness of Planning Health
Care Delivery in Cuba

1. Vicente Navarro, "Workers' and Community Participation and Democratic Control in Cuba," Int. J. Health Serv., Vol. 10, No. 2, 1980, p. 213.
2. The Ministry - Planning for Health. Interview with Jose Molina Otero, The First Vice Minister of Public Health, by Magret Gilpin in Havana, Cuba, July 1977. Cited in Cuba Review, Vol.7, No.1, March 1978, pp. 16-18.
3. Vicente Navarro, "Health, Health Services, and Health Planning in Cuba," Int. J Health Serv., Vol.2, No.3, August 1972, p.430.
4. Milton Roemer, "Health Development and Political Policy: The Lesson of Cuba," Journal of Health Politics, Policy and Law, Vol. 4, No.4, Winter 1980, p. 579.
5. Z. Stein and M. Susser, "The Cuban Health System: A Trial of a Comprehensive Service in a Poor Country," International Journal of Health Services, Vol. 2, No. 4, p. 551.
6. Walt Rostow, The Stages of Economic Growth (Cambridge: Cambridge University Press, 1962).
7. Stein and Susser, op. cit., p. 552.
8. Ross Danielson, Cuban Medicine (New Brunswick, New Jersey: Transaction Books, 1978), p. 127.
9. Ibid., p. 104.
10. Ibid.
11. Ibid.
12. Ibid., p. 105.
13. Ibid., p. 106.
14. This government was democratic Socialist to the extent that they subscribed to certain social welfare principles. However, they were openly anti-Communist. See Hugh Thomas, Cuba: The Pursuit of Freedom (New York: Harper and Row, 1971), p. 650 - 774.
15. Danielson, op. cit., p. 107.
16. Hugh Thomas, op. cit., p. 691.

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17. Danielson, op. cit., p. 107.

18. Ibid.

19. Ibid.

20. Ibid., p. 108.

21. Ibid.

22. Ibid., p. 118.

23. Ibid., p. 127.

24. Ibid., p. 138.

25. Navarro, op. cit., p. 413.

26. Most Cuban physicians over the two centuries preceeding the revolution had relatively marginal practices due to a relative oversupply and a severe maldistribution.

27. A baccalaureate degree in Cuba is equivalent to high school plus one year of community college in the U.S.

28. Danielson, op. cit., p. 140.

29. Ibid., p. 137.

30. Ibid., p. 135.

31. Ibid., p. 141.

32. Ibid., p. 140.

33. Ibid., p. 141.

34. Ibid.

35. Ibid.

36. Ibid., p. 180.

37. Ibid., p. 181.

38. Ibid.

39. Navarro, op. cit., p. 418; Danielson, op.cit., p.182.

40. Navarro, op. cit., p. 418.

41. Ibid., p. 416.

42. Cyrille Dechamp and Molses Troncoso, El Problema Medico y la asistencia mutualista en Cuba, a Report of the International Labor Office, (Havana, 1934), pp. 28-29. Cited in Danielson, Cuban Medicine, pp. 111-112.

43. World Health Organization, Statistical Abstracts 1957-1980. Also, Navarro, "Health, Health Service, and Health Planning in Cuba," p. 414.

44. Danielson, op. cit., p. 232.

45. WHO, Statistical Abstracts 1957-1980.

46. Ibid.

47. Ibid.

48. Paul Grundy and Peter Eudetti, "The Distribution and Supply of Cuban Medical Personnel in Third World Countries," American Journal of Public Health, Vol. 70, No.7, July 1980, pp. 717-718.

49. Danielson, op. cit., p. 208-209.

50. Ibid.

51. Ibid.

52. Ibid.

53. Ibid., pp. 232-233.

54. Ibid., p. 183.

55. Ibid., p. 233.

56. Ibid., p. 331.

57. John Thompson, professor of public health and chief of health service administration at Yale University school of medicine; professor of nursing administration at Yale University school of nursing; and professor in the Institution of Social and Policy Studies at Yale. See critique on last page.

58. Danielson, op. cit., p. 26.

59. Ibid., p. 28.

60. The cabildo was the governing body of the Spanish colony. The cabildo or gobierno of an average town might have included "six rigidores, or aldermen, and two alcaldes, or justices elected by regidores each year.

61. Danielson, op. cit., p.59.

62. Ibid., p.76.

63. Ibid., pp. 90-91.

64. Navarro, op. cit., p. 411-412.

65. Ibid.

66. Margret Gilpin and Helen Rodriguez, "Looking at Health in a Healthy Way," Cuba Review, Vol.7, No.1, March 1978, p-14.

67. Paul Grandy and P. Puditti, op. cit., p.717; also Milton Roemer, op. cit., pp. 576-577.

68. Center for Cuban Studies, Interview with Humberto Perez, Junta Central de Planificacion; conducted by Marta Harnecker. First printed in Bohemia, Feb.16,1979.

69. Ibid.

70. Navarro, op. cit., p. 402.

71. Ibid., p. 404.

72. Ibid.

73. Stark, op.cit., p.26.

74. Ibid.

75. WHO, Statistical Abstracts 1957-1980.

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76. Stein and Susser, op. cit., pp. 562-563 also WHO, Statistical Abstracts 1957-1980.
77. WHO, op.cit.
78. Gilpin, op. cit., p.13.
79. WHO, op.cit.
80. P.M. Boffey, "Health Care as a Human Right: A Cuban Perspective," Science, Vol.200, No.4347, June 1978, pp.1246-1250.
81. Ibid.
82. Personal Communication, March 1980.
83. Ibid.
84. Personal Communication with the Director of Mayari Polyclinic. March 1980.
85. WHO, op. cit.
86. Ibid.
87. Ibid.
88. M. Gomez, "Occupational Health in Cuba," American Journal of Public Health, Vol.71, No.5, May 1981, p.523.
89. Ibid.
90. Stein and Susser, op.cit., p.565.

Bibliography

- Annual Reports of the Pan American Health Organization of the World Health Organization in Cuba, 1967 - 1969.
- Berliner, Howard S. "Emerging Ideologies in Medicine," The Radical Review of Political Economy, Vol. 9, No. 1 (Spring 1977): 116-123.
- Bettleheim, C. "Forms and Methods of Socialist Planning and the Level of Development of the Productive Forces," Cuba Socialista, Vol. 32 (1964).
- Boffey, P.M. "Health Care as a Human Right: A Cuban Perspective." Science, Vol. 200 (1978): 1246 - 1250.
- Boorstein, Edward. The Economic Transformation of Cuba. New York: Monthly Review Press, 1968.
- Booth, D. "Cuba, Color and the Revolution." Science and Society, Vol. 40 (1976): 129-72.
- Braverman, H. Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century. New York and London: Monthly Review Press, 1974.
- Briggs, Kenneth A. "Reporter's Notebook: Cuban Showcase," New York Times (April 26, 1981).
- Castro, Fidel. "Speech before the II Congress on the Federation of Cuban Women," Cuba Review, Vol. IV, No. 4 (December 1974): 17 - 23.
- Castro, Fidel. History Will Absolve Me. La Habana: Editorial de Ciencias Sociales, 1975.
- Castro, Fidel. "The Revolution Continues." Fidel Castro Speaks, New York: Grove Press, Inc., 1969.
- Castro, Fidel. "On the Opening of the Polyclinic in Valle del Peru." Granma (English language edition, January 19, 1969): 1 - 3.
- Castro, Fidel. Speech in Self-criticism of the 1970 Sugar Harvest. Havana.
- Castro, Fidel. Analysis del Poder Popular (July 26, 1974, speech). Havana.
- Castro, Fidel. Speech of July 26, 1970. Granma Weekly Review (August 2, 1970).

- Castro, Raul. "Speech at the Closing Session of Seminar for Delegates to People's Power in Matanzas," Granma Weekly Review (August 22, 1974).
- Danielson, Ross. "The Cuban Polyclinic: Organizational Focus in on Emerging System." Inquiry. Special issue on comparative analysis of health systems, ed. Ray H. Elling. Vol.12 (July 1975 supplement): 86 - 102
- Danielson, Ross. Cuban Medicine. New Brunswick, New Jersey: Transaction Books, 1978.
- Danielson, R. and S. Guttmacher. "Changes in Cuban Health Care" An argument Against Technological Pessimism," International Journal of Health Services, Vol. 7, No.3 (1977): 383 - 400.
- Finlay, Carlos E. Carlos Finlay and Yellow Fever. New York: Oxford University Press, 1940.
- Frank, A. G. "Sociology of Development and Underdevelopment of Sociology." In Cockroft, J.D., Frank, A.G., and Johnson, D.L. Dependence and Underdevelopment: Latin America's Political Economy. New York: Doubleday nd Company, 1972
- Frank, A. G. Lumpenbourgeoisie: Lumpen development. Dependence, Class and Politics in Latin America. New York and London: Monthly Review Press, 1973.
- Frank, A. G. Latin America: Underdevelopment or Revolution. New York and London: Monthly Review Press, 1969.
- Friedman, Milton. Capitalism and Friedman. Chicago: University of Chicago Press, 1962.
- Fuchs, V. Who Shall Live: Health, Economics and Social Choice. New York: Basic Books, 1975.
- Galbraith, J.X. The New Industrial State. Boston: Houghton - Mifflin, 1967.
- Gomez, Manuel R. "Occupational Health in Cuba," American Journal of Public Health, Vol. 71, No. 5 (May 1981): 520 - 524.
- Grundy, Paul H. and Eudetti, Peter. "The Distribution and Supply of Cuban Medical Personnel in Third World Countries," American Journal of Public Health, Vol. 70, No.7(July 1980): 717 - 719.
- Guevara, Ernesto (Che). "Visita del Comdte. Dr. Ernesto Guevara al Colegio Medico Nacional: Declaraciones del Dr. Guevara sobre la clase medica." Tribuna Medica, Vol. 20 (January - June 1959): 17-18.

- Griffith, John R. Quantitative Techniques for Hospital Planning and Control. Lexington, Massachusetts: D.C. Health and Company, 1972.
- Guevara, Ernesto (Che). Man and Socialism in Cuba. Havana: Book Institute, 1967
- Hart, Tudor J. "The Inverse Care Law" Lancet, Vol. I, No. 7696 (1971): 405 - 412.
- Hoselitz, E.F. Sociological Factors in Economic Development, New York: The Free Press, 1960.
- Hsu, Robert C. "The Barefoot Doctors of the People's Republic of China - Some Problems," New England Journal of Medicine, Vol. 291, No.3 (July 18, 1974): 124 - 127.
- Hsu, Robert C. "The Political Economy of Rural Health Care in China," The Review of Radical Political Economics, Vol. 9, No. 1 (Spring 1977). 134 - 140.
- Illich, Ivan. Medical Nemesis: The Expropriation of Health. London: Calder and Foyars, 1975.
- Illich, Ivan. "Medical Nemesis," Lancet, Vol. 1 (1974) 7863: 918 - 921.
- Kahn, H. and A. J. Weiner. The Year 2,000. New York: Macmillan, 1967.
- Kissel, R. A. "The A.M.A. and the Supply of Physicians," Law and Contemporary Problems, Vol. 35 (1970): 267 - 283
- Kissel, R. A. "Price Discrimination in Medicine," Journal of Law and Economics, Vol. 1 (1958): 25 - 53.
- Lockwood, L. Castro's Cuba; Cuba's Fidel. New York: Vintage, 1969.
- Marx, Karl. Capital. New York: The Modern Library, Random House, Inc., 1906.
- Navarro, Vicente. "Worker's and Community Participation and Democratic Control in Cuba," International Journal of Health Services, Vol.10, No. 2 (1980): 197 - 215.
- Navarro, Vicente. Medicine Under Capitalism. New York and London: Prodist, 1976.
- Navarro, Vicente. "Health, Health Services, and Health Planning in Cuba," International Journal of Health Services, Vol.2 No.3 (August 1972): 397 - 432.
- Orris, Peter. "The Role of the Consumer in the Cuban Health System," Unpublished dissertation, master of public health. Yale University, 1970.
- Parsons, T. Structure and Process in Modern Societies. New York: The Free Press, 1960.

- Panamerican Health Organization. Health Conditions in the Americas, 1969 - 1972 (Scientific Publication No. 287). Washington, D.C.: Panamerican Health Organization, 1974.
- Riveron, C.R., L.F. Valdes and M.E. Rios. "Infant Mortality in Cuba: Analysis of a Program for its Reduction (1970 - 1976)," Bol. Med. Hosp. Infant. Mex., Vol. 35, No. 6 (Nov. - Dec. 1978): 981-992.
- Roemer, Milton I. "Medical Care and Social Class in Latin America," Milbank Memorial Fund Quarterly, Vol. 42, No. 3 (July 1964) part 1: 54-64.
- Roemer, Milton I. "World Trends in Medical Care Organization," Social Research, Vol. 26, No. 2 (Autumn 1959): 283 - 310.
- Roemer, Milton I. "Health Development and Political Policy: The Lesson of Cuba," Journal of Health Politics, Policy and Law, Vol. 4, No. 4 (Winter 1980): 570-579.
- Rostow, Walt W. The Stages of Economic Growth. Cambridge: Cambridge University Press, 1962.
- Silver, George. A Spy in the House of Medicine. Germantown, Maryland: Aspen Systems Corporation, 1976.
- Stein, Z and M. Susser. "The Cuban Health System: A Trial of a Comprehensive Service in a Poor Country," International Journal of Health Services, Vol. 2, No. 4 (1972): 551 - 566.
- Susser, M. "Ethical Components in the Definition of Health," Int. J. Health Serv., Vol. 4, No. 3 (1974): 539 - 548.
- Sweezy, P. and C. Fettelheim. On the Transition to Socialism. New York and London: Monthly Review Press, 1971.
- Thomas, Hugh. Cuba: The Pursuit of Freedom. New York: Harper and Row, 1971.
- Thompson, John D. Applied Health Service Research. Lexington, Massachusetts: D.C. Health and Company, 1977.
- Turshen, Meredity. "The Political Ecology of Disease," The Review of Radical Political Economics, Vol. 9, No. 1 (Spring 1977): 45-59.
- Weber, Max. The Protestant Ethic and the Rise of Capitalism. New York: Scribner's, 1957.

Williams, Eric. Capitalism and Slavery. New York: Russell and Russell, 1961.

Winikoff, Beverly. "Nutrition, Population, and Health: Some Implications for Policy," *Science*, Vol. 200 (May 26, 1978): 895 - 901.

Zeitlin, Maurice, Revolutionary Politics and the Cuban Working Class. Princeton: Princeton University Press, 1967.

Essay of Donald Moore

Critique by John D. Thompson

April 24, 1981

John D. Thompson is professor of public health and chief of health services administration at the Yale University School of Medicine; professor of nursing administration at the Yale University School of Nursing; and professor in the Institution of Social and Policy Studies at Yale.

This essay deals with the historical evaluation of planning and evaluation of health services in the Republic of Cuba.

The essay begins with an exposition of the Hegelian dialectic which is the methodological frame upon which the planning and evaluation efforts are being considered. The point is made in the first chapter of whether or not it is necessary for a country to become highly industrialized in order to develop a sophisticated and effective medical care delivery system.

The second chapter then deals with the historical development pre-Castro and in three periods post-Castro of the way the health delivery services are organized in Cuba. A careful attempt is being made to relate the progress of the development of the medical care delivery system to that of changes in the political and social arenas in Cuba. The author also reviews the role of the professional medical organizations and the role of education in the development of health services.

At the end, there is an attempt to evaluate the success of the system based on the ability of the Cuban system to undo previously existing delivery problems, such as the distribution of physicians, the distribution of hospital beds, and the training of manpower. At the very end, several population based health indices are applied to show the improvement of the general health of the population.

As in all such essays which are conceived and carried out within the fairly constrained philosophical-methodologic framework, many questions are unanswered. It was obvious that Cuba over-produced physicians and over-built hospital beds and are still somewhat plagued with the problems of separation of the practice of medicine in the communities from the practice of medicine in hospitals. There is no critical examination of these issues. Some hints are given that the overproduction of physicians is not a great problem since one of the purposes is to export physicians to other third-world countries and, thus, I presume, spread the good word about the successes of the Cuban medical care system. Nevertheless, it is a valuable essay which gives at least this reader much more information about the Cuban health care system that he has been able to obtain in any other single source.



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