
PhD Study Proposal

Socioeconomic development and health economics in
Nicaragua: challenges, trends and future scenarios

Application to PhD Training Programme Opportunities

Study Plan for:

Mariano Gerardo Salazar Castellón, MD, MSP.

Research and Studies Centre for Health (CIES).

Nicaraguan National Autonomous University (UNAN), Managua.

Main supervisors

General INDEX

Introduction	3
Rationale	4
Definitions	5
Study objectives	6
Methodology.....	6
Conceptual framework	6
Study subject.....	6
Study outline	6
Papers outline	7
PAPER I: Social determinants of health economic and health industry in Nicaragua: evolution, challenges and future scenarios.	7
PAPER II: Dilemmas of Strategy funding Primary Health Care in Nicaragua: Is it sustainable in the medium and long term a policy of providing free public health services?	8
PAPER III: The production of knowledge about health care costs and economic impact assessments of health programs in Nicaragua: strengths and weaknesses to management health economy and healthcare industry.....	9
PAPER IV: The private provision of sexual and reproductive health service from civil society in Nicaragua: business economics and sustainability, the case of PROFAMILIA.	10
Research courses, conferences and internship	11
Bibliography	12
Time table	14

Tables INDEX

Table 1Nicaragua in the Central American context: Human Development Index, 2011.....	3
Table 2 1Nicaragua in the Central American context: Human Development Index ordered by the health component, 2011	3

Introduction

Nicaragua's HDI is 0.589, which gives the country a rank of 129 out of 187 countries with comparable data. The HDI of Latin America and the Caribbean as a region increased from 0.582 in 1980 to 0.731 today, placing Nicaragua below the regional average, The HDI trends tell an important story both at the national and regional level and highlight the very large gaps in well-being and life chances that continue to divide our interconnected world. (United Nations Development Program, 2012)

Over the years the Human Development Report has introduced new measures to evaluate progress in reducing poverty and empowering women: The [Inequality-adjusted Human Development Index](#) (IHDI), [Gender Inequality Index](#) (GII) and the [Multidimensional Poverty Index](#) (MPI) (United Nations Development Program, 2012)

In this context, Nicaragua is part of the group of countries with medium human development. Share this category, in Central America, with El Salvador, Honduras and Guatemala. Panama and Costa Rica are on the category of countries with high human development.

Table 1 Nicaragua in the Central American context: Human Development Index, 2011

	HDI	POSITION	HEALTH	EDUCATION	INCOME	IHDI	MPI	GII	SUST	DEM
PAN	0.768	58	0.885	0.743	0.69	0.579	n.d	0.492	28.4	3,571.20
COR	0.744	69	0.936	0.659	0.667	0.591	n.d	0.361	15.2	4,726.60
ELS	0.674	105	0.823	0.637	0.585	0.495	n.d	0.487	3.7	6,227.50
HON	0.625	121	0.838	0.574	0.507	0.427	0.159	0.511	9.5	7,754.70
NIC	0.589	129	0.852	0.525	0.457	0.427	0.128	0.506	3.4	5,869.90
GUA	0.574	131	0.807	0.438	0.534	0.393	0.127	0.542	4	14,757.30

Source: Prepared using data available in (United Nations Development Program, 2012)

Table 2 Nicaragua in the Central American context: Human Development Index ordered by the health component, 2011

	HDI	POSITION	HEALTH	EDUCATION	INCOME	IHDI	MPI	GII	SUST	DEM
COR	0.744	69	0.936	0.659	0.667	0.591	n.d	0.361	15.2	4,726.60
PAN	0.768	58	0.885	0.743	0.69	0.579	n.d	0.492	28.4	3,571.20
NIC	0.589	129	0.852	0.525	0.457	0.427	0.128	0.506	3.4	5,869.90
HON	0.625	121	0.838	0.574	0.507	0.427	0.159	0.511	9.5	7,754.70
ELS	0.674	105	0.823	0.637	0.585	0.495	n.d	0.487	3.7	6,227.50
GUA	0.574	131	0.807	0.438	0.534	0.393	0.127	0.542	4	14,757.30

Source: Prepared using data available in (United Nations Development Program, 2012)

As shown in Tables 1 and 2, Nicaragua is living a paradox. On one hand its HDI is only higher than Guatemala, but in health ranks third, ahead of Honduras, El Salvador and Guatemala and just below Panama and Costa Rica.

What are the main determinants of health in Nicaragua that explain this paradox and affecting levels of inequality - health equity in Nicaraguan society, focusing on the implementation of universal health coverage?

One of them, for reference purposes, historical and structural in nature, are models for economic and social development which Nicaraguan society has gone from 1979, in which there is a historical break in the social evolution, creating new and challenging conditions for the development of public health in the country and to put in practice the implementation of the strategy of primary health care and health sector reorganization.

Rationale

Nicaragua is today the second poor country in Latin America. This title has been given after 40 years of social instability product of the second revolution in the continent, after Cuba, and the steady searching of democracy, social justice and economic development. The goal of development with democracy, social justice and economic growth has been common in all political forces that have reached the Government.

The transformation of health sector has been part of each political proposal moving it's from a model based on concept of unified health system to health sector's model as one subject to the market's roles. In all the cases, with exception of which has been called a "*Somocista Dictatorship*", health sector has clearly been taking into account, partially in the political speech and partially in the reality, as relevant part and vital piece which influence and received influence from the main features of the Nicaraguan society as a whole in its effort to build democracy, social justice and economic growth.

Big transformation has been done in the health sector and main epidemiologic changes have happened during these last 40 years. The sector has changed its composition and structure and the Nicaraguan population is today suffering a transition in relevant categories of public health: epidemiological, demographic and health services offer; that have affected the level of population health, the behaviour of social health determinants, the opportunities to get a healthy life style and the role of sector's different actors. Health policies and strategies have been organized for each political force in the Government, sometimes with continuity connection and other time with disrupted proposals.

Regularly, these health policies and strategies has been part of a National Plan of Country Development and exist both wide bibliographical references about as well a wide range of statistical associate with different's sector: economic, health, education, others; which have been registered for United Nations Agencies, Centres of Health Research, MOH and other national institutions including the institution in charge of periodical censuses which include a regular chapter devoted to specific topics of health.

International and national ONG's have enriched the available facts in health sector researching health economic states of the art as well epidemiological situation and other relevant dimension of health sector. Several health national personalities are alive and have their own point of view about the sector development and its main factor or success and failed in a general and specific vision.

Until now, a country with a very rich history and experience in public health did not have a strong support of national public health thought which is partially explaining due to the lack of scientific research far from the traditional monographic (quality?) requirement to obtain the title of Medical Doctor and Master in Public Health.

In consequence, several questions did not have an answer well supported for high quality scientific research. Some of them are the relationship between model of development and state of the art of health dimension as well as how this kind of relationship and its consequences today has a specific translation in people health at the local level.

This research proposal pretend give a contribution well supported to answer these crucial main questions analyzing in the country the social determinants of health economics and health industry, the dilemmas of Strategy funding Primary Health Care, the production of knowledge about health care cost and economic impact assessment of health programs and its contributions to manage the health industry and the sustainability of an ONG devoted to provides sexual and reproductive health services in a turbulent scenario.

The output of the research will give to different interested in different world: academic, institutional, social society, political, religious and communitarian leaders; facts to debate the proposal of health for all in our country comparing at least two way to reach this goal: the free charge government proposal and the hypothesis that health for all has a specific economic and social cost that have to be afford for a mix of different partners in Nicaraguan society in order to organize an intervention program according with our reality. (Salazar Castellón, 2012)

Definitions

Socio-economic development is the process of social and economic development in a society. Socio-economic development is measured with indicators, such as GDP, life expectancy, literacy and levels of employment. Changes in less-tangible factors are also considered, such as personal dignity, [freedom of association](#), personal safety and freedom from fear of physical harm, and the extent of participation in [civil society](#). Causes of socio-economic impacts are, for example, new technologies, changes in laws, changes in the physical environment and ecological changes. (Wikipedia, 2012)

... health Economy is defined as a field of study that integrates concepts, theories and both economic and medical models to study of the production, financing, distribution and consumption of health services (Universidad Nacional Mayor de San Marcos, 2012) Spanish original¹, English translation is by the author)

Health financing is concerned with how financial resources are generated, allocated and used in health systems. Health financing policy focuses on how to move closer to universal coverage with issues related to: (i) how and from where to raise sufficient funds for health; (ii) how to overcome financial barriers that exclude many poor from accessing health services; or (iii) how to provide an equitable and efficient mix of health services. (WHO, 2012)

As stated at Alma Ata Conference: "Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination." The WHO World Health Report of 2008 will further elaborate on this definition. (WHO, 2012)

The social determinants of health are the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries. (WHO, 2012)

Health inequities are avoidable inequalities in health between groups of people within countries and between countries. These inequities arise from inequalities within and between societies. Social and economic conditions and their effects on people's lives determine their risk of illness and the actions taken to prevent them becoming ill or treat illness when it occurs. (WHO, 2012)

Universal coverage, or universal health coverage, is defined as ensuring that all people can use the promotive, preventive, curative and rehabilitative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship. (WHO, 2012)

¹ ...la economía de la salud, es definida como una disciplina de estudio que integra conceptos, teorías y modelos económicos y médicos para abordar como objeto de análisis el estudio de la producción, financiamiento, distribución y consumo de los servicios de salud

Study objectives

- 1) General Objective
 - a) To analyze the relationship between patterns of country development and the behaviour of both main health determinants and indicators, from the perspective of health economics
- 2) Specifics objectives
 - a) To Identify Social determinants of health economic and health industry in Nicaragua and analyze its evolution, challenges and future sceneries.
 - 1) To discuss the sustainability in the medium and long term for a policy of providing free public health services.
 - 2) To analyze the contribution of knowledge production about health care costs and economic impact assessments of health programs in Nicaragua to support management health economy and healthcare industry.
 - b) To study the sustainability success factor and the lesson learned from a ONG (PROFAMILIA) devoted to the provision of sexual and reproductive health service from civil society in a turbulent environmental.

Methodology

Conceptual framework

The overall study is based on the followings conceptual frameworks:

- 1) Health and society: the role of health determinants as part of socio economic model of development.
- 2) The renewal strategy of primary care attention.
- 3) The body of knowledge, methods, tools and techniques produced by the area of health economics and health financing.
- 4) The concept and models of health sector and health system.

Study subject

1. Nicaragua as a whole social formation models emphasizing the relationship between socioeconomic development and health as a social product,
2. The policy of free public health services,
3. The production of knowledge about health care costs and economic impact of health programs and its use to manage the health industry and to understand the mains axis of health economic.
4. Sustainability achieved by NGOs PROFAMILIA as a case study.

Study outline

This study did not have ethical implications according to the guidelines prepared by the World Health Organization (WHO, 2012) and is in line with the policies defined by the organization in relation to the investigation and analysis of health systems as one of its priority topics. (WHO, 2012)

This study is proposed to be conducted in partnership with the Ministry of Health, the Center for Research and Health Studies (CIES), attached to the Autonomous University of Nicaragua (Managua Core) and interested members of the International Cooperation in Health in Nicaragua and abroad, under the leadership of the Health Committee of the National Assembly.

The discussion with those parties will be arranged from the stage of proposal development to the dissemination of results. The approach will be supported by the combination of the following study designs: Qualitative and quantitative research, Cost Effectiveness Analysis study and Case Study. Brief description on methodology of each sub studies is elucidated in the papers outline section.

Papers outline

PAPER I: Social determinants of health economic and health industry in Nicaragua: evolution, challenges and future scenarios.

Authors: Mariano G. Salazar C, Anna Karin Hurting, Lars Lindholm.

Background

The healthcare industry in Nicaragua has undergone a process of evolution characterized by different stages: (1) before 1979, (2) between 1979 and 1990 (3) 1991 - 2007 and (4) 2007 to the current date. Each of these periods has been associated with significant socioeconomic changes in Nicaraguan society. Three historical moments of social breakdown can be seen: (1) 1979, overthrow of Somoza military dictatorship, (2) 1990, end of the Government of National Unity and Reconstruction and the beginning of the neoliberal project and (3) 2007, relaunching Reconstruction Project and National Unity. The current situation at 2012 of the healthcare industry and its impact on health development as social product is the sum of these historical elements of rupture and continuity.

Objective

The objective of this study is to identify the mutual influence relationship between the different stages of economic and social development of the Nicaraguan society and health as a social product, emphasizing the characterization of the social determinants of health development and its impact on configuration healthcare industry, sector development and morbidity profiles of Nicaraguan society and its main risk groups. The role of strategy Primary Health Care as a guide for action in the field of Public Health and an interface between health and society will be analyzed and described.

Methodology

This study is retrospective, longitudinal and analytical. Analysis categories from history, sociology and economics, will be used to understand and characterize the models of economic and social history at each stage of Nicaraguan society over the proposed period. Similarly, analysis categories from situational strategic planning, health economics, epidemiology and biostatistics, as well as the renewed strategy of Primary Health Care, will be used to analyze the development of the health industry, the health sector and the health situation of Nicaraguan society, with emphasis on the behavior of the major public health problems and developments in health economics .

Analysis

It will be described and analyzed the behavior of the main characteristics and variables of the models of economic and social development in the period studied and the healthcare industry, both in its specificity and in its particularity. Relations between the two dimensions: development and industry, will be established. The main defining trends of industry and development and their mutual relationship, will be identified. Regarding the future development of the economic social models and their interaction with the health industry, pessimistic scenarios, intermediate and optimistic will be built. Lessons learned during the study period will be identified and justified. The prospect of free health services as public policy, public-private mix, health reforms and the role of the Primary Health Attention strategy will be axes of qualitative and quantitative analysis to draw conclusions regarding the development of health economics and its main attributes.

PAPER II: Dilemmas of Strategy funding Primary Health Care in Nicaragua: Is it sustainable in the medium and long term a policy of providing free public health services?

Authors: Mariano G. Salazar C, Anna Karin Hurting, Lars Lindholm.

Background

Nicaragua began the implementation of the Strategy of Primary Health Care in the period from 1979 to 1980. The organization of the National Unified Health System (SNUS), the extent of coverage of services for people and the environment as well as the push for prevention and health promotion, and human resource training (medical specialties, public health and technology professionals, media and basic) were the main areas of implementation. The mixed public-private health industry is an equation that has undergone several changes in composition depending on the ideology of the political forces exercised hegemony in the government since the mid-80s to the current date. Within this context, the free public health services has had different emphases but has been preserved as a public policy in force. In the later period (2007 - 2012) is part of the political discourse of restoration of rights. The Health Care Model in Family and Community (MOSAF) is the centerpiece proposal to implement the strategy of primary health care, but there has been no evidence-based assessment to bring what has been their impact and efficiency, equity and quality. Moreover, there has been a realignment of the public-private mix of service provision that has not been properly studied to reveal their intricacies. Funding Strategy Primary Health Care, the development of health economics, and overall access to health services by the Nicaraguan population are pending issues regarding the analysis of the relationship between health and development.

Objective

To analyze the feasibility and practicality of the public policy of providing free health services and establish for implementation in the quinquennium 2013 – 2019, pessimistic scenarios, intermediate and optimistic.

Methodology

This study is cross-sectional, prospective and analytical. Describe the evolution of the implementation of the Strategy for Primary Health Care in Nicaragua, identifying its main phases, milestones and features. Establishes relationships and mutual influences between reform efforts and modernization of the health sector and the implementation of the Primary Care Strategy and how the agenda of cooperation in this regard has played a leading role. Discuss financing the implementation of the strategy of primary health care, their interactions with the development of the economy and health industry, and the various transformations that the Ministry of Health and the Nicaraguan Institute of Social Security, the main tools for social implementation of Strategy of Primary Health Care, it's have had during the period studied. Data collection was done through review of secondary sources and semi-structured interviews with key informants.

Analysis

The milestones of the implementation of the Strategy for Primary Health Care, proposals for reform and modernization, players and strategies of international cooperation, as well as the economy and health industry, will be compared, within a framework of traditional performance variables of production services, morbidity, mortality, and risk. The current volume of investment for the implementation of Strategy of Primary Health Care, in different areas and backgrounds will be identified and analyzed. According to the analysis of large product trends, future scenarios of feasibility and practicality of the policy of free public health services will be developed as well as a group of lesson learned.

PAPER III: The production of knowledge about health care costs and economic impact assessments of health programs in Nicaragua: strengths and weaknesses to management health economy and healthcare industry.

Authors: Mariano G. Salazar C, Anna Karin Hurting, Lars Lindholm.

Background

In Nicaragua health care costs studies were performed since the early 80s. Two methods have been used. The *process cost methodology* was implemented with technical assistance from PAHO / WHO for the period 1989 – 1995 in national referral hospitals and at least a network of primary care services. Within this universe are highlighted, the experiences in the Hospital for Women "Berta Calderon" and the Military Hospital "Alejandro Dávila Bolaños". Moreover, the country developed a methodology called *event costs* through a study funded by the Agency for International Development (AID) of the Government of the United States of America, done at the request of the Nicaraguan Institute of Social Security and executed by Management Sciences for Health in a universe of 12 EMPs in the period 2003-05. This study identified total, direct and indirect costs for 25 clinical care consultation and placement and 25 occupational hazards. There is also evidence of the realization of cost / benefit analysis of social programs financed by international banks

Objective

To identify the application, relevance and usefulness of different management methods used to study health care costs and determine the economic impact of health programs.

Methodology

This is a retrospective study and analytical. It will be reviewed literature available internationally to identify different methods developed to study health care costs and determine the impact of health programs. Through key informants from government, international cooperation and civil society, and the review of relevant literature and documentation placed in National Libraries, will be identified, classified, compared and analyzed the studies in the country. The main trends and gaps will be identified and a discussion from the perspective of health economics, the development of the health industry and the formulation of public health policies will be made

Analysis

The main trends and gaps in the use of methods of health care costs and economic impact assessment of health programs will be identified and a discussion from the perspective of health economics, the development of the health industry and the processes formulation of public health policies will be made, based on the renewed paradigm of primary health care.

PAPER IV: The private provision of sexual and reproductive health service from civil society in Nicaragua: business economics and sustainability, the case of PROFAMILIA.

Authors: Mariano G. Salazar C, Anna Karin Hurting, Lars Lindholm.

Background

Product of population policies and sexual and reproductive health, Nicaragua is now in a process of demographic transition characterized by the availability of a demographic bond. This impact has been the product of the work of the Government, International Cooperation and Civil Society. From civil society numerous actors have worked this issue. One organization with more tradition and prestige in this field is the "Nicaraguan Demographic Association - PROFAMILIA". This partnership between the public and private sectors to identify policies, strategies and programs service provision in the field of sexual and reproductive health, has been subjected to over the past eight years to various stresses by the supply growth of free public services, reducing international cooperation and transformations in the world of EMPs offering private health care contracted by the Nicaraguan Institute of Social Security. All these factors have affected the market for provision of sexual and reproductive health and the underlying public-private mix. For PROFAMILIA, the reduction of international cooperation and the loss of status of EMP was a major financial sustainability crisis which has been raffled to the current date through various containment strategies.

Objective

To identify and analyze the financial sustainability strategies PROFAMILIA, its impact on business economy and in the profile and volume of provision of sexual and reproductive health services.

Methodology

This is a retrospective study and analysis, based on the review of secondary sources, semi structured interviews with key informants and other qualitative and quantitative methods of obtaining and processing information. It includes an analytical review of accounting statements and financial balances, preparing financial projections, statistical analysis of service production (final, intermediate and general and administrative support) and for the behavior of the main reasons for consultation. Field visits will be made to a group of clinics differentiated by their degree of sustainability to identify the factors of success and failure. The service users will also be a source of information about the quality of services through a cross-sectional study of perceived quality and at least three comparative cost studies will be performed about reasons for outpatient care. The main milestones of the company will be identified and characterized.

Analysis

The set of information from the four areas of analysis: business economics, production of services, quality of care and milestones in the development of the company, will be analyzed in an interrelated manner, with quantitative and qualitative methods. Conclusions for the development of the company, useful lessons for other NGOs and financial sustainability future scenarios will be developed.

Research courses, conferences and internship

Courses already attended from 1983 – 1986.²

Health planning (3 credits) , Methods and techniques of health planning (5 credits) , Health planning in transition societies (4 credits) , General theory of both health and public administration (5 credits) , Basics statistics (3 credits) , Basic epidemiology (3 credits) , Epidemiological analyses (3 credits) , Statistics methods for analyses of epidemiological studies (3 credits) , Special didactic and applied pedagogy (3 credits) , Social organization of medicine in Brazil (3 credits), Social sciences and health (3 credits) , Economic and social development (3 credits) , Internship in method of teaching (10 credits). Total credits: 55.

Courses, conferences , internship and field visit to be taken

1) Courses

- a) Qualitative and quantitative methods in health and socio economic research.
- b) Social development models and health determinants.
- c) Health scenarios.
- d) Basic health economics.
- e) Advanced health economics.
- f) Advanced biostatistics.
- g) Advanced epidemiology.
- h) Advanced English.

2) Conferences

- a) Will be identified at least three according to the annual opportunities that appear, both in Latin America and Europe.

3) Internship

- a) In the health economic unit belong to PAHO or WHO headquarter or other appropriate organization.

4) Field visit

- a) Will be identified at least three according to the development of national and local analyses of health economics similar to the main research goal, both in Latin America and Europe.

² Courses attended at the National School of Public Health, Oswaldo Cruz Foundation, Rio de Janeiro, Brasil, as part as of the Public Health Master with epidemiology training, exponsored by Pan-American Health Organization (PAH/WHO) scholarship.

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First draft

Time table

Activities	2013			2014			2015			2016			2017			Place
	Month			Month			Month			Month			Month			
1) Proposal Development																
2) PAPER I: Social determinants of health economic and health industry in Nicaragua: evolution, challenges and future scenarios																
a) Preparation for data collection																
b) Data collection																
c) Data analysis																
d) Writing paper																
3) PAPER II: Dilemmas of Strategy funding Primary Health Care in Nicaragua: Is it sustainable in the medium and long term a policy of providing free public health services?																
a) Preparation for data collection																
b) Data collection																
c) Data analysis																
d) Writing paper + Midterm seminar																
4) PAPER III: The production of knowledge about health care costs and economic impact assessments of health programs in Nicaragua: strengths and weaknesses to management health economy and healthcare industry.																
a) Preparation for data collection																
b) Data collection																
c) Data analysis																
d) Writing paper																
5) PAPER IV: The private provision of sexual and reproductive health service from civil society in Nicaragua: business economics and sustainability, the case of PROFAMILIA.																
a) Preparation for data collection																
b) Data collection																
c) Data analysis																
d) Writing paper																