

POVERTY, PARTNERSHIP, AND PUBLIC HEALTH:  
COMMUNITY NEEDS ASSESSMENT IN A MEXICAN COLONIA

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL  
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2006

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This document is dedicated to the women of Siglo XXI. ¡Dios las bendiga!

## ACKNOWLEDGMENTS

So many people have helped me through this process. First, I want to thank my graduate committee for all that they have taught me, both in and out of class. I asked these five individuals to be on my committee because they are five of the most intelligent, professional people I know. They set high standards for competency and integrity in both research and teaching, and I hope to follow their example. I want to thank Dr. Barbara Zsembik, the chair of my graduate committee, for being more than a professor for me. She has also been a mentor and a role model, a true example of how a strong, intelligent woman of character can make a difference in her world. I want to thank Dr. Milgaros Peña, the cochair of my committee, for giving me the opportunity to work with her on her own research, teaching me the ropes of conducting qualitative research and managing healthy, open relationships with colleagues. Dr. Peña always made me feel like I was an important part of the research team and that my ideas mattered. I want to thank her for treating me like a colleague and friend. I thank Dr. Chuck Peek for all of his advice about research methods and writing and for always being willing to listen to my questions and guide me in the process. I thank Dr. Charles Wood for setting a high standard for critical thinking and theoretical application in sociological research. I admire him as a teacher and scholar. I thank Dr. Virginia Dodd for being an example of a Christian woman of grace and dignity in the classroom and for sharing her personal experiences in community research with me as I developed this project. Each one of these professors contributed something unique to my educational experience in general and to this

research in particular. I am proud to have been their student, and I am so appreciative of their contributions and direction as members of my committee.

This research would not have been possible without the help of some very generous people in Los Mochis. I want to thank Marco and Vicki Vallejo and their girls for allowing me to live with them for six months while I collected data and conducted interviews. I want to thank Abner Vallejo for helping me to build relationships and establish contacts in Siglo XXI and the local government and health care system in Los Mochis. I want to thank Claudia Rodriguez Hand for helping me recruit participants and conduct focus groups and individual interviews, for driving me all over town from one interview to another, and for helping me transcribe the interviews. Claudia worked long hours helping me with my research, and she never asked for anything in return. She is a true example of service, and I am so thankful for her friendship. I thank Dana Fennell for helping me with some of the research and bookkeeping details while I was in Mexico, but most importantly I thank her for being my friend.

I also want to thank my family and friends for their prayers and encouragement through this long and tiring process. There were many times I cried and felt like giving up, but God used these people to love me and encourage me to see it through to the end. I thank my parents, Don and Diane Mauldin, for believing in me and for supporting me even when I was not so sure of myself. I thank them for teaching me to be strong and secure and to live out my convictions, even in the face of adversity. I thank them for teaching me from my childhood to love the unlovely and to give to the poor. Most of all, I thank them for their examples of godliness, faithfulness, and love. I pray I can live up to their example. I thank my brother, Andy, for being the best brother a girl could ever

have. I thank him for teaching me to laugh at myself and to not worry so much about what other people think. I hope I can be as smart as he is one day. I thank the rest of my family, friends, and Covenant Church for loving me, encouraging me, praying for me, and supporting me so that I could live and serve in Los Mochis. I thank Jorge Ramirez, his wife, Cristina, and their children, Ale, Christopher, and Paulina for all the sacrifices they made to let me live with them and for making me a part of their family. I thank Iglesia Cristiana Bautista Ágape for loving me and praying for me. Even though they made fun of my Spanish sometimes, they never made me feel like an outsider. I pray that God will bless them as they grow in their faith, and I thank Him for letting them be such an important part of my life.

Finally, I thank my Heavenly Father for His perfect plan. Sometimes I doubt, sometimes I grow discouraged, sometimes I just do not listen; but He is faithful. I thank Him for His love and salvation. I thank Him for all of the blessings He has so richly poured out on me. I thank Him for fulfilling His promises and for doing His good work in me. I thank Him and praise Him for letting me finally finish!

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Abstract of Dissertation Presented to the Graduate School  
of the University of Florida in Partial Fulfillment of the  
Requirements for the Degree of Doctor of Philosophy

POVERY, PARTNERSHIP, AND PUBLIC HEALTH:  
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By

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August, 2006

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Cochair: Milagros Peña  
Major Department: Sociology

This dissertation takes an applied sociological approach to examining the health and health care needs of a poor colonia in northwest Mexico. Using a triangulation of research methodologies, guided by the premises and techniques of participatory action research (PAR), a community needs assessment was conducted in order to establish a base measure for the physical and social needs of an extremely poor community and to present possible methods and means of meeting those needs. The needs analysis of the community is grounded in a social capital theoretical frame, which emphasizes a community's mutual trust and cooperation as resources for meeting needs where financial and human resources are scarce.

Results of this community needs assessment are divided in terms of age and gender categories. Diarrheas, gastrointestinal illnesses, and respiratory infections are some of the most commonly reported health problems for children in the community. Drug and alcohol addiction, diabetes mellitus, diarrheas, hypertension, and violence are some of the

most prevalent health conditions for adult men. Diabetes mellitus, high blood pressure, and cancer are some of the most commonly reported conditions among adult women. This colonia has very limited physical, human, and social capital. However, colonia residents have tapped into the limited social capital they have in order to help meet health and socioeconomic needs.

This research makes contributions to the field of sociology, health research, and the community studied. It serves as an example of applied research, guided by sociological theory. It draws from principles and methods in PAR, highlighting the strengths of a “grass roots” approach to health research, and it serves as a springboard to future research and health care implementation in the community.

## CHAPTER 1 INTRODUCTION

The purpose of my doctoral research was to determine the health status and health care needs of a poor community in northwestern Mexico. Based on the assumptions that individuals make life choices within the context of their social and physical environment and that the consequences of such choices may be mitigated or exacerbated by that environment, I conducted a community health needs assessment in Siglo XXI, a small colonia of Los Mochis, Sinaloa, Mexico. This community health needs assessment also demonstrates the effectiveness of community partnership in efforts to improve well-being among impoverished people groups in Mexico. Including the poor and isolated citizens in health care planning and decision-making should improve our ability to identify health needs and to plan appropriate services to meet those needs.

Many health programs are unfairly deemed unsuccessful when the results hoped for are not produced. The problem is not always that the health program was a bad program; rather, the program may have been less effective because the community norms, perceptions, habits, and values were not considered in the program planning. The key advantage of a community needs assessment is that it explicitly makes consideration of these elements central to program development.

To accomplish the purposes of determining the health status and health care needs of Siglo XXI and to demonstrate the effectiveness of community partnership in meeting those needs, I completed a community health needs assessment, evaluated the importance

of social capital in promoting community health, and established a prospective program evaluation of a new community health clinic.

## **Background and Significance**

### **Evolution of Mexico's Public Health System**

In this section, I draw from a report entitled *50 Años de Salud Pública en Sinaloa* (Lamarque Bastidas, 1993) to briefly describe the development of a public health care system and common health conditions in the Mexican state of Sinaloa. On December 30, 1942, Mexican President Manuel Ávila Camacho signed into law *la Ley del Seguro Social*, which was designed to protect the health care of the nation's workers and served as the country's first attempt to provide universal health coverage to its citizens. Almost one year later, on October 15, 1943, Camacho established a Health Secretary position, *la Secretaria de Salubridad y Asistencia*, by combining *los Jefes de Servicios Sanitarios Coordinados* and *los Rurales y Ejidales*. The immediate success of this decision was observed in the decreased national mortality rate (19.8 in 1944 to 18.7 in 1945), the increase in childhood vaccinations nationwide for diseases such as chicken pox, and the completion of the first hospital in the city of Los Mochis in 1980 (Lamarque Bastidas, 1993).

By 1988, the *Secretaria de Salubridad y Asistencia* was transformed into the *Secretaria de Salud*, whose responsibility it became to unify health care delivery in Mexico, directing and coordinating both public and private health care initiatives. In spite of efforts to streamline health care organization and delivery and to provide universal health care to its population, people living in the poorest and most rural areas of the country (approximately 7% of population) still have no access to health care services (Lamarque Bastidas, 1993). A lack of medical equipment and office space, as well as

insufficient medications, sanitation, and educational programs, is partly to blame. Respiratory infections and diarrheas, conditions to which people living in poverty conditions are even more susceptible, continue to be leading causes of death (Lamarque Bastidas, 1993).

Whereas consolidating and centralizing health care delivery was deemed the appropriate solution in the 1940s, now the recommended approach to diminishing health disparities in the Mexican population is to decentralize health care to local, community and municipal organizations (Lamarque Bastidas, 1993). Refugio Lamarque Bastidas (1993) offers 5 suggestions for improving the quality of health care in Mexico that are directly related to community development. The first is to promote the incorporation of the public in health care related activities. The second is to give special priority to marginalized rural and urban areas, with special emphasis on primary health care. The third is to systematically combat infectious and parasitic diseases, which are more common in areas lacking sanitation and potable water. The fourth is to increase social assistance to and improve nutrition for marginalized groups, and the fifth is to increase the number of hospitals, hospital beds, and other medical facilities (Lamarque Bastidas, 1993).

Each of these goals, on the surface, is laudable. However, it is important not to haphazardly implement these goals. Rather, the successful implementation of these recommendations rests on careful planning and evaluation accomplished collaboratively with the community and the researchers. Indeed the first two goals are the hallmarks of conducting participatory action research, a general research approach “where researchers and the researched population form collaborative relations in order to identify and

address mutually conceived issues or problems” (Parkes & Panelli, 2001:87)

Conducting a community health needs assessment is one method for ensuring such careful planning, implementation, and evaluation within the epistemological frame of participatory action research (PAR).

### **Accomplishing a Community Health Needs Assessment**

Participatory action research (PAR) is a broad framework of research models (see Small, 1995; Whyte, 1991) focused on the collaborative process of research with an explicit goal of education, social liberation, and/or social change. It has been especially fruitful in the fields of community development and public health in less-industrialized cultures (Botes & Van Rensburg, 2000; Cornwall & Jewkes, 1995; Fals Borda, 1988; Hart & Bond, 1995; Woelk, 1992; World Bank, 1996). The epistemological foundations of PAR emphasize the role of the researcher as a reflexive participant observer, the human subjects as active participants, and the ethical obligation that the human subjects benefit from the research. Methodological strategies are inclusive and versatile, typically encompassing the full range of community stakeholders (enhancing validity) and triangulating data sources and analytical techniques (enhancing reliability). The general method of “needs assessment” captures this triangulation of data and methods.

Needs assessments have been identified as “a decision-aiding tool used for resource allocation, program planning, and program development in the fields of health, education, and the human services” (Bickman & Rog, 1998:261). They are generally composed of various types of data from different sources related to the studied community and are designed to link intervention and educational programs to the circumstances of the population in need, as opposed to achieving goals set by service providers, funding agencies, or researchers (Bickman & Rog, 1998). Some of the more common types of

data included in needs analyses are resource inventories, secondary data analyses, surveys, and group procedures (committee meetings, focus groups, community forums, and public hearings).

### **Social Capital as the Guiding Framework**

The explicit goal of education or social change in public health PAR essentially strives to build community capacity for self-determination and well-being through investment in human capital, social capital and financial capital (Bush & Mutch, 1999). Accordingly, I examined the health needs identified by the members of the Siglo XXI community from a social capital theoretical framework. First, I described social capital broadly, and then I focused on its use in community development. Finally, I directly connected social capital to public health. The essential argument within the social capital perspective is

that strongly developed social norms of trust, reciprocity and co-operation are typically accompanied by dense networks of voluntary organizations. These in turn are associated with high levels of civic activity and political participation, which help to promote social integration and co-ordination, create an awareness of the common good, and help society overcome some of the problems of producing public goods and achieving common goals. (Clarke & Foweraker, 2001:656)

Trust and social networks are two essential components of social capital. In the context of social capital and public health, trust is important because it promotes peaceful cooperation between individuals in a given society and enables communities to “achieve social goals collectively that could not be achieved individually” (Clarke & Foweraker, 2001:657). Social networks are important because they serve as the structure of social relationships, or personal ties, that become sources of support and act as buffers against the deleterious effects of stress and disease.

I chose to use the World Bank's conceptualization of social capital<sup>1</sup> and its relationship to community development to guide my community needs assessment. I believe such an application is appropriate because the results of my research will ultimately inform the design and implementation of a community medical clinic in that community. Whether the clinic is able to implement appropriate and adequate health care programs for the colonia is in part dependent upon the community's participation in the clinic's development. Members of the community must have a sense of ownership in the clinic, and its development should draw upon and build the community's social capital for the clinic to be sustainable.

### **Research Questions**

My research focused on three main questions related to the community health needs assessment. First, I wanted to know if health needs were understood, defined, or identified differently among stakeholder groups (Siglo XXI community members, public health care providers and government agencies, and the non-profit organization Manos Amigas de Los Mochis). In regard to this question, I hypothesized the following:

1. Community members would identify a variety of needs related to lifestyle (violence, alcohol and drug abuse, prostitution), as well as chronic conditions (arthritis, diabetes, high blood pressure) and nutrition;
2. Health care providers would emphasize needs related to public health, communicable diseases, etc.; and
3. Members of Manos Amigas would focus more on preventive care and social needs because that is what they can address through the clinic operations and church or volunteer community services.

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<sup>1</sup> The World Bank defines social capital as, "the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development" (Grootaert & van Bastelaer, 2001:4). Further discussion of this definition and its application to community research can be found in Chapter 2.

My second question was more directly linked to the social capital framework.

Specifically, I wanted to determine the social capital capacity for the stakeholders. I

made the following hypotheses associated with this research question:

1. Informal horizontal linkages would be stronger and more abundant in Siglo XXI than formal horizontal linkages, meaning people living in Siglo XXI would be connected by informal social networks of friends, neighbors, and family and would have fewer and/or weaker ties to formal organizations, clubs, etc.;
2. The non-profit organization, Manos Amigas, would serve as a go-between for the community members and health care providers because there would be limited vertical linkages between community members and the health care providers, but more and/or stronger vertical linkages between community members and Manos Amigas;
3. Informal networks at the micro level would be observable to a greater extent because of the marginalization of poverty; and
4. Formal networks at the micro and meso levels would be underdeveloped for a variety of reasons, such as mistrust and physical and financial constraints (transportation, time, etc.).

Finally, my last research question connected the community health needs

assessment and the social capital framework, as I sought to determine whether a varying perception of needs was associated with fewer or weaker vertical linkages between health care providers and community members. This question is important because a variation in perception of needs would indicate a risk of the available health services' failure to meet individual health needs. In cases where health care providers are aware of and provide services to meet existing health needs but community members believe other needs are ignored or neglected, there is a risk that community members will not "buy-in" to the services provided. In either case, there is an increased risk of producing a significant level of unmet health and medical needs. I hypothesized that

5. A lack of trust, communication, and cooperation between community members and health care providers would lead to the identification of different needs among the stakeholders; and

6. The more and/or stronger the vertical linkages between stakeholder groups, the more alike their perceptions of needs would be.

### **Research Goals**

When I began this research, I believed that if there was no trust between the stakeholder groups, then there would be a mismatch between the health care services provided and the perceived health care needs of the community. While my research sought to identify the linkages that already existed and the effects of those linkages, or lack of linkages, I also saw my work as an opportunity to increase social capital, building and strengthening linkages between the stakeholders by allowing them to participate in the process and by providing them with the information I gathered. In turn, I hoped that this information would be used to produce a better fit between the health care that is provided and what is needed, or what the community members believe they need.

## CHAPTER 2 LITERATURE REVIEW

### **Public Health in Mexico**

Before I investigated the present health needs in Siglo XXI, I wanted to have a general understanding of the most prevalent needs in Mexico. I researched current health trends related to morbidity and mortality as provided by the World Health Organization, the Pan-American Health Organization, and the World Bank because these are reputable international agencies that monitor health conditions in various countries across the globe and that provide country-specific health data from past years, as well.

### **Epidemiology of Illness and Death**

Recent population estimates provided by the World Bank (2005a) and the World Health Organization (2005) show that Mexico had a population of 102,291,000 in 2003, with an average annual population growth rate of 1.6 from 1990 to 2003. Women accounted for just over half of Mexico's population (51.4 percent in 2000). The country's total fertility rate continued to decline, from 4.7 in 1980 to 2.5 in 2002. However, Mexico maintained a high adolescent fertility rate of 62 births per 1,000 women ages 15-19, according to 2002 data (World Bank, 2005a). Life expectancy at birth in 1990 was 70.8 years, but it increased to 73.6 years in 2002. While more than 60 percent of Mexico's population is under 60 years of age, the percentage of the population over 60 years of age increased in the past decade, from 6.0 percent in 1992 to 7.2 percent in 2002. Considering some of the most common national health indicators, Mexico has seen some progress in terms of human development (World Bank, 2005a).

## Mortality and Morbidity

This progress can be seen in declining mortality rates across time. For instance, Mexico's infant mortality rate decreased from 37.0 in 1990 to 24.0 in 2002. The child mortality rate for children under five years of age decreased from 46.0 in 1990 to 29.0 in 2002. The country's maternal mortality ratio was reported as 83 maternal deaths per 100,000 live births in 2000, compared to a maternal mortality ratio of 193 for all of Latin America and the Caribbean. Table 2-1 displays common mortality indicators for Mexico from 1990 to 2002.

Table 2-1. Mexico Mortality Indicators: 1990 – 2002

Indicator	1990	1995	2000	2001	2002
Infant Mortality (per 1,000 live births)	37.0	30.0	--	25.0	24.0
Under-5 Mortality (per 1,000)	46.0	36.0	--	30.0	29.0
Maternal Mortality Ratio (per 100,000 live births)	--	--	83	--	--
Adult Mortality male/female (per 1,000 adults 15-59 years)	--	--	--	--	170/97

Source: World Health Organization (2005) and World Bank statistics (2005a)

The decline in mortality was due mostly to a decline in infectious diseases, particularly among Mexico's younger citizens (Soberón, Frenk, & Sepúlveda, 1986). However, as the Mexican population aged, the incidence of chronic diseases increased (Soberón, Frenk, & Sepúlveda, 1986). By the end of the twentieth century, Mexico experienced what some authors refer to as an "epidemiological transition" in which the burden of disease in the country began to shift from infectious-contagious diseases to chronic-degenerative diseases (Carolina & Gustavo, 2003; Soberón, Frenk, & Sepúlveda, 1986). The most prevalent causes of death for Mexico's population transitioned from pneumonia and influenza, diarrheas, and fevers to cardiovascular diseases, malignant

tumors (trachea, bronchus, lung, stomach, and cervix of the uterus), and diabetes mellitus (Carolina & Gustavo, 2003; Soberón, Frenk, & Sepúlveda, 1986). Data from 1990 and 1995, for example, showed the five leading causes of overall mortality to be violent or accidental deaths (including accidents, poisoning, and violence), certain early childhood diseases or certain causes of perinatal morbidity and mortality, malignant tumors, heart disease, diabetes mellitus, and cerebro-vascular disease (Carolina & Gustavo, 2003).

Upon closer evaluation, this “epidemiological transition” seemed to apply more to the wealthier segments of the population than to the poor. For the less privileged citizens, illnesses associated with “poor environmental living conditions and poverty,” such as infectious respiratory diseases (i.e., bronchitis, tuberculosis, influenza, and pneumonia), infectious intestinal disorders and diarrheas, and typhoid or other salmonella infections continue to be leading causes of illness and death (Soberón, Frenk, & Sepúlveda, 1986; Ward, 1987:44). According to previous research, many of these diseases could be reduced, or even prevented, with “improved sanitation and housing conditions and with a shift of focus towards primary health care” (Ward, 1987:45).

### **Infectious diseases**

Mexico has experienced some success in terms of declining morbidity rates associated with infectious diseases. Rates associated with injuries and chronic diseases, on the other hand, continue to rise. According to World Health Organization (2005) data, prevalence rates of some of the most common infectious diseases are experiencing an overall decline. There were seven reported cases of diphtheria in 1980, for instance, but none by 1990. Mexico’s last polio case was reported in 1990. The number of measles cases diminished from 29,730 in 1980 to 44 in 2003, and the prevalence of tetanus

decreased from 363 cases in 1980 to 82 cases in 2003. Mexico achieved an 83 percent success rate for tuberculosis treatment by 2001 and reported a tuberculosis incidence rate of 33 per 100,000 people in 2002 with a death rate of 5 per 100,000 deaths attributable to tuberculosis.

Much of the decline in infectious diseases is due to successful vaccination and immunization campaigns. For example, the percentage of children under 12 months who were immunized against measles rose from 78.0 percent in 1990 to 96.0 percent in 2002. Also in 2002, child immunization for children ages 12 to 23 months was 96 percent for measles and 91 percent for DTP3. Table 2-2 displays vaccination information presented by the World Health Organization's immunization profile of Mexico.

Table 2-2. Percentage of Target Population Receiving Vaccine by Year

Vaccine	1980	1990	1999	2000	2001	2002	2003
BCG	48	70	99	99	99	99	>99.5
DTP1	--	--	--	90	91	92	>99.5
DTP3	44	66	96	89	89	91	98
HepB3	--	--	--	89	--	91	98
Hib3	--	--	--	89	--	91	98
MCV	35	78	95	96	95	96	96
Pol3	91	96	96	89	89	92	98
TT2plus	--	--	--	78	--	--	92

Source: World Health Organization (2005)

Approximately one-third of one percent (0.30 percent) of Mexico's population 15- to 49-years-old was reported to be infected with HIV, and 27,000 children were orphaned by HIV/AIDS in 2001. Data provided by Mexico's *Instituto Nacional de Estadística Geográfica e Informática* (INEGI) show that the number of reported new AIDS cases increased from 1983 to 1999, where it peaked at 7,036 new cases that year, and then began a steady decline, with a low of 324 new reported cases in 2003 (INEGI, 2006).

While Mexico has seen some reduction in the overall prevalence of infectious/communicable diseases, there remains a high incidence of such diseases (i.e., infectious respiratory diseases, parasitic and infectious intestinal diseases, tuberculosis, and HIV/AIDS) among poorer segments of the population. Mexico also appears to be experiencing a return of some diseases once thought to have been eradicated (i.e., cholera, malaria, dengue) that are “now present in an era of bacterial resistance and new, yet unaffordable medication” (Carolina & Gustavo, 2003:546).

### **Injuries**

According to the Pan American Health Organization (PAHO, 2005a), unintentional injuries are the third leading cause of death and hospitalization in Mexico and the first leading cause of death for children under the age of fifteen. Eight percent of all deaths in 1996 were due to accidental injuries, an increase from 5.3 percent of deaths due to injury in 1970. Automobile accidents were responsible for 40.5 percent of all accidental deaths in 1996, followed by falls, drowning, poisoning, firearm injuries, and “other” injuries (PAHO, 2005a).

### **Chronic diseases**

Mexico’s first National Health Survey conducted in the late 1980s revealed particularly high incidence rates of acute respiratory infections and diarrheas. A second National Health Survey taken in the early 1990s showed that the top three causes of morbidity in Mexico were respiratory infections, musculo-skeletal infections, and gastrointestinal infections. By 1993, the National Survey on Chronic Illnesses revealed that hypertension and diabetes mellitus were also highly prevalent (Carolina & Gustavo, 2003). Other chronic illnesses mentioned earlier, such as heart disease, malignant

tumors, and cerebro-vascular disease, are also counted among the most common chronic diseases in Mexico (Carolina & Gustavo, 2003).

According to PAHO country-specific data, the three leading causes of death in Mexico in 1999 were heart disease (71 deaths per 100,000), malignant neoplasms (55 deaths per 100,000), and diabetes mellitus (47 deaths per 100,000) (PAHO, 2006). The incidence for heart disease from 1997-2000 was 294 per 100,000. Cumulative incidence of malignant neoplasms in 1999 was 92 per 100,000. Women represented 66 percent of those cases. The most common types of cancer among women were cervical (34 percent), breast (17 percent), and skin (12 percent). The most common types of cancer among men were skin (20 percent), prostate (17 percent), and stomach (6 percent) (PAHO, 2006). In 1999, diabetes mellitus was the third leading cause of death among adults 20-59-years-old (31 per 100,000) and the fourth leading cause of death among adults aged 60 and over (584 per 100,000) (PAHO, 2006). According to 2000 census data, two percent of Mexico's population was mentally or physically disabled (PAHO, 2006).

### **Health Care**

In addition to mortality and morbidity rates, a country's health care expenditures and other elements of its health care system testify to the quality of life of its citizens. Previous research (Carolina & Gustavo, 2003; PAHO, 2005b) reveals that in all causes of illness and injury (i.e., communicable illnesses, non-communicable illnesses, accidents, and violence), the poorest and most disadvantaged groups bear the greatest disease burden. According to these authors, "the conditions of lack of sanitation and poverty in which large groups of population live, in both the increasingly atomized rural and the ever more crowded urban space means that this aspect of the burden of disease is unlikely

to be eliminated from the health scenario in the near future” (Carolina & Gustavo, 2003:544). The wealthier, more politically advantaged groups, on the other hand, absorb the greatest amount of health care resources (PAHO, 2005b). “In our countries,” explained Dr. Cesar Vieira, coordinator of the program on public policy and health at PAHO, “no matter how much the health systems are called public systems, what is most common is that the services do not reach the poorest people. Whether for political, economic, social, or ethnic reasons, in fact, the higher income sectors end up absorbing a large portion of public health resources” (PAHO, 2005b:1).

In 2001, Mexico’s total expenditure on health was 6.1 percent of the Gross Domestic Product (GDP), which translated to an average of three hundred seventy (\$370) U.S. dollars per capita. Health expenditures accounted for 16.7 percent of the total general government expenditures for 2001 and 44.3 percent of total expenditures on health. The majority of public health expenditures (66.5 percent) came from social security expenditures. Of the 55.7 percent of total health expenditures from private sources, 92.4 percent was from out-of-pocket payments, and only 4.9 percent was paid out of prepaid plans.

### **Health providers**

Mexico’s current health care system dates back to the 1940s. Under this system, health care is provided by three main sources: social security organizations, the government sector, and the private sector. The two largest providers in the social security system are the *Instituto Mexicano de Seguro Social* (IMSS) and the *Instituto de Seguridad y Servicios Sociales de los Trabajadores al Servicio del Estado* (ISSSTE). IMSS was established in 1944 to provide health care to the nation’s “urban salaried

workers,” but was extended to salaried agricultural workers in 1954 (Ward, 1987:45). IMSS is now available to anyone who is employed (since 1973), including self-employed workers. However, benefits for these groups are less comprehensive, limited to non-specialist medical care and not including maternity care (Ward, 1987). The majority of Mexicans who participate in IMSS live in urban areas (Ward, 1987). ISSSTE, Mexico’s second largest social security institution, was founded in 1960 to benefit all state employees. The number of people covered under ISSSTE increased rapidly in the 1970s, with most of the new members coming from urban areas (Ward, 1987). Overall, the social security sector provides health care to approximately 45 percent of Mexico’s population (Nigenda, Lockett, Manca, & Mora, 2001).

The government sector providing health care to Mexico’s citizens includes the Ministry of Health and Welfare (SSA, *Secretaría de Salud*), which provides health care to about 35 percent of the population and consists of primary health care facilities, general hospitals, and specialty hospitals (Nigenda et al., 2001; Ward, 1987). Over the last 25 years, the Mexican government has implemented various health programs targeting the country’s extreme poor (Nigenda et al., 2001). *Seguro Popular* is one of the most recent of these programs. *Seguro Popular* was created because the Mexican government and health officials were concerned that too many Mexican citizens were not receiving adequate health care. President Fox and Secretary of Health Frenk Mora implemented *Seguro Popular* in October 2003 in an effort to help Mexico’s poorest citizens gain access to the country’s health care system. *Seguro Popular* is intended to insure those who are unemployed or do not otherwise qualify for health insurance under the social security system. To be covered by *Seguro Popular*, citizens must reside in

Mexico, have valid government identification such as a driver's license, voter registration card, passport, or military identification card, and a valid birth certificate. They must also not already be covered by IMSS or ISSSTE. Approximately 2.1 million families (or seven million individuals) are covered by *Seguro Popular* (Salud.Com, 2005).

In addition to social security and public health care, Mexico also has a private health care sector that serves an estimated ten percent of the population (Nigenda et al., 2001). Private sector health care comes from such institutions as the Red Cross and the Green Cross, as well as other private, for profit hospitals and clinics. Unless they have private health insurance, patients must pay out-of-pocket for services provided by these clinics. Private sector health care is not reserved only for the wealthy in Mexico, however (Ward, 1987). Sometimes poorer citizens choose to go to these health care facilities even when they have no insurance and must pay out-of-pocket. These citizens choose to access private clinics for a variety of reasons, among which are that such clinics are sometimes closer to the person's house, the waiting time to see a physician in these clinics is shorter, and the treatment is more advanced (Ward, 1987).

Health care provided by Mexico's social security, government, and private health sectors accounts for approximately 90 percent of the country's total population. The remaining ten percent of Mexico's citizens are not accounted for under the country's health care system (Nigenda et al., 2001). These citizens are more likely to utilize alternative forms of health care, such as traditional medicine, self-care, and free clinics provided by non-profit and non-governmental organizations.

### **Traditional medicine**

Traditional medicine in Mexico is a blend of medical beliefs brought from Europe with original beliefs and practices of indigenous people groups and modern biomedicine (Nigenda et al., 2001; Trotter, 2001). Traditional medicine is believed to take a more holistic approach to health and illness than conventional medicine because it integrates the social, psychological, spiritual, and physical elements of health and illness (Trotter, 2001). Traditional medicine provided by *curanderos* is an integral part of Mexico's health care delivery, especially in poor rural and urban areas where access to formal medicine is limited. There are three types of healing practices included in *curanderismo*: physical treatments and supernatural healing; spiritual healing and spiritualism; and psychic healing (Trotter, 2001). There is a basic belief in *curanderismo* that health and illness are influenced by both natural and supernatural elements. Illnesses originating from natural sources can be treated by doctors and with herbal remedies; however traditional healers can also treat such illnesses, as well as supernatural illnesses not recognized by the conventional medical system (Trotter, 2001). Such treatment is generally provided at low cost by local healers who are also members of the local community (Ward, 1987).

When considering the relationship between social capital and community health, local healers (*curanderos*) may be seen as a source of social capital, as well as a health care provider. *Curanderos* are seen as influential leaders in the local community and are respected as people of power and authority. Because *curanderos* are usually members of the local community, they have more than a formal doctor-patient relationship with their clients. They are neighbors who know first-hand the living conditions and health care

needs of their clients, because they may interact with (or at least see in passing) their clients on a regular basis.

### **Self-care**

Self-care is generally thought of as the first line of defense against illness and disease, regardless of a person's socioeconomic position. However, when other forms of health care are not available or accessible, people may rely more heavily on self-care as the only line of defense, or treatment, for illness (Leyva-Flores, Kageyama, & Erviti-Erice, 2001). Self-care practices range from changes in diet (drinking teas and eating particular foods) to acquiring over-the-counter or prescription medications from neighbors, friends, or family members to treat a self-diagnosed condition. Such forms of self-care have become more common as the general population's knowledge of health and medical care has increased (influenced by mass media, previous contact with health services, use of medicine, traditional healers, and information passed on from parents, grandparents, and peers) and as conventional medical care has become more expensive and less accessible to the poorest populations (Hernández Tezoquipa, Arenas Monreal, & Valde Santiago, 2001; Leyva-Flores, et. al., 2001). When self-care serves not just as the first line of defense but as the only form of medical care, there is a definite problem with access to care in the formal health care system. Unfortunately, at least ten percent of Mexico's population is forced to rely on self-care (alone or in combination with other alternative forms of medical care previously mentioned) to meet their health care needs.

### **Non-profits and non-governmental organizations (NGOs)**

Aware of the need for increased health care access for poorer populations where governments are unable to provide fiscal and other resources, non-governmental

organizations (NGOs) and international non-governmental organizations (INGOs) have increased their efforts to help meet those needs (Bradshaw & Schafer, 2000). These organizations provide both financial and organizational aid to developing countries. The United Nations estimates that NGOs and INGOs from the North have contributed approximately five billion U.S. dollars to developing nations, the majority of which has been donated since 1980 (Bradshaw & Schafer, 2000).

There is some disagreement about the effectiveness or desirability of NGOs in developing countries. One perspective argues that NGOs have enhanced development, especially in urban areas, as they “have helped to provide clean water for slums; build low-cost housing; provide job training; improve sanitation facilities; construct schools and health clinics; give vaccinations to children; enact health education programs for street children; and so on” (Bradshaw & Schafer, 2000:100). Another perspective, however, argues that NGOs “are simply another arm of international capitalism,” creating and maintaining dependency of poorer nations on wealthier, more powerful nations (Bradshaw & Schafer, 2000:102). From this point of view, NGO involvement in poorer countries could potentially impede economic development in those countries as they become more dependent on information and material resources from NGOs and invest less energy and fewer resources in their own local institutional development (Bradshaw & Schafer, 2000; Postma, 1994; Vegara, 1994).

### **Role of Social Capital**

Recognition of the inadequacies in health care delivery and inequality in health has led local governments, NGOs and INGOs, and international organizations to search for ways to better meet the needs of the poorer segments of the world’s population. In this search, social capital has become a popular concept for developing alternative ways to

increase health status and access to health care in areas where social inequality and poverty are widespread.

### **Definition and Measurement**

Pierre Bourdieu was the first to use the term social capital in his discussion of the opportunities people accumulate through their participation in certain communities, or social networks (Portes, 1998; Portes & Landolt, 1996). Since then, social capital has been associated with healthy community, political stability, and economic development (Portes & Landolt, 1996; Putnam, 1995). In his 1990 article, “Human capital and social capital,” James Coleman compared social capital to two other forms of capital: physical and human. Physical capital, according to Coleman, consists of material goods and resources (i.e., money, house, car, etc.), while human capital is composed of “the skills and knowledge acquired by an individual” (Coleman, 1990:297).

Social capital is defined more in terms of its function, that is, “the value of those aspects of social structure to actors, as resources that can be used by the actors to realize their interests” (Coleman, 1990:298). Basically, social capital is manifested in the ability of individuals and/or groups to withstand and succeed in the face of adversity. While Coleman admits that social capital and human capital “are often complementary” it is important to understand that social capital is more than human capital (Coleman, 1990:297). It may be seen as somewhat like the combination of human capital and social networks. However, Edwin Meléndez (1998) argues that just having human capital or just having social networks does not automatically translate into social capital.

The World Bank recently developed its own definition of social capital in terms of its relationship to sustainable development. This definition rests more heavily on Robert Putnam’s work in Italy and the U.S. According to Putnam (1995:67), social capital

“refers to features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit.” Individual benefits of social capital, reaped from participation in “dense networks of interaction” extend to the community as those networks “broaden the participants’ sense of self, developing the ‘I’ into the ‘we’” (Putnam, 1995:67). As individuals learn to trust each other and coordinate their resources and abilities to meet shared needs, they begin to see themselves more as a cohesive community than a cluster of individuals. In communities with adequate social capital one can find networks of civic engagement and social interaction that foster cooperation, social trust, and generalized norms of reciprocity. In turn, such communities benefit from better schools, lower crime rates, more efficient government, and more rapid economic development (Putnam, 1995).

Synthesizing the works of Putnam, the previously cited authors and others, the World Bank defines social capital as “the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development” (Grootaert & van Bastelaer, 2001:4). The World Bank sees social capital not just as a contribution to collective action, but also as an outcome. Furthermore, social capital has the potential to influence the production of human and physical capital. For this reason, the World Bank believes an emphasis on understanding and increasing existing social capital in developing nations will play a major role in insuring the sustainability of development efforts.

The World Bank recognizes that the success of such efforts rests on understanding the character of the given community’s social capital and its ability to access other goods and services. That is why, in October 1996, the World Bank began its Social Capital

Initiative (SCI). The goal of the SCI was to meet three basic objectives: “(1) to assess the impact of social capital on project effectiveness; (2) to identify ways in which outside assistance can help in the process of social capital formation; and (3) to contribute to the development of indicators for monitoring social capital and methodologies for measuring its impact on development” (Grootaert & van Bastelaer, 2001:1).

The SCI, with help from the Government of Denmark, funded 12 research projects to meet these goals. Six of the research projects focused on the contribution of social capital to household living standards in terms of increasing income or improving access to public goods and services (Fafchamps & Minten, 1999; Isham & Kahkonen, 1999; Krishna & Uphoff, 1999; Pargal, Huq, & Gilligan, 1999; Reid & Salmen, 1999; Rose, 1999). Five studies considered “the process of accumulation and destruction of social capital” and the ways in which policy or donor interventions affect that process (Bates, 1999; Bebbington & Carroll, unpublished; Colletta & Cullen, unpublished; Grootaert & van Bastelaer, 2001:1; Gugerty & Kremer, 2000; Pantoja, 2000). The final project assimilated the findings from the previous 11 studies and developed a social capital assessment tool based on findings from those studies (Krishna & Shrader, 2000).

Using its definition of social capital, as well as empirical analyses, the World Bank constructed a conceptual framework and methodology for assessing social capital. First, the SCI disaggregated its definition of social capital into three components: the scope, forms, and channels of social capital. It then set out to determine the best ways to measure each of these components and to identify the role(s) social capital plays in community development initiatives.

## **The Scope of Social Capital**

According to the SCI, the scope of social capital ranges across micro, meso, and macro levels of analysis. The micro level consists of the horizontal ties discussed in Robert Putnam's analysis of civic associations in Italy. Putnam believed that social capital is the product of "social organization, such as networks of individuals or households, and the associated norms and values, that create externalities for the community as a whole" (Grootaert & van Bastelaer, 2001:4). Thus, at the micro level of social organization, networks and shared norms and values are where social capital takes place. In my research, for instance, the micro level consists of the formal (church membership, community associations, etc.) and informal (family, friendship ties, etc.) networks in the community, or in other words, the horizontal links that unite community members.

The meso level, or scope, is based on Coleman's definition of social capital at the structural level. In his view, social capital consists of the vertical, as well as horizontal, links that "are characterized by hierarchical relationships and an unequal power distribution among members" of groups (as opposed to individuals) (Grootaert & van Bastelaer, 2001:5). Social capital at this level is embodied in my research in the relationships between community members and the Manos Amigas non-profit organization, health care providers, and the local government (public health department).

Macro level social capital encompasses "the formalized institutional relationships and structures" of a society, in addition to the horizontal and vertical linkages between its citizens (Grootaert & van Bastelaer, 2001:5). Included at this level are the political environment, laws, and civil liberties. I chose not to focus on macro level social capital for this research. However, I acknowledge that national health care law, the social

security system, the *Secretaria de Salud* (SSA), and other formalized institutions all influence social capital at the macro level.

### **The Forms of Social Capital**

While the scope of social capital defines the unit of observation, the forms of social capital define its manifestation. The World Bank's SCI cites two forms of social capital: structural and cognitive. Structural social capital is a more objective form, manifested through information sharing and collective action made possible by participation in social networks and associations organized by rules, precedents, and established roles. Church membership is an example of structural social capital in my research. Cognitive social capital is a more subjective form, referring to norms, values, attitudes, beliefs, and trust shared by members of either formal or informal organizations (Grootaert & van Bastelaer, 2001). Examples of cognitive social capital in my research might include the belief that informal network members take care of each other by sharing food or watching each other's children, or the belief that health care providers are trustworthy.

### **The Channels of Social Capital**

The third component of the World Bank's concept of social capital is the channels of social capital. Whether it is at the micro, meso, or macro level, and whether it is structural or cognitive, social capital is ultimately viewed as an asset that "produces a stream of benefits" (Grootaert & van Bastelaer, 2001:6). In other words, the channels of social capital are the means through which social capital affects community development. Copying, information sharing, and collective action and decision making are all examples of channels of social capital (Grootaert & van Bastelaer, 2001). In my research, the channel of information sharing came into play as community members passed on knowledge about the health behaviors and outcomes of others. This transmission of

information, in turn, might serve to reduce contagion and increase health benefits among community members. As community members participate in the planning and implementation of the medical clinic, the channel of collective action and decision making may become evident. Such participation has the potential to facilitate cooperation and trust between community members and health care providers, as well as to promote alternative means to securing health goods and services in the community.

### **Social Capital and Public Health**

The concept of social capital is emerging as a key focus of public health research, as it integrates various concepts already used in health research, such as social networks and social support, and has been shown to be associated with certain health outcomes (Glanz, Rimer, & Lewis, 2002). Within epidemiology, social capital has been defined as “a horizontal relationship between neighbors or community members” and has been measured “with variables such as trust, reciprocity, and civic engagement such as in voluntary organizations” (Glanz, Rimer, & Lewis, 2002:291). Social capital generally appears in the health research literature as a positive effect. In health-related studies, social capital has been negatively associated with various measures of morbidity and mortality, and has been identified as a mediator between income inequality and health (Glanz et al., 2002). Social capital has been linked to health in terms of transmitting health information, maintaining health norms, promoting access to health services, and contributing to psychosocial processes that provide affective support in times of illness (Kawachi & Berkman, 2000; Kim, Subramanian, & Kawachi, 2006; Lin, 2001; Wilkinson, 1996).

In some social capital and health studies, the concepts of bonding, bridging, and linking social capital become important in distinguishing exactly how social capital

influences health. Bonding and bridging social capital both refer to “horizontal” ties between social groups. Bonding social capital refers to ties between people or groups that are similar (in terms of socioeconomic status, beliefs, experiences, etc.), while bridging social capital refers to ties between people or groups that see themselves as different from each other. The informal horizontal linkages (i.e., the informal social network of friends and family) are bonding linkages. These intimate ties provide structural social capital by providing health advice and information, as well as direct exchange of services, such as childcare, to permit someone to seek medical care. Here, cognitive social capital provides emotional care that nurtures the health advice and information into group health norms and adherence to the norms. I expected to see these linkages and consequent health promotion in Siglo XXI.

Bridging social capital links individuals and their networks to other networks and informal governance structures. It expands the resource base for health-related information and exchange of services and care. Network links among neighbors who are not part of the intimate network works more as bridging social capital. Health and health service information is provided, but at lower frequencies and levels. Trust in neighbors reduces the negative consequences of stress associated with fears for personal and household security. Bridging social capital is most likely to develop when individuals trust in the other networks and informal governance structures to deliver on promises in an equitable manner. I expected to find fewer examples of this social capital in Siglo XXI, and thus fewer health resources.

Linking social capital is a specific form of bridging social capital and is used to describe the “vertical” ties between people who are in different socioeconomic groups

and/or maintain different levels of power and influence (Grootaert, Narayan, Nyhan Jones, & Woolock, 2004; Kim, Subramanian, & Kawachi, 2006; Poortinga, 2005). Linking social capital is critical to secure public health resources, such as sanitation, personal safety, and access to health and medical care. Bridging social capital permits collective action for sewage systems, for example, but the collective actors must be linked upward to those responsible for delivering community health structures and services. This is a structural form of social capital. Again, the linking network function is unlikely to be observed if mistrust prohibits bridging social capital development, or if individuals do not trust or value service providers. In such a case, public health improvements and use of medical care will be hindered. I expected to see a significant absence of linking social capital in Siglo XXI.

Research that has considered the separate effects of bonding, bridging, and linking social capital on health showed that community bonding social capital was associated with 14 percent lower odds of self-reported fair/poor health, and bridging social capital was associated with five percent lower odds of self-reported fair/poor health (Kim, Subramanian, & Kawachi, 2006). Bonding social capital at the community level was also determined to contribute to individuals' self-rated health even beyond individual measures of social networks and social support (Poortinga, 2005). Individuals living in communities with high levels of social trust were less likely to report fair/bad health. The same was true for individuals living in communities with high levels of civic participation (Poortinga, 2005).

It is less common, but growing in frequency, to include the negative effects of social capital in health research. It is crucial to understand that negative forms and

channels of social capital exist. As Putnam and Goss (2002:8-9) warn, “we must take care to consider [social capital’s] potential vices, or even just the possibility that virtuous forms can have unintended consequences that are not socially desirable.” I have identified three of those potential vices or unintended negative consequences of social capital that are especially applicable to the well-being of Siglo XXI.

According to Grootaert, Narayan, Nyhan Jones, and Woolcock (2004), social capital may serve as either a bonding or a bridging agent. Both forms of social capital involve elements of trust, cooperation, and reciprocity; however, the benefits that bonding social capital provides for some may produce negative effects for others. For example, social networks that serve to bond people with similar backgrounds, beliefs, experiences, and resources may benefit those who belong to the network but function as a mechanism for alienating outsiders. Instead of benefiting the entire community, such social capital can become exclusive, as it is accessible only to those who are already privileged, and may increase social inequality (Grootaert et al., 2004; Putnam & Goss, 2002).

Furthermore, some forms of social capital that are intended to promote social health may actually be used in destructive ways (Putnam & Goss, 2002). Grootaert and colleagues (2004:4) give an example of the negative effects of social capital when looking specifically at “linking” social capital. According to these authors, linking social capital is a type of vertical social capital, which “refers to ones ties to people in positions of authority, such as representatives of public (police, political parties) and private (banks) institutions.” They argue that this form of social capital is “demonstrably central to well-being, especially in poor countries and communities, where too often bankers

charge usurious interest rates, the police are corrupt, and teachers fail to show up for work” (Grootaert et al., 2004:4). Linking social capital is seen as a positive form of social capital that allows community members to develop relationships of trust and cooperation with people in authority in order to establish some amount of accountability for those authority figures. However, this type of social capital can also produce negative results. Linking social networks formed between corrupt police and drug dealers or other criminals in the community, for example, endangers the community and hinders trust and participation.

Finally, the values of reciprocity and sharing of resources and information that are meant to promote unity and sustain a sense of community may actually hinder the individual’s well-being. For example, the individual who works hard to provide for his/her family is not able to accumulate the wealth necessary to become upwardly socially mobile when he/she is expected to share and lend to fellow community members.

I sought to add to the social capital and health literature by assessing the available social capital in a small, poor community, and its influence on the community’s health status and its ability to access adequate health care. Specifically, I comment in the following chapters on the positive and negative effects on the health of the residents of Siglo XXI. I also incorporate social capital into the community health needs assessment presented in later chapters.

## CHAPTER 3 SETTING

### **Defining Community**

To complete a community needs assessment, the first task is to define “community to study.” According to several authors writing about community and community studies, there is no single definition of community. In fact, it appears that there is not just one, but five types of “community.” There is the geographic community, defined in terms of definite territorial boundaries, and the social community, defined in terms of systems of “social intercourse” (Lindeman, 1921:10). There is the political community, defined in terms of a system of government, and an economic community, defined in terms of economic processes. Finally, there is the psychological community, defined in terms of “like-mindedness”, for as Lindeman (1921:10) explains, “the real community does not exist until there is a consciousness of group adherence.”

In addition to having various types of community, authors Bell and Newby (1971:15) claim that more than ninety definitions have been employed in community studies and that “the one common element in them all was man!” They argue that many early community studies were more like novels than scientific research because they lacked a clear, objective definition of community and numerical data with which to make scientific comparisons (Bell & Newby, 1971).

Community has been defined in terms of each of the community types listed above, as well as combinations of those types. To one researcher it consists of “those living within the same local area of law and custom” (Lindeman, 1921:8). To another, it is a

“sample or microcosm of a culture” (Arensberg & Kimball, 1965:ix). Dwight Sanderson defines community as “not an area, nor an aggregation or association, but rather a corporate state of mind of those living in a local area” (quoted in Lindeman, 1921:12). Butterworth and Weir, authors of *The Sociology of Modern Britain* (1970), state that community is composed of “a territorial area, a complex of institutions within an area, and a sense of belonging” (quoted in Bell & Newby, 1971:15-16). In his book, *The community: An introduction to the study of community leadership and organization* (1921:9), sociologist Eduard C. Lindeman argues “the community, which is an aggregate of families, is the vital unit of society in which the individual secures his education, receives his standards of health and morality, expresses his recreational tendencies and labors to earn his share of worldly goods....”

For purposes of this research, I chose to define community in terms of geographical space, social interaction, and psychological like-mindedness. The community of Siglo XXI is a community demarcated by physical boundaries that are recognized by both government and individuals living in that area. It is a community that can be found on a city map, and when asked, the people living there can point out where the community begins and ends. I believe community is defined by more than just physical space, though. Social interaction and psychological like-mindedness are also crucial components, especially when addressing issues of social capital, community trust, and participation. If a group of people lives in the same geographical space but functions as distinct, smaller entities (families or households), then there is little sense of community that leads to shared norms, values, and traditions. Without such shared norms, values, and traditions, setting and obtaining shared goals becomes increasingly difficult. I was

able to see during the time I spent in Siglo XXI that the people living there do see themselves as part of a larger group.

### **Locating Siglo XXI**

#### **Mexico**

The World Health Organization (2005) lists Mexico's GDP per capita in 2001 as \$8,903 (international dollars), and the World Bank (2005b) lists Mexico's income per capita at \$5,910, which is the highest of all Latin American countries. While Mexico is considered a middle-income country, the distribution of economic gains experienced over the past decade has been extremely skewed, leaving 53 percent of the population living in poverty (i.e. less than two dollars per day) and 24 percent in extreme poverty (i.e. less than one dollar per day) according to data from 2000 (World Bank, 2005b).

The World Bank (2005b) argues that inequality pervades Mexico's population in terms of income and differential access to basic services. The most recent economic indicators for Mexico show that the richest ten percent of the population receives more than 40 percent of the country's total income, while the poorest ten percent receives just over one percent of the total income (World Bank, 2005b).

#### **Los Mochis**

The city of Los Mochis, Sinaloa was founded in 1903 by Albert Kinsey Owen, a young engineer from the United States. Owen arrived in that area of the state of Sinaloa in 1872 to investigate the possibilities of constructing a railway. Upon his arrival, Owen gained an even greater vision for building a city that would incorporate rail, air, and maritime travel (Mochisonline.com 2005a). Owen's vision was realized through the port city of Topolobampo, located approximately fifteen kilometers from the present-day city of Los Mochis.

Benjamin F. Johnston, a young businessman from the U.S., arrived in Topolobampo, attracted by Owen's vision of a city that would serve as a connection between that part of Mexico and cities across the world. Johnston joined with Edward Lycan, an associate of Don Zacharías Ochoa, owner of a small sugar refinery, to build one of the most important sugar companies of the time. When Ochoa died, Johnston and Lycan founded The Aguila Sugar Refining Company, named after Ochoa's first sugar refinery, El Águila. The sugar company's name was later changed to United Sugar Company (Mochisonline.com 2005a).

By 1901, Johnston had become a powerful businessman in Mexico and the United States. He began to build a city just inland from Topolobampo, with "calles amplias y rectas [wide and straight streets]," much like the style of North American cities of his day (Mochisonline.com 2005a). On April 20, 1903, the state government of Sinaloa first recognized Los Mochis and Topolobampo as local "alcaldias" (Mochisonline.com 2005a). The government created the municipality of Ahome, which includes Los Mochis, Topolobampo, and a few other surrounding cities, in 1916. The rail way that Owen proposed to build from Kansas to Topolobampo proved to be a much slower process. It was finally completed by the Mexican government in 1961 (Mochisonline.com 2005a).

Today, Los Mochis has a population of over 200,000 (200,906 in the year 2000), more than half of whom are women (103,973 women and 96,933 men in 2000) (Mochisonline.com 2005b). Los Mochis is a relatively prosperous city. There are all types of neighborhoods throughout the city. Some neighborhoods are filled with large, well-kept houses with nice cars in the garages. Some of these houses have grass, trees,

and flowers planted in the yard. Such houses sell from between one-hundred and two-hundred thousand dollars (\$100,000 - \$200,000 USD). Some houses cost even more. In the middle class neighborhoods one might also see cars in many of the driveways or lining the streets. Those houses usually have two to three bedrooms and one or two bathrooms. Some of the houses have a bathroom in each bedroom. In the poorest colonias, the houses are built from wood, lamina, tin, tar paper, broken up fruit crates, and any other materials the builders could find. These houses may have one, two, or three rooms. Some have bathrooms, some do not.

The wealthier and middle-class neighborhoods have paved streets and sidewalks. The houses are built of brick and concrete block, and there are always metal bars covering the windows and air conditioning units. There are usually a few restaurants in or nearby these neighborhoods. In the middle-class neighborhoods, there are more taco and hot dog stands on the street corners. There are also local, family owned convenience stores, as well as chain convenience stores, grocery stores, and pharmacies in these neighborhoods. There are small, one-room, police stations located toward the entrances of some of the middle-class neighborhoods. One or two police officers can be found there any time of day, and it is very common to see patrol cars roaming the streets.

The poorest neighborhoods are located on the outer edges of Los Mochis. They do not have sidewalks or paved streets. The dirt roads are filled with potholes and with ruts that residents have to dig to let water drain away from their houses when it rains. There are usually a few small stores, owned and run by people living in that neighborhood, that sell snack foods, soft drinks, milk, juice, bread, tortillas, and sometimes fruits and vegetables. As in most neighborhoods in the city, there are also one or two beer

*depósitos*. Instead of streets lined with cars, it is more common to see barefoot children playing and adults gathered in someone's yard, talking. The iron bars covering the windows and doors in the middle- and upper-class neighborhoods are seldom seen in the poorest areas of the city. There are few air conditioning units in the poorest neighborhoods.

### **The Mexican Colonia**

I have been careful thus far to use the term neighborhood instead of colonia when describing the different sections of Los Mochis. That is because this term carries with it heavily weighted connotations of poverty, marginalization, and deprivation of resources. When scholars speak of Mexican colonias, they are more than likely referring to communities located on the outskirts of larger, more developed cities. These colonias are often developed through land squatter patterns, where individuals and/or families build a make-shift house out of scrap materials on a piece of property that they do not legally own. People living in such colonias have very little, if any, access to public services such as potable water, sewage systems, electricity, and garbage disposal (Haynes, 1977; Interhemispheric Resource Center, 1998). Colonias also tend to have higher rates of communicable diseases such as tuberculosis, typhoid, and hepatitis, as well as high unemployment rates and low levels of educational attainment (Interhemispheric Resource Center, 1998.)

While this definition of colonia holds true for many areas labeled as colonias in Mexico, it does not apply to all colonias in Los Mochis. Rather, the term *colonia* is one of two titles (*fraccionamiento* is the other) used to identify individual neighborhoods throughout the city. Fraccionamientos and colonias may be either poor or wealthy, in the middle of the city or on the outer edges. These terms serve as names for different

neighborhoods, and both terms apply to neighborhoods throughout the city. When I was conducting my research, I lived in the colonia Scally, which is one of the wealthier areas of the city, with some of the more expensive shops and restaurants. While the use of the terms *fraccionamiento* and *colonia* are more or less interchangeable in Los Mochis, the colonia of Siglo XXI does follow the scholarly concept of colonia mentioned above.

### **Siglo XXI**

Siglo XXI is one of the poorest colonias in Los Mochis. People first began inhabiting the area now known as Siglo XXI about six years ago. They moved to that area in a process of what the community members call “invasion.” The Siglo XXI women who participated in my research say that it was invasion because people were staking out and building on land that belonged to the government. Poorer individuals, or more commonly poorer families, without a home or land of their own chose a location in the area of what is now the colonia of Siglo XXI and built a house, without purchasing or renting the property.

Generally, the houses in Siglo XXI are one-room structures, built of cardboard, wood, lamina, and any other material scraps the would-be home owners could find and piece together. The roofs of the houses are also constructed with pieces of lamina. The vast majority of the houses have dirt floors, but occasionally one might find a house with the more recent addition of a concrete floor, at least in one area of the house. Figure 3-1 shows the inside of a typical house in Siglo XXI. At the time I conducted the focus group interviews with women in the Siglo XXI, there was no sewage system in the colonia, so residents had latrines instead of bathrooms. They emptied human waste into holes dug in front of their houses, along the dirt road (see Figure 3-2). While I was in Los Mochis collecting data, the city flooded. I passed through Siglo XXI a few days after

the rain stopped. Children were using empty potato chip bags and soft drink bottles to catch insects floating in the water. Figure 3-3 shows children wading through the flooded streets, playing barefoot in a mixture of mud, raw sewage, and rain water.



Figure 3-1. Inside a typical house in Siglo XXI

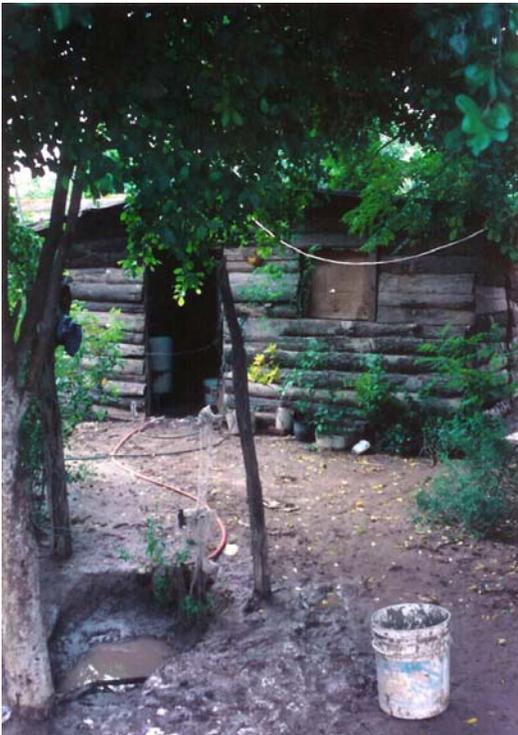


Figure 3-2. House with latrine



Figure 3-3. Children playing barefoot in polluted flood conditions

Siglo XXI consists of four streets that run East-West, with three intersecting streets running North-South. The streets look more like dirt paths worn by passing cars, busses, and animals than actual streets, but each street appears on official maps (Figure 3-4). While not all streets are marked with visible signs, they all are officially named, and people who live in this colonia know the names of the streets and where they are located. An outsider to the colonia who is not familiar with the area might have a difficult time determining where the colonia Siglo XXI ends and another colonia begins. However, members of this colonia are quick to point out which neighboring streets are or are not part of their colonia.

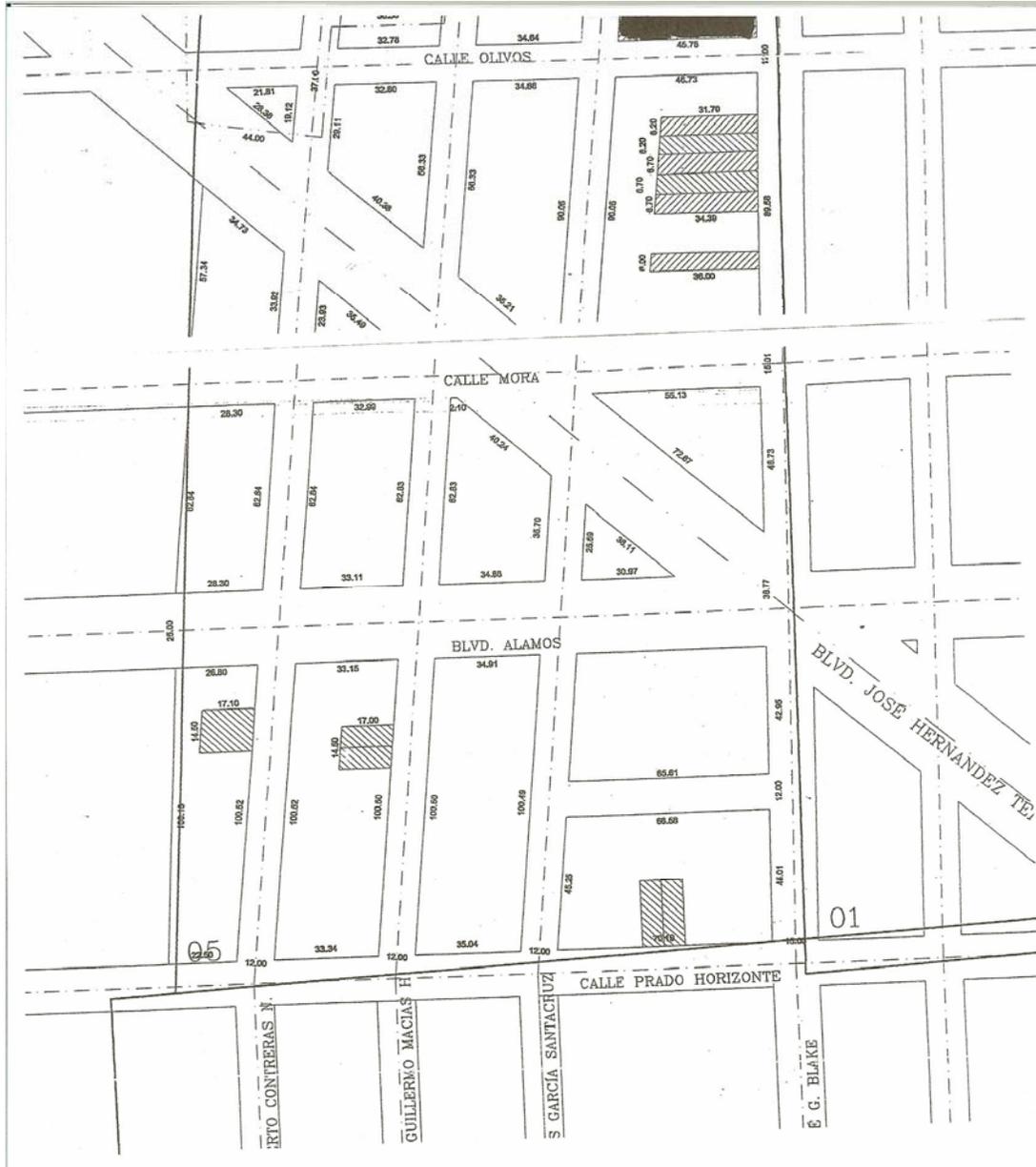


Figure 3-4. Map of Siglo XXI

According to the women who participated in my focus groups, the local city government only recently recognized Siglo XXI as a colonia of Los Mochis (around 2001) and implemented a program in which the people already living there can pay the government for the land in exchange for an official land title. The city also provides bus service, water, electricity, and garbage pick-up to the colonia. However, not everyone living in Siglo XXI can afford to access these services. Some women in the focus groups

talked about how they “borrow” water and electricity from neighbors and share in paying the bills each month. I noticed work crews digging trenches and installing pipes along the edges of some of the streets as I walked through the colonia during my last two weeks in Siglo XXI (end of November 2004). Local residents told me the city was installing sidewalks and a sewage system for the colonia, but that many people living in Siglo XXI still would not have access to the sewage lines because they could not afford to pay the mandatory connection fees.

The men of Siglo XXI who have jobs work as handy-men, laying tile, building bathrooms, or doing other home improvement projects for other people. Two or three of them raise cattle or goats. There is one auto mechanic in the area. The women make tortillas and tamales to sell. Some open their own hot dog or taco stand in front of their house each night. Some of the women have also worked picking tomatoes or cleaning chickens for larger businesses in the city.

Some of the residents in Siglo XXI have opened their own *aborrotos*, small stores where they sell soft drinks, cookies, chips, breads, tortillas, milk, water, and candy. There are also a couple of *tortillerías*, where women make and sell corn and flour tortillas. There are a couple of larger stores that sell the same types of goods as the *aborrotos*, along with beer and a few other household items. One of these stores has two arcade games where males of all ages can be found playing. Two teenage girls in the colonia told me that those arcade games have been rigged so that with a certain manipulation of the controls, the machines display pornography instead of the video games. The girls said that even the young boys of seven-, eight-, and nine-years-old know how to switch the machine from video game to pornography (Figure 3-5). The

most lucrative businesses in the area are drug dealing, prostitution, and stealing, which makes Siglo XXI one of the most dangerous places in the city, as well.



Figure 3-5. The local store with pornography in the arcade games

Whenever I talked to people I knew from Manos Amigas de Los Mochis or from one of the Baptist churches in the city about my plans to conduct this research project in Siglo XXI, they always warned me not to go to that colonia alone and to always leave before the sun went down. One woman, Claudia, told me that a female college student had been abducted and attacked while doing research in a similar area and stressed the importance of having someone with me at all times. Claudia volunteered to serve as my research assistant and said that she would always be willing to accompany me any time I needed to work on my research. I spent one day explaining my research objectives to

Claudia and teaching her to take notes during individual and focus group interviews. I also taught her how to transcribe interviews. Claudia spent two months with me, helping me recruit participants, obtain data from health care providers, and transcribe some of the interviews.

### **Rationale for Siglo XXI**

I selected the Mexican colonia of Siglo XXI as the location for a community health needs assessment for four principal reasons. The first reason I chose to study Siglo XXI is because my earlier involvement in the community facilitates the collaborative partnership of the researcher with community members to complete the community needs assessment. Value in establishing trust and participation with a disenfranchised community is greater than the role of the value-neutral and objective researcher, who is external to the culture. By conducting the needs assessment, I was able to observe the implementation of partnership between community members, the non-profit organization, and local health care providers. In effect, the needs assessment not only served as an evaluation of existing social capital, but it also serves as a benchmark for future studies to address how the medical clinic enhances (or hinders) social capital in this community.

A second reason for this setting, closely linked to the first, is the imminent development of a local medical clinic. The action-oriented goal of PAR ideally suits it and its needs assessment approach to develop a community-driven, culturally appropriate social change process. Within the next one to two years, a newly established non-profit organization, Manos Amigas de Los Mochis, hopes to open a medical clinic in Siglo XXI. For more practical reasons, I hoped that conducting a community needs assessment in Siglo XXI would give voice to the members of this community as they identified their health needs and worked together to find solutions. The leaders of Manos Amigas de Los

Mochis also hope to use the information provided by this community as they plan for the services that will be offered by the medical clinic.

A final reason for selecting Siglo XXI is that the inhabitants of this colonia have defined themselves as a community, living in the same geographical place, under similar social and economic conditions. They not only share a physical space, but they also share customs and values. The people living in Siglo XXI constitute an impoverished community that struggles to survive on the outskirts of a modern, developed city. Siglo XXI serves as a prime example of how Mexico's efforts to provide global health insurance have failed to insure health equity for its population.

### **Gaining Access and Legitimacy in Siglo XXI**

My first experience with the colonia of Siglo XXI was in June of 2003 when a church from Birmingham, Alabama invited me to go to Los Mochis with them to serve as an interpreter. The church sent two teams down to Los Mochis, and each team spent one week working in Siglo XXI. The first team worked with the women of the colonia, leading Bible studies and teaching crafts that the women could produce and sell to earn money. The second team spent the week with the children in the colonia, teaching Bible stories, songs, games, and crafts. In addition to teaching the women in Siglo XXI, the first mission team from Alabama also planned to spend some time getting to know the women and to find out more about the needs of their families. The mission team was just beginning to plan a medical clinic in that area, with the help of a local Baptist church in Los Mochis and the non-profit organization, Manos Amigas.

When the mission team leaders learned that my career goals included participating in healthcare research and perhaps working to open medical clinics in poor areas of Latin America, they became very excited. One woman said, "That's exactly what we're doing

here this week! We're supposed to talk to the women in Siglo XXI about their needs and what they see as the needs of their families because our church wants to build a medical clinic there." So, the next day I helped the team from Alabama talk to the women about their colonia.

### **The Women**

The women told us that the biggest problems they faced were drug and alcohol addiction, violence, and prostitution – all of which are tied to living in poverty. They talked about how it was difficult to find jobs that were secure and that paid enough. When asked what could be done to help them get work, they requested job skills training, such as hair cutting and sewing for the women, and construction, plumbing, and auto mechanics for the men. The women also identified the need for adequate and safe childcare for their young children in order to be able to work.

As I listened to the women talk about their families and life in Siglo XXI, I tried to stay emotionally detached. They said that many of the men, and even some of the women, were addicted to drugs and alcohol and, that for some of the women, prostitution was their only source of income. Members of the local church and leaders of the non-profit organization, Manos Amigas, had already told the mission team a little about the area. We learned that many of the men in Siglo XXI spent the majority of their income on drugs and alcohol and that their wives struggled to make ends meet with the rest. Siglo XXI was known throughout the city as one of the most dangerous places in Los Mochis, and it had one of the highest rates of drug related crime in the city. Radio, television, and print news reports often warned people to avoid that area after dark. Not even the police wanted to be there at night.

One woman described how she lived in constant fear for the safety of her children. Drug dealers lived on either side of her, and she would hear gun shots at all hours of the night. She felt she could not report anything to the police for fear that the drug dealers would find out and would harm her or her family. Her husband drank and used drugs, had a difficult time finding and keeping a job, and was abusive. She worked in a poultry factory, cleaning chickens, but lost her job when health problems caused her to miss a couple of days of work. The more time I spent with the women in Siglo XXI, the more I realized that this woman's story was not unique. Many of the people living in Siglo XXI live similar experiences.

### **The Health Care Workers**

I met the Director of Public Health for the municipality of Ahome (includes the city of Los Mochis and surrounding areas) in the summer of 2003 and listened to him describe the need for extended health care, sanitation, and health education in his municipality. This doctor, like Manos Amigas and the mission team from Birmingham, was concerned about the number of people in his municipality who do not currently receive adequate health care.

The people living in the poorer colonias surrounding Los Mochis, for example, struggle with high rates of malnutrition, as many families can only afford one meal of rice or beans per day. People living in poorer areas are also at greater risk for contracting diseases such as dengue fever. The July 27, 2003 issue of the local newspaper, *El Debate*, featured a number of articles related to dengue, its mode of transmission, and the city's efforts to rid itself of this disease. The Director of Public Health explained to me that he was concerned that people living in the poorest colonias were more likely to contract the disease because the conditions in which they lived – dirt floors, leaky roofs,

and very little (if any) sanitation service or potable water – were the most conducive to the spread of this mosquito-born disease.

### **The Mission Project**

After returning to the U.S. after those two weeks in Siglo XXI, I kept in touch with two of the members of Manos Amigas. They sent emails to let me know how people in Siglo XXI were doing and to keep me informed of the needs in that area. Sometimes they shared very troubling stories. I received an email one day from one of those men telling me that he had met a fifteen-year-old girl from Siglo XXI on the street as he was driving to the airport. Fulenita was standing in the middle of the street, waiting for cars to stop at traffic lights so that she could wash the windows and windshields to earn some extra money. This man was surprised to see Fulenita there because she had an eight-month-old baby and, according to cultural custom, should have been at home taking care of her daughter. When the man stopped to ask her why she was there, Fulenita told him her baby was sick but that she did not have money to take her to the doctor. The baby's father was in prison for stealing, so the family had no source of income. This man offered to help Fulenita pay the doctor bill, but she explained that even if she could afford the doctor's visit, she would not be able to pay for any medications prescribed for her child. In his email, this man expressed the sadness and helplessness he felt for Fulenita and others in similar situations.

Because of stories such as this one, the church from Birmingham and Manos Amigas de Los Mochis began plans to build a new medical clinic designed specifically to meet the needs of the poorest citizens in the area. It is not that these stories are unique that motivates the Mexican and American groups to take on the burden of providing health care to Siglo XXI. It is that these experiences are occurring in a country that touts

its nationalized health services. It is that Siglo XXI is part of one of the most economically and technologically advanced cities in the country. It is that despite all of the federal, state, and municipal governments' efforts to improve the lives of its citizens, the people in Siglo XXI have been lost in the shuffle.

The individuals and groups involved in this project hoped that by building a free medical clinic, they would be able to help reduce the inequities in the distribution of health and health care in the Los Mochis area. The Director of Public Health and other government officials were supportive of the project. The local government even donated a piece of property on which to build the medical clinic. However, the clinic planners wanted to ensure that the clinic meets the true needs of the community and that the poorest people living in the area are able to access appropriate health care (education, diagnosis, and treatment) through this clinic. As part of their planning process, these groups asked me to help identify the community's health needs and the services already available to this population, so that they would be able to design, staff, and supply a medical clinic with the necessary services, equipment, and medications to meet the needs of the surrounding area. The trusting personal relationships I had developed with community members over two years provided an opportunity for me to serve this community with my research skills for their desired social change.

## CHAPTER 4 METHODS

### **Participatory Action Research**

In this chapter, I first present a brief overview of the epistemological and methodological assumptions of participatory action research (PAR), which encompasses both my theoretical focus on social capital and my use of a community needs assessment. Then I discuss the five phases of a community needs assessments and present the data gathered for each phase.

PAR is a broad framework of research models focused on the research collaboration between the researcher and the researched and conducted with an explicit goal of policy or programmatic action. It is a framework that includes qualitative and quantitative data and analytical techniques (Cornwall & Jewkes 1995), thus well-suited for the data requirements of a community health needs assessment. The role of the researcher is as a reflexive participant observer, which means that data quality is enhanced by a trusting relationship balanced against scientific “objectivity.” Validity is enhanced by triangulation of data, inclusion of contextual factors, and guidance from the theoretical framework of social capital. Two common validity threats are researcher bias and reactivity. Managing reactivity means I must be aware and reflexive of how my presence shapes the data. Managing researcher bias means I must strive to avoid distorting data collection and analysis with my preconceptions and expectations. Reliability also is enhanced through triangulation of data.

## **Community Health Needs Assessment**

There are five basic phases of a needs assessment: identification of community stakeholders; community profile; needs identification; needs assessment; and communication. Here, I discuss the components of each phase of the needs assessment and identify where each piece can be found throughout the dissertation.

### **Phase 1: Community Stakeholders**

The first phase of a community health needs assessment involves identifying both the uses, or intended purpose of the assessment, and the individuals and organizations that will use the assessment. The users of the assessment include “those who will act on the basis of the analysis and audiences who may be affected by it” (Bickman & Rog, 1998:264). Identifying both the stakeholder groups and their potential uses of the assessment helped to guide and focus the assessment design. I identified three stakeholder groups associated with this community needs assessment: the government and other health care providers; Manos Amigas de Los Mochis, the non-profit organization working to establish a medical clinic in Siglo XXI; and the people living in the Siglo XXI colonia. Recognizing all stakeholders and inclusion of their data reduces researcher bias and reactivity, and validity threats to data quality in a needs assessment. The results of Phase 1 are presented here.

The public health administrators and other local health care providers had an interest in this needs assessment because it is their responsibility to ensure that citizens in their municipality receive adequate health care. Local health care providers and health care administrators are familiar with health trends in the area, as well as with the services already provided, so they were able to guide me toward specific issues to be explored in focus groups with women in the colonia. The local government and health care providers

also asked me for the results of my research so they will be able to use the findings to develop methods for addressing the public health issues highlighted in the assessment.

The non-profit organization, Manos Amigas de Los Mochis, was included in the community needs assessment because this is the group responsible for designing a new medical clinic to be built in the colonia. Members of the organization want to know what health needs are most prevalent in the community in order to design a clinic that is able to meet those needs in terms of space, equipment, medications, and personnel. It was useful to include Manos Amigas in the initial stages of the assessment because they were familiar with the people living in Siglo XXI, had an idea of the living conditions in the area, and were able to identify their own perceptions of the needs in the community.

Furthermore, leaders of this organization already had a positive relationship with the people of Siglo XXI. Members of the colonia trusted them. My association with Manos Amigas may have helped some of the women in the colonia to be more comfortable participating in the focus groups, communicating their perceptions of the community and their own health experiences. I was also able to gain access to local health care providers and health system information for the city of Los Mochis because of my association with the non-profit organization. One member of Manos Amigas introduced me to some of the health care providers who agreed to participate in my research and helped me to obtain some helpful information from some local government agencies. A pharmaceutical company representative, who is also the husband of one of the Manos Amigas board members, provided me with information related to availability and accessibility of prescription drugs in Los Mochis.

The citizens of Siglo XXI are perhaps the most significant stakeholder group. They, better than anyone, know the conditions in which they live, the needs they have in terms of health and health care, and the obstacles they face in meeting those needs. Through focus group interviews, women in the colonia were asked to examine their community – formal and informal networks, levels of trust and participation in the community, health care resources available, the utilization of those resources by members of the colonia – and describe any unmet needs related to health. I asked the focus groups to discuss possible solutions to the needs they expressed, and I asked them to tell me about any concerns or needs they saw in their community that I did not address in my questions.

This community needs assessment benefited the Siglo XXI women who participated in a variety of ways. First, they were able to express their own perceptions of needs in the community. Second, they were able to come together in small groups to share their concerns and ideas not only with me but with each other, thus building social capital and providing social support in terms of information sharing. Third, these women were able to take part in the beginning stages of planning a community medical clinic by providing information about the most urgent and widespread needs in their area. Becoming active agents for change in their own community, these women will help increase the efficiency and effectiveness of the future medical clinic once it is in operation. A successful PAR is reflected in the extent to which members of a disenfranchised community jointly develop social programs for their own benefit.

### **Sampling strategy**

A purposive sampling frame that covers all stakeholders is a good strategy to promote validity. First, I describe the snowball sampling of four health care providers,

then I describe the leader of the nonprofit organization. I conclude with the description of my efforts to secure a random sample of women for the focus groups. Gathering data from each of the key stakeholder groups increases data collection validity.

**Health care providers.** My sampling goal was to interview health care providers in the health care facilities most likely to serve people from Siglo XXI. First I interviewed a physician who is an elected official in the public health department. I interviewed this doctor first because I wanted to get an idea of how familiar his department was with the needs of people living in Siglo XXI. He also provided me with information about hospitals and clinics in the city and told me which other facilities I should approach to participate in my study.

Following this doctor's recommendations, I interviewed the Director of Nursing and the Director of Social Work at Hospital General, the closest hospital to Siglo XXI. I also conducted a brief interview with a statistician at the Centro de Salud, who referred me to the Jurisdicción Sanitaria, where the city keeps all of its records from the hospitals and clinics. The Jurisdicción Sanitaria supplied me with epidemiological statistics for the city of Los Mochis, but I was not able to get information specific to Siglo XXI because such colonia-specific information was not available. I conducted interviews with the Director of Social Work and the clinic Director at the Desarrollo Integral de la Familia (DIF) health clinic located in downtown Los Mochis. DIF is a national system organized to attend to the social and physical needs of the country's poorest citizens, with a focus on the family. My final interview with a health care provider was with the Director of the Instituto Mexicano de Seguro Social (IMSS) hospital in Los Mochis. Patients at this hospital must be covered by IMSS social security insurance. Not many people living in

Siglo XXI have this insurance. However, some of the women in the focus groups referred to IMSS as a possible location for seeking health care. I wanted to speak with someone at this hospital to learn more about the services offered in order to compare them with the care people receive when they do not have this health insurance.

**Non-governmental organization.** I interviewed one member of Manos Amigas de Los Mochis. The man I interviewed and his brother carry out most of the leadership within the non-profit and are the most involved in actual hands-on ministry and cooperation with American mission teams that serve in Los Mochis. This participant and his brother lead the planning and decision-making for how Manos Amigas will serve the community of Siglo XXI, especially the establishment of the medical facility, and they are the ones who have organized activities and construction projects in Siglo XXI thus far.

**Women community members.** In choosing participants for the women's focus groups in Siglo XXI, my sampling goal was to make my selection of participants as random and representative as possible. I began by determining the boundaries of the Siglo XXI colonia. I asked a member of Manos Amigas and community members of Siglo XXI to identify the physical boundaries of that colonia. According to the boundaries they identified, Siglo XXI is comprised of four streets running east-west, intersecting with a street running north-south on either end and one street running north-south through the center of the colonia. Using those boundaries, I walked and drove through the area, counting the number of houses and stores/*tortillerías* on each street.

I counted a total of 233 buildings, 8 of which were stores/*tortillerías*. I then assigned a number, 1 through 233, to each building and constructed a random numbers

table using SPSS 10.0 to randomly select 100 of those houses and stores/*tortillerías*. I selected 100 households because I wanted to make sure I had enough participants for a maximum of ten focus groups with a maximum of 10 participants in each focus group. I chose not to eliminate the stores and *tortillerías* from the list of numbers because I noticed during initial observations of the colonia that some store owners lived in back rooms attached to the stores. I did not want to eliminate the stores from the list and inadvertently discount any households represented by those stores in the process. I also noticed while counting houses that some buildings were unoccupied. I left those buildings in the master list of numbered houses, though, because those houses represent households of Siglo XXI, even if the owners/inhabitants were temporarily living somewhere else at the time I was counting houses (temporarily moved to work somewhere else, visit family or friends in another city, etc.). I did not want to risk not counting those houses and then see that people had moved back in after I finished constructing the random numbers table.

Once I completed the random numbers table, I went through Siglo XXI again to invite the oldest woman from the selected households to participate in a focus group. I chose to index my sample to the oldest woman for several reasons. I wished to include women with the most knowledge of and household authority over family health. The likely age variation in the “oldest woman” would also ensure a greater coverage of all stages of the family life cycle and individual life courses of women. Finally, an arbitrary selection process deters any sample selection bias I may introduce as a researcher with personal ties to this community.

The first time I invited women to participate in the focus groups, I selected two interview dates and two interview times for each date (one earlier in the day and one in the afternoon) before I approached any of the women. As I walked through the streets of Siglo XXI, I stopped at each house that was listed in the random numbers table and asked to speak to the oldest woman in the house. I explained to that woman why I was there and the purpose of my research, then invited her to participate in a focus group interview. I allowed the women to choose the interview time that was most convenient for them, allowing women who were occupied in the afternoon to attend a focus group in the morning, or vice versa.

If the house identified in the random numbers table was unoccupied, I moved on to the next house on the list. If no one was home, but the house was clearly occupied (according to what neighbors told me), I made a note to return to that house at a later date to invite that woman to participate in a focus group. If the oldest woman of the household was not home, I explained to someone else in the household why I was there and asked them to deliver the message to that woman. I made notes to myself of the houses where the oldest woman was not home (whether I left a message with someone else or not) so that I could return to those houses. When I went back to those houses at a later date, I invited the oldest woman of the household to participate in a future focus group.

As I invited women to participate in my research, I explained that I was not there on behalf of any church or other organization; nor was I there on behalf of the Mexican government. I let them know that I was a graduate student at the University of Florida in the United States of America and that I was conducting this research as a requirement to

write my dissertation and graduate with a Ph.D. in sociology. I told the women that I wanted to know about their colonia, the relationships between people in the community, and the needs of their families and the community as a whole. I explained to them that I would not be able to directly meet any of the needs they expressed in the focus group, but that I would share their responses with the local government so it would be aware of the needs in the community. Each time I invited a woman to participate in a focus group, I explained that she could choose not to participate.

The second week I went to Siglo XXI to conduct the focus group interviews, I returned to the houses of the women who had agreed to participate to remind them to meet me at the designated time and place. I discovered that some of the women had forgotten about the focus group or were busy with other responsibilities and could not attend the focus group that day. I decided to condense the two groups into one for that afternoon and return at a later time to schedule more focus groups. After completing the third focus group, I saw that I was getting very similar responses from the women, so I decided not to complete ten focus group interviews as originally planned. I conducted a fourth focus group my last week in Los Mochis. I recruited participants from a different area of the colonia and conducted the focus group in the evening so as to maximize the possibility that I might get different women in the final focus group. I wanted to make sure that I was not getting similar answers because I was only interviewing women who did not work or only women who lived near each other.

I approached 60 houses to invite women to participate. I found ten houses unoccupied, and one place selected from the list was a *tortillería* that was not also serving as living quarters. Of the women I asked to participate in a focus group, 32 agreed, but

only 27 women actually attended a focus group interview. Some women who originally agreed to participate in one focus group actually attended another. Table 4-1 shows the number of women who agreed to participate in a focus group and the number of women who actually participated. Since I only conducted one focus group on October 1, I combined the numbers of women who signed up for the morning and afternoon sessions. Four women said they would participate but did not sign up for a particular time or date.

Table 4-1. Focus Group Recruitment and Participation in Siglo XXI

Focus Group	Agreed	Participated
9/29 Morning	7	5
9/29 Noon	7	8
10/1 Morning/Afternoon	8	5
11/30 Evening	6	9

### **Focus group sample**

While I tried to insure that the selection process for the women's focus groups was as statistically random as possible, I was not able to achieve a completely random sample. There were two main reasons my sample of women for the Siglo XXI focus groups was not completely random. First, sampled households yielded nonresponse when the oldest women declined to participate.

A second sample selection bias was introduced when nonsampled women participated in the focus groups. Some of the women I invited to participate in a focus group invited their own neighbors or relatives to go with them to the focus groups. The more common reason is that women who saw me walking up and down the streets, only approaching some of the houses, wanted to know why I was there and what I was doing. I gave them the same explanation that I gave to the women who were selected to participate, and I explained to them that a computer had statistically selected certain houses from the area, so I could only invite women from those houses. This explanation

seemed to appease most of those women who felt left out, but some of them insisted that they also wanted to participate.

I had spent a sufficient amount of time in Los Mochis in general, and specifically in Siglo XXI, to know that if I refused to let those women participate, I would risk offending them. I also knew that if I offended them, there was a chance they would talk to each other about the way I had treated them and that I might develop a less than desired relationship of trust with the people in Siglo XXI. I also did not want any women to feel slighted or believe that some women or families were more valuable than others, thus potentially creating even the smallest amount of alienation or distrust among the colonia residents. Moreover, PAR values the collaboration and empowerment of the researched, and raises ethical questions regarding the privileged stature of the researcher, especially a researcher from outside the disenfranchised community (and indeed from another country!). So, I chose to promote maintaining community trust and gathering richer data more strongly than preserving the ideal statistical sampling techniques: I let those women who were not originally selected by the random numbers table participate in the focus groups. Based on my own previous experiences and understanding of the local culture, I wanted to maintain a positive image and trusting relationships in the community, as well as between community members and myself.

Having acknowledged this limitation to statistical randomness, I must also point out that the non-random sample of focus group participants should not change the results of my needs assessment because all of the women live in the same area and live very similar experiences. In fact, I saw in the focus groups that there was a lot of

heterogeneity, both in terms of demographics and in responses. I even ended up doing fewer focus groups (four instead of ten) because the women's responses were so similar.

## **Phase 2: Community Profile**

The second phase of a needs analysis is to describe the target population and its environment. This part of the analysis includes information related to the sociodemographic characteristics of the community, the identification of existing services, and the community's use of those services. Lu Ann Aday (1989) identifies the seven following components that should be included in this phase of a health needs assessment: characteristics of the environment, characteristics of the health care system, characteristics of the population, health status of the population, utilization of services, service expenditures, and the population's satisfaction with existing services.

Characteristics of the environment include political, cultural, social, economic, and physical descriptions of the community and the nation to which it belongs. I spent two days walking and driving through the Siglo XXI colonia, counting houses, stores, and *tortillerías* to mark them on a map of the area. In addition to the community map, I also examined the buildings (their size, materials used to build them, occupancy) and noted the availability of potable water and electricity. During my first few months in Siglo XXI, I observed any noticeable health care characteristics, both positive and negative, of the community. Such characteristics included laundry and dishwashing methods, personal hygiene, and food preparation, and how residents disposed of garbage and waste. This information was presented in Chapter 3.

Health care system characteristics include the organization of the health care system, the particular services available, and the number and specialty composition of health care professionals in the area. A resource inventory served as the basis for

collecting this data. I constructed a resource inventory to determine the health care provided by the government under Mexico's public health care system, private physicians, traditional healers, and NGOs. I also noted in the resource inventory the number of hospitals and medical clinics in the municipality of Ahome, as well as the number of doctors, nurses, ambulances, hospital beds, and X-ray capabilities in each facility. I obtained a list of all pharmacies, prescription drugs, and drug prices in Los Mochis. Furthermore, I asked about whether support groups, such as Alcoholics Anonymous or other self-development classes, exist in the area and if people in Siglo XXI participate in them. Some of this information was provided in the discussion of the setting in Chapter 3. Other parts of this data were reported in Chapter 5.

Population characteristics include demographic information and health-related resources, attitudes, knowledge, and behavior, as well as descriptions of existing formal and informal social networks. Physical, mental, and social health are all part of the population's health status. The utilization of services can be classified by type, site, purpose, and the time interval of use. Related to service utilization are the community's expenditures (both private and public) for and its satisfaction with those services (Aday, 1989). I asked community members to identify the most common reasons for seeking, or not seeking, medical care, and whether people in Siglo XXI have health insurance, what type of insurance they have, and how they pay for health care if they are not covered by any form of health insurance. As part of this community needs assessment, I also included measures of social capital at the community level, so as to address how social capital aids or hinders the promotion of community health. I used secondary data and focus group interviews to collect these empirical materials.

By completing an exhaustive resource inventory, I was better equipped to distinguish with minimal bias which services are available and which ones need to be provided in order to meet the needs of the community. Not only was I able to identify potential sources of health care, but I was also able to distinguish with minimal bias which resources are utilized, or underutilized, by the population. In addition, I used the resource inventory to demonstrate how the community uses its social capital to meet needs when access to formal health care services is limited. This data can also be found in Chapter 5.

### **Phase 3: Needs Identification**

The third phase of a needs analysis is the needs identification phase, in which both needs and potential solutions or strategies to meet those needs are identified by stakeholders and any secondary data sources. (This phase is where the results are compiled and reported.) I used information provided by focus group interviews, individual interviews with health care providers and a leader of Manos Amigas, and secondary data analysis of published official statistics for this phase of the needs assessment. Triangulation of data further increased validity and reliability of the measures. I conducted (and recorded) semi-structured interviews with individual health care providers and the representative of Manos Amigas (Appendices 1-4). I conducted semi-structured interviews with focus groups in Siglo XXI, which provided crucial information about how health care providers view the condition of Siglo XXI and its residents and will contribute to the design of health programs, and their subsequent evaluation, intended to improve the conditions of this colonia.

The secondary data to which I had access includes census data provided by the Mexican government (Figure 1) or other health organizations, such as the World Health

Organization (WHO) and the Pan-American Health Organization (PAHO), the World Bank, and health care statistics reported by local health care facilities in Los Mochis. Census and other administrative data suggested key trends in health status and health care needs across the larger population (the municipality, state, region, or country), by providing a standard set of indicators to be used for systematic comparisons across groups (Peterson & Alexander, 2001; Soriano, 1995). These comparisons enabled me to gauge the common health statuses and then compare the experiences of Siglo XXI citizens. For example, these sources provided me with information about health insurance, health care utilization rates, health care expenditures, and immunization rates, as well as morbidity, mortality, and other health outcomes and related risk factors.

Secondary data primarily focus on disease prevalence and incidence, which is useful to describe the current health status of the population. The data provided by these sources, however, was generally limited to people who sought care for or reported certain conditions. Thus, conditions for which people did not receive services were underestimated or perceived as less important. Accordingly, the information gathered in focus groups and individual interviews was incorporated with existing administrative data to gain a broader perspective of the health status, health care needs, and health care access of the community.

The data gathered from the interviews with health care providers, the leader of Manos Amigas, and the epidemiological and health service data were combined to provide results in the first section of the next chapter. These data provided a description of public health in Los Mochis, including leading causes of morbidity and mortality, and the range of health services available to and used by community members. These data

reflected relatively more “objective” measures of health and health care needs and better represented the health conditions of the entire colonia.

I conducted (and recorded) semi-structured interviews with four focus groups in Siglo XXI in order to identify the top needs in the community, available resources for meeting those needs, existing networks, and the perceived level of participation, cooperation and trust in those networks and between members of the community (Appendices 1-4). I asked the focus groups to rank their perceived needs in order of importance so that I would have a better idea of what issues should be addressed in the needs assessment and prospective program evaluation. Evaluations of community participation, cooperation and trust provided by the focus groups served as measures of social capital at the community level. I also asked the focus groups to describe how they thought cooperation and trust within the community helped them to meet the health needs of their families.

According to Fernando Soriano (1995:23), “focus groups work best when researchers seek the views of select or homogeneous subpopulations.” I also believed that by conducting focus groups for women only, respondents in each group would feel more comfortable revealing personal information, especially information related to health. Therefore, I conducted four focus groups of women who were the oldest woman or the wife of the head of household in their household to obtain information about their families and other members of their community.

On a practical level, women made ideal participants because they were more likely than men to be at home during the day and thus be able to participate in a focus group. Women were also more likely to know about different aspects of community life, as they

participated more often in community meetings. Because my research assistant and I are also women, it made sense that we would be able to relate to participants as women, building bonds of trust so that they would feel more comfortable sharing.

As the caretakers and cultural gatekeepers in their culture, the women in Siglo XXI served as ideal informants. In this culture, women are responsible for taking care of their husbands and children and making sure they get the medical attention they need. One author explained the importance of including Mexican women as informants in healthcare research:

If we think of the domestic, daily, and traditional chores – cleaning, cooking, feeding the children, cleaning the dishes, throwing out the garbage, washing clothes, bathing the children, keeping clean water, etcetera – it is evident that woman plays a basic role in hygiene, nutrition, and sanitary education. Her attitude in daily life and the way she transmits information has a major effect on the health of children, families, and communities. (Molina, 1990:4 as cited in Ramirez-Valles, 1999:611)

Including women as informants in health related research also makes sense because women are more likely to know and talk about sensitive issues; whereas men living in a culture of machismo may be less inclined to divulge personal information. Furthermore, in a culture where women are responsible for taking care of the family, their own health and sense of well-being is vital. As the woman is taken care of, so is the rest of the family. By participating in the focus groups, the women in Siglo XXI were able to address their personal needs, as well as those of their husbands, children, and community.

The focus group data are presented in the last half of the next chapter and the first half of the final chapter. In the next chapter, focus group data present insight into the range and depth of social capital in the colonia. In the final chapter, focus group data on

community members' perceptions of the status of and need for health and health care are integrated with data from health care providers and published statistical information.

#### **Phase 4: Needs Assessment**

The fourth phase, the actual needs assessment, is the stage in which information gathered in the previous phases is integrated and analyzed and prioritized recommendations for action are proposed. Bickman & Rog (1998) suggest that a high level of community involvement in this phase enhances the likelihood that recommendations will be successfully implemented. In the needs assessment, I provide a list of health needs identified and prioritized by each of the stakeholder groups and propose who best can meet each need. For example, health needs associated with sanitation and crime should be addressed by local leaders, while health education needs and disease prevention efforts (i.e. screenings, immunizations) are best met by public health care providers. The local clinic should plan for competence in the diagnosis and treatment of illness, and community members should be assisted to identify their own roles in personal and household hygiene and other individual health practices. Phase 4 is included in the final chapter (Chapter 6) of this dissertation.

#### **Phase 5: Communication**

The final phase, communication, consists of sharing the results of the assessment with its users and other audiences. Providing relevant information to each of the stakeholder groups will allow the groups responsible for service to the community to coordinate their efforts in order to maximize the benefits of their services. At the same time, it will enable community members to identify the appropriate service source for their health needs.

The primary objectives of my dissertation were to determine the health and health care needs of the people living in Siglo XXI and to identify how social capital plays a role in aiding or hindering the community's ability to meet those needs. While phase 5 is not a significant piece of the dissertation, I do believe that communication of my findings is critical for both practical and ethical reasons. Therefore, I will distribute a summary report of my findings and analyses to the stakeholders that participated in my research.

The next two chapters of my dissertation present the results of data analysis and the practical and theoretical conclusions I draw from the analyses. Chapter 5 first provides an assessment of public health in Los Mochis, built with interviews with health care providers, a leader of the key nongovernmental organization, and publicly available health and health care statistics. It concludes with an assessment of community social capital, using data from the women's focus groups. Chapter 6 opens with an organized summary of the health and health care needs of Siglo XXI. It concludes with a brief review of the research objectives of the dissertation and the ability of the collected data to meet those objectives.

## CHAPTER 5 RESULTS

The data described in the previous chapter were collected from a variety of sources, using a range of methodological techniques. I integrated them into three analytical segments: a public health profile of morbidity and mortality from the providers' perspective, an identification of primary health concerns from the community members' perspective, and a description of social capital from the community members' perspective. The profile of morbidity and mortality integrate data from individual interviews with health care providers, the resource inventory I constructed, and available health data from the government and local health care facilities. Focus group data underlie the community members' perceptions of health and social capital.

### **Public Health in Los Mochis**

#### **Leading Causes of Morbidity**

I asked health care providers at the public health department, Hospital General, the IMSS hospital, the health center, DIF, and Seguro Popular to tell me the three leading causes of illness among the Siglo XXI population, or among the patients they treated if they were unable to give me specific information for the colonia of Siglo XXI. These health care workers listed a wide range of illnesses such as respiratory infections, skin diseases, malnutrition, gastrointestinal problems, common cold and flu, diarrhea, alcoholism, drug addiction, hepatitis A, tuberculosis, and dengue (a vector-borne illness spread by mosquitoes that causes fevers, weakness, and flu-like symptoms). They listed chronic diseases such as diabetes mellitus, hypertension, and heart problems. Some even

mentioned social problems such as street violence and family violence and talked about how these social problems affect the mental and physical health of the community.

In order to more clearly understand the needs of different segments of the population, I asked the health care providers to tell me the three most common illnesses among three categories: children, adult men, and adult women. Tables 5-1, 5-2, and 5-3 display the list of illnesses named (for children, adult men, and adult women, respectively) by the health care providers and show how many times each illness was listed as the first, second, or third most common illness among each category. If a health care provider listed more than three illnesses, all illnesses named after the third illness were labeled as “additional” in the table.

Table 5-1. Most Common Illnesses among Children in Siglo XXI as Reported by Health Care Providers (n=6)

Illness	First	Second	Third	Additional
Cold & Flu	1			
Dengue				1
Dermatological (Fungi, Ring Worm, & Other Skin Diseases)			1	
Diarrheas		4		
Gastrointestinal		1	1	
Hepatitis A				1
Malnutrition	1			
Neglect (Lack of Attention)		1		
Parasites	1			
Rage ( <i>Iras</i> )	1			
Respiratory (Conjunctivitis, Bronchitis, Bronchial Asthma, Pharongitis)	2		1	

If the rows of Tables 5-1, 5-2, and 5-3 are read from left to right and the numbers in the corresponding columns calculated, the result is the total number of times that particular illness or disease was mentioned by the health care providers. According to

Table 5-1, diarrheas, gastrointestinal illnesses, and respiratory infections were the only diseases or illnesses on this list mentioned by more than one health care provider.

Because these illnesses/diseases were mentioned multiple times by various health care providers, I determined that they are the most common, or most important, illnesses/diseases among (Siglo XXI) children treated by the health care providers who participated in this research.

Table 5-2. Most Common Illnesses among Adult Men in Siglo XXI as Reported by Health Care Providers (n=6)

Illness	First	Second	Third	Additional
Accidents			1	
Alcoholism	2			1
Articular Degeneration			1	
Conjunctivitis				1
Dengue		1		
Diabetes Mellitus	1		1	1
Diarrheas		1	1	
Drug Addiction	2			1
Hypertension		1		2
Malnutrition				1
Parasites	1			
Tuberculosis				2
Typhoid Fever	1			
Violence (Street Violence & Family Violence)		1		1

Table 5-2 shows that alcoholism, diabetes mellitus, diarrheas, drug addiction, hypertension, tuberculosis, and violence were all mentioned by multiple health care providers when asked about the most common illnesses/diseases among adult men in Siglo XXI. Diabetes mellitus, alcoholism, drug addiction, and hypertension were the most common diseases/illnesses mentioned for adult men. It is important to note that while alcoholism and drug addiction are individually listed in this table, the health care providers that talked about these conditions usually talked about them together.

According to the data presented in Table 5-3, the most common illnesses/diseases for adult women in Siglo XXI were diabetes mellitus and hypertension. Diarrheas and violence were also reported as leading causes of illness among women by more than one health care provider. The illnesses/diseases listed most often as being the most common for women in Siglo XXI were the same as those listed most often for the men, with the exception of alcoholism, drug addiction, and tuberculosis.

Table 5-3. Most Common Illnesses among Adult Women in Siglo XXI as Reported by Health Care Providers (n=6)

Illness	First	Second	Third	Additional
Alcoholism				1
Articular Degeneration				1
Dengue				1
Diabetes Mellitus	1		1	1
Diarrheas		1	1	
Displasia (Pelvic Inflammatory Disease)	1			
Drug Addiction				1
Hepatitis A				1
Hypertension		1		2
Parasites	1			
Tuberculosis				1
Typhoid Fever		1		
Violence (Street Violence & Family Violence)	1			1

In addition to sharing their own perceptions of the most common illnesses among the population of Siglo XXI, some of the health care providers gave me statistical data collected for their health care facility. The Director of Nursing at Hospital General gave me 2004 data pertaining to the principle causes of general morbidity and mortality for cases presented at that hospital. According to this data, the three principal causes for general consults in 2004 were prenatal care (1,794 cases), fractures (1,256 cases), and pharyngitis (799 cases), followed by hypertension, cysts, hernia, Human Papiloma Virus

(HPV), neoplasia, dermatitis, and chronic colitis. The top three general causes of mortality at Hospital General in 2004 were illnesses directly related to obstetrics, but not birth related (20.47%), labor and delivery (20.31%), and fractures (10.59%).

Miscarriages and/or abortions, diabetes mellitus, problems beginning in the perinatal period (ex: respiratory failure), heart conditions, appendicitis, abdominal hernias, and illnesses/infections of the colon were also included in the list of the ten principal causes of general illness treated at that hospital. Hospital data of the most common pediatric cases treated in the emergency room included tonsillitis, gastroenteritis, pharyngitis, contusions, hyperactive bronchial, injuries, fevers, and bronchitis. For adults, the principal reasons for seeking emergency care included dengue, contusions, fractures, injuries, tonsillitis, gastroenteritis, diabetes, acid reflux, and asthma.

All health clinics and hospitals in Los Mochis are required to report certain statistics to the *Jurisdicción Sanitaria*, an office that coordinates health data for the *Sistema Nacional de Salud, Secretaria de Salud, and Dirección General de Epidemiología*. An epidemiologist at this office told me that colonia-specific health data was not available. However, he was able to provide me with a list of the ten principal causes of illness by age for the city of Los Mochis in 2004. This informant also gave me 2004 data for the incidence of all reported illnesses in the city of Los Mochis by age and by type of health care provider.

According to this data, respiratory infections had the highest incidence in 2004, with 53,506 new cases presented. Adults between the ages of 25 and 44 accounted for 12,097 (22.6%) of those cases, and 10,369 (19.4%) of those cases were presented by children one to four years of age. Children under one year of age experienced the third

highest incidence of respiratory illness (6,461 cases; 12.1%), followed by children five- to nine-years-old (6,259 cases; 11.7%). Infections of the intestinal organs had the second highest incidence with 19,222 new cases reported in 2004. Adults age 25 to 44 accounted for 5,472 (28.5%) of those cases. Children between one- and four-years-old accounted for 2,553 (13.3%) new cases, and 2,266 (11.8%) new cases of intestinal infections were presented by children under one year of age. The illness with the third highest incidence in 2004 was urinary tract infections (10,143 cases). Three thousand six hundred five (3,605) of those new cases were presented by adults between 25 and 44 years of age, accounting for 35.5 percent of all cases presented. Adults between the ages of 50 and 59 accounted for 1,308 (12.9%) of those cases, and adults 65 years of age and older accounted for 1,062 (10.5%) new cases.

The majority of these new cases of respiratory infections, internal infections, and urinary tract infections were reported by the two government hospitals, IMSS and ISSSTE. IMSS reported 23,545 of the 53,506 new cases (44.0%) of respiratory infections, 10,835 of the 19,222 new cases (56.4%) of internal infections, and 7,506 of the 10,143 new cases (74.0%) of urinary tract infections. ISSSTE reported 10,330 (19.3%) of the reported cases of respiratory infections, 5,065 (26.4%) of the internal infection cases, and 843 (8.3%) of the urinary tract infection cases.

Together, respiratory infections, internal infections, and urinary tract infections accounted for 77 percent (82,871 of 107,626 reported illnesses) of all reported illnesses in the city of Los Mochis in 2004. The remaining seven primary causes of illness in Los Mochis for 2004 included ulcers, gastritis and *duodenitis* (3,713 cases), *otitis media*

*aguda* (2,579 cases), other *helminthiasis*, hypertension, intestinal *amibiasis*, other intestinal infections, and diabetes mellitus.

### **Leading Causes of Mortality**

The three leading causes of mortality at Hospital General in 2004 were problems beginning in the perinatal period (16.61%), over 60 percent of which cases involved respiratory failure of the newborn, heart problems (11.40%), and diabetes mellitus (10.75%). Other leading causes of death for that year included cerebral vascular illnesses, malignant tumors (i.e. of the prostate, of the uterus, and multiple myeloma), liver disease, accidents, congenital malformations and chromosome abnormalities, flu and pneumonia, and HIV/AIDS.

Data from local health care providers and facilities were collected and analyzed to develop a profile of morbidity and mortality, and consequent health needs, from the perspective of the health care system. Reliance on the providers' perspective yields an incomplete view of health and health care among the people of Siglo XXI because members of the colonia may be unwilling or unable to access health care, or they may engage in self-care activities for less severe health problems. In the next section, I balance this bias from the health care system's point of view by presenting the view of common health care needs and issues from the point of view of colonia members.

### **Focus Group Responses**

Women in the focus groups did not discuss leading causes of mortality. However, I did ask them to tell me about the leading causes of illness among children, men, and women in their colonia. The focus groups' lists were similar to those provided by the health care workers. The women mentioned such illnesses and diseases as cough, cold and flu, malnutrition, diarrhea, fevers, respiratory infections, and dengue for children.

They mentioned drug and alcohol addiction, dengue, venereal infections, fevers, diabetes, cancer, vaginal infections, high blood pressure, high cholesterol, and cold and flu as leading causes of illness for adult men and women. Table 5-4 shows the number of focus groups that listed each of these diseases as one of the three leading causes of illness among children, men, and women in the colonia.

Table 5-4. Most Common Illnesses in Siglo XXI as Reported by Focus Groups

Illness	First	Second	Third
<i>Among Children</i>			
Cough, Cold, and Flu	2		1
Diarrhea or Vomiting	1	3	
Fevers		1	
Malnutrition	1		
Respiratory Infections			3
<i>Among Adult Men</i>			
Alcoholism		2	
Cancer (Prostate)	1		
Dengue	1		
Diabetes	1		
Drug Addiction	1		1
Fevers			1
Respiratory Infections		1	
Sexually Transmitted Illnesses		1	1
<i>Among Adult Women</i>			
Alcoholism		1	
High Blood Pressure	1		
Cancer (Breast and others)		2	
High Cholesterol			1
Cold & Flu	1		
Dengue			1
Diabetes		1	
Drug Addiction	1		
Sexually Transmitted Illnesses			1
Vaginal Infections	1		

The illnesses/diseases listed most often for children were diarrhea or vomiting and respiratory infections. Alcoholism, drug addiction, and sexually transmitted illnesses were the most commonly listed conditions for adult men. A variety of illnesses/diseases were mentioned as being the most common for adult women. Cancer was the only condition listed by more than one group. While the focus groups did not always name the same most common illnesses/diseases for the different sub-groups (children, adult men, and adult women), their responses were overall repetitive, as they mentioned the same cluster of illness/diseases for all three sub-groups.

In addition to these illnesses and diseases, the women in the focus groups consistently mentioned the need for a sewage system, drug and alcohol addiction, and violence as three major health-related issues that the colonia faced at a community level. The need for a sewage system seemed to be the most important to those women. They talked about how the human waste discarded in latrines in front of the houses would spill out into the streets when it rained. When children walked or played in the streets, they stepped in that waste and often ended up with skin infections. While the women did not mention it, I cannot help but wonder if the diarrheas, vomiting, and fevers they did mention are related to the children's contact with human feces. One woman referred to the colonia as a "cochinero [pig pen]" when it rains. The women said when it rains a lot and the streets flood, the whole colonia smells horrible. Dead animals (rats, cats, dogs) can be found at the edges of what community members call the "dren" (empty lot where people dump and burn trash). Rats and insects also make their way into the houses throughout the colonia.

Drug and alcohol addiction were also cited as severe problems in Siglo XXI. One woman said, “La salud de la colonia, lo única que nos afecta a nosotros es la drogadicción. Pues, aquí hay... demasiado. [The health of the colonia, the only thing that affects us is drug addiction. Well, here there’s... too much.]” When the women discussed the widespread drug and alcohol addiction in the colonia, they said it pertains mostly to the men and older teenage boys. In some families, the husband’s drug addiction is what keeps the women and children from eating balanced meals or having clothes or shoes to wear. “Lo poco que ganan los padres de familia o los hijos, todo su dinero ahí, ahí [The little that the fathers of the family or the sons earn, all their money there, there (into buying drugs)],” explained one mother.

Some women and even some children are also beginning to drink and use drugs. “Si un niño de diez años va y pide drogas, se la venden [If a ten-year-old boy goes and asks for drugs, they sell them to him],” one woman explained. I witnessed one drug dealer operating out of an abandoned house on the front edge of Siglo XXI one evening. Cars came and went, as did people on foot. There was a little boy who looked to be between the ages of eight and ten who rode his bike around the colonia making sure everyone knew where they could purchase their drugs that day. The women say the drug addiction and amount of drug sales that go on in Siglo XXI prompts a lot of theft and violence.

I got the impression from some of the women in the focus groups that violence is ever-present in that area. The women talked about how husbands abuse their wives, and the wives, in turn, abuse their children. As one woman explained, “Muchas veces el marido le pega a la mujer [Many times the husband hits the woman].” Another woman

added, “O la mujer... maltrata a los hijos [Or the woman... mistreats the children].” Manos Amigas de Los Mochis wants to offer parenting classes in Siglo XXI because of this very problem. In one focus group, the women told me the environment in Siglo XXI was better for the time being because many of the local gang members had been arrested and were off the streets. I asked what people do when those people are not in jail. “Pues, no duerme uno [Well, you don’t sleep],” one woman replied.

### **Health Care**

According to data provided by the public health department of the municipality of Ahome, there are ten hospitals, ten clinics, and a Red Cross in the municipality, 15 of which are in Los Mochis (4 hospitals, 10 clinics, and the Red Cross). One of the hospitals and all ten clinics in Los Mochis are private. Hospital General of Los Mochis is the only public, non-government hospital. IMSS and ISSTE each have a hospital in Los Mochis, accounting for the two remaining hospitals in the city. There is also a public health department, a public health center, and a department of family services (DIF) in Los Mochis that offer medical services, especially to people who cannot afford private medical care and who are not covered by government insurance (IMSS or ISSTE). The six hospitals outside the city of Los Mochis are all IMSS hospitals and are spread out across the rest of the cities in the municipality.

Resources and services provided by these hospitals and clinics vary. Health department records show that four of the hospitals and the Red Cross have ambulances, but an informant at the health department told me that not all of those ambulances were in service. In the city of Los Mochis, for example, the IMSS hospital had an ambulance, but it was in a state of disrepair and was not used to transport patients. The Red Cross ambulance was the only one in service in the city of Los Mochis. The number of doctors

in each hospital or clinic ranges from one to 81. The majority of doctors work in one of the four hospitals in Los Mochis (50 in Hospital General, 57 in Hospital Fatima, 77 in ISSTE, and 81 in IMSS). These hospitals also staff the majority of nurses (56 in Hospital Fatima, 114 in ISSTE, 122 in Hospital General, and 211 in IMSS) in the Ahome municipality's health system. I was able to interview doctors, nurses, and social workers from Hospital General, IMSS, DIF, the public health center, and the public health department. Everyone I spoke to told me their institution did all it could to serve the city of Los Mochis, but they simply did not have enough staff, beds, equipment, or other resources to sufficiently address the needs of such a large population.

The Director of Nursing at Hospital General, for example, told me that the hospital had a total of 120 beds, and it needed at least 20 more in the gynecology department and 20 more in surgery. She said the hospital had three incubators in the labor and delivery department, but should have at least ten. Nurses were in short supply at Hospital General, as well. The Director of Nursing said she ideally should have a minimum of 80 more nurses to take care of the in-patients and emergency department. When I asked her about the nursing school in Los Mochis and the possibility of hiring some of those graduates, she told me that she hired eight graduates to work for her that year, but the hospital did not have the resources to hire any more. She said that 80 percent of the graduates (in a class of 220 students) from the nursing school have to leave Los Mochis to find a job, and some of them end up working outside of their field for some time after graduation. The problem is not that nurses are not available, she explained. It is that there is not enough money to pay them.

It does help, though, to have the nursing school in the city, as all health care professionals are required to work for one year of social service after graduating. In essence, local hospitals and clinics can contract one year of free labor from these graduates. Hospital General, for example, hosted 52 nurses (not included in the totals of nurses provided above) for their year of social service in 2004. Without the free services provided by nurses, doctors, and dentists in their social service year, hospitals and clinics in the area would have an even more difficult time meeting the needs of the population.

According to information provided by a pharmaceutical company representative, his company serviced 288 locations in the city of Los Mochis. Among these locations were independent pharmacies, hospital pharmacies, convenience stores and neighborhood stores that sell medications. While 288 may seem to be a rather large number of locations where medications (both over-the-counter and prescription) are available, the existence of so many places does not mean everyone who lives in Los Mochis has access to those medications. Depending on health insurance coverage, some hospitals provide prescribed medications as part of the doctor's consultation. IMSS patients, for example, receive most diagnostic exams, procedures, and prescriptions as part of their health care coverage. Patients covered by Seguro Popular or those with no insurance, however, must pay out-of-pocket for tests and medications.

The same pharmaceutical representative who provided me with the list of locations also told me that most of the poorest people in the city, such as those living in Siglo XXI, purchase their medications from the pharmacies located in downtown Los Mochis. He explained that it is easier for these people to make one trip downtown to do all of their shopping in one place, at one time, in order to pay for the bus ride only once. The

pharmaceutical companies and downtown drug stores offer more discounts and lower prices (an average 18% - 19% less) than other pharmacies or drug stores in other parts of the city because they realize that most of their customers come from the poorest colonias in the city.

### **Accessing Health Care**

When I asked the women in Siglo XXI to tell me the main reasons people chose to go or not to go to a health clinic or hospital for treatment, the issue of access always came up. The women said they were less likely to seek formal medical care except in the case of an emergency because they did not have health insurance and could not afford to pay for the doctor's visit or any tests the doctor might order. The closest health care facility to Siglo XXI is Hospital General. To get to the hospital, the women have to take a bus or taxi. Taking a taxi is generally out of the question, unless the emergency occurs after the buses have stopped running for the night, because it is too expensive. The women said it is usually difficult for them to even pay the nine pesos it costs to get to the hospital and back by bus. In the cases where families do go to the hospital or a medical clinic for treatment, they usually cannot afford to buy the medications prescribed. The women said they will just buy what they can afford and hope it works.

### **Social Capital**

In communities such as Siglo XXI where human and physical capital are lacking, social capital may serve to fill in the gap and help meet the health and health care needs of the community. I spent some time with the women in Siglo XXI, asking them to tell me about their community to get a better idea of the scope, forms and channels of social capital in that colonia.

## The Scope of Social Capital in Siglo XXI

As stated in Chapter 2, the scope of social capital refers to the level of analysis. There are three distinct levels at which one might observe social capital, its construction, and its influences: the micro level, the meso level, and the macro level. I focused primarily on the micro and meso levels of social capital for this research. Micro level analyses were built upon the observation of social capital at the community level in horizontal relationships between residents of Siglo XXI. Meso level analyses were also conducted at the community level, but focused on the vertical relationships between Siglo XXI residents and outside organizations such as the non-profit, Manos Amigas de Los Mochis, the local municipal government, and health care providers. Table 5-5 shows how each focus group question was used to measure the scope of social capital in Siglo XXI.

Table 5-5. Measuring the Scope of Social Capital from Focus Group Interview Questions

Micro Level	Meso Level
Have there been any efforts by the community to improve the quality of life or overcome a problem?	Who are the main leaders in this community?
Has this colonia ever attempted to make improvements but failed? Why do you think it failed?	How are leaders selected?
Are you or someone in your household a member of any groups, organizations or associations?	How are decisions made within this colonia? What is the role of the community leaders? How are community members involved?
If there was a problem that affected the entire colonia, who do you think would work together to deal with the situation?	What members of the community participate most in solving the problems in the community?
Overall, how would you rate the spirit of participation in the colonia?	Do you think that everyone in this colonia has equal access to the services provided? If not, who is excluded?

### **Micro level analyses**

I measured micro level social capital in terms of participation among community members in dealing with community problems, involvement in organizations or associations and community decision making, and trust between community members. It was important for me to look at both formal and informal ties, as both types of social networks serve to build social capital.

At the micro level, Siglo XXI has very limited formal and informal social capital. None of the women who participated in focus groups identified any existing community associations or organizations in their colonia. However, some of them do participate in weekly Bible studies or attend church services at one of the few churches that ministers to that colonia. These women seem to be more connected to each other. They are more likely to receive church-provided food and clothing donations, temporary financial assistance, and help finding a job, all of which contribute to promoting health maintenance activities. Women who are involved in church related activities know each other on a more intimate level and thus provide emotional support by listening, encouraging, and praying for each other, and instrumental support by sharing water and electricity services and groceries, loaning each other money, and watching each other's children.

During my first two months in Los Mochis, I attended one of the biweekly Bible studies held in one woman's home. One older woman attended the Bible studies at least once a week. Her neighbor who lived across the street from her also attended. The older woman had an adult daughter (young 30's) who was paralyzed from the neck down and unable to speak. From stories the mother told, her daughter was able to walk and talk

until she was a teenager, at which point she had some sort of medical ailment (brain tumor, stroke, or something of the sort) that resulted in paralysis.

The daughter was completely dependent on someone for personal care: feeding, bathing, dressing, changing her diapers, turning her over in bed from time to time, and exercising her arms and legs. The daughter could not be left alone for extended periods of time because she might choke on her own saliva. The mother was her daughter's sole caretaker because she was a single woman, and her other two daughters lived in another city. The mother worked making tortillas because she could work from home, but the arthritis in her hands increasingly made this job more difficult. She struggled severely to put food on the table and buy diapers for her daughter.

This mother was able to share her concerns about her daughter and asked the other women in the Bible study to pray for her and her daughter each week. Because of her participation in the Bible study, the woman received instrumental and emotional support from other people in the Bible study. The woman's neighbor from across the street frequently helped the woman by sitting with her daughter while she went to work or ran errands. The neighbor was able to help because she also worked from home, selling hot dogs on the street in front of her house in the evenings. Sometimes the Bible study leader would give the woman 20 or 30 pesos to stretch across her weekly necessities.

I saw another example of how church membership helps women and their families during the floods that occurred in September 2004. Siglo XXI was one of the areas most affected by the floods, and some of the local churches wanted to help. Unfortunately, the churches did not have the resources to help everyone in the colonia, so they had to choose who would receive assistance. I know that at least two churches chose to assist only their

own people, or asked their members to make lists of people they knew who were most in need after the floods. The church donated food, household cleaning supplies, and hygiene items to those families identified by their own church members.

While some women in the colonia participated in church Bible studies and other activities in the area, the majority of Siglo XXI residents did not. Focus group discussions revealed that community associations and organizations do not exist in Siglo XXI, but members of the colonia participate in informal social networks of family and friendship ties. Informal network membership means that women can go to each other for health-related and other information, advice, and financial help. Women talked about how their husbands spent most of their income on alcohol and drugs, so there was little left to buy food and other necessities for the family. At times, the women had to borrow money from neighbors and friends in the colonia to buy enough food for their children. One woman shared how her neighbor is forced to ask other people in the colonia for help because her husband spent all of his money on alcohol and drugs. “Mi vecina... tiene que andar pidiendo. ¿Por qué? Porque a él... para pura cerveza y para droga [My neighbor... has to walk around asking (for money and/or food). Why? Because of him... for nothing but beer and drugs].” If the women did not borrow money from each other, they would borrow food, such as rice, beans, or other food staples. I also noticed that the little stores sometimes operated on a credit system, in which women purchased food and other items as needed, paying as much as they could when they could. This system permits maintenance of the nutritional basis of health, though it is likely to be at a minimal level.

The focus groups themselves served as an opportunity for the women to share information and offer support. During one focus group discussion about the instability or insecurity of housing in the colonia, one woman said that she was living in a borrowed house, but the owner wanted her property back. This woman said that she was worried about finding another place to live because she knew she would probably not be able to afford to move. Other women in the group immediately began telling her of similar situations they knew about where the courts allowed someone who was occupying a house to remain, awarding the property owner another piece of land and/or financial retribution. The other women encouraged this young woman to stay where she was and take the matter to court. They told her that the woman who owned the house obviously did not need it or she would have been living there already. They believed that the court would favor her side in the matter and make sure she would not lose the house.

### **Meso level analyses**

While I found some evidence of vertical, meso level social capital in Siglo XXI, such ties seemed strained and limited. When I asked the women who participated in the focus groups about how they went about solving problems in the community, their first response was usually that the colonia president took care of those issues. After all, that was her job – to represent the colonia and its needs at the city, municipal, and (if necessary) state levels. When residents of the colonia needed materials to improve their homes, the colonia president went to city hall on their behalf. When people in the colonia wanted to meet with government officials to request that sanitation services be implemented in the colonia, the colonia president invited the mayor or other influential people to meet in the colonia.

I heard similar stories about the government of Siglo XXI from the four focus groups. Siglo XXI has one recognized President. Some of the women say she was elected, others say they don't remember an election; they just know that woman has always been president. This woman has been the President of Siglo XXI for all six years of the colonia's existence. I asked the women why Siglo XXI has had the same President for all six years instead of electing a new representative every year or so. The women said no one else wants to take the initiative and the responsibility of changing the leadership. It is more convenient to just keep the same President. One woman explained, "Si quisiéramos cambiarla, la hubiéramos cambiado. Si tuviéramos el apoyo de mucha gente para quitar esa líder, la quitáramos, pero no nos hemos propuesto [If we wanted to change (the President), we would have. If we had the support of a lot of people to remove this leader, we would remove her, but we haven't proposed it]."

According to most women in the focus groups, the President does her job by getting services for the community. They credited her with getting bus service, electricity, and water. They also acknowledged that she has tried to get the city government to recognize Siglo XXI's need for a sewage system. However, these women also shared with me that not everyone is happy with the job this President is doing. Some women believe she shows favoritism to her own friends and neighbors. When services are limited or when the city government provides clothes and food dispenses for the poorer colonias, this President makes sure her friends and neighbors receive those goods and services first. Some women believe that those who are not friends or neighbors of the President do not receive the same quality assistance. These women who were less satisfied with the colonia President also told me there are at least two other women in

Siglo XXI who have tried to appoint themselves as leaders in the colonia. When the President shows favoritism or does not accomplish what the residents want or as quickly as they want it, they may go to one of those other two women for help. One of the members of Manos Amigas who spends the most time in Siglo XXI said he believes that is why Siglo XXI is unable to accomplish as much as other colonias (in terms of getting services provided). He said there is too much disunity in the colonia, and that without one strong leader working for the good of the entire colonia, it is difficult to improve the quality of life there.

Manos Amigas recognizes the difficulty of improving the standard of living in Siglo XXI, so they have involved themselves with trying to help represent the colonia at the local government level. One member of Manos Amigas explained the purpose of this organization:

“El propósito de Manos Amigas es localizar puntos críticos con grupos de personas que tienen problemas relacionados a desintegración familiar, que tienen problemas de adicciones o que carecen de medios de trabajo o con estudios limitados. A estos grupos de personas se les ayuda para resolver sus necesidades, trabajando en coordinación de agencias especializadas y con oficinas de gobierno y grupos de personas independientes, para buscar las formas y los recursos económicos para provocar un cambio en el estatus de vida de las personas en estado crítico. Así a través de capacitación, grupos de estudio, motivación, y de provocar un nivel moral más alto, presentando la opción de una mejor vida a través de Cristo, Manos Amigas enfoca todos sus esfuerzos para ayudar a estos grupos de gente necesitada

[The purpose of Manos Amigas is to locate critical points with groups of people that have problems related to family disintegration, that have problems of addictions, or that lack jobs or have limited education. (Manos Amigas) helps these groups of people to meet their needs, working in coordination with special agencies and with government offices and independent groups, to look for ways and economic resources to promote a change in the standard of living for the people in this critical state. So, through training, study groups, motivation, and promoting a higher moral standard, presenting the option of a better life through Christ, Manos Amigas focuses all its efforts in helping these groups of people in need].”

In addition to accessing services through the representation of the colonia President, residents of Siglo XXI now also have a vertical tie to social capital in this non-profit organization. Not only does Manos Amigas serve as a liaison at times between Siglo XXI and the city government, but it also helps to connect Siglo XXI to groups in the United States who help provide material resources to the community.

By way of Manos Amigas de Los Mochis, church groups in the United States send medical mission teams, medicines, and medical equipment, as well as educational and recreational resources to Siglo XXI. Siglo XXI has a basketball/soccer court and playground equipment provided by a church in Alabama, and every summer churches from throughout the United States send mission teams to Siglo XXI to teach the Bible, to play with the children, and to teach the women to make different handicrafts, with the hopes that the women will be able to sell these crafts to support their families. The church from Alabama also raised money to help some of the residents of Siglo XXI buy a small piece of property and build a one-room, concrete house. Manos Amigas does not have the resources to provide these services to Siglo XXI themselves, but through their social networks between Mexico and the United States they are able to meet both the physical and spiritual needs of the people in this community.

### **Macro level analyses**

My research focused primarily on the micro and meso level analyses of social capital. However, I do want to acknowledge some of the macro level influences on social capital in Siglo XXI. I noted that Mexican national health care laws, policies, and institutions shape the macro level landscape of social capital and health. For example, I learned that health care facilities in Los Mochis are understaffed and undersupplied because of financial constraints. Even if people of Siglo XXI had full access to them, the

quantity and quality of medical care is likely to be less than optimal. On a more beneficial note, the “price” of the federal government locating a nursing school in the area is that graduates must work for free for a year in the local health care arena. Another source of macro level capital that affects health is the lower levels of environmental quality of life: basic sanitation, household utilities and environmentally-located disease vectors.

### **The Forms of Social Capital in Siglo XXI**

According to the World Bank’s definition, there are two basic forms of social capital. The first, structural social capital, can be seen in how a community is organized, the existence of community groups and associations, and the participation of community members in those groups and associations. The second form of social capital, cognitive social capital, refers to community members’ perceptions of social norms, values and beliefs of their community and the social relationships within that community.

#### **Structural social capital**

Some of the questions listed under the “Micro Level” and “Meso Level” columns in Table 5-5 also served as measures of structural social capital. Those questions are repeated below in Table 5-6, along with a description of what concepts within social capital are represented by each question.

Table 5-6. Measuring Structural Social Capital

Focus Group Question	Concept Measured
Are you are someone in your household a member of any groups, organizations, or associations here in Siglo XXI?	Community Organizations, Associations, and Groups
If there was a problem that affected the entire colonia, who do you think would work together to deal with the situation? Who would take the initiative (act as leader)?	Addressing/Resolving Community Problems/Needs

Table 5-6. Continued

Focus Group Question	Concept Measured
In your view, are there members of your colonia who are excluded from or do not have equal access to services?	Access/Exclusion and Equality in the Community
What do you think are the main reasons that not all people benefit from these services?	
Overall, how would you rate the spirit of participation in the colonia?	Community Participation and Relationships
How much influence do you think people like yourself can have in improving this colonia?	
Are the relationships among people in this colonia generally harmonious or disagreeable?	

None of the women who participated in the focus groups was aware of any organization, association, or club (other than local church groups) in their community. They also said the level of participation in the community is limited. When I asked the women to tell me who takes the initiative to address problems in the community, they said the colonia President is the one who acts to address problems. Sometimes the President calls community meetings and invites the city mayor or other government officials to talk about specific needs in Siglo XXI. The women said that men rarely participate in those meetings and that it is always the same group of women who attend. These comments add validity to a data collection focus on the women of the colonia rather than data gathered from both sexes.

I asked the women if they believe everyone in Siglo XXI has equal access to the services provided to that colonia (water, electricity, bus transportation), or if some are excluded. For the most part, the women said they believed everyone had equal access. However, as I probed for more comments on this question, relating it to specific needs in the community, I found that the women did not really believe everyone had equal access.

The way the women described the colonia President's favoritism is one example of how they expressed that everyone in Siglo XXI is not equal. This sense of inequality expressed by the women in the colonia is evidence of a low level of the trust needed to promote bridging and linking social capital.

The women's responses to this series of questions were inconsistent in that they portrayed a fairly disorganized community of self-interested residents when I asked them about the existence of organizations and associations and about the level of participation in the community. When I asked them how much influence they believed they had to improve their colonia, or about the relationships between the people living in Siglo XXI, however, they gave a more positive impression of the community. They said they believed they could make a difference and that the relationships between the people living in Siglo XXI were generally good and harmonious.

### **Cognitive social capital**

To address the concept of cognitive social capital, I read a list of statements about the colonia and asked the women to tell me if they agreed or disagreed with each statement (Table 5-7). The women's responses to these statements were also somewhat contradictory. At times the women were unable to say if they agreed or disagreed. They would say that it all depended on the situation. For example, some women expressed that they would not pay attention to the opinions of someone in the colonia whom they did not respect, but they would seek the opinions of friends and people they trusted. Some women said they believed Siglo XXI had prospered in terms of getting water and electricity in the colonia, but they also said the colonia was equal or worse than in years past in terms of violence and the lack of a sewage system.

Table 5-7. Measuring Cognitive Social Capital

Statement	Groups with Members who Agree	Groups with Members who Disagree
1. Most people in this colonia are basically honest and can be trusted.	1	4
2. People are always interested only in their own welfare.	4	
3. Members of this colonia are always more trustworthy than others.	2	2
4. In this colonia one has to be alert or someone is likely to take advantage of you.	4	
5. If I have a problem there is always someone to help me.	3	2
6. I do not pay attention to the opinions of others in the colonia.	2	3
7. Most people in this colonia are willing to help if you need it.	3	2
8. This colonia has prospered in the last five years.	4	1
9. I feel accepted as a member of this colonia.	4	
10. If you drop your purse or wallet in the colonia, someone will see it and return it to you.		4

Overall, my perceptions of Siglo XXI, based on the women's responses to the statements in Table 5-7 are that people living in this colonia do not all trust each other; they tend to have a negative view of the honesty or trustworthiness of their neighbors. This negative view became especially evident when the women responded to the last statement about people in Siglo XXI returning a lost purse or wallet to its owner. In all four focus groups, the women laughed when I read this statement, as if the thought of someone doing such a thing in Siglo XXI was ridiculous. When I read the fifth statement about knowing someone would be available to help if there was a problem, one woman said, "Yeah, me [Soy yo]," giggling with the other women. I understood her remark to mean that she could only count on herself in time of need, not in any of her neighbors. Again, this lack of trust limits bridging social capital and its health benefits. Moreover, a

lack of community trust suggests exposure to significant and negative health effects of stress, fear and insecurity.

### **The Channels of Social Capital in Siglo XXI**

As explained in Chapter 2, the channels of social capital refer to the means by which social capital influences community development. For example, copying, information sharing, and collective action and decision making are all channels through which social capital is generated and applied. Based on the women's conversations in the focus group interviews, the channels of social capital in Siglo XXI are weak. According to those women, there are no community organizations or associations in Siglo XXI, and only certain women in the community regularly participate in community protests or meetings with government officials. The colonia generally relies on its President to get services provided or to make changes in the community. Leaving such responsibilities in the hands of one person has proved to be problematic for some residents in Siglo XXI because they do not have a positive relationship with the colonia President. For example, people who are not friends with, or do not support, the colonia President have been left out when government food dispenses were distributed throughout the colonia or when the government provided construction materials for home improvement projects in the area. The lack of community organizations and associations and the lack of community participation in Siglo XXI limit the colonia residents' abilities to share health resources, information, and decision making in the community.

### **Negative Social Capital in Siglo XXI**

Before I started conducting the community focus groups in Siglo XXI, I expected the women to express a general lack of social capital in their colonia. I had observed the community on numerous occasions and had heard both community members and

outsiders comment on the general lack of trust and mutual respect in that colonia. So, I was not altogether surprised to learn that there are no community organizations or that few people participate in community decision making. One of the things that struck me the most while conducting this research, however, was the power of negative social capital in Siglo XXI. The women from the focus groups mentioned over and over again the corruption they saw in their local law enforcement. They talked about how the police accept bribes from the drug dealers in Siglo XXI and about how Siglo XXI residents cannot report neighborhood crime to the police, especially if it involves the drug dealers. The women said they choose not to report crime in the area for fear that word will get back to the perpetrators who will then find the people who reported the crime in order to threaten and/or harm that person (or his/her family members).

I asked the women if the police ever patrolled Siglo XXI in order to discourage and catch criminal activity. They said the police do drive through the colonia once in a while. Sometimes they even make raids on drug dealers' houses. They rarely make any arrests, though, because they call the drug dealers ahead of time to say they are on their way. The drug dealers have the bribe money waiting when the police arrive. As one woman explained, the police "vienen y recogen su cobra y ya [They come and collect their fee, and that's it]."

Sometimes the police drive through the colonia asking people if they have seen any suspicious or criminal activity. No one reports anything, though, because they believe the police will only take that information straight to the person who committed the crime, offering not to arrest him in exchange for a gift of appreciation. One woman told me that she had personally experienced retaliation from the drug dealers she reported to the

police. “Ha habido ocasiones que, por ejemplo yo digo, a mi me golpean... esas personas van y golpean a los que... han hablado [There have been occasions that, for example I tell, they hit me... those people go and beat up the ones... that have talked].” Another woman said that sometimes other people who find out someone called the police will inform the drug dealers so they can exact their retaliation. “Y no puede uno confiar ni en la vecina [And one can’t even trust the neighbor],” she said, “porque resulta que hasta la vecina también tiene contacto con ellos [because it turns out even the neighbor has contact with them (drug dealers)].” One woman shared how the police showed up at her house asking her where the drug dealers lived, as if they wanted to make an arrest. “...Se apagó el carro ahí, se bajó un policía. No sé que sería, pero era de ellos. Y va diciéndome que si yo sé dónde venden [The car shut off there, a police officer got out. I don’t know what he was, but he was one of them. And he starts asking me if I know where they sell (drugs)].” This woman said she would not tell the police anything because she was afraid the drug dealers would find out and harm her or her family. “‘Usted sabe más que yo,’ le dije. Yo no le puedo decir. ¿Sabes por qué? Porque por medio de mi... vengan y me lastiman la familia... [‘You know more than I do,’ I said to him. I can’t tell him. You know why? Because they might come because of me... and hurt my family].” The existence of negative social capital (illustrated by these comments the women made about the relationships between drug dealers and police officers) inhibited trust and thwarted the formation of positive social capital ties among residents of Siglo XXI (horizontal, bonding social capital) and between community members and government officials (vertical, bridging social capital).

### **Community Health and Social Capital**

I conclude this chapter with a summary of the data collection and analytical work. I conducted a community health needs assessment in order to engage in action oriented research (also referred to as participatory action research, or PAR) intended to explicitly and directly promote social change within a disenfranchised colonia in Mexico. PAR is a social science research approach that integrates the researched and the researcher into conducting sound scientific study (needs assessment) guided by a theoretical framework (social capital). I defined and described the community of Siglo XXI, and I identified key stakeholders in the health and well-being of its citizens with whom I collaboratively developed an assessment of health and health care needs. These health issues were evaluated in the context of the degree to which the community's social capital could empower its citizens to secure the resources to meet its own health needs. My observations about social capital were limited to bonding social capital in small networks, where I saw some health promotion. I found that Siglo XXI had very limited bridging social capital, which was related to unequal access to health materials and services and a constrained capacity for collective action through linking social capital. In the final chapter, I will organize and summarize the analyses into a proposed set of prioritized recommendations for action, the final stage of a needs assessment and the explicit goal of PAR.

## CHAPTER 6 DISCUSSION

The preceding chapter presented several sets of data on the health needs of Siglo XXI, using published mortality and morbidity records, focus group interviews with community women, and personal interviews with health care providers. In the first third of this final chapter, I present a summary of the results of the community needs assessment (see the discussion in the Phase 4: Needs Assessment section of Chapter 4) and identify which stakeholder groups might be more invested and equipped to meet those needs. In the middle third of this chapter, I return to my original research questions to present the answers that emerged from the data. In the final conclusions section, I retreat to a more abstract discussion of the merits and difficulties of this type of research within academia.

### **Needs Assessment**

The purpose of this section of the dissertation is to organize and summarize the results of the community health needs assessment that I conducted in Siglo XXI. I have divided this assessment into five parts: public health needs, lifestyle health needs, community health needs, socioeconomic needs, and social capital needs. Table 6-1 presents the needs addressed in this assessment. The first column lists the five types of needs. The second column identifies the specific needs that fall under each need category, and the third column identifies who is currently or who should be the stakeholder with the greatest interest and/or responsibility for meeting the need.

Table 6-1. Summary of Needs for Siglo XXI

Type of Need	Need	Responsible Party
Public Health	Sanitation	Local Government
	Medication	Government; Manos Amigas
	Preventive Health Care	Public Health Educators*; Government; Manos Amigas
Lifestyle Health	Substance Abuse & Addiction	Manos Amigas; Public Health Educators
	Family Violence	Local Government; Public Health Educators; Manos Amigas
Community Health	Neighborhood Violence	Local Government; Manos Amigas
Socioeconomic	Employment/Job Skills Training	Manos Amigas; Local Government
Social Capital	Community Participation	Siglo XXI residents; Local Government
	Community Trust	Siglo XXI; Manos Amigas

\*Health Educators may refer to physicians, nurses, social workers, or any combination of these.

### **Public Health Needs**

The first set of needs presented in Table 6-1 is public health needs. They include the need for a sanitation system, affordable medications, and preventive health care. I chose to highlight these needs in the final needs assessment because they were the needs discussed most often by the participants in this research.

### **Sanitation**

The need for a sanitation system in Siglo XXI is urgent. Residents use buckets or dig holes in their yards to use as bathrooms, and they must dispose of human waste by dumping it into holes dug out in front of their property, along the edges of the dirt roads. This system for discarding human waste is unsanitary and unsafe. It is a sure way to spread disease. As discussed in Chapter 5, health care providers and the women who participated in the focus groups identified gastrointestinal problems, diarrheas, and skin

diseases as some of the most common health needs among children and adults living in Siglo XXI. According to one of the health care providers and many of the women, the lack of a sanitation system in Siglo XXI is one of the major causes for these health conditions. The local government of Los Mochis is the most appropriate source to provide this service to Siglo XXI because sanitation service falls under the responsibilities of, and is currently provided by, the local government to other residential and business areas in Los Mochis. The women in Siglo XXI shared that they had tried to call the local government's attention to their community's need for sanitation services, but the response at the time of focus group interviews had been slow coming. The slow response from the local government to such critical public health needs is one example of a lack of bridging and linking social capital between the residents of Siglo XXI and government officials.

### **Medication**

The need for affordable medications is also very important for Siglo XXI, as well as other poor colonias. The people living in this colonia do not have steady, well-paying jobs. They often struggle just to provide enough food for their families. When someone in the family becomes ill, they are often unable to pay for the necessary medications to get well. When chronic illnesses such as diabetes, high blood pressure, and heart problems are not treated adequately and consistently, the conditions become more severe, sometimes even to the point of death. According to the information provided by a local pharmaceutical representative, some of the pharmacies in the city do offer discounts for some medications. Members of IMSS, ISSSTE, and Seguro Popular also receive prescribed medications for free or at reduced costs. However, most of the residents in

Siglo XXI do not have health insurance, and they sometimes have to choose which medications they will buy and which ones they will go without.

When financial resources are so limited, vertical, bridging social capital ties become even more crucial. As discussed earlier, the residents of Siglo XXI have weak, limited bridging social capital ties. One of the few sources of bridging social capital I found in this community was its ties to the non-profit organization, Manos Amigas de Los Mochis. I believe Manos Amigas can help provide medications in instances where Mexico's health system does not. Manos Amigas already works with short-term medical mission teams from the U.S. that spend one week each summer treating patients for free in the poorest colonias, such as Siglo XXI. These groups are able to get free medication samples from the U.S. They are also able to purchase medications at greatly reduced prices from Christian pharmaceutical companies that provide medicines specifically for Christian mission work. As Manos Amigas and their contacts in the U.S. plan the medical clinic for Siglo XXI, one of their top priorities could be to provide free medications to the patients who visit that clinic.

### **Preventive health care**

Perhaps preventive health care might be listed as the first priority among the public health care needs. Oftentimes in poorer communities where resources are severely limited, health care providers find themselves so busy dealing with immediate health needs and emergencies that they have difficulty emphasizing preventive health care among those populations. Likewise, we know that people with limited socioeconomic resources are less likely to access preventive health care because providing food, clothing, and shelter is a more pressing priority. These families often wait until the

health problem advances to a state of emergency before they seek care. For example, a middle-aged gentleman with diabetes who monitors his blood sugar daily, follows the recommended diet, practices good hygiene, and has regular check-ups with a physician is less likely to develop sores on his feet and legs. Whereas, a middle-aged gentleman with diabetes who does not go to the doctor because he does not have health insurance and cannot afford the prescribed medications may not learn how to manage his diet and take care of himself so that he does not develop those sores.

In communities, such as Siglo XXI, where people cannot afford primary health care, public health departments might send health educators to offer classes on nutrition, hygiene, etc. so that even when those residents choose not to go to the doctor for primary care, they still receive valuable information about how to better care for themselves and their families. The local government and public health department could develop programs in which they send social workers and nurses into communities such as Siglo XXI to offer these classes. As I mentioned in Chapter 5, health care students must give one year of community service as part of their educational program. The local government and public health department could work together with the medical and nursing schools in the area to develop a program in which the students completing their social service year devote part of their time each week to designing and teaching community health and preventive care classes. I believe that in the case of Siglo XXI, Manos Amigas could also help to provide these courses, if not weekly, at least a few times each year. Again, they could invite groups from the U.S. to provide week-long seminars every three months on preventive health, CPR and first aid, nutrition, and similar health care topics.

## **Lifestyle Health Needs**

### **Substance abuse and addiction**

Alcoholism and drug addiction were repeatedly mentioned as two of the most serious problems in Siglo XXI. They were not only mentioned by the women who participated in the focus groups, but the health care providers also identified these conditions as very important. So many other problems, such as family and social violence, physical health, depression, and crime, stem from substance abuse and addiction that this condition must be treated in a more effective way. Right now there are treatment centers for drug addiction in Los Mochis; however, people living in colonias such as Siglo XXI cannot afford to seek care from these centers, and the centers are located so far away from Siglo XXI that the residents cannot afford transportation to get there. A lack of wide bonding and bridging social capital ties in this colonia proves to be a hindrance to meeting not just physical, but emotional and mental health needs, as well. That is why I propose that Manos Amigas and public health educators take a more aggressive role in drug and alcohol addiction prevention and rehabilitation. The public health educators can serve in a preventive capacity, leading community classes and discussion groups for children, adolescents, and adults. Manos Amigas might also be able to serve in this capacity, drawing from its relationships with counselors and its experience with the drug rehabilitation centers, to offer counseling for those addicted to drugs and alcohol, as well as for family members and friends of addicts.

### **Family violence**

Often linked to problems of alcohol and drug addiction is family violence. According to the women who participated in the focus groups, fathers who drink and use drugs are more likely to physically abuse their wives. In some families this spousal abuse

leads to child abuse, as the mother beats her children. Unfortunately, when this is the case, the bonding social capital (one of the few social capital channels available in Siglo XXI) available through family ties is comprised. I believe the first group responsible for protecting the residents of Siglo XXI from family violence is the local government, or specifically law enforcement agencies. These groups are responsible for protecting the citizens of Los Mochis and providing a safe environment in which to live. Unfortunately, as discussed in Chapter 5, local law enforcement officials are not trusted by many residents in Siglo XXI (or other parts of Los Mochis, for that matter) because of their reputation for being corrupt. That is why I also listed public health educators and the non-profit group, Manos Amigas, as other groups that might help meet the need for protection against family violence. Social workers may serve an important role in protecting families in Siglo XXI against violence in the home by offering parenting classes and counseling services. Manos Amigas could also play a role in helping these families by organizing discussion groups and other activities for victims and abusers.

### **Community Health Needs**

I identified neighborhood violence as a community health need because I believe it affects the well-being of the community as a whole. It is also a prime example of the lacking bridging and linking social capital in Siglo XXI. The women who participated in the focus groups talked about how they were afraid of their neighbors who were known to be drug dealers, gang members, or thieves because these people had a reputation for physically attacking anyone who reported their criminal activity. They said they could breathe easier and leave their houses with less anxiety only when they knew these people were in prison. Living in a state of fear such as that can affect residents' personal emotional health, adding stress that can translate into physical problems such as

headaches, nausea, loss of appetite, restlessness, etc., and it also impedes community trust and participation. Again, as in the case of family violence, local law enforcement should be the first group responsible for protecting Siglo XXI against neighborhood violence. However, arresting people for robbery and street violence may only serve to temporarily “bandage” the problem. I believe Manos Amigas may be more effective in changing the character of Siglo XXI from one of violence and mistrust to one of safety and mutual trust by offering activities for children, youth, and adults where they are able to come together in a friendly environment and learn to cooperate. Sports teams, youth groups, and study groups could serve to introduce people to their neighbors and keep them busy in constructive activities so that they do not resort to more destructive behaviors.

### **Socioeconomic Needs**

The socioeconomic and social capital needs presented here did not come directly from conversations with the people who participated in the interviews I conducted as part of my research. I identified these needs based on my own observations and personal conversations with people living in Siglo XXI and with members of Manos Amigas. While these needs were not presented by the participants of my research during the individual and focus group interviews, I believe they are important needs that should be acknowledged and addressed in order to improve the standard of living in Siglo XXI and to help meet other needs mentioned by the research participants.

I believe many, if not all, of the health needs presented in this assessment exist at least in part because of the high levels of unemployment and underemployment in Siglo XXI. Without reliable, steady jobs with adequate pay and benefits, the residents of Siglo XXI struggle to provide for their families. A lack of employment and financial security leads these residents to delay accessing health care services, if they access those services

at all. It also affects their ability to pay for services such as sanitation, water, and electricity. Built up stress and frustration can turn into anger and hostility, as people become violent. Unfortunately creating employment opportunities goes beyond the abilities of the stakeholder groups in this research. However, I believe Manos Amigas and local government agencies, such as DIF, can help residents of Siglo XXI become more employable. By offering job skills training programs, these groups could help equip the residents of Siglo XXI to find more secure, better paying jobs, so they can provide better for their families. The contacts that Manos Amigas has throughout the city of Los Mochis could serve as linking social capital for the people living in Siglo XXI, connecting them to potential employers and/or references for employment.

### **Social Capital Needs**

As I talked with the women in the four focus groups that I conducted in Siglo XXI, I realized that in addition to having very little human and physical capital, the colonia of Siglo XXI also has very limited social capital. This is a poor colonia of uneducated, underemployed, disconnected people. As I listened to the women talk about problems in their community, I was troubled by the fear and lack of trust they had for their neighbors. I kept thinking that the physical needs of this colonia are so many and so great that meeting these needs will take a lot of time and other resources. I kept questioning in my mind how the people living in Siglo XXI could be equipped to start meeting some of their own needs. I believe developing social capital in this colonia will help to do just that. Specifically, I believe that by increasing community participation and building relationships of trust in this community, Siglo XXI will see improvements in the standard of living.

**Community participation**

It is important to increase community participation in Siglo XXI because right now only a select group of people are making decisions and moving to make changes for the colonia. Increasing participation in Siglo XXI is something the residents themselves are responsible for doing. They alone decide if and when and for what they will take part in the goings on of their community. For Siglo XXI to truly be a unified community, however, more of its residents must feel like they have a voice in their community and take part in decision making. I believe the local government can play a part in increasing community participation by holding more public community meetings and listening to the voices of the people. Not only should local government leaders make themselves more available and accessible to their constituents, they should also take more responsibility to respond to the concerns voiced by these people. Such activities will promote the development of wider bonding and bridging social capital as colonia residents learn to work together to solve problems and see that their efforts produce results. People are far more likely to participate in community matters and decision making if they believe their efforts will actually accomplish something worthwhile. If no one listens and nothing changes, then their participation is in vain.

**Community trust**

Building mutual trust among the residents of Siglo XXI is also an important step to developing more social capital. Right now the people in Siglo XXI are inundated by images of drug deals, prostitution, robbery, violence, and corruption. They have little reason to trust their neighbors. Without opportunities to work and play together, these residents will have a difficult time learning to trust. I saw in the focus groups that I

conducted how the women began opening up and sharing stories with each other, the more time they spent answering my questions. As they heard other people expressing the same concerns, fears, and frustrations they had, the women were able to trust each other more to share personal stories that illustrated certain topics of conversation. I believe local church groups and organizations such as Manos Amigas can help to provide more opportunities for the people in Siglo XXI to come together and share their experiences with each other. As people learn to share their own experiences with their neighbors, they will be able to learn from each other and develop relationships of trust in which they can help each other meet other physical and emotional needs.

### **Developing the Colonia in Community**

As shown in the far right column of Table 6-1, the majority of these needs cannot, or should not, be met by just one of the stakeholder groups. These needs are complex and must be addressed by more than one party. The fact that most of the needs presented in this needs assessment cannot be met by one person or group supports the argument that social capital is an essential part of community development. Without a solid base of social capital – social networks, trust, and cooperation – between the stakeholder groups, their efforts to meet the needs presented here may be frustrated and their ability to meet those needs hindered.

### **Answering the Research Questions**

As I explained in Chapter 1, my research in Siglo XXI was driven by three main questions. First, I wanted to know what people living in Siglo XXI defined as the most important health needs in their families and communities, compared to what members of Manos Amigas and selected health care providers in Los Mochis identified as the most important needs in Siglo XXI. Second, I wanted to know about the scope, forms, and

channels of social capital available to Siglo XXI in terms of community members' relationships to other stakeholders. Third, I wanted to know how social capital linkages were related to the kinds of needs identified by each of the stakeholder groups.

### **Comparing Responses to the Community Needs Assessment**

The first research question addresses the needs assessment component of this research project. The results of the needs assessment were presented in Chapter 5. Now I will discuss how those results do or do not support the hypotheses I presented in relation to the first research question. As stated in Chapter 1, I hypothesized that:

7. Community members would identify a variety of needs related to lifestyle (violence, alcohol and drug abuse, prostitution), as well as chronic conditions (arthritis, diabetes, high blood pressure) and nutrition;
8. Health care providers would emphasize needs related to public health, communicable diseases, etc.; and
9. Members of Manos Amigas would focus more on preventive care and social needs because that is what they can address through the clinic operations and church or volunteer community services.

In relation to the first hypothesis, the women who participated in the focus groups did identify a few common chronic diseases, such as diabetes, heart problems, high blood pressure, and cancer as leading causes of illness in their community. All four focus groups also identified illnesses and needs related to lifestyle. Specifically, the women talked about widespread drug and alcohol addiction and the violence related to that lifestyle. They related drug and alcohol addiction to poor health in three ways. First, drug and alcohol use promotes violent behavior in the home, between husband and wife and between parent and child. Second, these addictions promote violence in the neighborhood through fights, robberies, and physical assaults against anyone who reports drug deals or other criminal behavior to the police. The women in the focus groups

identified drug and alcohol addiction as being more of a problem for men than for women in that colonia, but they saw the women and children paying the price for those addictions. As the women explained, the men spent all of their already limited income to buy the drugs and alcohol, leaving the women without money to buy food for their families. Without money to buy groceries, the women had a difficult time feeding their children nutritional meals, which led to malnutrition and related health problems among the children (diabetes, diarrhea and vomiting).

The responses of the women support my first hypothesis, which stated that they would identify lifestyle and chronic diseases when asked about the health needs of the community. However, I was impressed that the women were also able to talk about public health concerns. All four focus groups identified the lack of a sewage system as one of the most important needs in Siglo XXI. They understood that many skin diseases, parasites, and other illnesses are the result of direct contact with the raw sewage that overflows from the latrines into the streets where people walk in sandals and children play barefoot.

My second hypothesis related to the community needs assessment was not completely supported. While the health care providers talked about the need for public health education in order to decrease the prevalence of communicable diseases and improve nutrition and overall quality of life in Siglo XXI, they also mentioned chronic diseases as leading causes of illness in this colonia. Most of the health care providers focused on public health, communicable, and chronic diseases as leading causes of illness and priority needs in Siglo XXI. The doctor from the public health department and the social workers that participated in this research seemed to be much more familiar with the

colonia Siglo XXI and its health needs. In addition to talking about public health and communicable diseases, these participants also recognized lifestyle conditions (drug and alcohol addiction, prostitution) as important contributors to poor physical, mental, and emotional health in Siglo XXI.

My conversations with members of Manos Amigas de Los Mochis helped to confirm my third hypothesis. The person I spoke with from this organization did not talk about specific health needs in the community. Instead, he talked more about the material, social, and spiritual needs of the people living in Siglo XXI. He stressed the need for community participation and positive social networks and relationships. He also talked about the need to offer job skills training, nutrition classes, parenting classes, and similar services to the people in Siglo XXI to give them a possible way out of the difficult circumstances in which they live.

### **Investing in and Accessing Social Capital**

After determining the needs in Siglo XXI and comparing how different stakeholders identified those needs, I wanted to examine the social capital capacity of Siglo XXI based on the community's relationships with each other and with other stakeholder groups. I made the following hypotheses associated with this research question:

1. Informal horizontal linkages would be stronger and more abundant in Siglo XXI than formal horizontal linkages, meaning people living in Siglo XXI would be connected by informal social networks of friends, neighbors, and family and would have fewer and/or weaker ties to formal organizations, clubs, etc.;
2. The non-profit organization, Manos Amigas, would serve as a go-between for the community members and health care providers because there would be limited vertical linkages between community members and the health care providers, but more and/or stronger vertical linkages between community members and Manos Amigas;

3. Informal networks at the micro level would be observable to a greater extent because of the marginalization of poverty; and
4. Formal networks at the micro and meso levels would be underdeveloped for a variety of reasons, such as mistrust and physical and financial constraints (transportation, time, etc.).

The focus group interviews with the women in Siglo XXI and individual interviews with health care providers and the representative from Manos Amigas supported all four of these hypotheses. The women who participated in the focus group interviews told me that there are no formal organizations or associations in Siglo XXI. Furthermore, political participation or participation to address health needs and solve health problems in the colonia is limited. Formal ties, with the exception of ties to religious groups and the Manos Amigas organization, are practically non-existent, so the people living in Siglo XXI must rely on their informal ties and personal relationships for health and medical information, care and supplies. From listening to the women talk about their interpersonal relationships and social networks, I saw that the residents of Siglo XXI also have very limited informal social ties. The women repeatedly gave the impression that people who live in Siglo XXI experience a serious lack of trust for their neighbors, often to the point of fearing for the safety of themselves and their families.

### **Linking Social Capital to Meeting Needs**

Finally, my last research question connected the community health needs assessment and the social capital framework, as I sought to determine whether a varying perception of needs was associated with fewer or weaker vertical linkages between health care providers and community members. I hypothesized that:

5. A lack of trust, communication, and cooperation between community members and health care providers would lead to the identification of different needs among the stakeholders; and

6. The more and/or stronger the vertical linkages between stakeholder groups, the more alike their perceptions of needs would be.

It is important to mention that at least two of the health care providers that agreed to participate in my research admitted that they were not especially familiar with Siglo XXI and its residents. When I introduced myself to the health care workers and told them about my research project, they said they had not even heard of Siglo XXI. This lack of knowledge was evidence of a lack of communication and cooperation between the residents of Siglo XXI and health care providers. In spite of not being specifically aware of the health care needs in Siglo XXI, the health care providers did identify most of the same health needs as the women in Siglo XXI. I believe this is due, at least in part, to the fact that the conditions identified as the most important for Siglo XXI are the same conditions that are most common in other impoverished parts of the city. The health care providers that participated in this research are those that work in facilities that treat the poorer populations of Los Mochis. The needs presented in Siglo XXI are not different from the needs presented in other colonias with the same socio-economic conditions. Therefore, the health care providers do not necessarily need to be familiar with one colonia; rather, they should understand the needs of their city's poorer population in general.

An unexpected, but positive, finding in the needs assessment was that residents of Siglo XXI did express trust in health care providers, even though they were often unable to access formal health care services. The trust expressed by the women in focus groups reveals health care providers as an untapped source of potential bridging social capital. Developing relationships of trust and cooperation between health care providers and Siglo XXI residents will not only serve to build social capital in this impoverished

colonia, but it will also lower the risk of failing to meet the health and medical care needs of community members.

While the women in Siglo XXI did not express a lack of trust in the health care providers, they did express a lack of trust in their local leaders and government. They felt like even when they were able to call attention to the public health needs, such as a sewage system, that local leaders and government officials only made empty promises to help resolve the issue. Residents were regularly told they would get the services they requested, but they seldom saw results. This lack of results led the women who participated in the focus groups to believe they had limited power to effect change in their community. This is yet another example of how community members' trust in health care providers may serve to increase bridging social capital with other groups by leveraging the community's trust in health care providers to enact sanitation efforts and develop a wider web of vertical social capital linkages.

### **Conclusions**

The purpose of this dissertation was to conduct a community health needs assessment, using participatory action research (PAR) and social capital as guiding methodological and theoretical frames, respectively. This dissertation demonstrates how applied research, grounded in sociological theory, serves multiple purposes in both the academic field in general and the real lived experiences of a poor community in particular. For the remainder of this chapter, I will discuss how this research contributes to the field of sociology, health research, and the community.

First, this research contributes to the field of sociology by supporting applied sociology as a legitimate, appropriate, and valuable practice within the discipline. In terms of applied research, this dissertation specifically calls upon PAR research values

and methods to carry out a community needs assessment. PAR in health research has acquired a hearty research identity and set of researchers, and it is considered to be a framework that is participatory, or “grass roots,” motivated. As a discipline, sociology itself is inclusive of a variety of data, methodologies and research objectives. Applied sociology is a respected field within the discipline, but I have augmented it in this dissertation with a theoretical focus. While this community needs assessment leans heavily toward the applied side of the spectrum of sociological research and practice, it is also theoretically informed with the use of social capital theory (a theoretical perspective that is becoming increasingly popular in the field of health research). Furthermore, this dissertation serves as an example of how a blend of fields, such as community studies, sociology of health and illness, and social stratification, helps to provide a more complete picture of the social conditions and behaviors of the community under study. Combining applied research methods with a theoretical base that stretches across disciplines allows this dissertation to provide a unique contribution to sociology, representing its ability as a discipline to take a holistic approach to social scientific investigation.

Second, this research contributes to health research by providing an example of how a participatory, “grass roots” approach that includes multiple domains of information fosters more holistic, contextualized results and recommendations for service. Health research, in general, requires multiple types of data from multiple sources to fully understand the health conditions and/or needs of the study population. This dissertation integrates multiple methodologies, such as individual interviews and focus group interviews, and it also draws upon multiple data sources, such as individual and focus group responses and secondary data provided by local health statistics, census, and World

Health Organization (WHO) and Pan American Health Organization (PAHO) data. This triangulation of data collection and use of multiple indicators of certain concepts serves both to reduce biases in the data and data interpretation and to present a more complete, contextualized analysis of the health status and health needs of the community. In addition, this dissertation contributes to health research as an example of participatory research that is action-oriented. As I explained in Chapter 1, including members of the research community in the research process increases the effectiveness of the project because the researcher purposively considers the community's existing norms, perceptions, habits, and values in program and service planning.

Finally, and perhaps most importantly considering the values of applied research, this dissertation makes some concrete contributions to the community of Siglo XXI. When I began this community needs assessment, I hoped that I would be able to both understand the needs of Siglo XXI and provide possible ideas for improving the lives of the people living in the colonia. As I conducted the interviews with health care providers, Manos Amigas, and the women in Siglo XXI, I began to feel discouraged. I felt like Siglo XXI was a colonia poor in both physical and social resources. Helping the people in Siglo XXI seemed like such a daunting task. As I write this conclusion, however, I see changes that have already taken place since I conducted my last focus group in Siglo XXI one year ago. Manos Amigas, with the help of a local Baptist church in Los Mochis and other Baptist churches in Tennessee and Alabama, finished the construction of a pavilion, bathrooms, kitchen, and church building, which are located next to the park that these same groups helped to build two years ago. The local city government has also started putting in a sewage system. The residents tell me that not all

of the houses have access to the sanitation system yet, but at least they can see progress. It looks like the community's efforts to organize and present their needs to the government, as well as their connections to Manos Amigas and other groups (by way of Manos Amigas) are producing fruit. Sometimes changes take time, but it is encouraging to see that the little bit of social capital Siglo XXI does have is serving the colonia to improve the lives of the people living there. I believe this dissertation can also serve the community of Siglo XXI by providing a measure for the current status of this poor colonia and by serving as a tool to be used for designing and implementing future community development.

APPENDIX A  
INFORMED CONSENT FORM

**Project Title:** Poverty, Partnership, and Public Health: A Community Needs Assessment in a Mexican Colonia

**Please read this form carefully before deciding to participate in this study.**

**Purpose:**

The purpose of this study is to better understand the social, physical, and cultural conditions and public health in the area of Siglo XXI, a colonia of Los Mochis, Sinaloa, Mexico.

**What I Will Ask of You in This Study:**

For your participation in this study, you will provide answers to some questions about your family, the Siglo XXI colonia, and the health system in this colonia. It is possible that I will ask you for personal information. If you do not want to provide that information, you do not have to answer, and you may end the interview with no problem.

**Time:**

Each interview will last one to two hours. The duration depends on the conversation and your participation.

**Confidentiality:**

Your identity is confidential information that will be protected according to law. Interviews will be taped. I will keep the tapes in a secure place until the interviews are transcribed, then I will destroy the tape. Please do not use names of the people in the interview, nor any information that may be used to identify the participants.

**Potential Benefits and Risks:**

If you decide to participate in this study, you will have the opportunity to share your experiences with the community of Siglo XXI, health services, and the problems and needs of this colonia. However, if your participation causes problems, at whatever time, you may stop participating in this study without consequence.

**Voluntary Participation:**

Your participation in this study is completely voluntary. You may refuse to answer any question, or you can end the interview when you wish if you do not want to complete it. There is no penalty for not participating.

**Right to End the Study:**

You have the right to end your participation and to cancel your participation in this study at any time without consequence.

**If you have questions about this study, you can contact:**

Dr. Barbara Zsembik, Associate Professor, Department of Sociology, 3219 Turlington Hall, P.O. Box 117330, Gainesville, FL 32611-7330, U.S.A.; email: [zsembik@soc.ufl.edu](mailto:zsembik@soc.ufl.edu)

Melissa Mauldin, M.A., Ph.D. Candidate, Department of Sociology, 3219 Turlington Hall, P.O. Box 117330, Gainesville, FL 32611-7330, U.S.A.; email: [melissamauldin\\_mx@hotmail.com](mailto:melissamauldin_mx@hotmail.com)

**For more information about your rights in this study, you can contact:**

UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250, U.S.A.; phone: 352-392-0433

**Agreement:**

I have read/heard the procedure described above. I agree, of my own will, to participate in the procedure. I have received a copy of this description.

Participant: \_\_\_\_\_

Date: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

Date: \_\_\_\_\_

APPENDIX B  
INTERVIEW SCHEDULES

**Focus Group Interview Schedule**

Activities/questions for community focus groups and individual interviews are taken directly from the World Bank's social capital measurement instruments (Krishna & Shrader, 2000).

I. Community Social Capital

A. General Community Composition: How many years has this village/neighborhood been in existence? Has the village/neighborhood grown, gotten smaller or stayed the same in the last five years? Who are the people most likely to come in to or leave the community?

B. Collective Action, Solidarity, Conflict Resolution, and Sustainability of Efforts

Screening: People from the same village/neighborhood often get together to improve the quality of life or something similar. What issues has your village/neighborhood tried to address in the last three years?

*[Probe re: education, health, public services, roads and transportation, markets, credit, recreational and cultural resources, security, child care, irrigation, agricultural services, robberies, gangs, drugs, alcohol abuse, family violence, prostitution. Conduct interview based on response.]*

1. Do you think that everyone in this village/neighborhood has equal access to (name of service or benefit)? Is this also true for the poorest members of the community?
2. Have there been any efforts by the community to improve the quality of the (name of service or benefit) or overcome a problem? Can you describe one instance in detail (community groups that played important role, responses from government, organizations, rest of community, obstacles dealt with, outcome of effort)?
3. Has this village/neighborhood ever attempted to make improvements but failed? Why do you think it failed? What would you have done differently to make the effort more successful?
4. What are the two principal problems or needs that community members feel must be addressed and/or solved?

C. Community Governance, Decision Making, and Problem Solving

1. Who are the main leaders in this community? (*Probe formal and informal leadership.*)
2. How do they become leaders? How are new leaders selected?
3. How are decisions made within this community? What is the role fo the community leaders? How are community members involved? (Probe on role of traditional leaders, informal leaders, elites.)
4. What members of the community participate most in solving the problems in the community (men, women, youth, adults, workers, unemployed/non-workers)?

## II. Community Questionnaire

### A. Health

1. What are the 3 principal illnesses or diseases that affect the children under 6 years of age in this community?
2. What are the 3 principal illnesses or diseases that affect the adult men in this community?
3. What are the 3 principal illnesses or diseases that affect the adult women in this community?
4. How far is the nearest health clinic or hospital to this community?
5. What are the 3 main reasons people in this community choose to go to the health clinic or hospital?
6. What are the 3 main reasons people in this community choose not to go to the health clinic or hospital?

### B. Environmental Problems

1. In the past 5 years, has the community experienced cases of:
  - a. Dengue
  - b. Cholera
  - c. Malaria
  - d. Tuberculosis
  - e. Meningitis
  - f. Hepatitis
2. Does this community have:

- a. Garbage dumps that pollute or contaminate rivers, streams or wells
- b. Junk yards or scrap heaps
- c. Standing water/stagnant pools
- d. Slaughterhouses that dump their waste in public places
- e. Mechanics who dump waste oil near rivers or wells
- f. Contaminating industries
- g. Lumber industry, clear cutting or forest burns

**Individual Household and Health Interview – Community Members  
(to be included in Focus Group Interviews)**

Activities/questions for community focus groups and individual interviews are taken directly from the World Bank's social capital measurement instruments (Krishna & Shrader, 2000).

**I. Household Characteristics**

1. In this dwelling are there people or groups of people who share food preparation and consumption together or separately? How many?
2. What construction material is used for the MAJORITY of the exterior WALLS of the house or building?
3. What is the construction material of MOST of the ROOF of this house?
4. What is the construction material of MOST of the FLOOR of this house?
5. How many rooms are used for sleeping ONLY?
6. What type of sanitary services does this household use?
7. What is the PRIMARY source of WATER for this household?
8. How does this household dispose of MOST of its GARBAGE?
9. What type of LIGHTING does this household use?
10. This home is: owned and completely paid for; owned with mortgage; loaned; given in exchange of services; squatter; rented; other \_\_\_\_\_.

**II. Structural Social Capital**

1. Are you or someone in your household a member of any groups, organizations or associations? (If yes, probe for who belongs to what group; their role in the group; leadership of the group; group decision making; rank order of groups by most important to household.)
2. If there were a problem that affected the entire village/neighborhood, for instance violence, who do you think would work together to deal with the situation? Who would take the initiative (act as leader)?
3. In your view, are there members of your village/neighborhood who are excluded from or do not have equal access to any of these services? How many (what percentage)?

[Services: education/schools; health services/clinics; road maintenance; housing assistance/mortgage; water distribution; sanitation services; agricultural extension; job training/employment; credit/finance; justice/conflict resolution; transportation; security]

4. What do you think are the main reasons that not all people benefit from these services?
5. Are there any services from which you or members of your household are excluded?
6. How often in the past year have you joined together with others in the village/neighborhood to address a common issue?
7. If some decision related to a development project were to be taken in this village/neighborhood, then do you think the entire village/neighborhood would be called for this purpose or would the community leaders make the decision themselves?
8. Overall, how would you rate the spirit of participation in the village/neighborhood?
9. How much influence do you think people like yourself can have in making this village/neighborhood a better place to live?
10. Are the relationships among people in this village/neighborhood generally harmonious or disagreeable?

### III. Cognitive Social Capital

Please tell me if you agree or disagree with the following statements (likert scale: strongly agree; agree; disagree; strongly disagree):

1. Most people in this village/neighborhood are basically honest and can be trusted.
2. People are always interested only in their own wellbeing.
3. Members of this village/neighborhood are always more trustworthy than others.
4. In this village/neighborhood one has to be alert or someone is likely to take advantage of you.
5. If I have a problem there is always someone to help me.

6. I do not pay attention to the opinions of others in the village/neighborhood.
7. Most people in this village/neighborhood are willing to help if you need it.
8. This village/neighborhood has prospered in the last five years.
9. I feel accepted as a member of this village/neighborhood.
10. If you drop your purse or wallet in the village/neighborhood, someone will see it and return it to you.

III. Health (see questions appropriate for individual participant)

A. Infants/Children (*to be answered by mothers*)

Immunizations:

When did your child(ren) receive the following immunizations?

1. BCG (Tuberculosis) \_\_\_\_\_ Did not receive \_\_\_\_\_
2. SABIN (Poliomielitis) \_\_\_\_\_ Did not receive \_\_\_\_\_
3. DPT (Difterina/Tosferina/Tetanos) \_\_\_\_\_ Did not receive \_\_\_\_\_
4. Antisarampión (Measles) \_\_\_\_\_ Did not receive \_\_\_\_\_

Nutrition:

How many servings of the following did your child(ren) have during the past 3 weeks?

1. Fruits \_\_\_\_\_
2. Vegetables \_\_\_\_\_
3. Milk \_\_\_\_\_

Injuries:

Please tell me about any injuries your child(ren) has(have) had in the past year.

Infections/Infectious Disease:

Please tell me about any infections your child(ren) has(have) had in the past year.

Has(Have) your child(ren) ever been diagnosed with Tuberculosis?

Other Comments:

Is there anything else you want to tell me about the health of your child, health care needs, or the community in general?

B. Teens/Young Adults

Reproductive:

Ask about family planning, pregnancies, STDs, contraceptive use, etc.

Injuries:

Please tell me about any injuries you have had in the past year.

Infections/Infectious Disease:

Please tell me about any infections you have had in the past year.

Have you ever been diagnosed with Tuberculosis?

Other Comments:

Is there anything else you want to tell me about your health, health care needs, or the community in general?

C. Middle Age +

Chronic Diseases:

Has a doctor or nurse ever told you that you have heart disease?

Has a doctor or nurse ever told you that you have diabetes?

Has a doctor or nurse ever told you that you have hypertension?

Injuries:

Please tell me about any injuries you have had in the past year.

Infections/Infectious Disease:

Please tell me about any infections you have had in the past year.

Have you ever been diagnosed with Tuberculosis?

Other Comments:

Is there anything else you want to tell me about your health, health care needs, or the community in general?

**Individual Interview Schedule – Manos Amigas and Health Care Providers**

Activities/questions for community focus groups and individual interviews are taken directly from the World Bank's social capital measurement instruments (Krishna & Shrader, 2000).

1. What are the 3 principal illnesses or diseases that affect the children under 6 years of age in this community?
2. What are the 3 principal illnesses or diseases that affect the adult men in this community?
3. What are the 3 principal illnesses or diseases that affect the adult women in this community?
4. In the past 5 years, has the community experienced cases of:
  - a. Dengue
  - b. Cholera
  - c. Malaria
  - d. Tuberculosis
  - e. Meningitis
  - f. Hepatitis
5. Does this community have:
  - a. Garbage dumps that pollute or contaminate rivers, streams or wells
  - b. Junk yards or scrap heaps
  - c. Standing water/stagnant pools
  - d. Slaughterhouses that dump their waste in public places
  - e. Mechanics who dump waste oil near rivers or wells
  - f. Contaminating industries
  - g. Lumber industry, clear cutting or forest burns
6. Do the health clinics/hospitals in this community regularly have sufficient:
  - a. Basic Medicines
  - b. Equipment and Instruments
  - c. Beds for Patients
  - d. Ambulances

7. – 9.

For each item, answer 7, 8, & 9	Does the clinic offer or have enough (____)? <b>7</b>	The service provided by (____) is: <b>8</b>	The service provided by (____) is: <b>9</b>
Doctors	Sufficient	Permanent	Good
	Insufficient	Frequent	Normal
	None	Sporadic	Bad
Nurses	Sufficient	Permanent	Good
	Insufficient	Frequent	Normal
	None	Sporadic	Bad
Aids/Orderlies	Sufficient	Permanent	Good
	Insufficient	Frequent	Normal
	None	Sporadic	Bad
Obstetrics	Sufficient	Permanent	Good
	Insufficient	Frequent	Normal
	None	Sporadic	Bad
Gynecology	Sufficient	Permanent	Good
	Insufficient	Frequent	Normal
	None	Sporadic	Bad
Pediatrics	Sufficient	Permanent	Good
	Insufficient	Frequent	Normal
	None	Sporadic	Bad
Dentists	Sufficient	Permanent	Good
	Insufficient	Frequent	Normal
	None	Sporadic	Bad

10. What are the 3 main reasons people in this community choose to go to the health clinic or hospital?
11. What are the 3 main reasons people in this community choose not to go to the health clinic or hospital?
12. Is there anything else you want to tell me about the health of the people living in this community, or about the health care available to the community?

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