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**EFFECTIVE COVERAGE OF PRIMARY HEALTH CARE SERVICES FOR THE ROMA IN
SERBIA**

LEANNE IDZERDA

Thesis submitted to the
Faculty of Graduate and Postdoctoral Studies
In partial fulfillment of the requirements
For the MSc in Health Systems Program

Telfer School of Management
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ABSTRACT

Research Question: This research will assess whether the Roma population are able to effectively access primary care services, and if not, what barriers prevent them from doing so.

Background: The Canadian International Development Agency (CIDA), in partnership with the Serbian government and the Canadian Society for international Health, has prioritized equitable access to healthcare services for vulnerable populations in Serbia. As part of this larger initiative, the factors that affect access to primary care services for the Roma population will be analyzed in an attempt to determine if and how services can be improved.

Methodology: Disaggregated data was collected from three population groups in Serbia; the general population, the poorest quintile (not including the Roma), and the Roma population. The effective coverage framework, which incorporates availability, affordability, accessibility, acceptability, and effectiveness, was used to structure the analysis.

Results: This research found that the Roma are disadvantaged across a range of equity dimensions. The Roma are less likely to be able to afford health services, or physically access primary care centers, and are more likely to be discriminated against by health workers.

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Chapter 1 : INTRODUCTION

There is a large body of evidence indicating that vulnerable populations often have a greater need for healthcare services given their marginalized existence¹². This population is however often less likely than the general population to be able to utilize those services³. Previous studies conducted in Serbia have revealed that the Roma population is the largest vulnerable group in Serbia and that they are disadvantaged across a number of equity strata as defined by PROGRESS (place of residence, race/ethnicity, occupation, gender, religion, education level, socioeconomic status, and social capital)⁴.

1.1 Thesis statement

This research will assess whether the Roma population are able to effectively access primary care services, and if not, what barriers prevent them from doing so. The effective coverage framework will be used to structure this analysis of access. Effective coverage is a recent metric that attempts to move from individual coverage, defined as the probability of a person in need receiving a necessary health intervention, to effective coverage, defined as the extent to which interventions deliver on their potential health gain at the population or health systems level⁵. This framework clarifies “the interrelationships between the notions of access, demand for care, utilization, and coverage”⁶ by explicitly considering the quality of access, defined as affordability, availability, accessibility, acceptability and effectiveness of health services⁷.

Effective coverage of the Roma is compared to both the general population and the poorest quintile in order to identify gaps in coverage. By comparing the Roma to the poorest quintile, this thesis intends to ascertain whether the Roma’s situation is more than merely a result of their lower

¹ CSDH, *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health*. (Geneva: World Health Organization,[2008]).

² Tim Evans and Wim Van Lerberghe, *World Health Report: Primary Health Care Now More than Ever*. (Geneva, Switzerland: World Health Organization,[2008]).

³ Ibid.

⁴ P. Tugwell and others, "Applying Clinical Epidemiological Methods to Health Equity: The Equity Effectiveness Loop." *British Medical Journal* 332, no. 7537 (11 Feb, 2006), 358-361.

⁵ Bakhuti Shengelia, Christopher Murray and Orvill Adams, "Beyond Access and Utilization: Defining and Measuring Health System Coverage." In *Health Systems Performance Assessment: Debates, Methods and Empiricism.*, eds. Christopher Murray and David Evans (Geneva, Switzerland: World Health Organization, 2003).

⁶ Ibid.

⁷ B. Shengelia and others, "Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy." *Social Science and Medicine* 61, no. 1 (Jul, 2005), 97-109.

socioeconomic status. In order to do this, equity dimensions, defined by PROGRESS, will be assessed for their impact on the Roma's ability to use healthcare services effectively.

1.2 Motivation

The Serbian government has recently recognized access for vulnerable persons to health services as a priority. Their commitment has been demonstrated through the proclamation of healthcare as a right in the Serbian Constitution⁸. The importance of improvement in access was further stated in the 2002 Health Policy document⁹, which supports the need for equity in access by promising *"equal availability of and access to basic health care services ... regardless of socio-economic status of the individual citizen"*.¹⁰ The Serbian government showed further support for equal access in 2005 through the adoption of a set of health related laws: the Health Care Law, Health Professionals Chambers Law, and Health Insurance Law¹¹. This set of laws mandates that health services be physically, economically, and geographically accessible¹², and that patients have the right to access health services without discrimination¹³. The adoption of these principles at the highest levels of government shows a strong commitment by the Government of Serbia to equitable access of healthcare services for all citizens. Given the recent commitment by the Government of Serbia, this research is timely, as it will identify specific areas where access to primary care services may be improved for the marginalized Roma community. This research forms a small part of a much larger Canadian International Development Agency (CIDA) funded project currently underway in collaboration with the Serbian Ministry of Health entitled the Balkans Primary Health Care Policy Project, implemented by the Canadian Society for International Health (CSIH). It is hoped that the results of this thesis will be incorporated into the policy initiatives recommended by the larger CIDA project.

⁸ *Constitution of the Republic of Serbia, Article 68.* (2002): .

⁹ Ministry of Health of the Republic of Serbia, *Better Health for all in the Third Millennium.* (Belgrade, Serbia: , 2002).

¹⁰ Ibid.

¹¹ *Official Gazette of the Republic of Serbia.* Public Law 107/05, (2005): .

¹² *Health Care Law, Article 19; Official Gazette of the Republic of Serbia.* Public Law 107/05, (2005): .

¹³ "Health Care Law, Article 26; Official Gazette of the Republic of Serbia, Vol. 107/05, December 2005," (.

1.3 Objectives

The specific objectives of this research project are three-fold:

1. To apply the effective coverage framework that seeks to identify where the gaps in coverage exist by breaking down quality of access into its various components (acceptability, affordability, accessibility, availability and effectiveness);
2. To apply the framework to two of the Millennium Development Goals (MDGs), which address primary care interventions, in order to illustrate how the framework may be useful in identifying the barriers to achieving the MDGs; and
3. To make recommendations based on these gaps so that more specific programs and research addressing all aspects of access may be instated.

1.4 Outcomes and Contributions

The outcome of this research has both theoretical and practical importance. Of theoretical importance is the use of the effective coverage framework, as it defines access as more than merely utilization and instead takes into account acceptability, affordability, accessibility, availability and effectiveness. This is very different from previous work in the area, which has frequently equated access with utilization.

Of practical importance is the identification of gaps in coverage that can be improved for the Roma population. Specific contributions of this thesis are essential public policy and research recommendations for the provision of primary care to the Roma population in Serbia.

1.5 Chapter Outline

Chapter 2 provides a situational analysis of the healthcare system, the Roma population, and what other organizations are currently doing in Serbia. The healthcare system is described first, including: justification for focusing on primary healthcare; the role that primary care plays in Serbia; how the system is funded; and how individuals access the health system. Following this, an overview of the Roma population is presented, including: the history of the Roma; the various subgroups of Roma; and characterization of Roma living in settlements. Finally, an outline of what other organizations are currently doing and how this research fits into the greater organizational structure in Serbia is presented.

Chapter 3 provides a theoretical overview of the effective coverage framework. The framework is deconstructed into need, utilization, and quality of access; each of these components are described in detail. Finally, the application of the framework to equity is discussed.

Chapter 4 provides an overview of the methodology used in this study. The processes of data collection and of data analysis are described in detail. The three main data sources are described and compared for homogeneity of the populations surveyed.

Chapter 5 provides the results and discussion of the analysis. An overview of the effective coverage framework is presented with the main barriers to access and gaps in research identified. Following this, each aspect of quality of access, including system barriers, availability, affordability, accessibility, acceptability and effectiveness are discussed in detail.

Chapter 6 presents an application of the framework to two of the Millennium Development Goal targets that address primary care interventions.

Finally, *Chapter 7* presents the study conclusions, along with limitations and recommendations for both public policy and future research.

Chapter 2 : SITUATIONAL ANALYSIS

The goal of this section is to describe the healthcare system, the Roma population, and what other organizations are doing as part of a situational analysis. The healthcare system in Serbia will be described first, including justification for focusing on primary healthcare, the role that primary care plays in Serbia, how the system is funded, and how individuals access the health system.

Next, an analysis on the Roma population will be presented. Based on the history of the Roma and a breakdown of the various subgroups of Roma including, domestic, internally displaced persons, and returnees from Western Europe, this thesis will build a case for focusing only on populations living in ghettoized Roma settlements. Following this, a description of Roma living in settlements will be presented. This will include a description of the family structure as well as the determinants of health that affect this group.

Finally, a review of what other organizations are doing with regards to Roma and healthcare will be discussed emphasizing how this research fits into and builds on the greater organizational structure in Serbia.

2.1 Healthcare System in Serbia

Why focus on primary healthcare?

A focus on primary healthcare is important as this system makes it possible to address basic health rights at the lowest possible level. Primary healthcare is defined as an accessible health system wherein services are delivered to a community by an accountable healthcare professional¹⁴. Primary care is characterized by three features: the primary care physician is the first point of contact with the health system, physicians provide comprehensive care that focuses on the patient needs, and physicians act as a central hub for patient referral to specialists when necessary¹⁵. By focusing the interventions in this research around primary healthcare, it is hoped that interventions most relevant to the marginalized Roma population will be addressed¹⁶.

¹⁴ Evans and Van Lerberghe, *World Health Report: Primary Health Care Now More than Ever*.

¹⁵ Starfield B, Shi L, Macinko J., "Contributions of Primary Care to Health Systems and Health." *The Milbank Quarterly* 83 (2005), 457 - 502.

¹⁶ Zorka Lopicic and others, *Developing Sensitivity of the Primary Health Care System to the Issue of Gender and Marginalised People* (Beograd: Grupa 484,[2008]).

Targeting primary care towards the marginalized Roma population is important because: 1) they are especially vulnerable in terms of health and therefore are the most probable potential beneficiaries¹⁷; 2) they largely live in poverty on the edge of society in isolated and ghettoized settlements; 3) they tend not to prioritize prevention and only seek help for serious illness¹⁸. For these reasons, focusing on primary healthcare in the Roma population has the potential to have an important impact on the most disadvantaged population group.

What role does primary healthcare play in Serbia?

A decade of war in the Former Yugoslavia created a climate of post-conflict reconstruction in Serbia. Civil war, beginning in 1991, led to the breakup of the Socialist Republic of Yugoslavia into the six independent states of Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Slovenia, and Serbia¹⁹. This particularly volatile time had negative effects on the healthcare system in Serbia. Both internal and external pressures affected the healthcare system. Internal pressures included armed conflict and the destruction of facilities from air strikes, the mass migrations of people, and political and economic instability²⁰. External pressures centre around sanctions and embargoes, which prevented the healthcare system from accessing the resources that they required, thus destabilizing the health infrastructure even further²¹. The emerging health system was without facilities, resources, equipment and a supportive economic infrastructure.

Despite political and economic collapse, the government of Serbia still attempts to provide a comprehensive range of primary health care services²². According to an overview of the Serbian health system conducted by the CIDA Balkans Youth and Primary Health Care Policy Project, primary care services are comprised of a decentralized network of 161 primary health centers, *dom zdravlja*, with one centre per municipality²³. At a minimum, these centers are mandated to provide: a general practice, preventative and emergency health care services, healthcare services for women and children, home

¹⁷ Evans and Van Lerberghe, *World Health Report: Primary Health Care Now More than Ever*.

¹⁸ Ibid.

¹⁹ B. D. Nelson and others, "Multimodal Assessment of the Primary Healthcare System of Serbia: A Model for Evaluating Post-Conflict Health Systems." *Prehospital & Disaster Medicine* 18, no. 1 (Jan-Mar, 2003), 6-13.

²⁰ Ibid.

²¹ Ibid.

²² Orvill Adams and others, "Access to Primary Health Care in Serbia: Taking Stock" (Policy Paper, Belgrade, Serbia, 2008).

²³ Ibid.

visits, and diagnostic testing²⁴. *Dom zdravlja* that are servicing more than 20 000 people, and are more than 20 km away from the nearest hospital, may also offer specialist-consulting services including: internal medicine, pneumoftisiology (lung diseases), ophthalmology, psychiatry services, social medicine, health informatics, and chemo dialysis²⁵. Medical personnel and health services delivery are organized according to the following departments: pediatrics for children aged 0-6 years, pediatrics for school age children, gynecology, general practice, occupational medicine, and dentistry²⁶. Complementing these facilities are smaller satellite health stations, *ambulantas*, organized at the community level²⁷. *Ambulantas* are responsible for general medicine, primary care pediatrics, and preventative and children stomatology²⁸. This primary care system is supported by secondary and tertiary care services, including forty public hospitals and four tertiary university hospitals²⁹.

Funding of the healthcare system

Funding for the healthcare system is by means of mandatory employee contributions to the Health Insurance Fund; insurance coverage is granted to all employees, pensioners, self-employed persons, and their spouses and children³⁰. In principle, the Ministry of Finance also covers uninsured vulnerable populations, such as uninsured elderly, refugees, and displaced persons, through transfer of funds. The transfer of funds is in line with the 2003 Health Policy of Serbia document, which mandates just and equal accessibility to health care for all citizens and improvement of health care for vulnerable populations³¹. Emphasis is placed on equal access to basic health services for the poorest and most vulnerable groups, including the Roma³². Thus in theory, all healthcare services are free to citizens and protected persons in Serbia.

How does one access the healthcare system?

In order to access primary healthcare services, clinics require that their patients possess a valid health card. Legally, a healthcare worker cannot perform a medical check-up with a person who does

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Nelson and others, *Multimodal Assessment of the Primary Healthcare System of Serbia: A Model for Evaluating Post-Conflict Health Systems.*, 6-13

²⁸ Adams and others, *Access to Primary Health Care in Serbia: Taking Stock*

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

not have this documentation³³ To obtain a health card, citizens must register their permanent address with the authorities and pay a small registration fee³⁴ Although this registration fee may be reduced or waived for persons receiving social insurance, advocacy organizations, such as Praxis and UNHCR, maintain that there is little evidence to support that these fees are in fact waived for Roma people³⁵ Following registration of a permanent address, individuals receive an identification card, which must be used to apply for a health card This process is quite lengthy and involves numerous potential obstacles for the Roma population The process is discussed in detail during the results and discussion in chapter 5 on page 41

2.2 The Roma Population in Serbia

There are approximately 5.2 million Roma living in Central and Eastern Europe³⁶, with 108,193 people defining themselves as Roma in Serbia³⁷ It is thought that the actual number of Roma people living in Serbia is four to five times higher than this³⁸ Many, however, may not declare themselves as Roma due to widespread discrimination

History of the Roma

The history of the Roma people will be presented in order to better understand their current position in society as part of a history of marginalization, rather than a recent or sudden occurrence The Roma in Europe have historically been portrayed as a singular ethnic group with a common history It is often argued that Roma are one homogenous group based on the uniting language, Romani In fact, there are almost 100 dialects of Romani and less than 20% of the Roma population speaks any dialect, while almost all are fluent in the language of the country in which they reside³⁹ The idea of a linguistically and culturally distinct Roma population likely stems from eighteenth century Romanticism

³³ Lopčević and others, *Developing Sensitivity of the Primary Health Care System to the Issue of Gender and Marginalised People*

³⁴ Praxis and UNHCR, *Analysis of the Situation of Internally Displaced Persons from Kosovo in Serbia: Law and Practice* UNHCR, [2007]

³⁵ Ibid

³⁶ C. L. Zeman, D. E. Depken and D. S. Senchina, "Roma Health Issues: A Review of the Literature and Discussion," *Ethnicity & Health* 8, no. 3 (Aug, 2003), 223-249

³⁷ D. Bogdanović and others, "Mortality of Roma Population in Serbia, 2002-2005," *Croatian Medical Journal* 48, no. 5 (2007), 720-726 (accessed 16 November 2008)

³⁸ Petar Antić, *Roma and Right to Health Care in Serbia* Minority Rights Centre, [2005]

³⁹ Martin Kovats, *The European Roma Question* Royal Institute of International Affairs, [2002]

and continues to remain largely unchallenged today⁴⁰. With no written or oral history of their own, the Roma have been subject to depiction by the majority population⁴¹.

It is believed that the Roma immigrated to central and eastern Europe from the Indian subcontinent in the fourteenth century⁴² as tradesmen and performers⁴³. They soon clashed with local guilds, which sought to maintain monopolies on trades such as metalworking and basket manufacturing⁴⁴. A number of restrictions were placed on the Roma and they were slowly marginalized within societies. They were stereotyped as beggars, thieves, and bandits likely due to their precarious economic position. A second stereotype of the 'mystical Gypsy' seems to have appeared as many Roma turned towards performing, including fortune telling, sorcery, music and dance, as a means by which to make a living⁴⁵. A third stereotype of Roma as nomadic people was highly romanticized; it is more likely that they were forced to move from village to village due to discrimination by local populations and in search of work. The nomadic way of life ended for many Roma in the eighteenth century in the Austro-Hungarian Empire when Roma were forced to settle into permanent housing⁴⁶. A second wave of settlement appeared in the twentieth century as large parts of Eastern Europe came under communist rule. Severe restrictions were placed on nomadism and all citizens were expected to hold a steady job while entrepreneurial activities were declared illegal⁴⁷. Through these forced settlement programs, large numbers of Roma settled in shantytowns on the outskirts of cities. Although some Roma have integrated into the general population in Serbia, the majority of Roma continue to live in these ghettoized settlements.

Subgroups of Roma in Serbia

The Roma in Serbia may be divided into three main groups based on their personal histories: the domestic Roma, internally displaced persons (IDP) from Kosovo, and returnees from Western Europe.

The domestic Roma are defined as those Roma who have lived in Serbia their entire lives. According to the UNDP vulnerability survey, 98% of the domestic Roma population had lived in the

⁴⁰ Ibid.

⁴¹ Guenter Lewy, "The Travail of the Gypsies," *The National Interest* (1999).

⁴² Zeman, Depken and Senchina, *Roma Health Issues: A Review of the Literature and Discussion*, 223-249

⁴³ Lewy, *The Travail of the Gypsies*

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Ibid.

same location for the past 15 years, compared to 90% of the non-Roma population interviewed⁴⁸; thus negating the present day stereotype of the 'nomadic gypsy'. Those who did move were likely: women who had married into another community; people who were forcibly evicted by the government; and people who moved to a larger city, such as Belgrade, in search of employment. For the most part, domestic Roma communities live in settlements on the outskirts of cities or in smaller industrial towns.

Large numbers of Internally Displaced Roma (IDPs) from Kosovo are a result of mass migrations between 1991 and 1995 due to great instability in that region. A second wave of IDPs fled to Serbia because of the resurgence of violence in the area in 1999⁴⁹. In 2007, there were 22,457 Roma IDPs registered. However, the United Nations Development Program estimates that the real number of IDP Roma is probably closer to 50,000⁵⁰. While a small number of IDPs end up in government-run or "unofficial" collective centers, the majority of Roma IDPs find accommodation in Roma settlements⁵¹. The Government of Serbia has not recognized the integration of IDPs as a viable solution and they have been reluctant to allow projects that would aid displaced households to settle permanently in Serbia⁵². On the other hand, Roma IDPs are reluctant to return to Kosovo, as their security cannot be guaranteed.

Returnees from Western Europe are defined as those people for whom it is mandatory to return to Serbia following failure of asylum seeking. The number of Roma who have already returned, or who are awaiting return, is not available⁵³; however, according to the Council of Europe, it is estimated that up to 100,000 people will be returned to Serbia with the majority coming from Germany, Sweden and Switzerland. Most of the returnees are Roma, with estimates ranging from 60 to 75% of the total

⁴⁸ United Nations Development Program, *At Risk: The Social Vulnerability of Roma, Refugees and Internally Displaced Persons in Serbia*. (Belgrade: UNDP, [2006]).

⁴⁹ Praxis and UNHCR, *Analysis of the Situation of Internally Displaced Persons from Kosovo in Serbia: Law and Practice*.

⁵⁰ United Nations Development Program, *At Risk: The Social Vulnerability of Roma, Refugees and Internally Displaced Persons in Serbia*.

⁵¹ Praxis and UNHCR, *Analysis of the Situation of Internally Displaced Persons from Kosovo in Serbia: Law and Practice*.

⁵² Ibid.

⁵³ Tatjana Peric, *Reintegration of Returnees in Serbia: An Overview of Awareness Raising Activities* (Belgrade: UNDP, [2008]).

returnee population⁵⁴ Upon return, the Roma population often moves into temporary housing in Roma settlements that are close to major city centers

Because Roma from Kosovo and returnees are recognized as IDPs and not refugees, they are not protected under international refugee law, however, the Serbian *Law on Protection of Rights and Freedoms of National Minorities* states that this group should be granted equal access to social services as Serbian citizens These two groups of Roma face similar challenges to the domestic Roma community In addition, language and cultural barriers exacerbate their challenges

Roma population focused on by this research

From this assessment, one can see that the Roma population in Serbia is not one homogenous population group, but rather a collection of subgroups with different life histories, thus defining the Roma population in this study is quite difficult In addition, some have argued that defining a group based on ethnicity may cause further discrimination⁵⁵ Defining the Roma based on self identification may mitigate this problem, however many Roma may not define themselves as Roma due to fear of discrimination In order to overcome these problems, this research will focus on communities with higher concentrations of persons at risk, i.e. those people living in settlements It is assumed, based on previous research and government sources, that the vast majority of persons living in these settlements are in fact Roma During the next section, the Roma living in these ghettoized settlements will be described in detail

2.3 Characterization of Roma living in settlements

Location and Size of settlements

The Roma settlements are distributed across Serbia with the majority of Roma living in Southern Serbia and near large urban centers A map, adapted from the 2002 census data, of the areas with high concentrations of Roma persons can be found in appendix I The Roma settlements in Serbia range in size from small settlements containing only a few households to some settlements containing over 5000 residents⁵⁶ The types of settlements also vary and include old rural villages, settlements on the

⁵⁴ Ibid

⁵⁵ United Nations Development Program, *At Risk The Social Vulnerability of Roma, Refugees and Internally Displaced Persons in Serbia*

⁵⁶ Vladimir Macura and Zlata Vuksanovic, *Roma Housing and Settlements in South-Eastern Europe Profile and Achievements in Serbia in a Comparative Framework* (Warsaw, Poland: OSCE Office for Democratic Institutions and Human Rights (ODIHR), [2006])

outskirts of cities, and inner city slums⁵⁷. Living conditions within settlements range considerably from extremely poor slum housing, such as tin shacks or cardboard houses, to well-maintained brick houses⁵⁸. Appendix I contains pictures of some settlements in Serbia.

Family structure

Defining family structure and social roles is important as these allow us to better understand the social dynamics of households. Households in Roma settlements tend to be multigenerational with the typical household consisting of at least one grandparent, usually the grandmother, the sons and their wives, and grandchildren. The social roles in Roma households are very well-defined. The grandparent is the head of the household and controls all resources, including economic resources, which are handed to them by the sons⁵⁹. Boys and men are expected to work and support their families from a very young age regardless of their marital status. Typical employment includes factory work and labor intensive jobs such as garbage collection. A large percentage of Roma also collect second hand materials from dumps and sell these to recycling plants⁶⁰.

Women are expected to marry and take care of the children and the household. Marriage is considered both for love and for convenience, however parents have the final say on the marriage and arranged marriages are not uncommon⁶¹. Following marriage, the girl will move in with her husband's family and often occupies the lowest rung on the social hierarchy until she bears children; thus, fertility and childbirth are crucial to her social role⁶². Because of these expectations, the average age of marriage for a girl is 17 years old, with 12% of girls marrying before 15 years of age⁶³. Childbirth is usually one and a half years after marriage⁶⁴. The Roma tend to have very large households with

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Milena Prvulovic, *Access to Sexual and Reproductive Health Care for Uprooted People and Romani Women and Youth in Southern Serbia* (Novi Sad, Serbia: CARE,[2008])..

⁶⁰ United Nations Development Program, *At Risk: The Social Vulnerability of Roma, Refugees and Internally Displaced Persons in Serbia.*; Antic, *Roma and Right to Health Care in Serbia*.

⁶¹ Prvulovic, *Access to Sexual and Reproductive Health Care for Uprooted People and Romani Women and Youth in Southern Serbia*

⁶² Ibid.

⁶³ Ibid.; Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report* (Belgrade, Serbia: Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency,[2006]).

⁶⁴ Prvulovic, *Access to Sexual and Reproductive Health Care for Uprooted People and Romani Women and Youth in Southern Serbia*

women bearing an average of 3.3 children⁶⁵ compared to 1.38 children in the general population⁶⁶. Due to the larger number of children as well as the multigenerational structure of households, there is a significantly larger number of persons per Roma household than in the general population as can be seen in table 2.1⁶⁷.

Table 2.1 Roma households residing in settlements in Serbia are significantly larger on average than general population households (persons, in percent)

Household Size	General Population	Roma
1	6.6	1.4
2	18.4	5.6
3	20.5	9.7
4	27.0	18.1
5	11.9	20.2
6	9.7	14.9
7	3.6	12.8
8+	2.6	17.4
Mean household size	3.8	5.5

This diagram was taken from Bodewig and Sethi, 2005⁶⁸

Roma as a disadvantaged population

One way to analyze and describe whether the Roma is disadvantaged is using an equity lens. Equity is different from inequality. Inequality is defined as the difference between population groups, regardless of whether this difference is fair. Equity has a moral or ethical dimension and is defined as (1) a difference or inequality exists, (2) the difference is unfair or unjust, and (3) the difference is avoidable or remediable⁶⁹. In addition patients' values and preferences should be taken into account. Using this definition of equity, it is possible that the Roma are disadvantaged across a number of social strata including socioeconomic, political, ethnic, and cultural strata⁷⁰. The magnitude of these inequities can

⁶⁵ Ibid.,

⁶⁶ Statistical Office of the Republic of Serbia, *2002 Census of Population, Households and Dwellings* (Belgrade, Serbia: ,[2003]).

⁶⁷ Christian Bodewig and Akshay Sethi, *Poverty, Social Exclusion and Ethnicity in Serbia and Montenegro: The Case of the Roma*.World Bank,[2005]).

⁶⁸ Ibid.

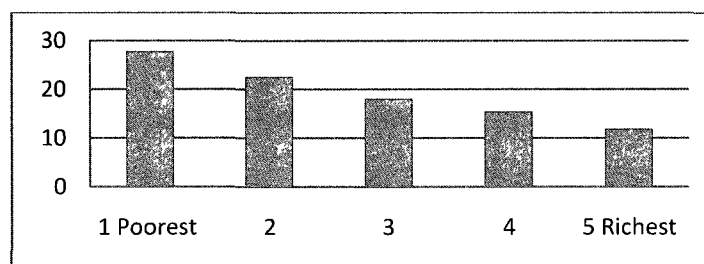
⁶⁹ M. Whitehead, "The Concepts and Principles of Equity and Health." *Health Promotion International* 6, no. 3 (1991), 217-228.

⁷⁰ M. Marmot, "Achieving Health Equity: From Root Causes to Fair Outcomes." *Lancet* 370, no. 9593 (29 Sep, 2007), 1153-1163.

be measured in different ways. One approach is to measure the *health gaps* between population groups⁷¹. The difference observed in life expectancies between the Roma and the general Serbian population is an example of this gap. Roma men live on average 12.1 years less than men in the general population; similarly, Roma women live on average 14.4 years less than the general population⁷². The fact that the Roma have a much lower life expectancy than the general population indicates that an inequity may exist.

Although measuring gaps in equity can be useful, it fails to take into account the social gradient. The gradient shows that health status and determinants lie on a spectrum; they are continuous, rather than dichotomous⁷³. Figure 2.1 shows a theoretical example of a social gradient; this graph shows that an individual's self reported health status decreases with a decrease in income level. This phenomenon has been widely shown in many other areas such as education and employment status.

Figure 2.1 The gradient of the proportion of each socioeconomic status quintile that self reported their health status as good⁷⁴



Determinants of Health

Gaps and Gradients are a result of both upstream (societal) and downstream (individual) determinants of health⁷⁵. Downstream determinants of health include factors such as weight, smoking, alcohol, hypertension, and sexual behavior. Upstream determinants of health are societal in nature and include socioeconomic status⁷⁶ (SES), education levels, unclean water, lack of sanitation and shelter, and

⁷¹ Ibid.

⁷² Bogdanović and others, *Mortality of Roma Population in Serbia, 2002-2005*, 720-726

⁷³ Marmot, *Achieving Health Equity: From Root Causes to Fair Outcomes.*, 1153-1163

⁷⁴ Unless otherwise indicated, all figures and tables included in this lecture were created by Leanne Idzerda © University of Ottawa 2009

⁷⁵ Tugwell and others, *Applying Clinical Epidemiological Methods to Health Equity: The Equity Effectiveness Loop.*, 358-361

⁷⁶ Please note some determinants, such as socioeconomic status and income level may also be measured at the individual level.

lack of appropriate medical care. Too often, the population at risk is blamed for downstream (individual) determinants of health and upstream (societal) determinants are not taken into consideration. It should be noted that these determinants are not mutually exclusive and often upstream determinants have an effect on downstream determinants and vice versa. The Commission on the Social Determinants of Health (CSDH) attempts to address this issue by asking “What are the causes of the causes?” In other words, what societal factors affect health?

The social determinants of health framework considers health inequities as a “*result of a complex system operating at global, national, and local levels which shapes the way society, at national and local level, organizes its affairs and embodies different forms of social position and hierarchy. The place people occupy on the social hierarchy affects their level of exposure to health-damaging factors, their vulnerability to ill health, and the consequences of ill health*”⁷⁷. The CSDH report outlines five important areas in which inequities should be addressed: early child development; housing; fair employment; social protection; and universal healthcare⁷⁸. Data on the CSDH in the Roma is summarized in table 2.2.

Table 2.2 Comparison of Roma and non-Roma Health Status Indicators

Health Status Indicator	General Population	Roma	Poorest 20%
Life Expectancy Women+	73.96 ± 12.57	61.97 ± 19.48	
Life Expectancy Men+	68.88 ± 14.42	56.83 ± 18.66	
Early Childhood Development			
Low Birth Weight (<2500g)	4.9%	9.3%	8.6%
Prevalence of Stunting (moderate and severe)	5.4%	20.0%	9.0%
Enrolled in Primary School	99%	73.6%	95.6%
Complete Primary School	76.9%	27.2 %	60.9%
Housing			
Slum housing	18.5%	60.1%	32.1%

⁷⁷ Marmot, *Achieving Health Equity: From Root Causes to Fair Outcomes.*, 1153-1163

⁷⁸ CSDH, *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health.*

Electricity Supply	99.9%	96.9%	99.2%
Water Supply	97.6%	72.9%	82.3%
Sewerage System	96.0%	59.4%	72.5%
Employment			
Formally employed*	26.6%	4.8%	13.9%
Unemployed – seeking employment *	15.3%	31.9%	11.3%
Independent Agricultural Worker	5.9%	4.4%	10.4%
Social Protection			
Identification Card	94.4%	81.1%	90.2%

+ These data summaries were taken from MICS UNICEF publication⁷⁹ (UNICEF 2006)

* These data summaries were taken from: (Bodewig and Sethi 2005).

All other data summaries were calculated by Leanne Idzerda using PASW 17 © University of Ottawa 2009

Early childhood development influences health later in life both directly, through good nutrition and lifestyle, and indirectly through skills development and education⁸⁰. As can be seen in table 2.2, Roma have much lower birth weights and experience greater stunting than non-Roma children⁸¹. In regards to education, 73.6% of Roma children are enrolled in primary school (grade 1-8) with only 27.2% graduating primary school, compared to 76.9% of the general population graduating from primary school⁸².

The daily living conditions and housing in which people live have a major impact on their health status. A much larger number of Roma live in slum housing with less space per person than non-Roma. In addition, access to clean water, sanitation and electricity are much lower in the Roma settlements than in the general population, as can be seen in Table 2.2.

Fair employment refers to safe, secure, and fairly paid work and includes both the conditions and the nature of the work itself. A large number of Roma, 31.9%, remain unemployed. Of those Roma that are employed, only 20% have access to full-time employment with benefits. The remainder indicated that they worked seasonal, part-time, or contract jobs⁸³. Informal employment conditions

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report*

⁸² Ibid.

⁸³ Bodewig and Sethi, *Poverty, Social Exclusion and Ethnicity in Serbia and Montenegro: The Case of the Roma*.

may lead to both physical health hazards and health issues related to the stress of not having a steady income.

Social protection is important in that it provides a safety net for the poorest and most vulnerable in society. In order to access social protection services in Serbia, one must possess identification documents. It is estimated that 18% do not possess a health insurance card⁸⁴. There are currently no systematic legal mechanisms in place to assist the Roma in becoming registered citizens⁸⁵.

Universal Health Care and the factors that affect how people interact with the healthcare system can be considered as determinants of health. The acronym PROGRESS can be used to describe the individual equity factors that may affect health usage. PROGRESS stands for **p**lace of residence; **r**ace, ethnicity, and culture; **o**ccupation; **g**ender; **r**eligion; **e**ducation; **s**ocioeconomic status; and **s**ocial capital⁸⁶.

Place of Residence: The Roma tend to live in ghettoized settlements on the outskirts of cities, which are separate from the general population's place of residence. As seen above, slum housing in these settlements is quite common. In addition, the distance and lack of transportation from primary care centers may be an issue for some poor individuals.

Race/ ethnicity/ culture: The Roma people have been widely discriminated against throughout Europe because of their ethnicity and culture. Decades of social exclusion have created a situation in which healthcare workers are not educated in cultural sensitivity to the Roma population⁸⁷.

Occupation: High rates of unemployment amongst the Roma may be the result of a number of issues including lack of education and social exclusion. As many Roma are not formally employed, they do not have access to health insurance under the Health Insurance Fund⁸⁸.

Sex/ Gender: Roma women and single mothers are particularly vulnerable⁸⁹. A systematic review of studies on Roma women in Central and Eastern Europe revealed that Roma women tended to have

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ Tugwell and others, *Applying Clinical Epidemiological Methods to Health Equity: The Equity Effectiveness Loop.*, 358-361

⁸⁷ Zeman, Depken and Senchina, *Roma Health Issues: A Review of the Literature and Discussion*, 223-249

⁸⁸ Bogdanović and others, *Mortality of Roma Population in Serbia, 2002-2005*, 720-726

more issues related to reproductive health, have their first pregnancy earlier, and have less knowledge about contraceptive methods than the general population⁹⁰.

Religion: Religion and ethnicity are closely intertwined in Serbia and in many cases it is difficult to identify discriminatory acts as primarily religious or primarily ethnic in origin. The lack of communication between the general population and the Roma people has caused religious tensions in the past around patient preferences and the refusal of treatment. Analyses of patient preferences and values would aid in the cross-cultural translation of interventions.

Education: Education is a major predictor of success in breaking out of the cycle of poverty and ill health. Improvement in the education of public health and prevention among mothers has consistently been linked to the better health status of children.

Socioeconomic Status (SES): Poverty has consistently been linked to poorer health status. In Serbia, 58% of the Roma are living below the World Bank absolute poverty line, defined as purchasing power parity of USD 4.30 per day, compared to only 9% of the general population⁹¹. There is no data on chronic poverty in Serbia; however, it is generally acknowledged that a much larger percentage of the Roma live in chronic poverty than their non-Roma counterparts⁹².

Social Capital: Roma appear to be high in social capital as a result of close-knit families and communities. Social networks provide day care for children of ill parents, palliative care to the elderly by younger generations in the household, and care giving to neighbors and friends⁹³. Recent plans to move or demolish Roma settlements may have severe detrimental impacts on these social networks and support mechanisms.

⁸⁹ Lopicic and others, *Developing Sensitivity of the Primary Health Care System to the Issue of Gender and Marginalised People*

⁹⁰ S. Hajioff and M. McKee, "The Health of the Roma People: A Review of the Published Literature." *Journal of Epidemiology and Community Health* 54, no. 11 (2000), 864-869.

⁹¹ United Nations Development Program, *At Risk: The Social Vulnerability of Roma, Refugees and Internally Displaced Persons in Serbia*.

⁹² Ibid.

⁹³ Prvulovic, *Access to Sexual and Reproductive Health Care for Uprooted People and Romani Women and Youth in Southern Serbia*

Analyzing the themes across which deprivation occurs clearly reveals that inequity may exist across a number of social strata including socioeconomic, political, ethnic, and cultural strata exists⁹⁴. Any analysis of their situation must take into account their precarious position in society if they are to be effective at reducing the current inequities.

2.4 Organizations working with the Roma population on health issues

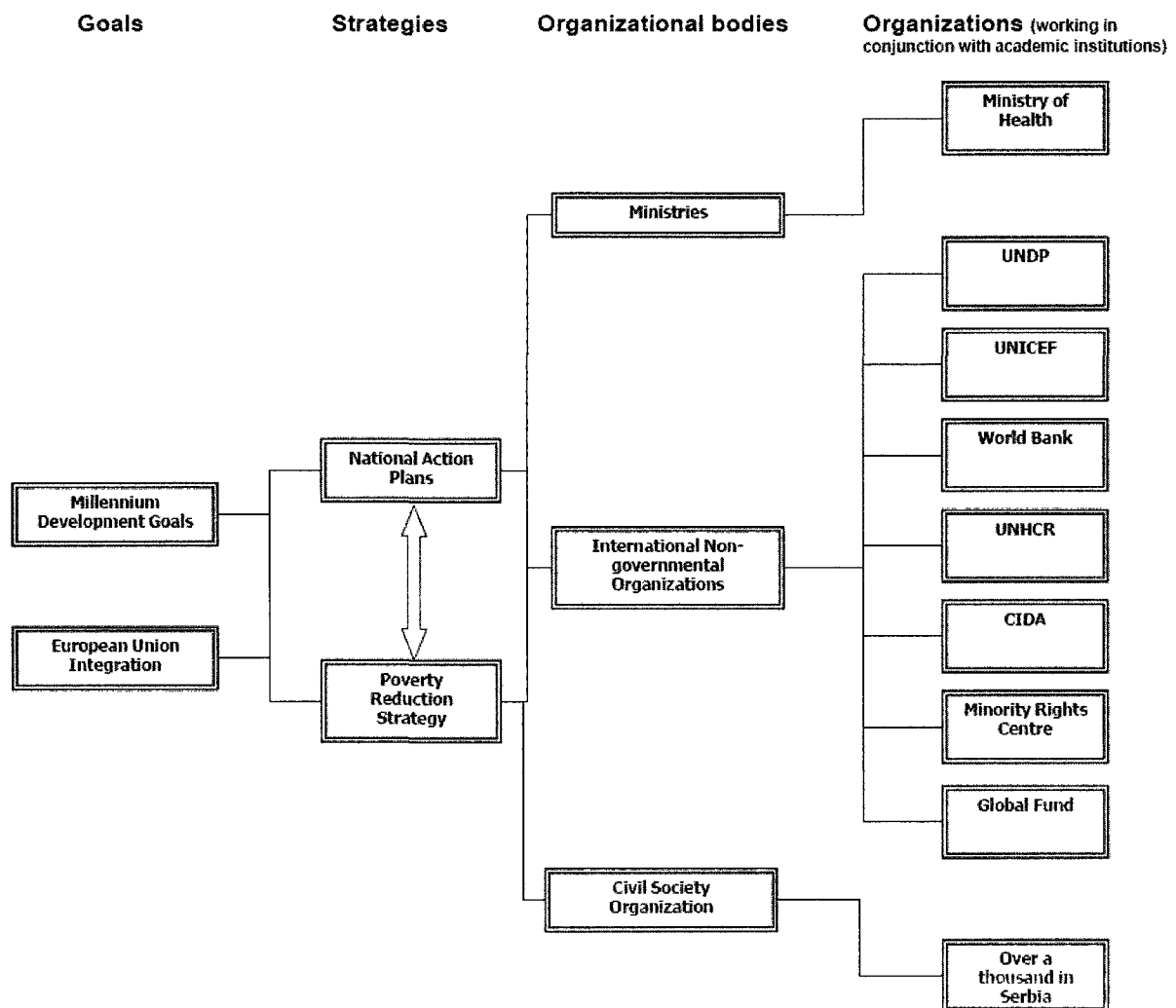
Research should take into account the roles and functions of other organizations in Serbia and so it is important to conduct a review of what these organizations are doing. First, an overview of the work that is being conducted in relation to Roma and health will be conducted. Following this, an analysis of how this research project fits into the greater organizational structure will be presented.

What other organizations are currently doing

The government of Serbia has developed a coordinated strategy based on achievement of the *Millennium Development Goals (MDGs)* and the *European Union (EU) Integration requirements*. These strategies are embodied in the National Action Plan and Poverty Reduction Strategy. Under these coordinating agencies, international non-governmental organizations, civil society organizations, and government ministries collaborate to achieve and measure progress on the MDGs and EU Integration. A chart of the organizations discussed in this section can be found in figure 2.2. Each of the entities involved will be discussed as they relate to Roma healthcare and access to health services.

⁹⁴ Marmot, *Achieving Health Equity: From Root Causes to Fair Outcomes.*, 1153-1163

Figure 2.2 The organizational structure of nongovernmental and civil society organizations in Serbia⁹⁵



The Poverty Reduction Strategy (PRS) is a government-run approach that aims to alleviate poverty for the most vulnerable groups, including the Roma as a special subgroup. The specific aims are to support economic growth and development, prevent new poverty, and implement social programs that provide equal opportunities for marginalized groups⁹⁶.

⁹⁵ Unless otherwise indicated, all figures and tables included in this lecture were created by Leanne Idzerda © University of Ottawa 2009

⁹⁶ Government of Serbia, *Second Progress Report on the Implementation of the Poverty Reduction Strategy in Serbia* (Belgrade: Government of Serbia,[2007]).

The Decade of Roma Inclusion is an unprecedented commitment by European governments to improve the livelihoods of the Roma population within each country⁹⁷. Under the Decade, each government has developed *National Action Plans* to address the four priority areas of Health, Housing, Employment, and Education⁹⁸. *The Regional Roma Health Intelligence Center (RRHIC)* aims to facilitate the generation and exchange of information and knowledge on the health of Roma in the countries of the Decade of Roma Inclusion program. They achieve this through an international network of professionals, researchers, experts, Roma organizations, advocates and other individuals who are interested and active in generating, disseminating and using relevant health information⁹⁹.

Both the Poverty Reduction Strategy and the National Action Plans (NAPs) work with implementation partners from government ministries, international non-governmental organizations, and civil society organizations.

Ministries

The *Ministry of Health* has been responsible for the implementation of more than 100 projects focused on Roma health since 2006. They have recently developed software that is able to monitor the progress of each of these projects in order to create accountability mechanisms. Another major project is the placement of forty-five Roma health mediators. Their role is to increase public outreach and awareness in Roma settlements. The Ministry of Health conducted an impact analysis in 2008 of the health policy measures that enable access to healthcare services for the Roma¹⁰⁰; the results can be found in the assessment conducted by the Ministry of Health¹⁰¹.

International and non-governmental organizations

There are numerous international non-governmental organizations working in Serbia on Roma and health. These organizations carry out projects with the support of the government that are in line with the Poverty Reduction Strategy and National Action Plans.

⁹⁷ The twelve countries currently taking part in the Decade are Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Hungary, Macedonia, Montenegro, Romania, Serbia, Slovakia and Spain.

⁹⁸ Decade Watch, *Roma Activists Assess the Progress of the Decade of Roma Inclusion 2007 Update*. Decade Watch, [2008]].

⁹⁹ www.RRHIC.org

¹⁰⁰ Miroslav Dinkić, Kosovka Ognjenović and Siobhan McClelland, *Impact Analysis of the Health Policies on the Accessibility of Healthcare for the Roma Population in Serbia* (Belgrade, Serbia: Ministry of Health, [2008]).

¹⁰¹ Ibid.

➤ The *United Nations Development Program (UNDP)* is currently working in two major areas related to Roma health in Serbia. The first project aims to decrease the vulnerability of Roma through improving their access to social services, including healthcare. The second project aims at improving living conditions and livelihood opportunities of IDPs through providing them support in accessing social services and documentation¹⁰². The UNDP has conducted household surveys within each of these projects in order to assess the current situation.

➤ *UNICEF* has focused on immunizations, HIV/AIDS, and early childhood development as areas of priority, both in the general population and in the Roma population. They also conducted a Multiple Indicator Cluster Survey in 2005 and intend to conduct a second survey in the near future¹⁰³.

➤ The *World Bank* has partnered with the Statistical Office of the Republic of Serbia to implement regular household surveys. Special attention has been paid to the health of the Roma population through targeted booster surveys¹⁰⁴.

➤ The *UNHCR*, in partnership with *Praxis*, aims to raise awareness, educate and inform the Roma and IDP population, as well as to sensitize the local and central authorities, on the need and importance of registration and possession of personal documents¹⁰⁵.

➤ The *Minority Rights Centre (MRC)*, in partnership with the European Roma Rights Centre, investigates and reports on human rights abuses against the Roma population. They work with individuals to formally document cases of discrimination within the healthcare system¹⁰⁶.

➤ The *Global Fund to Fight Aids, Tuberculosis and Malaria* intends to contribute towards the decrease of these major infectious diseases under the auspices of the MDGs. The intent is to conduct a

¹⁰² <http://www.undp.org.rs>

¹⁰³ www.unicef.org/serbia

¹⁰⁴ www.worldbank.org/yu

¹⁰⁵ <http://praxis.org.rs>; <http://www.unhcr.org.yu>

¹⁰⁶ Minority Rights Centre, *Yearly Report of the League for the Decade 2007.*,[2008]).

study on the extent of HIV/ Aids and Tuberculosis, with special focus on marginalized populations including Roma, however, no study has been conducted to date¹⁰⁷

➤ The *Canadian International Development Agency (CIDA)* supports the Balkans Primary Health Care Policy Project. This project aims to achieve responsive and accountable primary health care systems in Serbia that improve citizens' health outcomes, and thus enabling social, economic and political development¹⁰⁸

Civil Society Organizations

There are over a thousand civil society organizations addressing Roma health issues in Serbia. Two of the larger organizations are Grupa 484 and the Roma Information Centre. *Grupa 484* is a non-governmental organization founded in 1995 to aid refugee and IDP families. They have since expanded their goals to include long-term sustainable development programs around education and support for the local Roma and IDP population in Belgrade¹⁰⁹

The *Roma Information Centre* advocates for the improvement of the quality of life of the Roma through exercising rights to education and social services. Primary activities of the centre are networking and sharing of information within Roma organizations with the aim of developing the Roma civil sector in Serbia¹¹⁰

Fund for an Open Society is a non-governmental organization with the ultimate goal of developing a self-sustainable democratic and pro-European society for the inclusion of Serbia in European integration. Since 2007, the Roma Program has developed and supported processes that contribute to meeting the goals defined in the Action Plans for the Roma Decade. Emphasis has been placed on strengthening the role of the civil sector through the activities of the League for the Roma Decade, mainly through funding mechanisms.

¹⁰⁷ Public Health Program, Open Society Institute, *How the Global Fund can Improve Roma Health: An Assessment of HIV and TB Programs in Bulgaria, Romania, Macedonia and Serbia* (New York, USA: Open Society Institute, [2007])

¹⁰⁸ www.canbhp.org

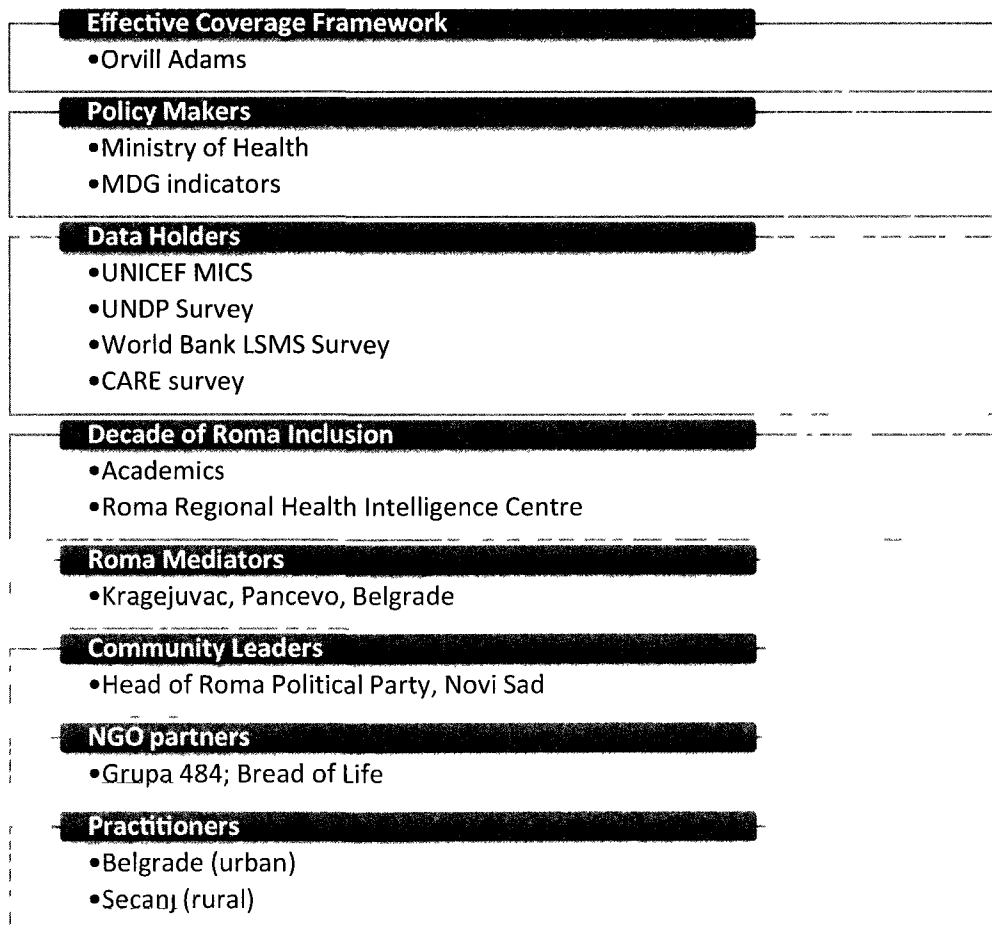
¹⁰⁹ www.grupa484.org.rs

¹¹⁰ http://www.prsp.sr.gov.yu/engleski/aktuelno/kocd_romi.jsp

How this research fits into the greater organizational structure

As part of the Canadian International Development Agency (CIDA) project goals, this research will analyze what barriers face the Roma population living in settlements when they attempt to access primary care services in Serbia. Throughout this research, I have been in consultation with the Poverty Reduction Strategy Implementation Focal Point team, the Regional Roma Health Intelligence Centre, the UNDP, UNICEF, Oxfam, CARE, Minority Rights Centre, MDG national report director, the Ministry of Health and the Batut Institute of Public Health. Please see figure 2.3 for a list of experts consulted with in Serbia.

Figure 2.3 Experts Consulted in Serbia



2.5 Summary of situational analysis

This chapter provides a situational analysis of the healthcare system, the Roma population, and what other organizations are doing in Serbia. An overview of the healthcare system, as well as the history and current Roma situation in Serbia, was discussed. Justification for focusing only on Roma living in settlements was proposed. Subsequently, Roma living in settlements were characterized in terms of family structure, disadvantaged position in society, and according to the determinants of health. Finally, an analysis of what other organizations are doing in Serbia in relation to Roma and health was presented. It was seen that this research project is very relevant within the context of other projects in Serbia and contributes to the greater Roma healthcare movement.

Chapter 3 : EFFECTIVE COVERAGE FRAMEWORK

In this chapter, an overview of the effective coverage framework will be presented. First, the theoretical importance of the framework will be discussed. Next, the framework will be deconstructed into its various components and access, need, utilization, and quality will be defined. Finally, an overview of how this framework can be used to measure equity in access will be presented.

3.1 Theoretical importance of the effective coverage framework

The effective coverage framework was developed by the World Health Organization (WHO) as a means with which to better assess health systems performance following the release of the 2000 World Health Report entitled Health Systems Improving Performance¹¹¹. It was noted that previous research on access to healthcare services often equated access with utilization. The effective coverage framework attempted to move past this narrow definition by defining access as the interactions between need, utilization and quality¹¹². Orville Adams, Christopher Murray, Bakhuti Shengelia, and Ajay Tandon opened the debate on effective coverage with the publication of the theoretical underpinnings of this framework in 2005¹¹³. Since then, a number of publications applying the framework have been published^{114 115 116}. This framework is important in health systems performance as it attempts to measure the intermediate system goals, or quality of access, necessary for effective coverage. As can be seen in figure 3.1, whether a population in need of an intervention actually utilizes that intervention is dependent on a number of health system factors, called quality of access, or barriers to access. Effective coverage is defined as the population that benefits (B) as a proportion of the population in need (A) or (B/A) ¹¹⁷. The factors affecting whether a population in need is able to access the intervention required

¹¹¹ Philip Musgrove and others, *World Health Report Health Systems Improving Performance* (Geneva, Switzerland: World Health Organization, [2000]).

¹¹² Shengelia and others, *Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy*, 97–109.

¹¹³ Ibid.

¹¹⁴ R. Lozano and others, "Benchmarking of Performance of Mexican States with Effective Coverage," *Lancet* 368, no. 9548 (11 Nov, 2006), 1729–1741; Michael de Looper and Gaetan Lafortune, *Measuring Disparities in Health Status and in Access and Use of Health Care in OECD Countries* (Paris, France: Organisation for Economic Co-operation and Development, [2009]).

¹¹⁵ David Spiegel and others, "Topics in Global Public Health," *Clinical Orthopaedics and Related Research*, no. 466 (2008), 2377–2384.

¹¹⁶ Alvaro Idrovo and Gustavo Nigenda, "Effective Coverage of Medical Treatment of Influenza A (H1N1) Infection during the Outbreak in Mexico," *BMJ Rapid Response* (24 June 2009, 2009).

¹¹⁷ Shengelia and others, *Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy*, 97–109.

are described under quality of access. The arrows in figure 3.1 indicate the steps that a population is required to go through in order to move from a state of need to utilization.

This framework is of theoretical importance as an application of a broader definition of access could lead to the creation and measurement of more appropriate health interventions. The framework is not meant to quantify the quality of access, but rather provide a structure with which to determine where the blockages occur so that further study on why these blockages occur may be conducted.

Figure 3.1 Conceptual Framework of effective Coverage

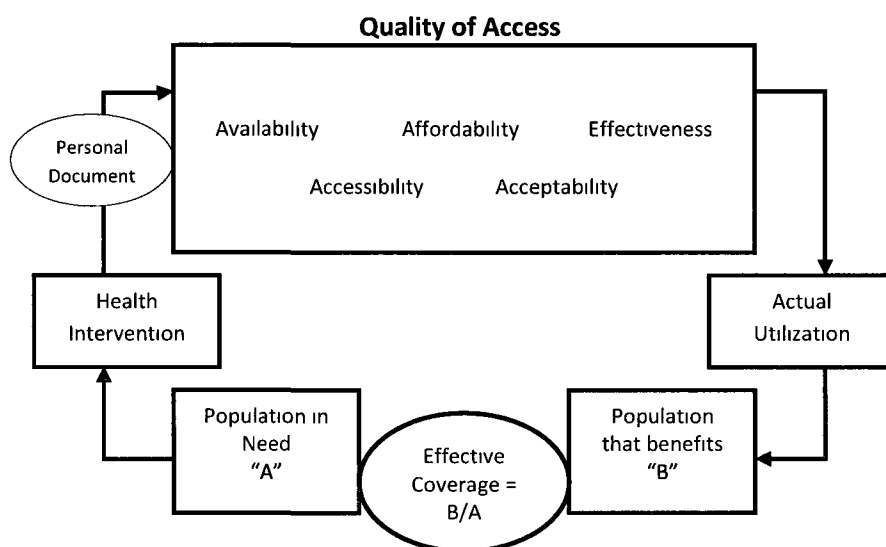


Figure adapted from the background paper for the technical consultation on effective coverage of health systems, 27-29 August 2001 in Rio de Janeiro, World Health Organization.

3.2 Deconstructing the effective coverage framework

Need The literature to date has described need along two dimensions: perceived need, expressed as demand, and true need¹¹⁸. Health interventions attempt to address the true needs of a population. It can be argued that individuals need an intervention if their expected health gain is greater than zero where health gain is defined as the difference measured using disability adjusted life

¹¹⁸ Ibid

years¹¹⁹ In contrast, perceived need has two distinct components (a) perception of an illness, injury, or health risk, and (b) the belief that the interventions will make a difference Perceived need could be low if individuals do not know, or deny, that they have a health problem¹²⁰. Alternatively, individuals may perceive a need that is not present Ultimately, it is the perceived need, which may differ from true need, that will influence utilization

Utilization As has been consistently demonstrated, true need does not necessarily correlate to the actual utilization of services¹²¹ Perceived need coupled with knowledge of services and quality of access, discussed below, have a far greater impact on utilization In addition to the quality of access, patients and physicians must also be aware that the relevant services exist¹²² In Serbia, services have largely been designed and delivered in a curative fashion and although preventative and public health measures have been heavily promoted by the Ministry of Health, their importance has been under appreciated by a large number of physicians that do not value preventive services and view them as extra work¹²³

Access: A common misconception regarding access is that if an individual is able to use the healthcare system, then her/his health needs will be met, and conversely, if an individual is not able to utilize the healthcare system, then s/he will not be restored to health Access to health care services is in fact a much more difficult concept to define and there is no agreement on what constitutes appropriate access One commonly referenced definition of access refers to whether patients can access the “right services at the right time in the right place”¹²⁴ This definition assumes that if a health facility is nearby, patients will be able to access care This, however, is not necessarily the case Others have taken this definition further and included the availability of health services (the supply), the

¹¹⁹ Ibid , C D Mathers and others, "Healthy Life Expectancy in 191 Countries, 1999 " *Lancet* 357, no 9269 (2001), 1685–1691

¹²⁰ Shengelia and others, *Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy* , 97–109

¹²¹ D R Gwatkin, A Bhuiya and C G Victora, "Making Health Systems More Equitable " *Lancet* 364, no 9441 (02 Oct, 2004), 1273–1280

¹²² M Dixon-Woods and others, "Conducting a Critical Interpretive Synthesis of the Literature on Access to Healthcare by Vulnerable Groups," *BMC Medical Research Methodology* 6 (Jul 26, 2006), 35

¹²³ Maria Kett, "Internally Displaced Peoples in Bosnia Herzegovina: Impacts of Long-Term Displacement on Health and Well-being," *Medicine, Conflict and Survival* 21, no 3 (2005), 199

¹²⁴ J L Chapman and others, "Systematic Review of Recent Innovations in Service Provision to Improve Access to Primary Care," *British Journal of General Practice* 54, no 502 (2004), 374–381

utilization of health services (the demand), the service relevance and effectiveness (the right service), and the equity of services (the extent to which resources reflect the need) into the definition of access¹²⁵. This model, like the previous model, suggests that access is more than mere utilization of services, and encompasses many complex processes such as perceptions of health care, valuing of health care, interpersonal dynamics between patient and provider, availability of economic resources such as time, and policy imperatives¹²⁶. These principles can be summarized into the following four 'A's: affordability, accessibility, acceptability, and availability¹²⁷. A fifth dimension of quality of access, effectiveness, was included into this framework following discussions with members of the University of Ottawa Centre for Global Health research team about the importance of addressing community effectiveness and previous work conducted in this area through the equity-effectiveness loop¹²⁸. To address the question of whether a primary healthcare system is accessible, one must address all of these issues, not only utilization of primary health care. Within the effective coverage framework, these aspects of utilization are defined as the quality of access.

Quality of access: If every person in need is able to utilize the healthcare services they require, assuming that these services are effective, then one can say that there is one-hundred percent effective coverage. This, however, is very rarely the case and it is the factors that affect quality of access that cause actual utilization to differ from need. As can be seen in Figure 3.1, the indicators that affect utilization are availability, affordability, accessibility, acceptability and effectiveness¹²⁹:

1. *Availability* – measures the extent to which the provider has the necessary resources, such as personnel and technology, to meet the patient's needs.
2. *Accessibility* – refers to geographic accessibility, which is determined by how easily the patient can physically reach the provider's location. This includes physical barriers to the service for patients with disabilities.
3. *Affordability* – is determined by how the provider's costs relate to the patient's ability or willingness to pay for services.

¹²⁵ Ibid.

¹²⁶ Dixon-Woods and others, *Conducting a Critical Interpretive Synthesis of the Literature on Access to Healthcare by Vulnerable Groups*, 35

¹²⁷ R. Penchansky and J. W. Thomas, "The Concept of Access. Definition and Relationship to Consumer Satisfaction." *Medical Care* 19, no. 2 (1981), 127-140.

¹²⁸ Tugwell and others, *Applying Clinical Epidemiological Methods to Health Equity: The Equity Effectiveness Loop.*, 358-361

¹²⁹ Ibid.

4. *Acceptability* – is the extent to which the patient is comfortable with the more immutable characteristics of the provider and vice versa. These characteristics include the age, sex, social class, and ethnicity of the provider and of the patient.
5. *Effectiveness* – captures the extent to which providers and individuals deliver on their true health potential. This is measured using diagnostic accuracy, adherence, and efficacy of the intervention in question.

3.3 Application of the framework to equity in access

Defining Equity in Access

Although equitable coverage has been set as a priority, the actual implementation of this concept is much more difficult as there is no specified definition of what constitutes equitable access¹³⁰. Some countries for example, have attempted to improve access by decreasing wait times. Others have introduced user fees as a means to reduce unnecessary use of services. Some of these measures have however, created a situation in which low-income patients cannot access healthcare services thus undermining the ideal of equitable access¹³¹. From the large body of literature on equitable access, two key principles have emerged. The first principle states that healthcare should be available to all persons in need irrespective of other characteristics such as income, race, and place of residence; this is termed horizontal equity¹³². The second principle is that of vertical equity. This implies that people receive a level of care that is appropriate to their true need¹³³ - this may mean unequal resource expenditure if the needs are unequal. It is important to note that a difference in rates of utilization among social groups does not necessarily mean that the differences are inequitable or due to discrimination. How a patient values the services also needs to be taken into account as this may contradict their assumed utilization.

Equity versus efficiency

Efficiency refers to taking advantage of the health expenditures within a society so that the overall health of the society is maximized¹³⁴. The effective coverage framework attempts to take

¹³⁰ Shengelia and others, *Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy*, 97-109

¹³¹ A. Oliver and E. Mossialos, "Equity of Access to Health Care: Outlining the Foundations for Action" *Journal of Epidemiology and Community Health* 58, no. 8 (Aug, 2004), 655-658

¹³² Ibid.

¹³³ Ibid.

¹³⁴ James C and others, "Clarifying Efficiency-Equity Tradeoffs through Explicit Criteria, with a Focus on Developing Countries," *Health Care Anal* 13, no. 1 (2005), 33.

efficiency in the healthcare system into account by relating resource usage to outputs¹³⁵. Although it is possible that equity and efficiency may be congruent, there is usually a tradeoff between the overall health of society and the health of the poorest populations. Balancing equity with efficiency is particularly difficult and is crucial to the success of any equity-oriented intervention. Tradeoffs between equity and effectiveness must be made explicit by clearly specifying criteria that reflect both these concerns so that they can be discussed in an open and rational manner. The inclusion of both efficiency and equity criteria in policy should result in interventions that favor the most disadvantaged without jeopardizing the greater society.

Using the framework to measure equity

A major strength of the effective coverage framework is that it is responsive to equity issues and can allow one to see exactly where in the overall process the breakdown in access occurs. Effective coverage can be calculated across multiple equity dimensions, such as across socioeconomic status, gender, or place of residence, to determine the impact on the population in need. In this study, the impact on the Roma will be compared to both the general population and the poorest quintile in order to analyze the distributional affects of the barriers to access.

¹³⁵ Shengelia and others, *Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy.*, 97-109

Chapter 4 : METHODOLOGY

4.1 Overview

The primary healthcare system in Serbia aims to provide essential health services to the entire population. There are, however, subgroups of the population who may not be able to utilize primary healthcare interventions. The Roma population is one such group. As outlined in the effective coverage framework, the factors affecting whether a population in need is actually able to utilize an intervention, is described as the quality of access. Data on each aspect of quality (availability, affordability, accessibility, acceptability, and effectiveness) are analyzed. The framework will not be used to quantify the quality of access, but rather to provide a structure with which to identify where the blockages occur.

Data on each of the factors that affect effective coverage have been gathered from three main sources: the World Bank 2007 Living Standards Measurement Survey, the UNICEF Multiple Indicators Cluster Survey, and the UNDP Vulnerability Survey. Data was disaggregated by population group: the general population, the poorest 20% (not including the Roma), and the Roma population.

This framework has been applied to two examples based on indicators for the Millennium Development Goals in order to illustrate how this framework can be applied in the Serbian context, please see table 6.1. Under goal 4, reduce child mortality rate, acute respiratory infections was used as the indicator. Under goal 5, improve maternal health, the rate of utilization of contraception was used as the indicator.

4.2 Data Sources Searched

Major Serbian policy papers were analyzed to determine which data source they relied on. The reports searched were the Poverty Reduction Strategy Paper¹³⁶, The Government of Serbia MDG Monitoring Framework¹³⁷, The Minority Rights Centre Decade of Roma Report¹³⁸, Decade Watch¹³⁹, and

¹³⁶ *Second Progress Report of on the Implementation of the Poverty Reduction Strategy in Serbia* (Belgrade: Government of Serbia, [2007])

¹³⁷ Dinkic Miroslav and others, *Millennium Development Goals in the Republic of Serbia: Monitoring Framework* (Belgrade: United Nations Development Programme, [2007])

¹³⁸ Minority Rights Centre, *Yearly Report of the League for the Decade 2007*

¹³⁹ Minority Rights Centre, *Decade Watch: Roma Activists Assess the Progress of the Decade of Roma Inclusion, 2007 Update*, [2008])

the World Bank's Programmatic Poverty Assessment for Serbia and Montenegro¹⁴⁰. The references were also searched for other reports on Roma health that may contain additional datasets. The identified datasets were then searched for data relevant to the quality of access indicators previously selected. Please see Appendix II for a full list of the datasets that were identified.

Once all possible data sources from Serbian reports were exhausted, reports on health in the Roma from the United Nations, UNICEF, the United Nations Development Program (UNDP), the Open Society Institute, the World Bank, and the World Health Organization were searched and the original data sources were identified where possible. Following this, data on the Serbian population in South Central Europe from the UNDP, Decade of Roma Inclusion, and the European Agency for Reconstruction were searched for relevant data sources. Two datasets, the World Bank Living Standards and UNICEF Multiple Indicator Cluster Survey, were identified from these searches.

Individual studies on the Roma people in Serbia were searched in PubMed, EMBASE, and Scopus. This search revealed one additional study by Oxfam.

Experts in Serbia were approached and asked whether they were aware of any additional studies that had been conducted on Roma health in Serbia. In this way, two additional studies were identified through CARE and the Minority Rights Centre.

I attended a workshop in Belgrade entitled the '*Decade of Roma Inclusion Workshop on Indicators and Monitoring*' hosted by the United Nations Development Program (UNDP) and the World Bank. Through this workshop, I was able to discuss the available databases with numerous experts in the field. Only one additional database was identified in this workshop: the UNDP Vulnerability database (2006).

In all cases, authors and data holders were contacted in order to request the original datasets. Only data disaggregated by population group was included in the final analysis. As a result of this literature search, as well as meetings with data holders and users, I am confident that all the major data sources in Serbia have been identified. The full list of data sources that include data disaggregated at the population level are identified below in table 4.1.

¹⁴⁰ Owen O'Donnell and others, *Analyzing Health Equity using Household Survey Data* (Washington: The World Bank, [2008]).

Table 4.1 The data sources that include data on the Roma population in Serbia

Data source	Year	Population size	Relevant Disaggregation	Area covered by survey	Type of collection	Data File Type
LSMS 2007 World Bank - 2007 Living Standards Measurement Study	2007	5557 households 17375 individuals	- Roma - General population - Wealth quintiles	Republic of Serbia	Household survey	SPSS Files
UNDP Vulnerability Report 2006	2006	1201 households 4582 individuals	- Roma - Refugees/ IDPs - Quintiles - non-Roma living nearby	Republic of Serbia	Household survey	SPSS Files
UNICEF MICS Multiple Indicator Cluster Survey (MICS)	2005	5557 households 7516 women 3777 children	- Roma - General population - Wealth quintiles	Republic of Serbia	Household survey	SPSS Files
LSMS 2003 World Bank and Statistical Office of Serbia 2003 Booster Survey	2003	6386 total 2548 total 525 Roma Booster survey	- Roma - General population - Wealth quintiles	Republic of Serbia	Household survey	SPSS File
CARE International Reproductive Health Report	2007	120 people in focus groups (qualitative) 523 Total (quantitative)	- Roma - IDP Roma - IDP Serbian	Southern Serbia	Focus groups Community survey	Report only – no original data available
Oxiam Health Status, Health Needs and Utilization of Health Services	2001	No information available			Household survey	Not possible to access
IPH Statist Institute of Public Health	2008	39 NGOs	- Only Roma NGOs	Republic of Serbia	Solicitation – req'd for funding	Access File
MRC Minority Rights Centre	2007	Unknown population size – based on cases	- Roma	Republic of Serbia	Case studies	Qualitative reports on discrimination

4.3 Data Quality

Because data was collected from a large variety of sources, it was important that the quality of the data be considered. As can be seen in box 4.1, the optimal data would be disaggregated by Roma, and would be from Serbian population census data conducted after 2005.

Box 4.1 Data Quality Hierarchy

Population Disaggregation

Disaggregates by Roma vs. non-Roma

Does not disaggregate by Roma vs. non-Roma

Geography

Serbia

Serbia and Montenegro/ Kosovo

South Eastern Europe (including Serbia)

South Eastern Europe (not including Serbia)

Data Source

Population Census Data

Large National Surveys

Individual Studies

Time Frame

2005 – 2009

2000 – 2004

1995 – 1999

Using this data hierarchy, the datasets can be divided into 4 tiers:

1. Disaggregated by Roma/ Serbia/ large national survey/ 2005 - 2009
 - a. LSMS 2007
 - b. UNDP 2006
 - c. MICS 2005
2. Disaggregated by Roma/ Serbia/ large national survey/ 2000-2004
 - a. LSMS 2002/ 2003
3. Disaggregated by Roma/ Serbia/ territorially constrained survey/ 2000-2009
 - a. CARE (2007)

- b. Oxfam (2001)
- 4. Disaggregated by Roma/ Serbia/ Individual studies/ 2005 – 2009
 - a. Batut Institute of Public Health
 - b. MRC (qualitative data only)

Based on the criteria above, three datasets - the World Bank 2007 Living Standards Measurement Study¹⁴¹ (LSMS), the UNICEF Multiple Indicator Cluster Survey¹⁴² (MICS), and the UNDP Vulnerability Study¹⁴³ were identified as reliable sources of data and were used in the analysis. Although the LSMS 2003 survey was also analyzed, the results were not reported, as the questions were duplicates of those asked in the LSMS 2007 survey.

4.4 Description of Datasets

Living Standards Measurement Survey (LSMS) 2007

The LSMS was a partnership between the World Bank and the Statistical Office of the Republic of Serbia. The aim of this household survey was to repeat the census conducted in 2002, and booster in 2003, in order to measure trends over time. The questionnaire of this household survey was conducted in two parts: via a face-to-face interview, completed by the interviewer, and a consumption diary, completed by the designated household member. The household survey was completed by 5557 households (78% response rate) and 17375 individuals (80.6% response rate), of which 250 households identified as Roma. The Roma population is defined in this sample as those persons who self-identified as Roma and live in an enumeration district where the majority of persons are Roma i.e. Roma settlement (total of 456 persons). 3610 people were identified as being in the poorest quintile and the remaining 13 309 people are identified as general population. A three-stage stratified sample was used. First, the enumeration districts were systematically selected with probability proportional to size for each region. Second, occupied dwellings were selected with equal probability. Finally, in dwellings where multiple households resided, one household was randomly selected using a Kish Grid. More

¹⁴¹ *The Living Standards Measurement Survey - the Statistical Office of the Republic of Serbia. the Original Survey and Data can be Accessed at <http://webzrzs.Statserb.Sr.Gov.yu/axd/en/azs.Htm>.*

¹⁴² "Multiple Indicator Cluster Survey II - the Report for the Federal Republic of Yugoslavia (UNICEF - Belgrade 2001, ISBN: 86-82471-25-6). for More Details on this Publication and Free Download Please Refer to: <http://www.Unicef.org/serbia/resources.Html>," (.

¹⁴³ United Nations Development Program, *At Risk: The Social Vulnerability of Roma, Refugees and Internally Displaced Persons in Serbia*.

detail on the methodology of the LSMS 2007 survey can be found in the Living Standards Measurement Study publication¹⁴⁴.

UNDP Vulnerability Survey 2006

The UNDP Vulnerability Survey sought to measure the extent of deprivation in three disadvantaged population groups; IDPs and refugees, households within Roma settlements, and domicile non-Roma communities living nearby. This household survey was conducted at both the household and the individual level. At the household level, 399 Roma living in Roma settlements, 403 IDPs and refugees, and 399 domicile non-Roma were interviewed. At the individual level, 1270 Roma living in Roma settlements, 1553 IDPs and refugees, and 1759 domicile non-Roma were interviewed. No response rates or total sample sizes were reported. The Roma sample defined in this population are those individuals who live in an enumeration district where the majority of persons are Roma i.e. Roma settlement. The sampling methodology firstly constructed a representative stratified sample that included only areas where there was a majority Roma population. Secondly, sampling clusters were determined based on population size and distribution of settlements. Finally, respondents were identified using random route selection processes. More detail on the UNDP Vulnerability Survey can be found in the publication¹⁴⁵.

UNICEF Multiple Indicator Cluster Survey (MICS) 2005

The UNICEF MICS survey was conducted in partnership with the Statistical Office of the Republic of Serbia in 2005 with the aim of measuring progress towards to Millennium Development Goals. The questionnaire of this household survey is based on the standard UNICEF MICS3 model. Certain modifications were made to the questionnaire in order to adapt it to the Serbian situation. This survey was administered in three parts: the household survey, survey of women, and survey of children less than five years. The household survey was completed in 8730 households (93% response rate) across 400 enumeration districts, of these households, 1716 were Roma living in Roma settlements. In addition, 7516 women were interviewed (89.1% response rate in general population; 87.4% response rate in Roma living in Roma settlements) and 3777 interviews were completed on behalf of children

¹⁴⁴ *Living Standards Measurement Study: Serbia 2002 - 2007* (Belgrade: Statistical Office of the Republic,[2008]).

¹⁴⁵ United Nations Development Program, *At Risk: The Social Vulnerability of Roma, Refugees and Internally Displaced Persons in Serbia*.

under five (92.0% response rate in general population; 90.8% response rate in Roma living in Roma settlements). The Roma sample defined in this population are those individuals who live in an enumeration district where the majority of persons are Roma i.e. Roma settlements. The following sampling methodology was used: enumeration districts were categorized based on a majority Roma presence in that district. All 106 enumeration districts were sampled. Households from each of these districts were randomly selected for interview. More detail on the methodology of the MICS 2005 survey can be found in the UNICEF final report¹⁴⁶.

4.5 Comparability of Data

Table 4.2 describes the demographics of each of the samples analyzed in the LSMS (2007), UNICEF MICS (2005) and UNDP Vulnerability Survey (2006). From this table, one can see that the LSMS and MICS surveys are quite similar; however, the sample in the UNDP survey has a remarkably different demographic structure. This is likely because the LSMS and MICS surveys both randomly sampled the population to get a generalized view of the population. In contrast, the UNDP survey was focused on Roma, IDP, refugees, and those populations living nearby and did not seek to generalize to the entire population.

¹⁴⁶ Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report*

Table 4.2 A comparison of demographics of the databases analyzed

		LSMS 2007			MICS			UNDP		
		General Population	Roma	Poorest 20%	General Population	Roma	Poorest 20%	Non-Roma living nearby to settlement	Roma	Poorest 20%
Gender										
	Male	48.6%	50.4%	47.7%	48.3%	49.9%	49.1%	77.2%	78.4%	77.1%
	Female	51.4%	49.6%	52.3%	51.7%	50.1%	50.9%	22.8%	21.6%	22.9%
Urban/ Rural										
	Urban	58.4%	45.8%	35.6%	61.7%	69.4%	14.6%	56.1%	27.7%	52.5%
	Rural	41.6%	54.2%	64.4%	38.3%	30.6%	85.4%	43.9%	72.3%	47.5%
Age										
	0-14	13.4%	34.4%	13.4%	22.4%	36.5%	20.5%			
	15-29	20.4%	23.9%	15.2%	19.5%	26.2%	16.3%	8.6%	15.1%	11.0%
	30-49	27.1%	26.5%	23.5%	27.7%	24.0%	23.2%	43.0%	42.8%	48.3%
	50 and over	39.0%	15.1%	48.0%	30.4%	13.3%	40.1%	48.4%	42.1%	40.8%
Wealth Quintiles										
	Poorest	NA	65.5%	100%	NA	66.8%	100%	NA	33.2%	100%
	Second	26.6%	21.3%		20.6%	12.2%		24.3%	22.6%	
	Middle	26.5%	9.6%		21.3%	5.5%		24.7%	18.5%	
	Fourth	24.7%	3.5%		21.7%	1.8%		25.1%	14.9%	
	Richest	22.2%	0%		21.7%	0.5%		25.9%	10.7%	

4.6 Data Analysis

The population groups were defined as follows: first the datasets were divided by wealth quintile. Following this, the Roma was separated from the total population group. Finally the predefined poorest quintile was separated from the total population, leaving the general population. The three population groups are distinct and there is no overlap between the poorest quintile, Roma, and general population.

The three identified datasets were searched for questions related to the use of healthcare services. These questions were separated according to themes based on the factors that affect quality

of access: accessibility, affordability, acceptability, availability and effectiveness. Data on personal documents, as well as utilization and need for each of the two applications to the MDGs, was also extracted at this time. The full definition of each indicator, the method of computation, data source, and relevant disaggregation can be found in appendix III. The full data tables for each indicator with the results from the analyses can be found in appendix IV. The confidence intervals around each proportion can be found in appendix V.

The results were analyzed using PASW Statistics 17 (formerly known as SPSS). For each question analyzed, the absolute number and proportion of the population were recorded. The confidence intervals around each proportion were calculated using the normal approximation to the binomial. In instances where the sample sizes were too small, the 95% confidence intervals were calculated using the graph for binomial confidence intervals. A Pearson chi-square test was conducted for each question. In cases where the chi-square test was statistically significant, the post-hoc Bonferroni test for significance was conducted at the 0.05 and 0.01 levels of significance. The absolute and relative differences between the Roma and general population and Roma and the poorest quintile, as well as the 95% confidence interval around the difference between each population group, were calculated in Microsoft Excel. The measure of association between variables of the same theme, for example the three questions related to accessibility, were calculated using the Pearson's phi for nominal dichotomous data.

Questions that could not be answered using data from the three datasets previously identified were analyzed separately. Data on efficacy, adherence and diagnostic accuracy typically could not be found in the three datasets. In these cases, systematic reviews and large randomized control trials were searched for proxies.

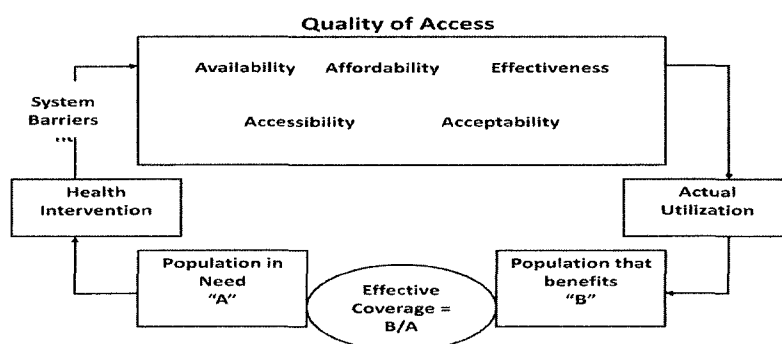
Chapter 5 : RESULTS AND DISCUSSION

In this chapter, the results of the analysis will be presented and discussed within the context of the effective coverage framework. This chapter will begin with an overview of the steps that an individual must go through in order to achieve effective coverage. Following this overview, the main findings on the factors that affect quality of access will be presented and possible reasons for the findings will be discussed. Finally, a sub analysis on the Roma population will be conducted in order to determine whether there is one specific sub population of the Roma that is more severely affected than the others.

5.1 Overview of Results

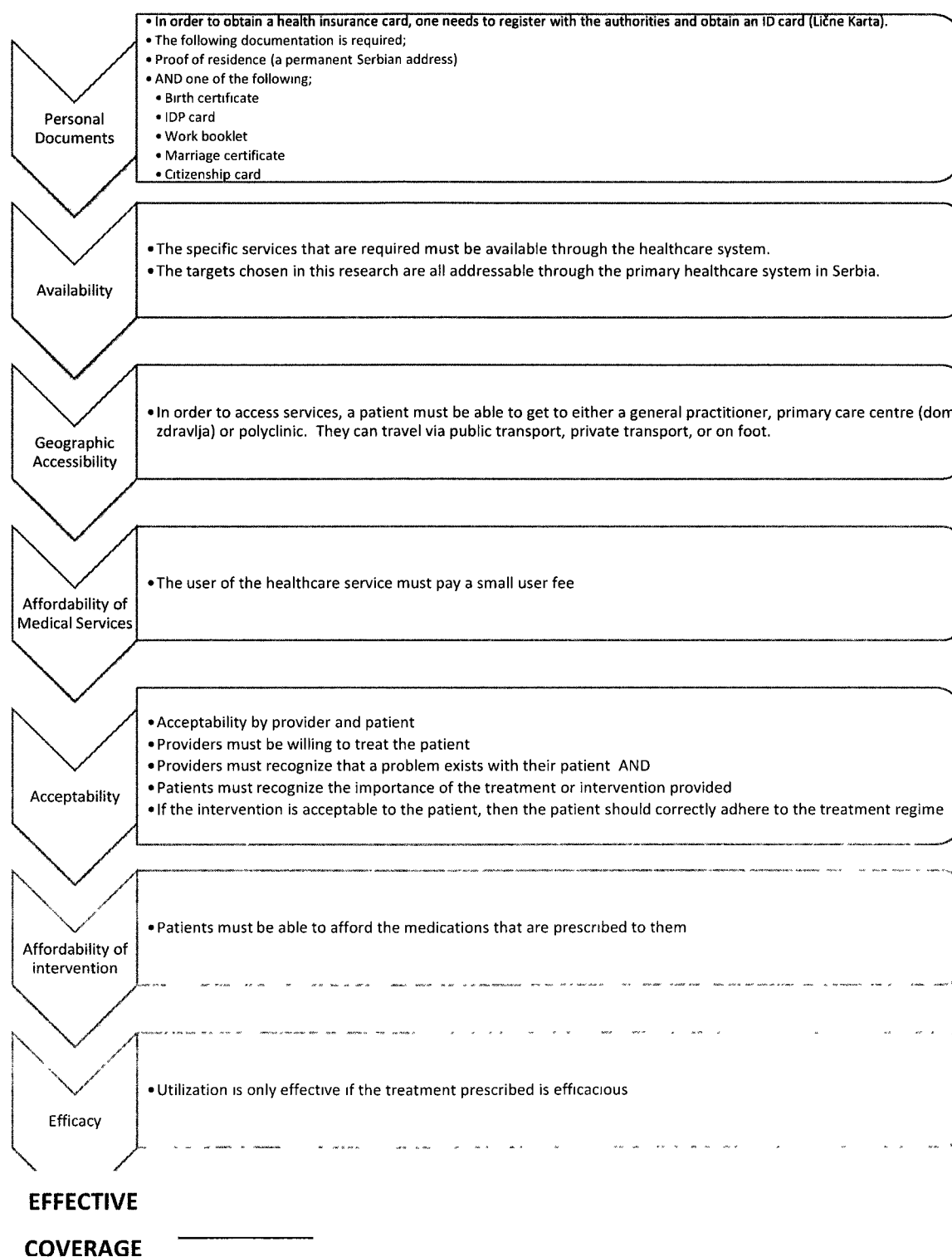
As can be seen in figure 5.1, effective coverage is defined as the proportion of the population that benefits from an intervention (B) over the population in need of an intervention (A). The factors that affect whether a population benefits from an intervention are termed quality of access; these are defined as availability, accessibility, affordability, acceptability, and effectiveness. Following discussions with one of the lead authors of the effective coverage framework, Orvill Adams, system barriers were also included into the framework. System barriers refer to those steps that must be undertaken before one can even begin to access the health system. In Serbia, the major system barrier is possession of a health insurance card. Thus it is crucial to analyze personal documents as these are a precondition to quality of access.

Figure 5.1 The effective coverage framework



Effective coverage of primary care services is a complex matter that requires a number of consecutive steps to occur before patients are able to effectively use health services. Figure 5.2 outlines the steps that must be taken by an individual before they can effectively use an intervention. A break at any point in this process could result in patients not effectively using health services.

Figure 5.2 Steps that must be undertaken by an individual in order to receive effective coverage¹⁴⁷



¹⁴⁷ Unless otherwise indicated, all figures and tables included in this thesis were created by Leanne Idzerda

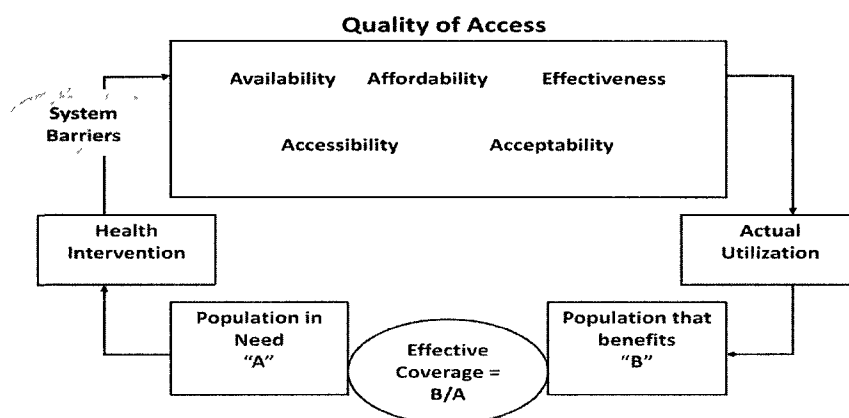
For the remainder of this chapter, system barriers as well as each factor that affects quality of access (availability, accessibility, affordability, acceptability, and effectiveness) will be defined and discussed in detail. For each factor, the Roma population will be compared to the general population and the poorest quintile separately. The absolute and relative difference, as well as the 95% confidence intervals and p-values around the difference, will be reported. The full data tables for every completed analysis can be found in Appendix III. The confidence intervals around each proportion can be found in appendix V.

5.2 Quality Dimensions of the effective coverage framework

System Barriers

System barriers refer to those factors that must be overcome prior to an individual even being able to come in contact with the health system. The possession of a health insurance card is a precondition to accessing health care services. Therefore, whether an individual has a health insurance card will be assessed first.

Personal Documents



All citizens of Serbia have the right to access healthcare services within the public system for a minimal user fee. In order to realize this right, citizens of Serbia must present a validated health insurance card. The normal process for obtaining a health insurance card is quite complex and requires that a number of consecutive steps occur; these are described in figure 5.3. As seen in figure 5.3, when a child is born in a hospital, the hospital informs the local Birth Registry Office of the birth. A birth certificate is issued to the child and the child is automatically registered with the authorities. Next, parents must go to the municipal Citizens Registry Office within 30 days of the birth in order to register

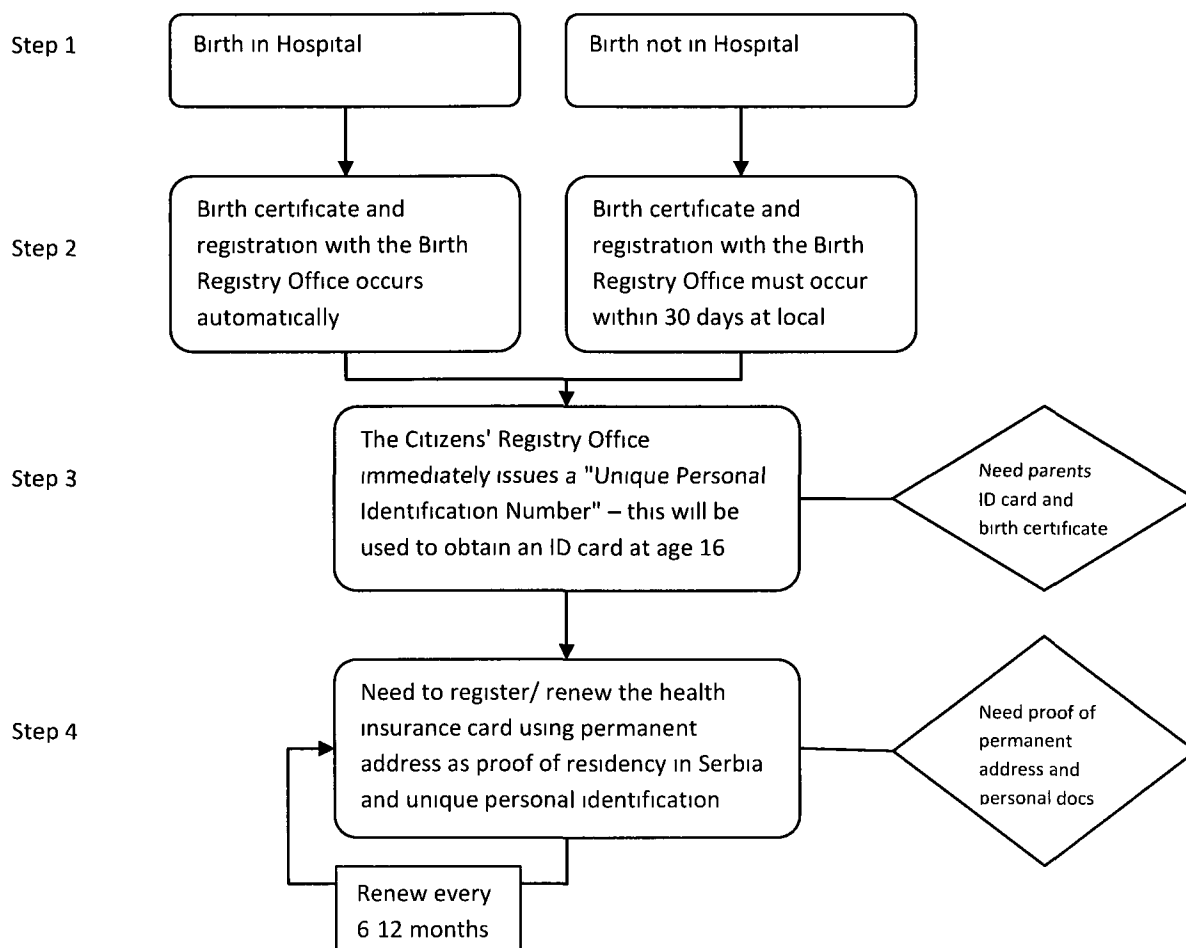
the child with the authorities and obtain a unique personal identification number. The parents need to produce the following documentation: a form indicating the location of birth, the identity of the parents, and their own personal identification documents (*lična karta*)¹⁴⁸. The unique personal identification number is issued to a child for life and will be used to obtain their own *lična karta* at sixteen years of age. A child may obtain a health insurance card by presenting this unique personal identification number and registering their permanent address. The health insurance card needs to be renewed every 6-12 months (Cameron 2008), and every 60 days for internally displaced persons (Praxis and UNHCR 2007); therefore step 4 of the process would need to be constantly repeated. As can be seen in figure 5.3, there may be a number of reasons a person cannot obtain a health insurance card. For example, they may not have a birth certificate, they may never have been issued a personal identification number (*lična karta*), or they may not have a permanent address. In order to rectify this issue, they must go through the administrative process of attaining these documents and pay the relevant administration and registration fees.

For births that do not occur in a hospital, parents must register their child at the Birth Registry Office within 30 days of the delivery; the remainder of the process is the same. The number of births that occur outside of a medical institution is actually quite low with 0.6% of births in the general population (95% CI 0.1 – 1.1), 1.8% of births in the poorest quintile (95% CI 0 – 1.8), and 3.8% of births in the Roma population (95% CI 4.0 – 8.2) occurring outside of a medical institution. Although the proportion of births that occur in the home is low in all three population groups, there is a statistically significantly larger number of Roma women that give birth outside of a medical institution than the general population ($p < 0.01$)¹⁴⁹.

¹⁴⁸ Lindsey Cameron, *The Right to an Identity*. European Roma Rights Centre, 2008).

¹⁴⁹ Data Source: MICS 2005

Figure 5 3 Process for obtaining documentation¹⁵⁰



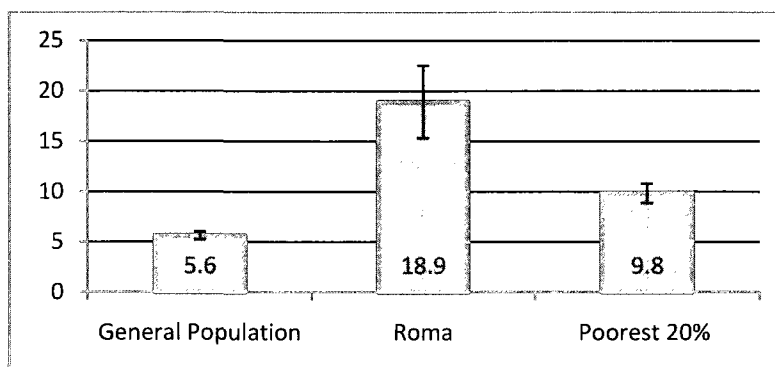
From this analysis one can see that the process is quite complex and a break at any point in the flow of information could result in a child not obtaining a health insurance card

The Roma population has a much higher likelihood of not possessing a health insurance card. As can be seen in figure 5 4, only 5 6% of the general population and 9 8% of the poorest quintile do not have a health insurance card, while 18 9% of the Roma do not have a health insurance card¹⁵¹, the difference between the Roma in comparison to both the general population and poorest quintile is statistically significant ($p < 0.01$)

¹⁵⁰ This figure was generated by the author based on the information obtained from Ibid

¹⁵¹ The confidence intervals for these proportions can be found in appendix V. In addition, they are displayed on the graph

Figure 5.4 Proportion of households who do not possess health insurance cards, displaying the 95% confidence intervals for each proportion.

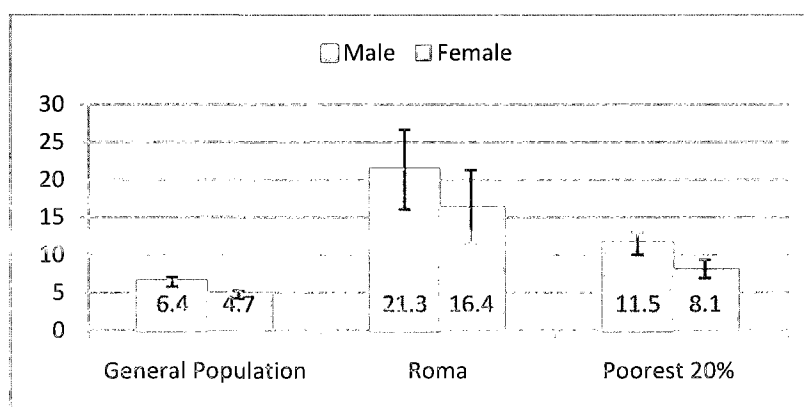


Source: World Bank Living Standards Measurement Survey 2007

Sample Size: General Population – 13 309/ Roma – 456/ Poorest quintile – 3610

If we analyze this same question from a gender perspective, we find that there is also a gender difference. As can be seen in figure 5.5, more men than women do not possess health insurance cards in all three population groups. The difference between men and women within the general population and poorest quintile is statistically significant ($p < 0.01$), while the difference between the Roma men and women is not statistically significant.

Figure 5.5 The proportion of men versus women who do not possess a health insurance card, displaying the 95% confidence intervals for each proportion.



Source: World Bank Living Standards Measurement Survey 2007

Sample Size Males: General Population – 6470/ Roma – 230/ Poorest quintile – 1723

Sample Size Females: General Population – 6839/ Roma – 226/ Poorest quintile – 1887

This finding is interesting as studies that have been conducted on male versus female utilization indicate that women are more likely to use health services than men¹⁵² From previous research we also know that women are more likely to seek out health services¹⁵³ Therefore, one might expect that women are more likely to prioritize obtaining a health card than men On the other hand, one would expect women to possess less social capital than men and thus be less likely to acquire a health insurance card¹⁵⁴ More qualitative research into the demographics of those without personal documents would be interesting and might illuminate the reasons for some of these differences

Although it is illegal to treat persons in a primary care centre without a validated health insurance card, there is anecdotal evidence that persons without a health card are still treated A common belief is that more Roma without personal documents are treated than non-Roma If however we look at the data, we find that more Roma were denied services because they lacked personal documentation than either the general population or the poorest quintile Figure 5.6 shows that 16.4% of persons living in Roma settlements were denied access, compared to 7.2% of the general population and 12.8% of the poorest quintile¹⁵⁵, the difference between the Roma and general population and the Roma and the poorest quintile is statistically significant ($p < 0.01$) There is no statistically significant difference between the proportion of men and women that were denied services in any of the population groups

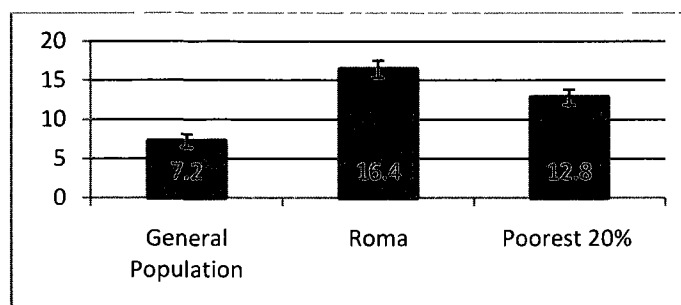
¹⁵² Cameron Mustard and others, "Sex Difference in the use of Health Care Services " *New England Journal of Medicine* 338, no. 23 (1998), 1694

¹⁵³ Ibid, Karl-Heinz Ladwig and others, "Gender Differences of Symptom Reporting and Medical Health Care Utilization in the German Population " *European Journal of Epidemiology* 16, no. 6 (2000), 511

¹⁵⁴ Jennie Popay and others, *Understanding and Tackling Social Exclusion: Final Report to the WHO Commission on Social Determinants of Health From the Social Exclusion Knowledge Network* (Geneva, Switzerland: World Health Organization, [2008])

¹⁵⁵ The original question asked in the UNDP Household survey was, In the previous year, "Has s/he ever encountered any of the following: Was denied medical service due to lack of proper documents?" The full list of questions asked as well as the method of computation can be found in appendix III

Figure 5.6 The proportion of individuals that were denied medical services due to lack of personal documents, displaying the 95% confidence intervals for each proportion.



Source: UNDP 2006

Sample Size: General Population – 5772/ Roma – 800/ Poorest quintile – 1215

From this analysis we can see that Roma were less likely to have a health card than either the poorest quintile or the general population. In addition they were also more likely to be refused treatment than both the general population and poorest quintile because they did not possess the required medical documents.

The next question that was analyzed is *why* Roma are less likely to possess a health insurance card. As discussed in Figure 5.3 on page 45, the health insurance card is issued to citizens upon registration of their residence and presentation of personal identification documents¹⁵⁶. From the literature and discussions with experts in the area, three main reasons emerged why Roma may not register with the civil authorities in order to gain a health card;

- (1) They do not know how to register with the authorities,
- (2) They do not want to register with the authorities, and
- (3) They cannot register with the authorities.

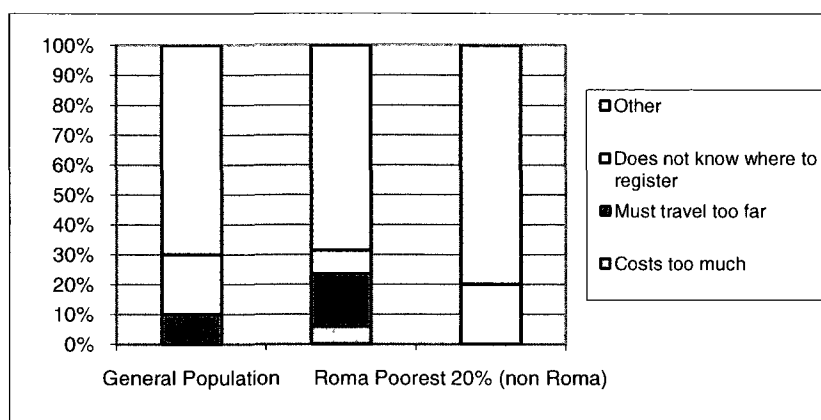
(1) Roma do not know how to register with the authorities?

One explanation of why Roma do not acquire a health insurance card is because they do not know how to initiate and follow through on the application process. Registration of births with the authorities was used as a proxy for registration as no data could be found on adult registrations. It is assumed that if parents know how to register their children, then they will know how to register

¹⁵⁶ Praxis and UNHCR, *Analysis of the Situation of Internally Displaced Persons from Kosovo in Serbia: Law and Practice*.

themselves as the process is quite similar. Figure 5.7 shows the reasons that people did not register their children with the civil authorities. No statistical differences could be found between the three population groups. This is likely due to small sample sizes (n=66). Thus, from this analysis it appears that not knowing where to register is not a problem specific to the Roma population.

Figure 5.7 The reasons that births were not registered with the civil authorities



Source: UNICEF MICS Survey 2005

Sample Size: General Population – 10/ Roma – 51/ Poorest quintile – 5

In addition, when asked if they know *how* to register their child's birth, 30% (95% confidence interval: 18.4 – 41.6%) of Roma mothers stated that they did not know how to register their child¹⁵⁷; no statistically significant difference was found between groups. From this analysis it would appear that knowledge on *where and how* to register is not a problem specific to the Roma population.

(2) Roma do not want to register with the authorities?

According to the Minority Rights Centre, the main reason people do not want to register with the authorities is due to discrimination¹⁵⁸. A history of persecution dating from the Second World War to the more recent conflicts in the Balkans has resulted in many Roma being skeptical that by registering with authorities, they will be subjected to prejudice in the event of another conflict¹⁵⁹. A second reason

¹⁵⁷ Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report*; United Nations Development Program, *At Risk: The Social Vulnerability of Roma, Refugees and Internally Displaced Persons in Serbia*.

¹⁵⁸ Minority Rights Centre, *Decade Watch: Roma Activists Assess the Progress of the Decade of Roma Inclusion, 2007 Update*.

¹⁵⁹ Andrea Colak, *Decade of Roma Information Booklet of Minority Rights Center: Abuses of Roma Rights in Serbia*. Minority Rights Centre, [2007].

often offered for why Roma are not registered is that once registered, persons can be traced by the government. Roma returnees working illegally in Western Europe, for example, may choose not to register with the authorities so that they can easily return abroad¹⁶⁰. The argument here is that Roma *want* to remain invisible.

No data on whether the Roma prefer to remain invisible currently exists in Serbia. Anecdotal evidence from non-governmental organizations working with Roma has suggested that this is sometimes the case. However since no rigorous data has been gathered on this matter, no conclusions can be drawn. More exploratory qualitative research needs to be conducted in this area. The UNHCR and Grupa 484 are currently exploring this issue independently in relation to their ongoing projects on the registration of persons¹⁶¹.

(3) Roma cannot register with the authorities?

From the analysis above, we know that the Roma are as likely as the general population to know where to register and how to register. Thus assuming that the majority of the population wants to register, we need to analyze the reasons that the Roma cannot register. Research and legal investigations into why persons are not registered is currently being undertaken by the Minority Rights Centre and Praxis in collaboration with the UNHCR. Although no quantitative data has been collected on the extent of this issue, the UNHCR in partnership with Praxis has identified some major barriers to registration through participatory research methods and case studies (Praxis and UNHCR 2007). The major barriers identified are: lack of permanent or temporary address, especially since most settlements are not recognized as permanent, financial barriers, procedural barriers, and chronic non-registration of parents.

In order to obtain identification documents and thus a health insurance card, one must register using a permanent home address. Since many of the Roma live in temporary, informal or illegal settlements – despite the fact that they have lived there for the past 40 or 50 years – their addresses are

¹⁶⁰ Lopicic and others, *Developing Sensitivity of the Primary Health Care System to the Issue of Gender and Marginalised People*

¹⁶¹ Praxis and UNHCR, *Analysis of the Situation of Internally Displaced Persons from Kosovo in Serbia: Law and Practice*.

not recognized by officials as being valid. They therefore cannot apply for documentation due to the lack of a permanent address¹⁶².

The second reason may be due to financial barriers. Persons applying for an ID card must pay a Republic fee as well as a Municipal Administrative fee. Although it is possible to have both these fees waived, in reality the UNHCR has found little evidence to support that these fees are in fact reduced for Roma¹⁶³. In addition, as seen in Figure 5.7 on page 49, the only population group that was affected by the cost of the process was the Roma and even the poorest quintile does not see this as a major challenge.

The third reason for not registering with the authorities may be due to procedural barriers. Many people find the process complex and cumbersome to complete. Individual applicants may need to travel long distances in order to obtain birth certificates or visit their closest registration office. They may also be faced with staff that lack the will to assist in the process or are inflexible in their demands. After completing the arduous application process, the processing time may be extremely long and documents may take months to reach the applicants¹⁶⁴.

Finally, the problem of chronic non-registration of Roma severely affects the new generation. As many children are born to parents who do not possess a unique personal identification number and thus do not have legal status within Serbia, their children cannot register with the authorities¹⁶⁵.

As an illustration of the problems associated with the lack of personal documentation, an excerpt of a case study that was conducted by Praxis in collaboration with the UNHCR has been included in Box 5.1.

¹⁶² Grupa 484, 2009.

¹⁶³ Praxis and UNHCR, *Analysis of the Situation of Internally Displaced Persons from Kosovo in Serbia: Law and Practice*.

¹⁶⁴ Ibid.

¹⁶⁵ Ibid.

Box 5.1 Case study on access to documentation for Roma people

The Afrim Case

When Life Depends on a Piece of Paper

Afrim has been living without legal identity for 30 years now. He was born in Djakovica, Kosovo, but moved to Belgrade with his parents as a baby. He lives with his common-law wife, a child and his parents in a Roma settlement in Belgrade. They support themselves by collecting raw material. Afrim suffers from serious medical problems, has had a heart defect from childhood and due to recent glaucoma, he has recently lost sight in his right eye. Last year, he had been admitted to hospital as an emergency case, and was advised to undergo heart surgery. He was also told that he needed to obtain personal documents and medical insurance, so that the hospital would be able to cover the expenses of his medical treatment. For that reason, Afrim addressed Praxis for legal assistance upon leaving the hospital.

Silence of administration

In June 2007, a request for subsequent registration into birth registry book was submitted to the competent administrative body in Jagodina. The following necessary evidence was previously obtained: birth and citizenship certificates for both parents and their marriage certificate. Besides these documents, copies of parents' ID cards and verified statements of parents and witnesses of childbirth were enclosed in the request. Afrim's medical documentation was also enclosed in the request so that the administrative body would comprehend the urgency of deciding upon the request. Instead of urgently bringing a decision, a three month silence of the administration followed. Upon Praxis' plea for urgency, the administration claimed that the body was not competent to bring decisions in cases of subsequent registration into birth registry books.

Court brings a decision in a civil lawsuit in 5 months

Taking into consideration the standpoint of the administrative body, Afrim addressed the court for protection of his rights. In October 2007, a lawsuit for determination of maternity and paternity was initiated. Regardless of the submitted evidence and Afrim's financial and medical position, the court requested a DNA analysis, for which Afrim had to pay 500 EUR. Five months later, in March 2008, the court declared that Afrim's parents were in fact his biological parents. The court ordered the administrative body to perform the registration in the birth registry book.

The administrative body brings a decision rejecting the request for subsequent registration based on the court decision

At the beginning of September 2008, the administrative body in Jagodina delivered a decision to Afrim rejecting the request for subsequent registration. Even though obliged to act upon the final court decision, the administrative body delays this procedure without valid reasons, thus additionally aggravating Afrim's condition.

More than a year upon submitting the request, the outcome is still uncertain.

It is uncertain when the procedure of subsequent registration into birth registry book will be completed, and what follows is the procedure for establishing the citizenship with the Republic of Serbia, which can last more than a year.

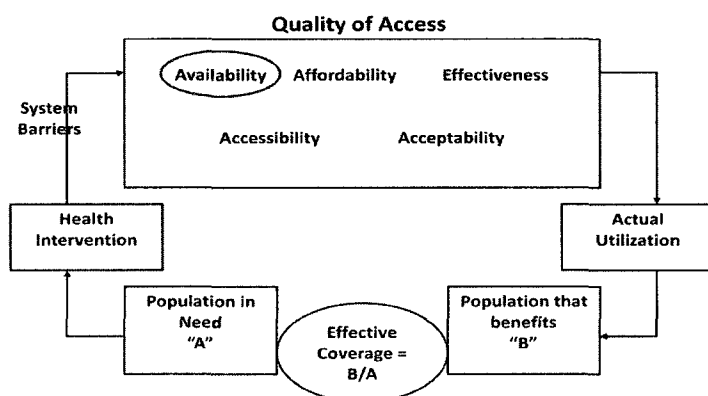
(This case study was taken from the publication, UNHCR Legally Invisible Persons in Seven Stories, November 2008¹⁶⁶)

¹⁶⁶ Praxis and UNHCR, "Legally Invisible Persons in Seven Stories" World Health Organization, Belgrade, Serbia, 2008)

In conclusion, this analysis highlights that 18.9% of the Roma do not possess personal documentation, including a health insurance card. The problem does not seem to lie in knowing how or where to register, but rather in the actual registration process. Further research both into whether Roma want to register, as well as how to overcome the barriers to registering, needs to be conducted as a research priority.

Availability

Assuming that individuals have a health insurance card, the first potential barrier to access is the availability of services.

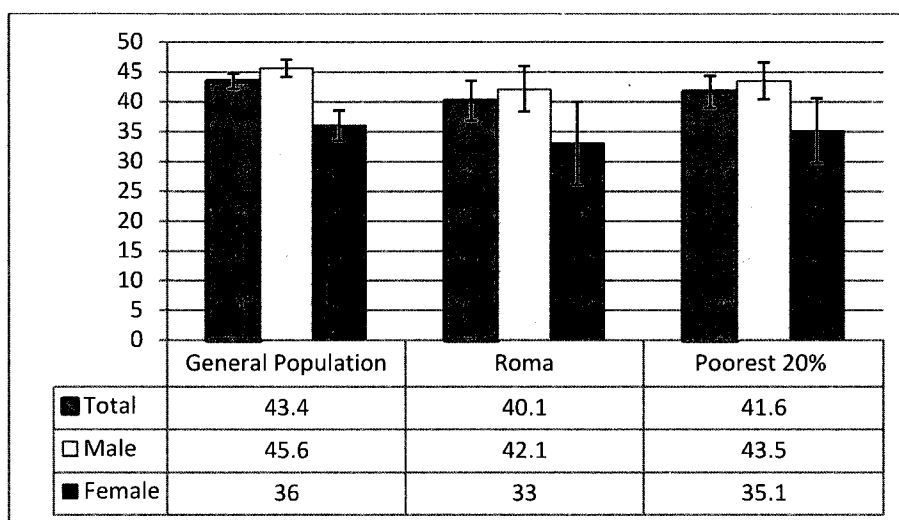


Availability refers to the accessibility of required drugs or equipment and the capacity of trained healthcare practitioners. It was not possible to assess the availability of equipment or drugs due to a lack of data; therefore the capacity of trained health practitioners was assessed. It was assumed that in primary care a general practitioner would have access to the knowledge, diagnostic tests, and equipment that are required to diagnose and treat any disorder. Thus the proxy of availability used by this research is whether the individuals have a doctor. It should be noted that this is not the same as determining whether the Roma have access to a doctor, however given the lack of data and difficulty in measuring this aspect, it was deemed an acceptable alternative.

As can be seen in figure 5.8, no statistical difference was found between either the Roma and the general population (Confidence Interval: -6.9% to 0.3%) or the Roma and the poorest quintile (Confidence Interval: -5.8% to 2.8%) in terms of the proportion having a family doctor. This figure also shows that although women are more likely to have a doctor in all three population groups, there is no

statistically significant difference either between or within the population groups with regards to gender.

Figure 5.8 Proportion of the total population, as well as men and women that do not have a family doctor, displaying the 95% confidence intervals for each proportion¹⁶⁷.



Source: UNDP Vulnerability Survey 2006

Sample Size – total: General Population – 5932/ Roma – 822/ Poorest quintile – 1293

Sample Size – male: General Population – 4571/ Roma – 646/ Poorest quintile – 997

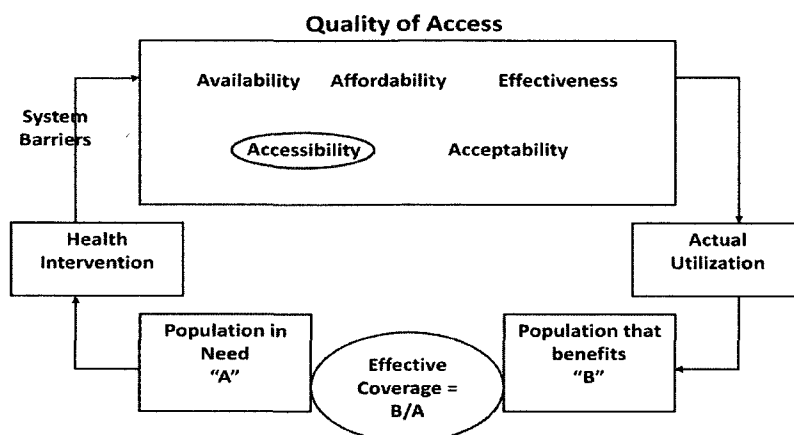
Sample Size – female: General Population – 1361/ Roma – 176/ Poorest quintile – 296

From this analysis it would appear that the availability of services, measured by access to a physician, is not significantly different across all population groups. Although the availability of a physician could be increased for the entire population, it may not be a problem that is specific to the Roma population.

Accessibility

Assuming that services are available, the next factor that may affect the quality of access is whether the services are geographically accessible.

¹⁶⁷ All confidence intervals can be found in appendix V.



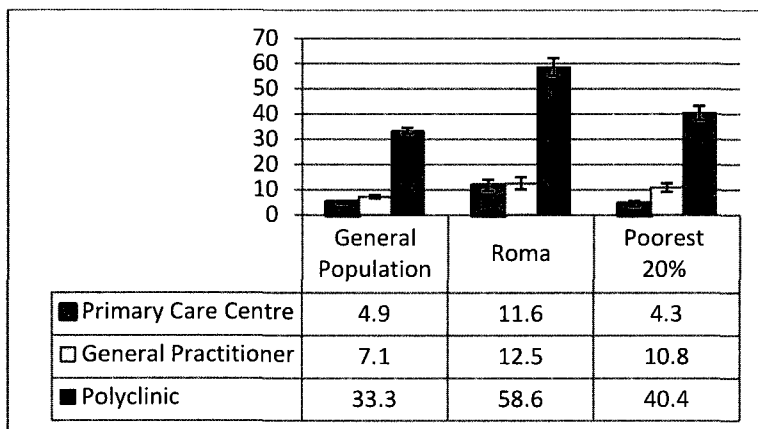
Accessibility, as defined by the effective coverage framework, refers to geographic location and has three distinct components: the patient's distance from the provider, the travel time to the provider, and the wait time at the clinic. Within the parameters of this research project, no data could be found on the travel time to provider and on the wait times at the clinic. The distance from the provider was therefore used as the primary indicator for geographical accessibility. A distance of 5km was chosen as it has been demonstrated by the World Health Organization¹⁶⁸ and other organizations¹⁶⁹ that a distance of 5km or more was related to worse physical accessibility. Figure 5.9 shows the proportion of each population group that does not have a health service facility within five kilometers of their primary residence. The health services that were measured are the primary care centers (*dom zdravlja* or *ambulant*as), general practitioners, and polyclinics. Polyclinics were included in this research as primary care interventions related to women's reproductive health are carried out in these centres. In all three cases, the general population was statistically different from the Roma ($p < 0.01$). The poorest quintile is also statistically different from the Roma in the case of the primary care centre and the polyclinic ($p < 0.01$), but not in the case of the general practitioner. In addition to a distance of five kilometers, a distance of three kilometers was also measured. The results showed very similar patterns, with the Roma population being statistically significantly less likely to be within 3 km of a primary care clinic, a general practitioner, or a polyclinic than either the general population or the poorest quintile ($p < 0.01$).

¹⁶⁸ Hannah Jordan and others, "Distance, Rurality and the Need for Care: Access to Health Services in South West England." *International Journal of Health Geographics* 3, no. 21 (2004).

¹⁶⁹ Ibid.; Perry B and Gesler W, "Physical Access to Primary Health Care in Andean Bolivia." *Social Sciences and Medicine*, no. 50 (2000), 1177.

Therefore it would appear that regardless of the distance travelled, the Roma population is more likely to be situated further away from health facilities.

Figure 5.9 The proportion of each population group that does not have a healthcare clinic within 5km of their primary residence, displaying the 95% confidence intervals for each proportion.



Source: UNDP Vulnerability Survey 2006

Sample Size – primary medical centre: General Population – 5863/ Roma – 803/ Poorest quintile – 1265

Sample Size – general practitioner: General Population – 5800/ Roma – 721/ Poorest quintile – 1253

Sample Size – polyclinic: General Population – 5837/ Roma – 775/ Poorest quintile – 1179

The measure of association between the three geographical accessibility indicators was calculated using Pearson's Phi. As seen in table 5.1, it was found that distance from primary care centre, distance from general practitioner, and distance from polyclinic are all highly correlated ($p < 0.01$). Thus the same individuals are affected by the geographic location of these three centers. The demographics of this population will be analyzed further during the sub analysis in section 5.3 on page 70.

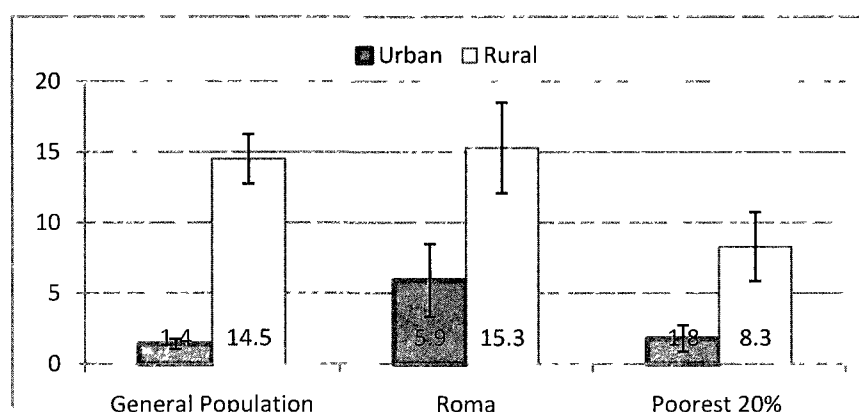
Table 5.1 Measure of association between geographical accessibility indicators; distance from primary care centre, distance from general practitioner, and distance from polyclinic

	Distance from general practitioner	Distance from polyclinic
Distance from primary care centre	0.717**	0.302**
Distance from general practitioner		0.389**

** Correlations are statistically significant at the 0.01 level (two-tailed)

For the purposes of illustration, it is interesting to break this analysis down further into the urban versus rural population for each group. Only the urban versus rural behavior for distance from primary care centers is presented, however the distance from a general practitioner and polyclinic are similar. Figure 5.10 compares the urban and rural populations for the general population, Roma and poorest quintile. As can be seen in this graph the proportion of persons that live further than 5km from the nearest primary care centre is much larger in rural areas than urban areas within all three population groups ($p < 0.01$ within each population group). This finding is not surprising given the large geographical population spread in rural areas. There is also a statistically significant difference with regards to distance travelled in urban areas with the Roma being much more likely than either the general population or the poorest quintile to travel further than 5km to a primary care centre ($p < 0.01$) in urban areas.

Figure 5.10 The proportion of each populating group that lives further than 5km from the nearest primary care centre, displaying the 95% confidence intervals for proportion.



Source UNDP Vulnerability Survey 2006

Sample Size – urban. General Population – 4313/ Roma – 320/ Poorest quintile – 771

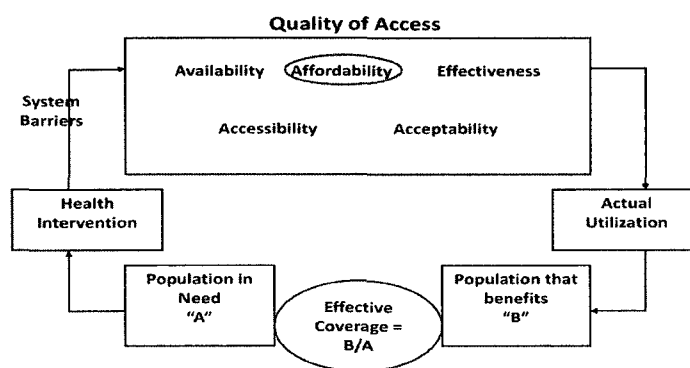
Sample Size – rural. General Population – 1550/ Roma – 483/ Poorest quintile – 494

From this analysis one can see that the network of primary care centers (*dom zdravlja*) and outreach clinics (*ambulantas*) provide extensive geographical coverage of primary care facilities throughout Serbia. It should be emphasized that more than 95% of the general population and poorest quintile have a primary care facility within 5km of their residence and 88% of the Roma population have a primary care facility less than 5km from their residence. While this level of coverage is excellent, the Roma are still much more likely to have to live further from a healthcare centre. We also find that within each population group, rural dwellers live further than their urban counterparts. Further

research into the modes of travel, such as public or private transport, and travel time would be interesting in order to ascertain how much of a barrier this 5km distance is in reality¹⁷⁰.

Affordability

If health services are both available and geographically accessible to the population in need, then the next factor that may affect quality of access is the cost of the health service or the cost of the intervention.



Affordability refers to whether health services are financially prohibitive. Although much of the health system is publicly funded, a user fee may be a hindrance to those who are extremely poor. Also not all services are funded under the public system and some services, such as pharmaceuticals, are privately financed¹⁷¹. The out-of-pocket payments might greatly impact their ability to access healthcare services. It is often assumed that the Roma cannot access healthcare services due to the fact that they cannot afford to pay for services¹⁷². This analysis shall examine which services the Roma, general population and poorest quintile have to pay for during a primary care visit and at what cost. Following this, we shall look at their ability to pay.

¹⁷⁰ Sara McLafferty, "GIS and Health Care," *Annual Reviews of Public Health* 24 (2003), 25.

¹⁷¹ M. Godwin and others, "Primary Care in Bosnia and Herzegovina: Health Care and Health Status in General Practice Ambulatory Care Centres," *Canadian Family Physician* 47, no. FEB. (2001), 289-297.

¹⁷² Bodewig and Sethi, *Poverty, Social Exclusion and Ethnicity in Serbia and Montenegro: The Case of the Roma*.

It has been widely assumed that Serbians must spend substantial resources on out-of-pocket payments¹⁷³. It is hypothesized that these payments might prevent the Roma and the poorest quintile from accessing healthcare services when they are in need. In order to assess this hypothesis, the proportion of each population group that has paid for primary healthcare services over the previous month as well as the average amount paid for this service was analyzed and presented in table 5.2. The asterix (*) indicates that the difference between the Roma and the non-asterixed population group is statistically significant ($p < 0.05$). According to table 5.2, only 45.8% of Roma paid the participation costs when visiting their primary care provider, this is statistically significantly lower than either the general population (68.3%) or poorest quintile (68.2%). This finding is expected given that the 2003 Health Policy Document of Serbia mandates that vulnerable persons including the Roma do not have to pay the user fee for medical services or medicines, which is otherwise obligatory (Ministry of Health of the Republic of Serbia 2002).

Table 5.2 also shows that in circumstances where patients are required to pay the full costs of the visit (for example they are not covered under government medical insurance because they do not possess a health insurance card) only 7% (95% confidence interval: 0 – 32%) of the Roma pay the full price for these interventions; this is statistically significantly lower than the general population (25.7%; 95% confidence interval 21.3 – 30.1) and on par with the poorest quintile (13.1%; 95% confidence interval 2.6 – 23.6). Finally, in circumstances where Roma are required to pay participation costs for prescription drugs, they are statistically significantly less likely to pay these costs than either the general population or the poorest quintile. Both these findings are unexpected and qualitative research into how these costs are covered and the reasons that the Roma do not pay full participation costs for interventions or prescription medications needs to be conducted as these results could be interpreted in a number of ways. Research on whether the Roma have money to pay the medical costs, whether they were excused costs, or whether they chose not to pay would provide valuable insight into this finding. All other differences are not statistically significant.

When comparing the absolute cost of the services in table 5.2, the only statistically significant difference is between the Roma and the poorest quintile where the Roma pay much more for drugs and medical materials ordered during the visit than the poorest quintile. Again the reason for this

¹⁷³ Ibid.

discrepancy is not clear and further research into utilization of medical materials should be conducted in the Roma population. In all other instances, the absolute amount per visit that the Roma, general population, and the poorest quintile pay is not statistically significantly different.

Table 5.2 The proportion of each population group that pays for healthcare services and the amount paid for each service, displaying the 95% confidence intervals for proportion.

	Population Group			Total
	General Population	Roma	Poorest 20% (non-Roma)	
Participation for doctors visits and/ or nurse intervention	68.3% ± 1.9	45.8% * ± 15.8	68.2% ± 3.8	67.8% ± 1.7
Amount†	80 ± 8	50 ± 14	44 ± 6	70 ± 7
Sample Size	2190	38	570	2798
Full price (according to price list of health institution) for doctors visits and/ or nurses interventions without referral	25.7% ± 4.4	7.0% * ± 25.0	13.1% * ± 10.5	23.0% ± 4
Amount†	2280 ± 303	480 ± 370	921 ± 416	2130 ± 277
Sample Size	379	4	40	423
Drugs and medical (disposable) materials ordered during the visit	42.0% ± 4.7	35.5% ± 28.3	33.8% ± 10.6	40.4% ± 4.3
Amount	1010 * ± 112	1820 * ± 1574	568 ± 232	960 ± 106
Sample Size	420	11	76	507
Laboratory tests, x-rays, ultrasound	54.3% ± 3.9	36.8% ± 35.7	47.4% ± 9.1	52.9% ± 3.5
Amount†	1160 ± 143	1250 ± 1228	422 ± 141	1050 ± 123
Sample Size	644	7	117	768
Participation for prescribed drugs	70.8% ± 2.2	55.9% * ± 15.8	73.0% ± 4.1	70.9% ± 1.9
Amount†	260 ± 24	130 ± 44.5	159 ± 23	230 ± 19
Sample Size	1612	38	462	2112
Full price for prescribed drugs	80.7% ± 1.9	68.4% ± 14.6	78.8% ± 3.9	80.1% ± 1.7
Amount†	1150 ± 69	940 ± 481	700 ± 71	1060 ± 58

Sample Size	1736	39	419	2194
Transport cost	63.4% ± 3.2	55.0% ± 29.4	63.7% ± 6.5	63.4% ± 2.8
Amount†	550 ± 53	700 ± 474	350 ± 55	520 ± 44
Sample Size	885	11	211	1107

* The proportion/ absolute amount is statistically significantly different from the non-asterixed proportions/ amounts ($p < 0.05$)

† The absolute amounts are reported in Serbia Dinars; 100 Serbian Dinars (RSD) are equivalent to CDN \$1.70

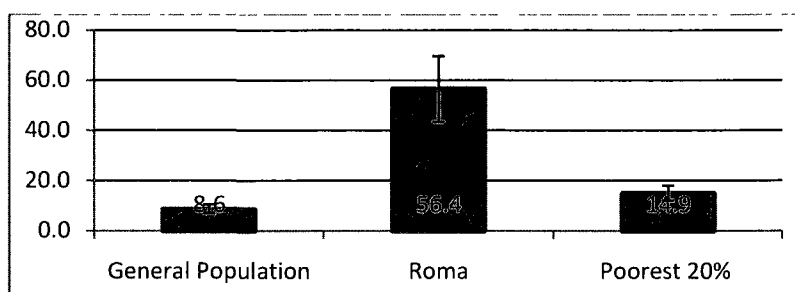
From this analysis it would appear that the Roma are less likely to pay for medical services than the general population and the poorest quintile in all cases (except for the full price of medical visits). There is also no difference with regards to the absolute amount that each population group pays out-of-pocket (with the exception of medical equipment ordered during the visit). Although there is no difference in either the likelihood of out-of-pocket payments or in the absolute amount that is paid out, the ability of persons to pay these expenses will have the greatest impact on utilization of services.

An analysis of the absolute amount of dinars that the Roma earn in comparison to the poorest quintile, reveals that 45.8% (95% CI; 41.2 – 50.4) of the Roma live below the poverty line, defined by the World Bank as 8883 dinars per month, compared to 30.4% (95% CI; 28.9 – 31.9) of the poorest quintile. Therefore on an absolute scale, the Roma have less financial resources than the poorest quintile. Looking at utilization patterns, we find that the Roma are more likely not to use health services because they cannot afford to pay for them. Figure 5.11 shows the proportion of each population group that did not use healthcare services in the previous month when they were in need due to the fact that the services were deemed too expensive¹⁷⁴. The proportion of Roma that did not use the health services is statistically significantly more ($p < 0.01$) than either the general population or poorest quintile. Thus the Roma are much more likely not to be able to afford to pay for health services.

¹⁷⁴ This question was asked only those persons in need: "If you haven't used health services in the last month what was the main reason?"

The original question and method of computation for this variable, and all other variables, can be found in appendix III.

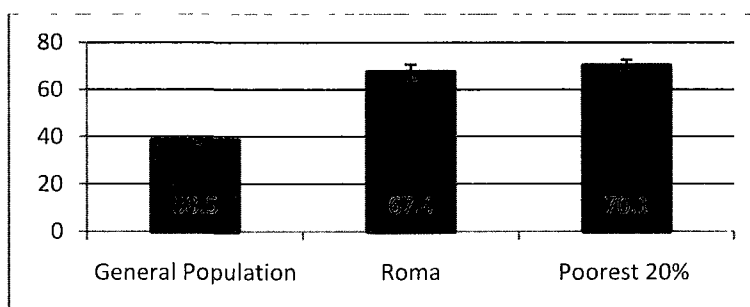
Figure 5.11 The proportion of each population group in need that did not use health services within the previous month because they were too expensive, displaying the 95% confidence intervals for each proportion.



Source: World bank Living Standards Measurement Survey 2007
Sample Size: General Population – 1084/ Roma – 55/ Poorest quintile – 543

In addition to not being able to pay for health services, it also appears that Roma are less likely to be able to afford medications. Figure 5.12 describes the proportion of persons that could not afford to buy prescribed medications within the previous 12 months. There is no statistical difference between the Roma and poorest quintile and both are statistically significantly higher than the general population ($p < 0.01$). This difference between the poorest quintile and the Roma population may be due to the fact that the poorest quintile is more likely to receive social assistance than the Roma population, thus easing the burden of their poverty.

Figure 5.12 The proportion of the population that could not afford to purchase prescribed medications within the previous 12 months



Source: UNDP Vulnerability Survey 2006
Sample Size: General Population – 5961/ Roma – 831/ Poorest quintile – 1292

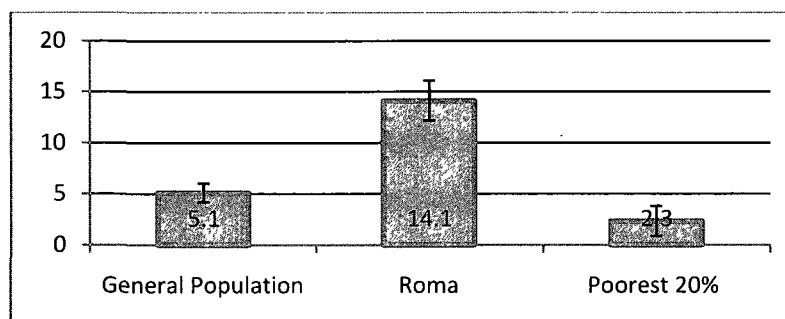
From the analyses presented above, it is evident that the Roma are more likely not to use healthcare services or purchase medications due to their prohibitive costs. It should also be noted that in addition to there being a statistical difference between the population groups, the

proportion of the population that cannot afford to purchase medications is substantial in all three population groups. This may be due to the fact that this data is taken from the UNDP vulnerability survey, which looks at IDP, Roma, and the general population living nearby. Thus the results for the general population in this case may not be representative of the general Serbian population. Any discussion of ability to pay needs to take into account an individual's willingness to pay, especially when doing an analysis of socioeconomic status¹⁷⁵. Further research is required into how the Roma value and use services – i.e. is it matter of them not valuing the services and therefore not prioritizing and paying for services, or is it a matter of the cost of the services.

The final aspect of one's ability to pay is where their financial resources come from. This section shall look at whether individuals had to seek assistance in paying for services. From research on funding mechanisms, it is assumed that individuals would only seek assistance from external sources once they had exhausted their own resources. Figure 5.13 shows the proportion of each population group that sought assistance from other sources. These sources included relatives and friends in Serbia or abroad, humanitarian organizations, and state or company assistance. The Roma were much more likely to seek external assistance than either the general population (statistically significant at $p<0.01$) or the poorest quintile (statistically significant at $p<0.05$).

¹⁷⁵ Mike Drummond and Tom Jefferson, "Guidelines for Authors and Peer Reviewers of Economic Submissions to the BMJ. the BMJ Economic Evaluation Working Party." *BMJ* 313, no. 7052 (1996), 275-283.

Figure 5.13 The proportion of each population that sought assistance for payment of healthcare costs from an external source, displaying the 95% confidence intervals for each proportion.



Source: World bank Living Standards Measurement Survey 2007
Sample Size: General Population – 6928/ Roma – 133/ Poorest quintile – 1373

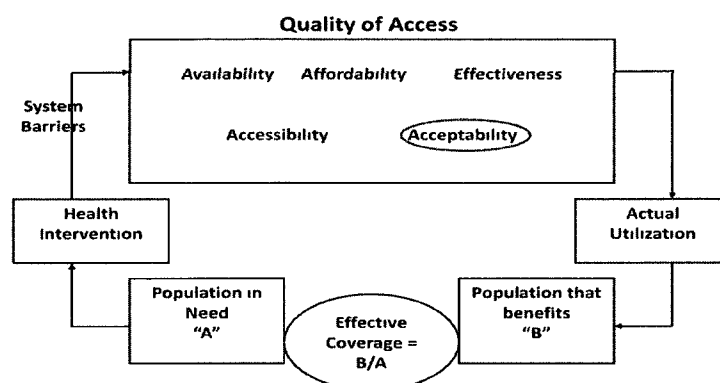
The fact that Roma are much more likely to seek external funding is interesting for two reasons. Firstly, because Roma must seek external funding sources one is led to believe that they are not able to make the out-of-pocket payments themselves. This result is in line with the findings on paying for health services and medications presented earlier in the section. Secondly, the fact that Roma can access external funding sources is surprising given that the literature on social exclusion¹⁷⁶ theorizes that Roma should be less likely to have the necessary social networks than the general population. Further investigation of this matter would be extremely interesting from a social exclusion perspective and is required before any conclusive statements may be made. Unfortunately the sample sizes are too small to analyze the breakdown of where these funding sources come from and so further research into the type of assistance was not possible.

In conclusion, we see that all three population groups are required to pay the same out-of-pocket expenses, however the Roma are much more likely not to be able to afford these costs and therefore not utilize the services. In instances where they do use health services, they are more likely to seek external assistance in order to pay for these services.

Acceptability

¹⁷⁶ Praxis and UNHCR, *Legally Invisible Persons in Seven Stories*.

If health services are available, and an individual is able to physically access those services, and the services are affordable, then utilization is dependent on the acceptability of the intervention in question.



Provider acceptability refers to both provider compliance and patient adherence. Provider compliance can be measured by provider attitudes, provision of care according to guidelines, and patient satisfaction, in contrast patient adherence can be measured through observance of a treatment regime.

Provider compliance includes the implicit social criteria that physicians may have regarding who deserves treatment. As practitioners are more likely to assume that vulnerable populations smoke, use drugs, or are overweight, providers may feel that they do not 'deserve' treatment as the resulting conditions are their own fault, or that they are not as likely to 'do well' if prescribed certain interventions¹⁷⁷. Conversely, patients' perception of the quality of providers will affect their probability of seeking care¹⁷⁸. Negatively perceived provider behavior is often the result of a cultural divide that may exist between providers, who are from a certain social class, and users, who are often from a lower social class. This is particularly true of vulnerable populations who generally have lower socioeconomic

¹⁷⁷ Dixon-Woods and others, *Conducting a Critical Interpretive Synthesis of the Literature on Access to Healthcare by Vulnerable Groups*, 35

¹⁷⁸ Shengelia and others, *Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy*, 97-109

status and lower education levels¹⁷⁹. These issues may prevent the most vulnerable groups from receiving optimal care.

No quantitative data on provider attitudes towards the Roma exists in Serbia. However from qualitative research conducted in this area, it would appear that discrimination against the Roma within the healthcare system is quite widespread due to the more than 20 reported cases per month¹⁸⁰. One organization that has taken the lead in identifying cases of discrimination is The Minority Rights Centre (MRC)¹⁸¹. The MRC is a public interest law organization dedicated to addressing discrimination against Roma in Serbia. The main objective of the MRC is to investigate and record all reported cases of discrimination. Within the healthcare system, many cases of discrimination have been recorded including: Roma being insulted by health professionals because of their ethnicity; refusal of treatment by health professionals; and refusal to attend to critical care patients who do not have a health card¹⁸². As an example, one case study of such an incident is described in Box 5.2 below¹⁸³.

Box 5.2 A Case Study of Discrimination¹⁸⁴

Hasani Džemail, father of Sandra Kostić (8), explains in his statement given to the MRC that on 3 March 2006, at around 9 p.m., she came home with her right arm injured, and in a great deal of pain. He decided to take her to the clinic in Tirova Street. They talked to the nurse that was on duty, gave her the girl's health card, and the nurse told them to go to the office down the hall:

There was a young doctor inside. He told us to wait. We went out and sat on a bench in the corridor. About ten minutes later, the doctor went into the hall and asked what we wanted. I explained that my daughter was injured, as patiently as I could, because I didn't feel comfortable, as we were talking to him in the corridor. He interrupted me, said it was nothing and told us to go home. I looked at Sandra and realized she could not stand the pain anymore. I said he had to respect us and examine my daughter's arm. Then he started his tirade, "What do you want? You don't take care of your children, you bring them here and then leave and not even Interpol can find you! What arm are you talking about? Maybe she was begging all day and it hurts her now!" I could hardly restrain myself from hitting him. I just said, "I want my child to be examined and I won't leave the hospital until you do that! Is that clear?" While he was writing an order for an X-ray, he was saying that Gypsies know many things today

¹⁷⁹ Dixon-Woods and others, *Conducting a Critical Interpretive Synthesis of the Literature on Access to Healthcare by Vulnerable Groups*, 35

¹⁸⁰ Colak, *Decade of Roma Information Booklet of Minority Rights Center: Abuses of Roma Rights in Serbia*.

¹⁸¹ Ibid.

¹⁸² Ibid.

¹⁸³ Ibid.

¹⁸⁴ Ibid.

and that the world went mad when it let Gypsies attend school. About an hour and a half later the examination was over, and it turned out that the arm was broken.

(The interview was conducted on 27th March 2006 in Belgrade and is reported in the 2007 Minority Rights Centre booklet on the Abuses of Roma Rights in Serbia).

Although legislation prohibits any form of discrimination based on ethnicity, nationality, or religion, deeply rooted social prejudices are still evident in both the actions of individuals and institutions¹⁸⁵. The Law on Health Care¹⁸⁶ prohibits discrimination based on race, gender, age, nationality, social background, religion, political or other belief, property, culture, language, type of disease, physical or mental disability (Article 20). The law further states that any citizen has the right to receive health care in keeping with the highest possible standards of human rights and values (Article 25), and that a patient has the right to equal access to medical services, without discrimination based on financial situation, place of residence, type of disease or time of accessing medical help (Article 26). These laws and statutes are important as they advocate for an environment that is free of discrimination by providing a legal framework. Future research into the extent of discrimination needs to be conducted in order to develop strategies to mitigate the individual and systemic discrimination that currently exists.

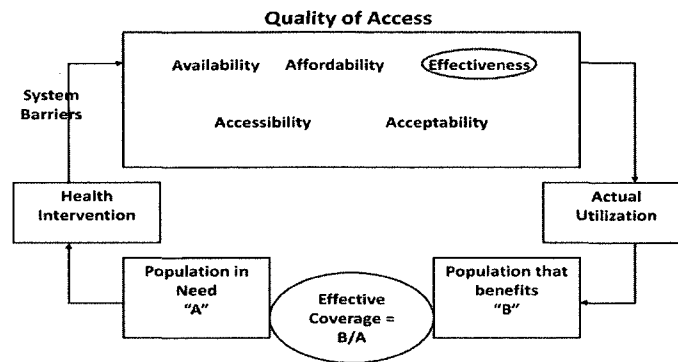
As mentioned above, acceptability refers to both provider compliance and patient adherence. From the patient adherence perspective, patients must recognize the importance of seeking care. In addition, if the patient views the intervention as culturally acceptable, then they should correctly adhere to the treatment regime prescribed. Recognition of importance and adherence to interventions are highly dependent on the need or medical condition and will be discussed in more detail in the next chapter during the application of the framework to the MDGs as there is no data on adherence issues in general.

Effectiveness

Assuming that an individual has seen a practitioner for their illness, that they have been prescribed the correct intervention, and that they can afford to purchase that intervention, then whether that individual benefits is based on the effectiveness of the intervention.

¹⁸⁵ Ibid

¹⁸⁶ Government of Serbia, *Official Gazette of the Republic of Serbia*

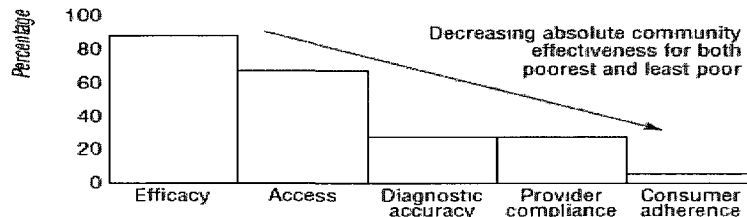


The effective coverage framework defines effectiveness as the extent to which providers and individuals deliver on their true potential to improve health¹⁸⁷. Tugwell et al proposed the equity effectiveness loop as a means with which to emphasize equity issues inherent in assessing health needs, effectiveness, the cost effectiveness of interventions, and the development and evaluation of evidence based health policy¹⁸⁸. The end measure of this loop is a measure of community effectiveness, which is defined as how well an intervention works in the 'real world'. Community effectiveness is often substantially lower than efficacy because of a staircase effect as illustrated in figure 5.14. This staircase effect is the result of lower: awareness, access, or coverage; screening, diagnosis, or targeting; compliance of providers; and adherence of consumers. In the best case scenario, a provider would correctly diagnose every patient, choose the most appropriate intervention, and implement that intervention optimally. Effectiveness is highly dependent on the intervention prescribed to the patient and will be discussed in more detail in the next chapter during the application of the framework to the MDGs.

¹⁸⁷ Shengelia and others, *Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy.*, 97-109

¹⁸⁸ Tugwell and others, *Applying Clinical Epidemiological Methods to Health Equity: The Equity Effectiveness Loop.*, 358-361

Figure 5.14 An example of the staircase effect, moving from efficacy to community effectiveness.



This figure has been taken from: (Tugwell and others 2006, 358-361)

Conclusions

The quantitative data revealed that lack of personal documents, geographical accessibility, and affordability are all factors that disproportionately affect the Roma population. Availability of services was low for all three population groups, and did not disproportionately affect the Roma population. In addition, anecdotal evidence shows that discrimination by providers affects the Roma. No conclusions were drawn on patient adherence and the effectiveness of interventions as these will be analyzed further in the next chapter during the application of the effective coverage framework to two MDGs.

5.3 Sub analysis of the Roma Population

Before any substantive conclusions or recommendations can be made, it is important to know whether there is a subgroup of the Roma population that is more severely affected by the factors that affect quality of access. A sub analysis of the Roma population was therefore conducted to determine if there is such a group. The quality dimensions analyzed were personal documents, availability, accessibility, and affordability. No analysis on acceptability and effectiveness was conducted as no data currently exists within the Roma population. For each potential barrier to access, the Roma population was analyzed according to the following demographic information: gender, location (rural/urban), education level, and employment status.

Table 5.3 shows the proportion of the Roma population within each subgroup that is affected by a potential barrier to access (e.g. lack of personal documents). The highlighted cells in table 5.3 indicate where the differences between the subgroups are statistically significant ($p < 0.05$). The significance is shown in the third column of each cell. As can be seen in table 5.3, overall there does not appear to be any single subgroup of Roma that are consistently worse off than the other subgroups. Instead, it appears that there are different subgroups affected by different quality dimensions. For example, the rural Roma are much more likely to be affected by geographic accessibility than their urban

counterparts. In contrast, affordability does not seem to disproportionately affect the rural population. Each subgroup is examined in detail below and table 5.3 reports the exact proportions and p-values for each subgroup analysis. The total Roma population within each subgroup is reported in brackets (x) below.

Table 5.3 Proportion of the Roma population within each subgroups that are affected by the quality of access.

		Gender			Urban/ Rural			Education			Employment status		
		Male	Female	sig	Urban	Rural	sig	High school	Incomplete high school	sig	Employed	Un-employed	sig
Personal Documents	No Health Insurance	21.3 (230)	16.4 (226)		13.5 (241)	23.7 (215)	0.04	19.6 (32)	9.4 (424)		24.3 (103)	2.6 (39)	
Geographical Accessibility	PHC is more than 5km away	11.7 (633)	11.2 (170)		5.9 (320)	15.3 (483)	<0.01	14.1 (99)	10.8 (687)		7.8 (397)	15.6 (390)	<0.01
	GP is more than 5km away	13.2 (568)	9.8 (153)		6.5 (292)	16.6 (429)	<0.01	13.4 (97)	12.6 (611)		10.7 (366)	14.7 (339)	
	Polyclinic is more than 5km away	57.6 (602)	61.8 (173)		25.7 (315)	81.1 (460)	<0.01	58.9 (95)	57.8 (664)		54.6 (370)	60.9 (389)	0.05
Availability	Household members do not have a family doctor	42.1 (646)	33 (176)	0.03	49.1 (332)	34.1 (490)	<0.01	26.2 (103)	42 (703)	<0.01	44.8 (400)	36 (406)	0.01
Affordability	Cannot afford medications	66.2 (651)	71.7 (180)		65 (334)	69 (497)		45.6 (103)	70.5 (711)	<0.01	62.2 (410)	72.1 (405)	0.04
	Cannot afford healthcare costs	7.8 (61)	5.8 (72)		4.2 (67)	8.4 (66)		7.1 (9)	3.1 (124)		3.9 (27)	5.1 (14)	
	Receive payment assistance	13.1 (230)	13.9 (226)		15.2 (21)	11.9 (10)		11.1 (32)	13.7 (424)		3.7 (103)	28.6 (39)	
Acceptability	No data												
effectiveness	No data												

(x) = the total Roma population within each subgroup

Gender appears to have very little impact on the factors that affect the quality of access. The only statistically significant difference between any of the groups lies in the availability of services with more women than men having a family doctor. One potential reason for this finding may be due to the need for a family physician during pregnancy. A second reason may be due to the fact that mothers are often responsible for the health of children and therefore more likely to report having a physician on behalf of the whole family. As described earlier in this chapter, this finding is not surprising given that women are more likely to prioritize and use healthcare services than men.

The rural population are far worse off than the urban population with regards to lack of personal documentation with more rural Roma not having personal documents. As expected, the rural Roma are also statistically significantly worse off than the urban population with regards to geographical accessibility, with more rural Roma living further away from primary care centers, general practitioners,

and polyclinics. One surprising finding is that the rural Roma are more likely to have a family doctor than their urban counterparts. The reasons for this are unknown and more research into this finding would be interesting. There is no difference between rural and urban Roma with regards to affordability of services.

Education, measured as the completion of high school, does not seem to have a major impact on whether one is able to access health services. One area where there is a statistically significant difference is availability of services, which is measured as access to a family doctor. It appears that individuals who have completed high school are more likely to have a family doctor than those who have not completed high school. Not surprisingly, it also appears that those who have completed high school are more likely to be able to afford medications. There are no statistically significant differences within the other affordability measures, or within personal documentation and geographical accessibility of services.

Employment status appears to have a mixed effect on the Roma. With regards to geographical accessibility, statistically significantly more unemployed Roma live further than five kilometers from either a primary care facility or polyclinic, compared to their employed counterparts. Surprisingly, there are more employed Roma that do not have a family doctor than unemployed Roma. The reasons for this discrepancy are unknown and more research into unemployment programs is required. Finally and not surprisingly, unemployed Roma are more likely not to be able to afford medications. There is no statistically significant difference between groups with regards to the other measures of affordability. Nor is there a difference between those people that are employed versus unemployed with regards to possessing personal documentation.

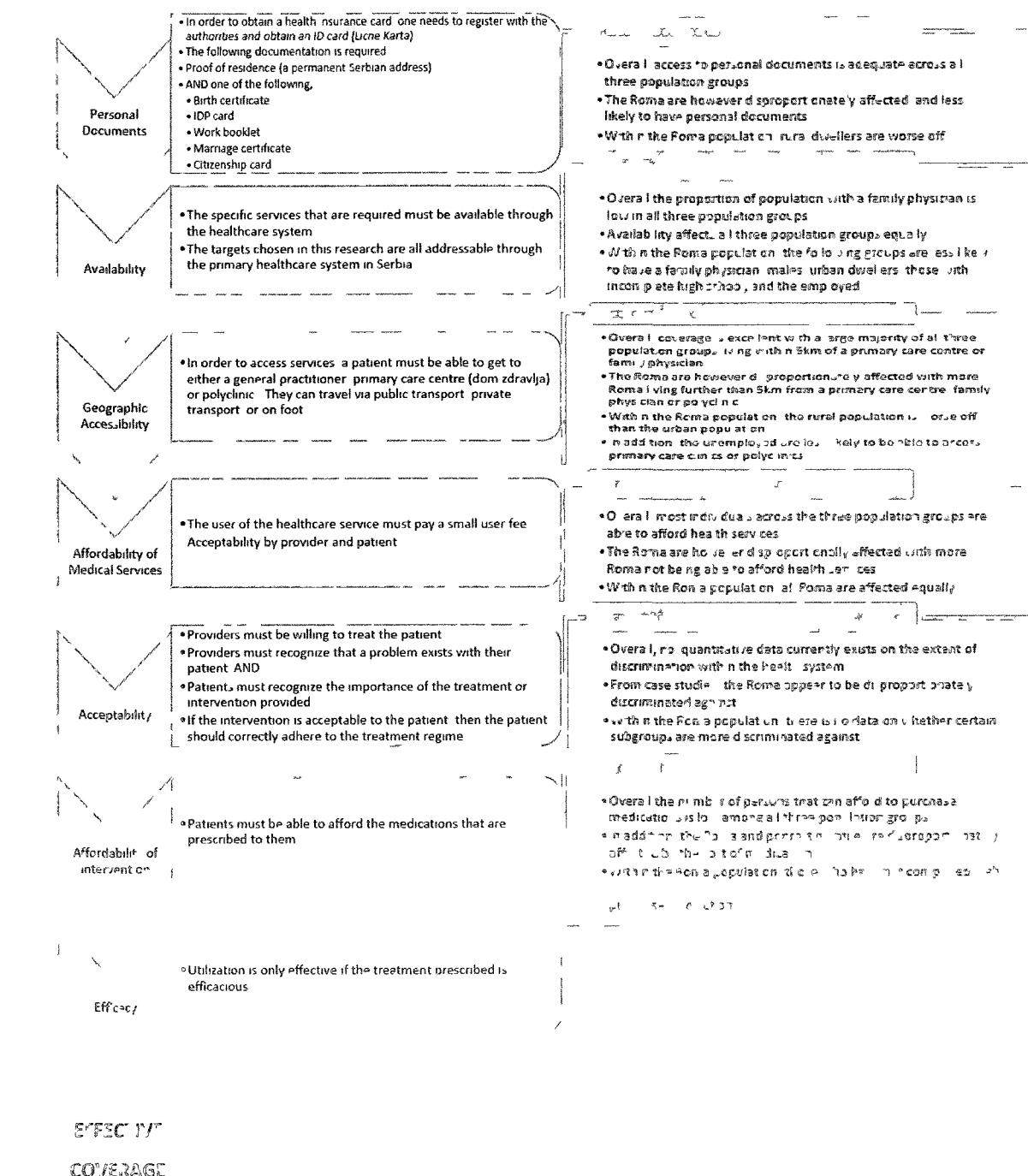
In conclusion, there does not appear to be one single subgroup of the Roma that is disproportionately affected by the barriers to access. With this knowledge in mind, it is important that interventions are individually tailored to address the barriers experienced by each subgroup.

5.4 Summary of Results

Figure 5.15 summarizes the barriers to access experienced by the general population, the poorest quintile, and the Roma population. The main findings from each analysis are reported in the second column of figure 5.15. As part of the main findings, the following findings are reported: the

overall coverage of the Serbian population, whether the Roma population is disproportionately affected, and whether specific subgroups of the Roma are affected. As can be seen in figure 5.15, the overall population is most affected by the lack of availability of family physicians and by the cost of medications. The Roma population is disproportionately affected by a lack of personal documentation, geographical accessibility of health services, and the affordability of health services. Qualitative research in the area has highlighted discrimination by providers as a major obstacle. Within the Roma population, there does not appear to be a single subgroup that is consistently affected. Recognition of which subgroups are affected in each case is important for policy decision-making and implementation.

Figure 5.15 Summary of the barriers to access of healthcare services¹⁸⁹



¹⁸⁹ Unless otherwise indicated, all figures and tables included in this thesis were created by Leanne Idzerda ©

Chapter 6 : Application of the effective coverage framework to the MDGs

In this chapter, the effective coverage framework shall be applied to two of the Millennium Development Goals targets that focus on primary care interventions. The application of this framework to specific interventions is important as this illustrates the effect that quality of access has on population need and utilization. Although any primary care intervention could have been selected for this application, the MDGs will be analyzed due to the reasons described below.

6.1 Rationale for Application of the Framework to the MDGs

Others that have applied this framework have specified that the selected interventions should **firstly cause the greatest improvement in health**. Secondly, **the interventions should be affordable**. And thirdly, **they should contribute to a reduction in inequalities in health**¹⁹⁰. I have chosen to apply the framework to the Millennium Development Goals (MDGs) because the MDGs have been shown to benefit the greatest number of people, provide cost-effective interventions, and improve equity¹⁹¹; thus fulfilling the criteria described above. It is important to note that although the MDGs can contribute to improved equity they are just as likely to increase the gap between the rich and poor as decrease it; this is because many MDG strategies target averages and may leave out the most vulnerable groups, thereby improving the health status for the middle and high income populations while not addressing the needs of the most disadvantaged¹⁹². Thus careful consideration of equity dimensions needs to be made to ensure that focus extends beyond population averages. A second reason for applying the framework to the MDGs is the fact that the Serbian government has prioritized these goals within the National Poverty Reduction Strategy. Therefore the application of the framework to these indicators is both timely and politically relevant.

The first column of table 6.1 outlines the country specific targets for the two health-related MDGs that have been selected; child health and maternal health. Based on these targets, indicators that fulfilled the following three criteria were selected in consultation with the Government of Serbia MDG Monitoring Framework Committee;

¹⁹⁰ Lozano and others, *Benchmarking of Performance of Mexican States with Effective Coverage*, 1729-1741

¹⁹¹ Dinkić Mirosinka and others, *Millennium Development Goals in the Republic of Serbia : Monitoring Framework*

¹⁹² Kath Moser, David Leon and Davidson Gwatkin, "How does Progress Towards the Child Mortality Millennium Development Goal Affect Inequalities between the Poorest and Least Poor? Analysis of Demographic and Health Survey Data," *BMJ* 331 (2005), 1180.; Daniel Reidpath and others, "The Millennium Development Goals Fail Poor Children: The Case for Equity-Adjusted Measures." *PLOS Medicine* 6, no. 4 (2009), e1000062.

- The target is related to the issue of 'coverage'.
- The target could be addressed by a primary healthcare intervention.
- The intervention is the most cost-equitable means of addressing the target¹⁹³.

The second and third column of table 6.1 state the indicator that can be measured for each target and the rationale for the choice.

Table 6.1 Country-specific targets for Serbia with indicator and rationale

MDG TARGETS	INDICATOR	RATIONALE
MDG 4: Reduce child mortality rate		
Target 1: Between 2000 and 2015, reduce on average by half the under-five mortality rate	Indicator 1: Treatment for acute respiratory infections (ARI) in children under 5 years	The leading cause of morbidity in children U5 in Serbia is acute respiratory infection (ARI) ¹⁹⁴
Target 2: Between 2000 and 2015, increase the coverage of women with antenatal and postnatal health care by one third at least	Indicator 2: The proportion of women who receive antenatal care coverage during pregnancy	Access to antenatal health care by pregnant women is the most cost-effective means of addressing neonatal mortality ¹⁹⁵
Target 3: Between 2000 and 2015, halve the death rate of children under 19 from external causes of death		Not specifically related to primary health care interventions
Target 4: Between 2005 and 2015, increase the coverage of children exclusively breastfeeding from childbirth to the sixth month of life from 15% to 30%	Indicator 3: The proportion of children exclusively breastfeeding from childbirth to the sixth month of life	Exclusive breastfeeding has been shown to decrease both the infant mortality and morbidity rates ¹⁹⁶
Target 5: Between 2000 and 2015, improve mandatory immunization coverage of children to 99%	Indicator 4: The proportion of children who are fully immunized according to the Serbian immunization schedule (MMR, DTP and TB)	Immunization schedule requires that children are immunized with MMR, DTP and TB before 18 months
MDG 5: Improve maternal health		
Target 1: By 2015, reduce the maternal mortality ratio to 4.9	Indicator 5: The proportion of births attended by a skilled birth attendant	The presence of a skilled birth attendant substantially decreases maternal mortality ¹⁹⁷
Target 2: By 2015, maintain and enhance the reproductive health of women by maintaining the fertility rate at current levels, reducing the abortion rate by half and doubling the proportion of women who use modern contraceptive methods	Indicator 6: The proportion of women aged 15 – 49 who use modern methods of contraception	Modern contraceptives have been shown to increase birth spacing and place less of a burden on women's health ¹⁹⁸ Disaggregated data on abortions is not available
Target 3: Between 2000 and 2015, reduce the mortality rate among women of childbearing age by one third		Not specifically related to primary health care interventions

¹⁹³ Richard Cookson, Mike Drummond and Helen Weatherly, "Explicit Incorporation of Equity Considerations into Economic Evaluation of Public Health Interventions " *Health Economics Policy and Law* 4 (2009), 231-45

¹⁹⁴ Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report*

¹⁹⁵ T. Adam and others, "Achieving the Millennium Development Goals for Health Cost Effectiveness Analysis of Strategies for Maternal and Neonatal Health in Developing Countries " *British Medical Journal* 331, no. 7525 (12 Nov, 2005), 1107-1110

¹⁹⁶ Taghreed Adam and others, "Cost Effectiveness Analysis of Strategies for Maternal and Neonatal Health in Developing Countries " *BMJ*, no. 331 (2005), 1107

¹⁹⁷ Adam and others, *Achieving the Millennium Development Goals for Health Cost Effectiveness Analysis of Strategies for Maternal and Neonatal Health in Developing Countries*, 1107-1110

¹⁹⁸ Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report*

6.2 Selection of Interventions for Application

Two interventions were selected in order to illustrate the application of the framework to the MDGs. One intervention was selected from child health and one from maternal health. Under MDG 4, which relates to child health, the treatment of acute respiratory infection with antibiotics was selected. Under MDG 5, which relates to maternal health, the use of contraception to prevent unwanted pregnancies was selected. These interventions were selected in part because the problem among the Roma is large and in part because enough data exists on this problem to make the application feasible. Each of these interventions is described in detail below.

6.3 MDG4: Reduce Child Mortality

The National MDG Progress Report indicates that although there has been a marked reduction in child mortality over the last 10 years, high child mortality rates still persist among the Roma¹⁹⁹. The indicators for child mortality are shown in table 6.1. These are: the treatment of acute respiratory infections in children under 5 years, antenatal care during pregnancy, exclusive breastfeeding until 6 months of age, and administration of the full immunization schedule to children under the age of 2 years. The intervention chosen to illustrate the application of the framework to child health was the treatment of acute respiratory infection in children under 5 years of age. This intervention was selected as it is the leading cause of morbidity among children of this age group in Serbia²⁰⁰.

Indicator 1: Treatment for acute respiratory infection (ARI) in children under 5

Acute respiratory infection is the leading cause of morbidity among children under the age of 5 years in Serbia²⁰¹. The use of antibiotics to treat ARI is considered as the key intervention²⁰². ARI was defined in this study as the presence of an acute cough in the previous 2 weeks accompanied by rapid or difficult breathing, and whose symptoms were due to a problem in the chest, or both a problem in the chest and a blocked nose, or whose mother did not know the source of the problem.

Need

¹⁹⁹ Dinkic Miroslav and others, *Millennium Development Goals in the Republic of Serbia: Monitoring Framework*

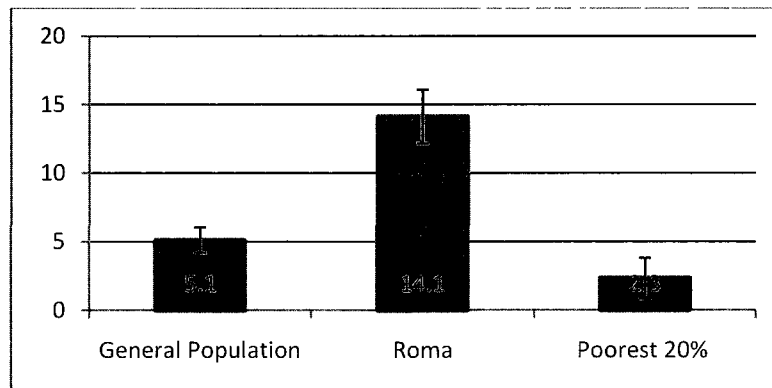
²⁰⁰ Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report*

²⁰¹ Ibid

²⁰² Ibid

Registered need is used as a proxy in this situation for true need, and is defined by the number of children less than 5 years who presented with an ARI in the previous 2 weeks. Figure 6.1 reveals the proportion of children in each population group under the age of five years who had symptoms of an acute respiratory infection within the previous two weeks. As can be seen in both figure 6.1 and tables 6.2 and 6.3, the difference between both the Roma and the general population and the Roma and poorest quintile is statistically significant ($p < 0.01$). Despite the difference in overall population size, the absolute number of Roma children in need versus the general population children is quite similar. The absolute number of children in need in the poorest quintile is much lower. The absolute difference between the proportion of Roma children in need versus both the general population and poorest quintile is quite large at 9.0 and 11.8% respectively. The relative difference in need is 1.4 and 1.5 respectively. Thus one can see from table 6.2 and 6.3, both the relative and absolute differences between the Roma and general population and poorest quintile²⁰³ is quite large and is highly statistically significant. From this we can conclude that need is much greater in the Roma population.

Figure 6.1 The proportion children under five years of age who had symptoms of an acute respiratory infection within the previous two weeks, displaying the 95% confidence intervals for each proportion.



Source: MICS 2005

Sample sizes: Total 2223/ Roma 1218/ Poorest 397

²⁰³ The small proportion of children in need under 5 years of age in the poorest quintile may be deceiving due to the fact that the sample size is extremely small as can be seen in table 6.3.

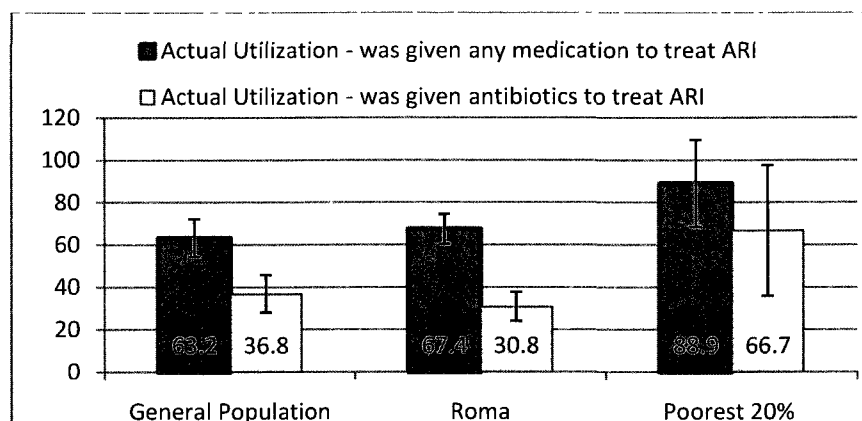
[illegible][illegible]

Actual Utilization and Effective Coverage

Actual utilization is defined as the number of persons who receive an intervention regardless of whether this is the correct intervention, or one step towards the final intervention. In this scenario, actual utilization is defined as the proportion of children with an ARI who received *any* medication to treat this condition. As can be seen in tables 6.2 and 6.3, there are no statistically significant differences between any of the population groups with regards to actual utilization. Thus children from all three population groups were equally likely to receive some form of treatment for the ARI. Actual utilization is distinct from effective coverage. Effective coverage is defined as the proportion of children with an ARI that received the correct treatment for this condition; the correct treatment was defined by the UNICEF MICS survey as the prescription of antibiotic medication. It is important to note that effective coverage can only be measured using clinical outcomes, in this case a lab test confirming the presence of ARI before antibiotics are prescribed and again after the treatment course confirming that the ARI has been resolved. Thus treatment with antibiotics is used as a proxy for effective coverage in this application. As can be seen in tables 6.2 and 6.3, there is no statistically significant difference between the proportions of children that receive the correct treatment in any of the population groups. Thus children from all three population groups were equally as likely to receive the correct treatment for ARI. Hence effective coverage is equal across all three population groups.

If effective coverage is analyzed in relation to actual utilization, as presented in figure 6.2, we see that there is a large gap between the treatment that is administered and the treatment that is actually required. Thus although children under five years of age in all three population groups are receiving treatment, the treatment is not necessarily an effective treatment for the condition.

Figure 6.2 The proportion of children under 5 years old with a suspected acute respiratory infection that received any medication compared those that received antibiotics, displaying the 95% confidence interval for each proportion.



Source: MICS 2005

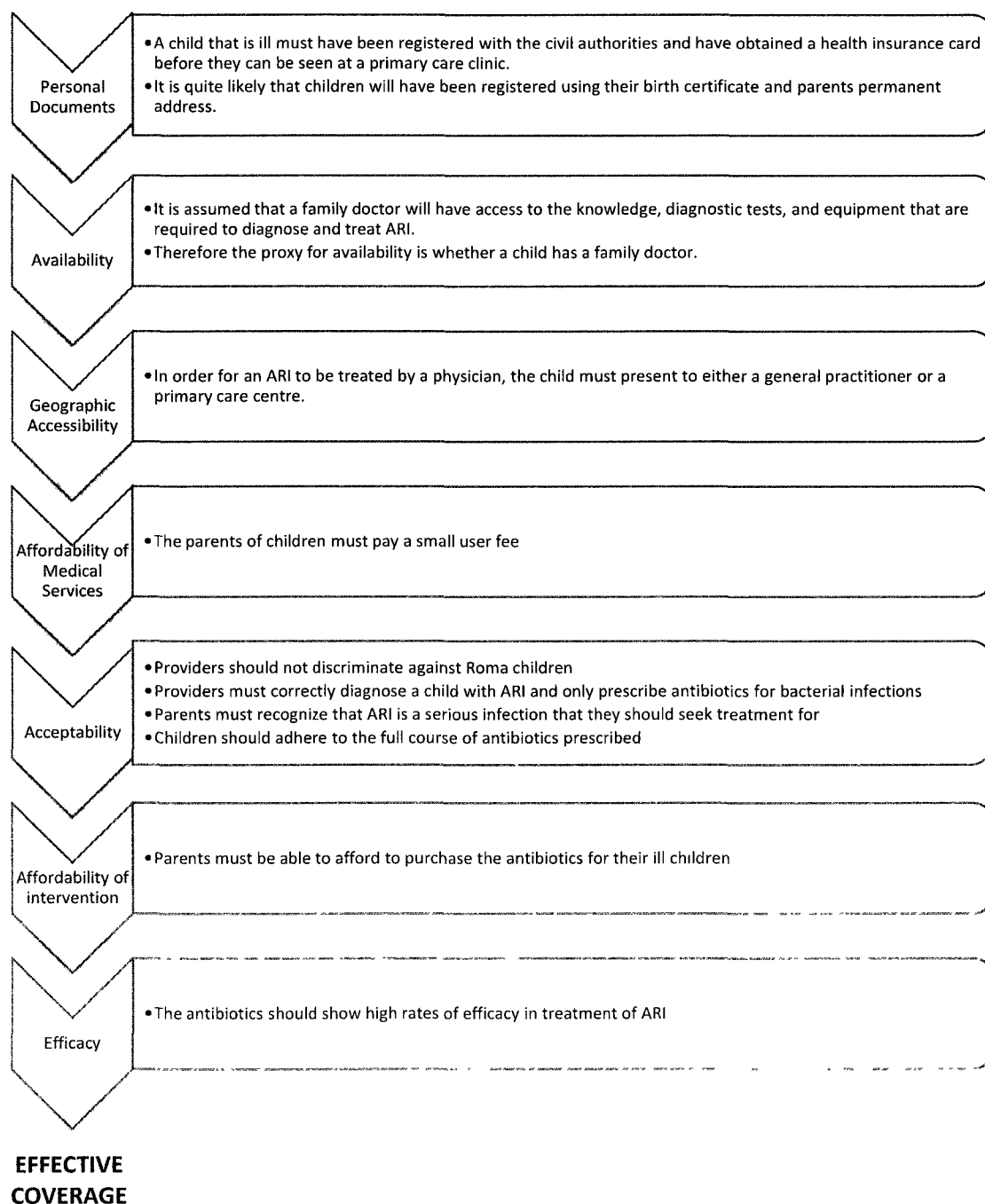
Actual Utilization - Sample sizes: Total 114/ Roma 172/ Poorest 9

Effective Coverage - Sample sizes: Total 114/ Roma 172/ Poorest 9

Quality of Access

As can be seen above, the need in the Roma population is greater than in the general population or poorest quintile. The effective coverage of acute respiratory infection in children is quite low across all three population groups. The factors that affect whether a child in need receives the correct intervention are described under the quality of access. Figure 6.3 outlines the quality of access that a child with acute respiratory infection needs to overcome in order to achieve effective coverage for this condition. Each of these potential barriers to access will be analyzed in more detail below.

Figure 6.3 Overview of the steps that a child with an acute respiratory infection needs to take in order to achieve effective coverage for this condition.²⁰⁴



²⁰⁴ Unless otherwise indicated, all figures and tables included in this thesis were created by Leanne Idzerda © University of Ottawa 2009

For each factor that influences quality of access, the proportion of Roma versus general population and Roma versus poorest quintile are reported in tables 6.2 and 6.3 on page 79 respectively. The relative and absolute differences as well as the confidence intervals and p-values around these differences are also reported.

Personal Documents are required by all children who are in need of a medical treatment. As demonstrated in the previous chapter and in tables 6.2 and 6.3, 18.9% of Roma do not have health insurance cards.

Availability in this scenario is measured by whether a child has a family doctor. As shown in the previous chapter, the proportion of the total population with a family doctor is low and there is no statistically significant difference between any of the population groups.

Accessibility refers to whether a child is actually able to present at a primary care clinic or to a general practitioner. As can be seen in tables 6.2 and 6.3, a statistically significantly larger proportion ($p < 0.01$) of Roma live further than 5km from either a primary care centre or a general practitioner.

Affordability can be broken down into three separate questions: (1) whether the health service was not used due to prohibitive costs, (2) whether someone assisted in paying for the costs of healthcare, and (3) whether parents could afford to purchase medications. As illustrated in the previous chapter and in tables 6.2 and 6.3, the Roma are statistically significantly worse off than both the general population and poorest quintile in all three cases.

Acceptability was measured as recognition of the importance of the illness. It was assumed that if a mother sought advice from any source, then she saw her child's illness as important. Recognition of the importance of the illness was measured as the proportion of mothers who sought advice from an outside source including: seeking advice from neighbors, holding a religious ceremony, and taking the child to a medical centre. As can be seen in tables 6.2 and 6.3, there was no statistically significant difference between the Roma and general population or poorest quintile with regards to recognition of ARI a serious illness. Therefore, mothers from all population groups recognized ARI as a serious illness.

Effectiveness is defined as a combination of efficacy and diagnostic accuracy. Since there is no data on efficacy or diagnostic accuracy within the Roma in Serbia, studies from other sources were

sought. A systematic review²⁰⁵ on the efficacy of antibiotics to treat ARI found that 88% of the treatment group recovered, compared to 66% in the non-treatment placebo group. No studies indicating that there are differences across population groups could be found. Studies estimating diagnostic accuracy are limited across aspects of equity, therefore only the general population is compared to the Roma. Diagnostic accuracy in the general population is estimated at 73%. Only one study could be found on diagnostic accuracy in children of disadvantaged populations. From this study, it appears that children from more economically disadvantaged households are less likely to be accurately diagnosed by a healthcare professional than their richer counterparts²⁰⁶.

Conclusions

In conclusion, Roma children are statistically significantly more likely to experience an acute respiratory infection than either the general population or the poorest quintile. All three population groups are equally likely to not receive the correct treatment regime of antibiotics. Thus there is a considerable gap in effective coverage for all three population groups. As illustrated in the previous chapter, an analysis of the factors that affect quality of access reveals that personal documentation is a statistically significant problem, availability is not an issue that disproportionately affects the Roma, however the geographical accessibility and affordability are substantive issues that disproportionately affect the Roma population. With regards to acceptability, mothers from all three population groups are equally as likely to recognize the importance of seeking treatment. Looking at effectiveness, Roma and poor children are less likely to be accurately diagnosed, but once diagnosed are equally likely to benefit from the treatment.

Areas for improvement with regards to acute respiratory infection are both general and specific. In general terms, the Roma should be assisted in applying for personal documentation, the geographical accessibility of clinics needs to be addressed, and the costs of healthcare visits and medications should be reviewed. Areas for improvement specific to ARI are the costs of antibiotics and the diagnostic accuracy of providers. In addition, research on why a larger proportion of Roma are in need is required.

²⁰⁵ John Ioannidis and Joseph Lau, "Technical Report: Evidence for the Diagnosis and Treatment of Acute and Uncomplicated Sinusitis in Children: A Systematic Overview," *Pediatrics* 108, no. 57 (2008).

²⁰⁶ H. M. Malaty and others, "Helicobacter Pylori Infection in Asymptomatic Children: Impact of Epidemiologic Factors on Accuracy of Diagnostic Tests," *Journal of Pediatric Gastroenterology & Nutrition* 35, no. 1 (Jul, 2002), 59-63.

6.4 MDG5: Improve Maternal Health

As seen in table 6.1 on page 76, the two indicators for maternal mortality are the number of births attended by a skilled birth attendant and the proportion of women aged 15-49 years who use a modern method of contraception. The intervention chosen to illustrate the application of the framework to maternal health is the proportion of women of child-bearing age who use a modern method of contraception. This intervention was selected because utilization of modern methods of contraception is extremely low in all three population groups. This is in contrast to the number of births which are attended by a skilled birth attendant, which is quite high in all three groups with 99.4% (95% confidence interval 98.9 – 99.9) of births in the general population, 93.9% (95% confidence interval 91.8 – 96.0) of births in the Roma population, and 98.2% (95% confidence interval 96.2 - 100) of births in the poorest quintile occurring in a medical institution. In this section we shall apply the effective coverage framework to indicator six, which is the proportion of women of child bearing age that use a modern method of contraception.

Indicator 6: The proportion of women between the ages of 15 – 49 who use modern methods of contraception

The use of contraception among women of childbearing age is important to the health of women as contraception aids in preventing pregnancies that are too early, extends the time between births, and limits the number of children²⁰⁷. Each of these factors may result in an increased risk to women's health. In Serbia, where abortion rates are extremely high²⁰⁸, contraception may also prevent unwanted pregnancies and abortions. The use of modern methods of contraception include: female sterilization, male sterilization, pill, intrauterine device (IUD), injections, implants, condom, female condom or diaphragm/foam/jelly²⁰⁹.

Need

Need is defined as the number of sexually active women aged 15-49 that prefer not to have any more children. As discussed in chapter 2, the Roma tend to have very large

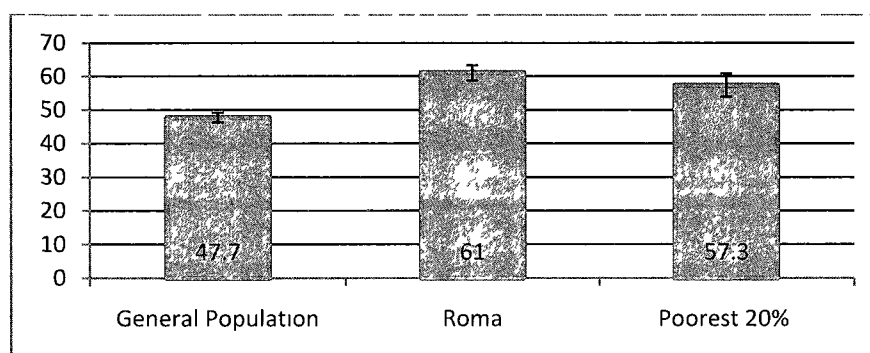
²⁰⁷ Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report*

²⁰⁸ Prvulovic, *Access to Sexual and Reproductive Health Care for Uprooted People and Romani Women and Youth in Southern Serbia*

²⁰⁹ Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency, *Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report*

households with women bearing an average of 3.3 children²¹⁰, compared to 1.38 children in the general population²¹¹. As can be seen in figure 6.4 and tables 6.4 and 6.5, the difference in proportion between the Roma and the general population with regards to whether they would like to have any more children is statistically significant ($p < 0.01$), with more Roma preferring not to have any more children. There is no statistically significant difference between the Roma and the poorest quintile with regards to whether they would like to bear any more children. The absolute difference between the proportion of Roma women who prefer not to have any more children and the general population is 13.1%; the relative difference is 1.3. Thus one can see from tables 6.4 and 6.5 that there is both a relative and absolute difference between the Roma and general population; these differences are highly statistically significant ($p < 0.01$). From this we can conclude that the need is much greater in the Roma population than the general population while no difference in need exists between the Roma and poorest quintile.

Figure 6.4 The proportion of sexually active women aged 15-49 that prefer not to have any more children, displaying the 95% confidence intervals for each proportion



Source: MICS 2005
Sample sizes: General Population 4614/ Roma 1776/ Poorest 808

²¹⁰ Prvulovic, *Access to Sexual and Reproductive Health Care for Uprooted People and Roma Women and Youth in Southern Serbia*

²¹¹ Statistical Office of the Republic of Serbia, *2002 Census of Population, Households and Dwellings*

Table 6.4 The factors that affect utilization applied to contraception usage in sexually active women aged 15-49 years of age. Roma versus the general population.

CONTRACEPTION USAGE AMONG SEXUALLY ACTIVE WOMEN AGED 15-49											
	General population	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	General pop sample size	Roma sample size	Source
NEED/ UTILIZATION											
<i>Need = number of women sexually active who prefer not to have any more children</i>	47.7	61.1	<0.01	13.30	1.3	10.6%	16.0%	7198	4614	1776	MICS
<i>Absolute number</i>	2200	1083									
<i>Effective Coverage = number of women who are pregnant who prefer not to be pregnant</i>	42.3	30.5	none	-11.80	0.7	-22.5%	-1.1%	318	157	151	MICS
<i>Actual Utilization = Currently not using a modern method of contraception</i>	77.8	96.9	<0.01	19.10	1.2	17.7%	20.5%	7895	5012	2045	MICS
PERSONAL DOCUMENTS											
Household members do not have health insurance	5.6	18.9	<0.01	13.3	3.4	9.7%	16.9%	17375	13309	456	LSMS 2007
AVAILABILITY											
Household members do not have a general practitioner	43.4	40.1	none	-3.3	0.9	-6.9%	0.3%	8047	5932	822	UNDP
ACCESSIBILITY											
More than 5km from the nearest Primary Medical Centre	4.9	11.6	<0.01	6.7	2.4	4.4%	9.0%	7931	5863	803	UNDP
More than 5km from the nearest General Practitioner	7.1	12.5	<0.01	5.4	1.8	2.9%	7.9%	7774	5800	721	UNDP
More than 5km from the nearest Polyclinic	33.3	58.6	<0.01	25.3	1.8	21.6%	29.0%	7341	5837	775	UNDP
AFFORDABILITY											
Have not used health services in the last month because they were too expensive	1.2	8.8	<0.01	7.6	7.3	4.6%	10.6%	11441	8580	352	LSMS 2007
Could not afford to buy medications in the last month because they were too expensive	38.5	67.4	<0.01	28.9	1.8	25.5%	32.3%	8084	5961	831	UNDP
Someone has assisted in paying for health care costs in previous 12 months	5.3	13.5	<0.01	8.2	2.5	2.4%	14.0%	7804	6928	133	LSMS 2007
ACCEPTABILITY											
Recognition of importance - Currently NOT using any method of contraception	57.5	74.8	<0.01	17.3	1.3	14.8%	19.8%	7198	4614	1776	MICS
EFFECTIVENESS											
Efficacy	32-99%										

Table 6.5 The factors that affect utilization applied to contraception usage in sexually active women aged 15-49 years of age. Roma versus the poorest quintile.

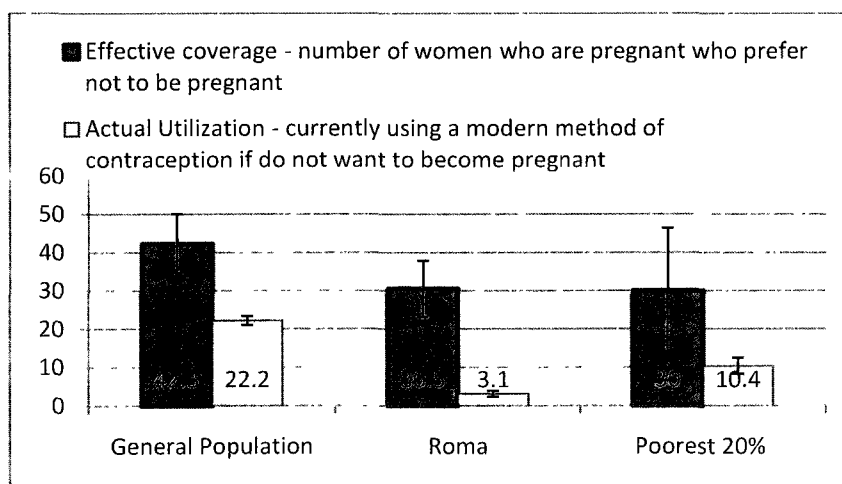
CONTRACEPTION USAGE AMONG SEXUALLY ACTIVE WOMEN AGED 15-49											
	Poorest 20%	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	Poorest 20% sample size	Roma sample size	Source
NEED/ UTILIZATION											
NEED/ UTILIZATION											
<i>Need = number of women sexually active who prefer not to have any more children</i>	57.3	61 none		3.7	1.1	-0.4%	7.8%	7198	808	1776	MICS
<i>Absolute number</i>	463	1083									
<i>Effective Coverage = number of women who are pregnant who prefer not to be pregnant</i>	30	30.5 none		0.5	1.0	-17.5%	18.5%	318	30	151	MICS
<i>Actual Utilization = Currently not using a modern method of contraception</i>	89.6	96.9		7.3	1.1	5.1%	9.5%	7895	838	2045	MICS
PERSONAL DOCUMENTS											
Household members do not have health insurance	9.8	18.9 <0.01		9.1	1.9	5.4%	12.8%	17375	3610	456	LSMS 2007
AVAILABILITY											
Household members do not have a general practitioner	41.6	40.1 none		-1.5	1.0	-5.8%	2.8%	8047	1293	822	UNDP
ACCESSIBILITY											
More than 5km from the nearest Primary Medical Centre	4.3	11.6 <0.01		7.3	2.7	4.8%	9.8%	7931	1265	803	UNDP
More than 5km from the nearest General Practitioner	10.8	12.5 none		1.7	1.2	-1.3%	4.7%	7774	1253	721	UNDP
More than 5km from the nearest Polyclinic	40.4	58.6 <0.01		18.2	1.5	13.7%	22.7%	7341	1179	775	UNDP
AFFORDABILITY											
Have not used health services in the last month because they were too expensive	3.2	8.8 <0.01		5.60	2.7	2.6%	8.6%	11441	2529	352	LSMS 2007
Could not afford to buy medications in the last month because they were too expensive	70.1	67.4		-2.7	1.0	-6.7%	1.3%	8084	1292	831	UNDP
Someone has assisted in paying for health care costs in previous 12 months	8	13.5 <0.05		5.50	1.7	-0.5%	11.5%	7804	1373	133	LSMS 2007
ACCEPTABILITY											
Recognition of importance - Currently NOT using any method of contraception	69.6	74.8 <0.05		5.2	1.1	1.4%	9.0%	7198	808	1776	MICS
EFFECTIVENESS											
Efficacy of antibiotic to treat API	no data	no data									
Diagnostic Accuracy	no data	no data									

Actual Utilization and Effective Coverage

Effective coverage is defined as the proportion of women that are not pregnant and would prefer not to be pregnant. One hundred percent effective coverage would imply that no women that prefer not to be pregnant are pregnant. In this case although the percent of pregnant women who would rather not be pregnant is quite high in all three population groups, as seen in figure 6.5, there is no statistically significant difference between any of the population groups.

Actual utilization is defined as the proportion of sexually active women between the age of 15 and 49 that are currently using any modern method of contraception. As can be seen in figure 6.5 and tables 6.4 and 6.5, only 3.1% of Roma women who do not want to become pregnant are currently using any modern method of contraception; compared to 22.2% of the general population ($p < 0.01$) and 10.4% of the poorest quintile ($p < 0.01$). The number of women who do not want to become pregnant and use modern contraceptive methods is extremely low in all three population groups, however the Roma are by far the least likely to use modern contraceptive methods.

Figure 6.5 The proportion of sexually active women between the ages of 15 and 49 that are pregnant and would prefer not to be pregnant compared to the proportion of women who use a modern method of contraception, displaying the 95% confidence interval for each proportion.



Source: MICS 2005

Effective Coverage Sample Size: Gen Pop 157/ Roma 151/ Poorest 30

Actual Utilization Sample Size: Gen Pop 5012/ Roma 2045/ Poorest 808

It is interesting to look at the type of contraception used as this will reveal whether women are using hormone changing contraceptives that require a prescription or condoms that do not change hormonal makeup and can easily be purchased in a general store. Of those women who use any method of modern contraception, 52.8% (95%CI; 21.3 – 44.3) of the Roma use only a condom compared to 66.9% (95%CI; 64.1 – 69.7) of the general population and 50.6% (95% CI; 40.1 – 61.1) of the poorest quintile. Therefore the proportion of Roma women who use hormone changing contraceptives that require a prescription is in fact extremely low, and condom usage appears to be the most popular method of modern contraception.

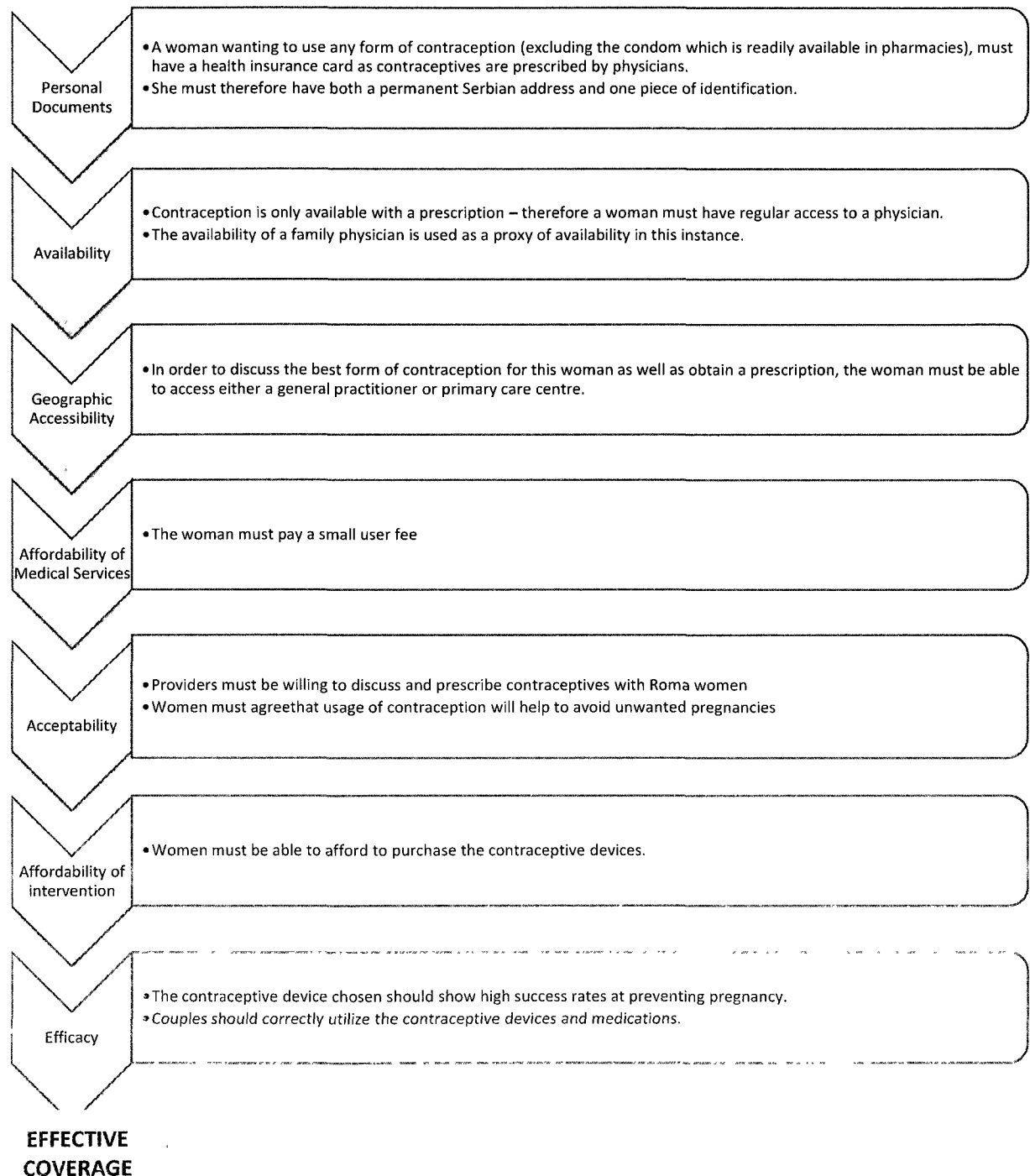
From this analysis, we can see that there is greater need in the Roma population because more women prefer not to have any more children. Analyzing patterns of utilization is interesting because although usage of modern contraception is significantly lower in Roma populations, the proportion of unwanted pregnancies is the same within all three population groups. One explanation for this incongruence may be due to the large numbers of abortion in the Roma population²¹². A mixed methods study conducted by CARE Serbia found that the average number of abortions per woman living in a Roma settlement was 4.6. Women may be relying on abortion as a means of contraception as opposed to modern contraceptive methods. A second reason may be due to high failure rates of condoms as a means with which to prevent pregnancy. Further study into the causes of this incongruence is needed before any conclusions may be drawn.

Quality of Access

As demonstrated above, the need in the Roma population is greater than in the general population or the poorest quintile. Effective coverage of contraceptive usage is quite low in all three population groups. The factors that affect whether a women in need receives the correct intervention are described under the quality of access. Figure 6.6 outlines the factors that affect the quality of access to contraception. Each of these potential barriers to access will be analyzed in more detail below.

²¹² Prvulovic, *Access to Sexual and Reproductive Health Care for Uprooted People and Romani Women and Youth in Southern Serbia*

Figure 6.6 Overview of the steps that a woman must take needs to take in order to achieve effective coverage for contraceptive usage.²¹³



²¹³ Unless otherwise indicated, all figures and tables included in this thesis were created by Leanne Idzerda © University of Ottawa 2009

For each factor that influences quality of access, the proportion of Roma versus general population and Roma versus poorest quintile are reported in tables 6.4 and 6.5 respectively. The relative and absolute differences as well as the confidence intervals and p-values around the differences are also reported in these tables. The 95% confidence intervals around the proportion for each population group are reported in appendix V. Throughout this description, it is important to note that a prescription is required for all modern methods of contraception except condoms.

Personal Documents are required by all women who need to see a medical practitioner in order to get a prescription for contraceptives. As can be seen in tables 6.4 and 6.5, 16.4% of Roma women do not have health insurance cards; this is statistically significantly higher than both the general population and poorest quintile ($p < 0.01$).

Availability in this scenario is measured by whether a woman has a doctor. As shown in the previous chapter there is no statistically significant difference between any of the population groups with regards to accessing a doctor.

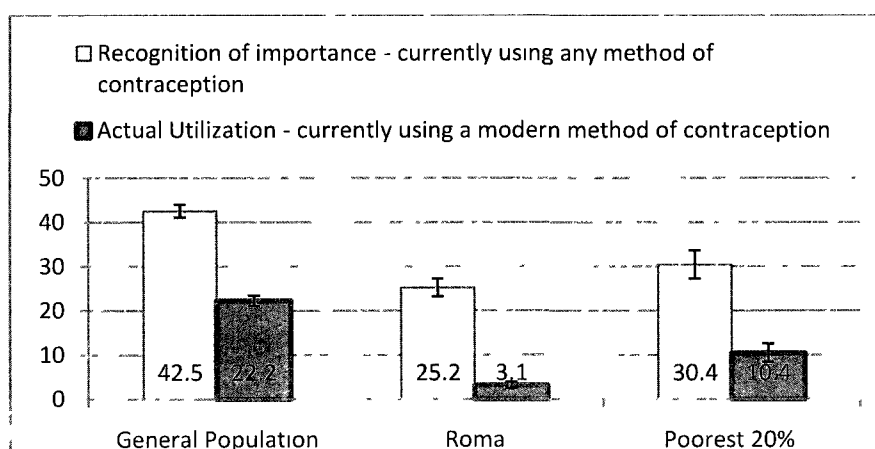
Accessibility refers to whether a woman is actually able to attend a primary care clinic or see a general practitioner. As illustrated in the previous chapter and again presented in tables 6.4 and 6.5, a statistically significantly larger proportion ($p < 0.01$) of Roma live further than 5km from either a primary care centre or a general practitioner. Thus they are forced to travel further distances in order to reach a primary care provider.

Affordability can be broken down into three separate questions; (1) whether the health service was not used due to prohibitive costs, (2) whether someone assisted in paying for the costs of healthcare, and (3) whether women could afford to purchase medications. As can be seen in table 6.4 and 6.5, the Roma were statistically significantly worse off than both the general population and poorest quintile in all three cases. From this analysis, one can see that even if Roma women are prescribed contraceptives by the physician, they may still not be able to purchase them if they are too costly.

Acceptability was measured using two indicators; (1) recognition of the importance of using contraception to prevent unwanted pregnancy and (2) adherence to the contraceptive

methods. Recognition of importance of using contraception to prevent unwanted pregnancy was measured as the proportion of women who used any means of contraception including any of the modern methods described above or traditional methods, defined as the lactational ammenhoria method, periodic abstinence, or withdrawal. Figure 6.7 reveals that utilization of any method of contraception is extremely low in all three population groups. As can be seen in figure 6.7 and tables 6.4 and 6.5, the number of Roma women who prefer not to become pregnant and are using *any* method of contraception is 25.2% in the Roma compared to 42.5% in the general population ($p < 0.01$) and 30.4% in the poorest quintile ($p < 0.05$). The absolute difference in proportions between the Roma and general population is 17.3% and the relative difference is 1.3.

Figure 6.7 The proportion of sexually active women aged 15-49 who do not want to become pregnant who are using any method of contraception compared to the proportion of women who use a modern method of contraception, displaying the 95% confidence interval for each proportion.



Source: MICS 2005

Recognition of Importance Sample size: Gen Pop 4614/ Roma 1776/ Poorest 808

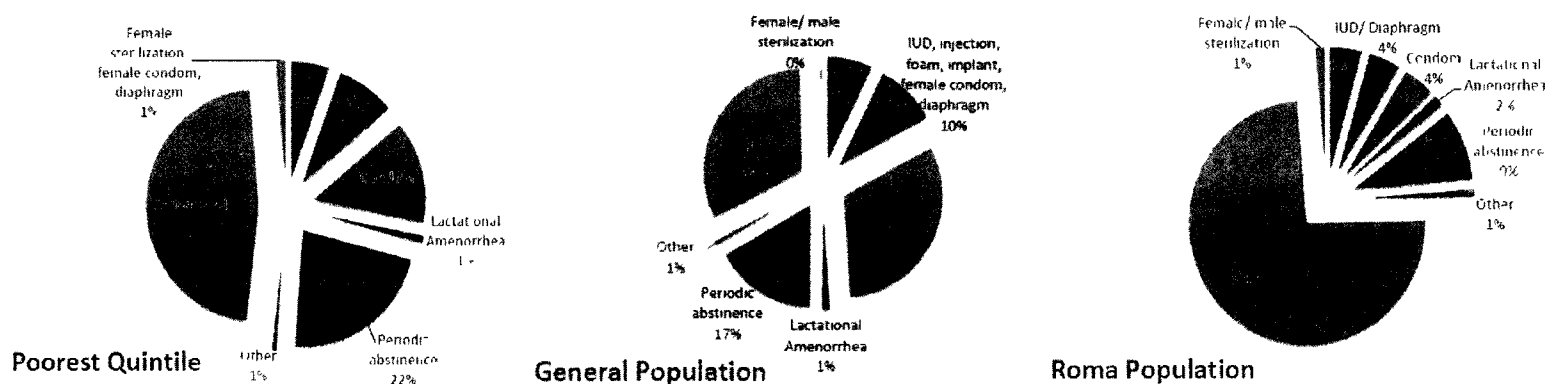
Actual Utilization Sample Size: Gen Pop 5012/ Roma 2045/ Poorest 808

Although recognition of importance is low in all three population groups, it is statistically significantly lower in the Roma with only 25.2% of women who do not want to become pregnant practicing any form of birth control. It would therefore appear that women do not recognize the importance of using any contraceptive methods in order to prevent unwanted pregnancies. It is interesting to compare this trend to the actual utilization rates, which is the proportion of women who are using a modern contraceptive method. Figure 6.7 reveals that there is a large

discrepancy between those women who use any contraceptive method and those that use a modern contraceptive method within all three population groups.

Figure 6.8 takes this analysis one step further by breaking down all methods of contraception by population group for those persons that report using contraception. As can be seen in these figures, all three population groups use withdrawal as their main method of contraception; in addition, the general population is also much more likely to use condoms. The reason for the discrepancy in contraception usage may be due to: skepticism regarding the use of modern methods of contraception, preference for traditional methods, or it could be due to the factors that affect quality of access. More research into why women choose not to use modern methods of contraception would be quite useful. As we have seen above, women may not be able to see a family physician, may not be able to afford contraception, or may not recognize the important role that contraception plays in preventing pregnancies. More research into men and women's attitudes towards utilization of contraception needs to be conducted before any conclusions can be drawn.

Figure 6.8 The proportion of each population by method of contraception



Sample: MICS 2005

Sample Size: Gen Pop 5012/ Roma 2045/ Poorest 808

Data on adherence to contraceptive methods was not available for the Roma in Serbia. From studies published in the United States on adherence to modern methods of contraception, it was found that disadvantaged African-American populations were much more likely to experience an unwanted pregnancy in the first 12 months of contraceptive use due to the

failure of contraception than their more affluent white counterparts²¹⁴ Given the parallel marginalization of African-American populations in the United States to the marginalization of Roma in Serbia, it is quite likely that the situation is similar in Serbia with Roma and poor populations experiencing a higher rate of failure of contraception than the general population However, given the low rates of modern contraception usage among the Roma population, contraception failure is probably not having a major impact

Effectiveness is defined as a combination of the efficacy of modern contraceptives and community effectiveness, or real world effectiveness, of an intervention²¹⁵ (Tugwell and others 2006, 358-361) Since there is no data on efficacy within the Roma in Serbia, studies from other sources were sought A systematic review²¹⁶ identified that the efficacy of modern methods of contraception is between 82 (diaphragm) and 99% (pill, IUD) No studies reporting a difference between population groups could be found Previous studies have shown that community effectiveness is likely much lower than efficacy rates due to improper usage as described above under compliance and adherence²¹⁷

Conclusions

From this analysis one can see that a larger proportion of the Roma and the poorest quintile women prefer not to have any more children, therefore the need among Roma women is greater Looking at effective coverage, we see that the number of women who are pregnant who prefer not to be pregnant is the same across all three population groups This is interesting given the fact that actual utilization rates of modern contraceptives are so much lower in the Roma than the general population or the poorest quintile An analysis of the factors that affect quality of access reveals that personal documentation is a significant problem, availability is not an issue specific to the Roma, and geographical accessibility and affordability are substantive

²¹⁴ Nalini Ranjit and others, "Contraceptive Failure in the First Two Years of use Differences Across Socioeconomic Subgroups," *Family Planning Perspectives* 33, no 1 (2001), 19

²¹⁵ Tugwell and others, *Applying Clinical Epidemiological Methods to Health Equity The Equity Effectiveness Loop*, 358-361

²¹⁶ R French and others, "Hormonally Impregnated Intrauterine Device Systems (IUDs) Versus Other Forms of Reversible Contraceptives as Effective Methods of Preventing Pregnancy" *The Cochrane Library*, no 1 (2003)

²¹⁷ Ranjit and others, *Contraceptive Failure in the First Two Years of use Differences Across Socioeconomic Subgroups*, 19

issues that disproportionately affect the Roma population. With regards to the acceptance of the intervention, it would appear that women do not recognize the importance of birth control in preventing pregnancies due to the extremely low rates of usage of any contraceptive method, not only in the Roma, but in all three population groups. Finally, looking at studies on adherence in other marginalized population groups, one finds that failure rates among women of marginalized populations are significantly higher than that of the general population.

Areas for improvement with regards to contraceptive usage are both general and specific. In general terms, the Roma should be assisted in applying for personal documentation, the geographical accessibility of clinics needs to be addressed, and the costs of healthcare visits and medications should be reviewed. Areas for improvement specific to contraceptive usage are increasing the knowledge and usage of modern contraceptives among all three population groups, but especially among the Roma. More research into why women in all three population groups in Serbia do not use any form of contraception needs to be conducted with a special sub analysis of the Roma population as their rates of utilization are so much lower.

6.5 Conclusions on Application

From these two applications of the effective coverage framework to the MDG targets, one can see that there are differing reasons why the Roma do not have effective coverage of primary healthcare services. These reasons are both at the general level, and thus applicable to all primary care interventions, and also at the specific level, and thus applicable to the specific intervention in question. These two applications have shown the usefulness of the effective coverage framework in identifying gaps in service coverage for the delivery of the Millennium Development Goals. In addition to the framework's usefulness in identifying areas where access could be improved in order to meet the MDGs, this application also reveals areas where service delivery can be improved for the total population and Roma subpopulation.

Chapter 7 Conclusions and Recommendations

In this chapter, the methodological issues and limitations of this study will be discussed in detail. Next, the conclusions and recommendations for both policy and future research will be presented for each aspect of the effective coverage framework. This is followed by a short discussion of the viability of implementation of these recommendations. Finally, what this thesis adds to the state of knowledge and research is discussed.

7.1 Methodological Challenges and Limitations

In this section, the main methodological challenges and limitations of the study will be discussed in detail. Five methodological issues have been identified: self identification of Roma, lack of disaggregated data, data collection by different organizations, use of secondary data and limitations of the effective coverage framework.

The first issue relates to how the Roma study population is defined. In any study of a marginalized population group, defining the population by self identification is difficult due to the excluded group often not identifying themselves as part of that group due to discrimination. On the other hand defining a population based on ethnicity by an outsider may cause further discrimination. This study attempted to overcome this issue by defining the population based on their place of residence, i.e. those persons living in Roma settlements. By including only individuals that live in settlements, it is possible that important Roma population groups are excluded. In addition, non-Roma who live in these areas are by definition included. It is therefore important to note that these results are only generalizable to those persons that live in Roma settlements and not to the Roma population as a whole.

A second potential limitation of this study is the fact that data in Serbia is not usually disaggregated at the population level and so although numerous sources were searched (please see appendix I), only three datasets were included in this study. This meant that although this study was able to report on some aspects of effective coverage, such as affordability, data on other factors such as discrimination and patient satisfaction were not available at the disaggregated level.

Recommendation:

1. In the future, it would be important to incorporate questions into both census data and household surveys that would allow for the disaggregation of data at the population level (i.e. analyze Roma separately).

The third potential limitation of this study is the fact that data was analyzed from a number of different sources. Although this was necessary in order to incorporate as much data as possible into the study, it is important that while reading this study, one takes into account the varying populations surveyed. The source of the data, original questions asked, and method of computation can all be found in appendix III.

The fourth limitation is with regards to the use of secondary data. Secondary data is only as good as the research that produced them and thus may have limitations. Although this research relies on the documentation of the original datasets, bearing in mind that there may have been bias in the sample collection phase, we believe that the data is both valid and reliable given the description of survey methodologies as well as discussions with individuals in Serbia who administered the surveys. In addition, the surveys were all conducted in Serbian and then translated to English; therefore there may be jargon in the wording that is not captured in the translations. Following discussions with data holders in Serbia, we believe that the concepts were accurately interpreted and are reflected in the English datasets utilized in this research.

The fifth limitation is a limitation of the effective coverage framework in general. Effective coverage can only truly be measured through clinical confirmation. For example, in the acute respiratory infection (ARI) application presented in chapter 6, use of antibiotics was used as a proxy for effective coverage, but true effective coverage can only be measured by clinical assessment and laboratory investigation. In this case a clinical assessment, laboratory test, or x-ray confirming the presence of ARI before antibiotics are prescribed and again after the treatment course confirming that the ARI has been resolved. As clinical confirmation is difficult to gather on a large scale, application of this framework usually requires that proxies be used to measure the extent of coverage.

It is important to bear in mind these methodological challenges when interpreting the conclusions and recommendations in the next section.

7.2 Conclusions and recommendations

This research sought to assess whether the Roma population are able to effectively access primary care services, and if not, what barriers prevent them from doing so. Effective coverage of the Roma was compared to both the general population and the poorest quintile in order to identify gaps in coverage. By comparing the Roma to the poorest quintile, this thesis showed that the Roma's situation is more than merely a result of their lower socioeconomic status and that they are disadvantaged across a number of strata that may affect access, defined by PROGRESS (place of residence, race/ ethnicity, occupation, gender, religion, education level, socioeconomic status, and social capital)²¹⁸. Given that the Roma are less likely to effectively use health services, this research sought to determine what specific barriers prevent them from doing so. The barriers to access were analyzed using the effective coverage framework, which defines access as more than merely utilization by taking into account affordability, availability, accessibility, acceptability and effectiveness of health services²¹⁹.

The conclusions and policy recommendations outlined by this research were structured using the Global Equity Gauge framework²²⁰. According to this framework, policy is defined as a broad range of actions undertaken by the government, these range from formal actions, such as change in laws, to more informal procedural changes, such as changes in 'policy and procedural' manuals²²¹. According to readings on Knowledge Translation and Implementation from the Equity Oriented Toolkit, policies involve,

"making choices, both about what to do ("the selection of goals") and about how to achieve those goals. Policies are not the same as programs - decision makers might decide to do nothing. Policies are not laws - there are many ways to achieve particular goals, of which passing laws is only one. Neither are policies the same as outcomes - policies may fail to achieve their desired goals. Finally, policies are not restricted to government, particularly when responsibility over particular situations rests with non-governmental actors"²²²,

²¹⁸ Tugwell and others, *Applying Clinical Epidemiological Methods to Health Equity: The Equity Effectiveness Loop*, 358-361.

²¹⁹ Shengelia and others, *Access, Utilization, Quality, and Effective Coverage: An Integrated Conceptual Framework and Measurement Strategy*, 97-109.

²²⁰ Global Equity Gauge Alliance, "Health Equity: Research to Action" (Course Reader, Durban, South Africa, 2004).

²²¹ Ibid.

²²² Chitr Sithi Amorn and others, "Equity Oriented Toolkit: Knowledge Translation and Implementation" (The WHO Collaborating Centre for Knowledge Translation and Health Technology Assessment in Health Equity, 2004).

In addition, recommendations for policy need to take into account: political commitments and national obligations; national development policy; health needs and demands of the people for health services; and the vested interests of stakeholders²²³.

This research has used these principles to guide the presentation of the conclusions and recommendations. For each barrier to access, the context is provided, followed by a summary of the main subgroups of Roma affected. Next a summary of the issues is presented including: what others have recommended, what is currently being done, and what has worked in similar situations. Finally, based on all this information, policy recommendations and recommendations for future research are offered.

7.2.1 Lack of personal documents

Context

The analysis of data on personal documents revealed that 18.9% of the Roma do not possess personal documentation, including a health insurance card. Without this health card, they are not able to gain access to the primary health system.

What is the evidence for use of health insurance cards?

Numerous studies and systematic reviews have shown that public healthcare systems, based on free health coverage with the possession of a health insurance card, is advantageous for the poor communities^{224 225}. This however is only true if those communities are able to access a health card.

As discussed in chapter 5, the Roma people who are most affected by the lack of personal documents are as follows; (please see page 43 for the analysis on Personal Documents)

Place: The rural Roma population is significantly less likely to possess a health insurance card.

²²³ Ibid.

²²⁴ Björn Ekman, "Community-Based Health Insurance in Low-Income Countries: A Systematic Review of the Evidence," *Health Policy and Planning* 19, no. 5 (2004), 249–270.

²²⁵ Menno Pradhan, Fadia Saadah and Robert Sparrow, "Did the Health Card Program Ensure Access to Medical Care for the Poor during Indonesia's Economic Crisis?" *The World Bank Economic Review* (January 2007, 2007).

Race/ ethnicity: The Roma are much less likely than either the general population or the poorest quintile to possess a health insurance card.

Occupation: Lack of personal documents affects the employed and unemployed equally

Gender: Lack of personal documents affects Roma men and women equally.

Religion: no data

Education: Lack of personal documents affects educated and non-educated persons equally.

SES²²⁶: The Roma are much less likely than the poorest quintile to possess a health insurance card. In addition, they are more likely to perceive registration fees as a barrier to obtaining personal documents.

Social capital: no data

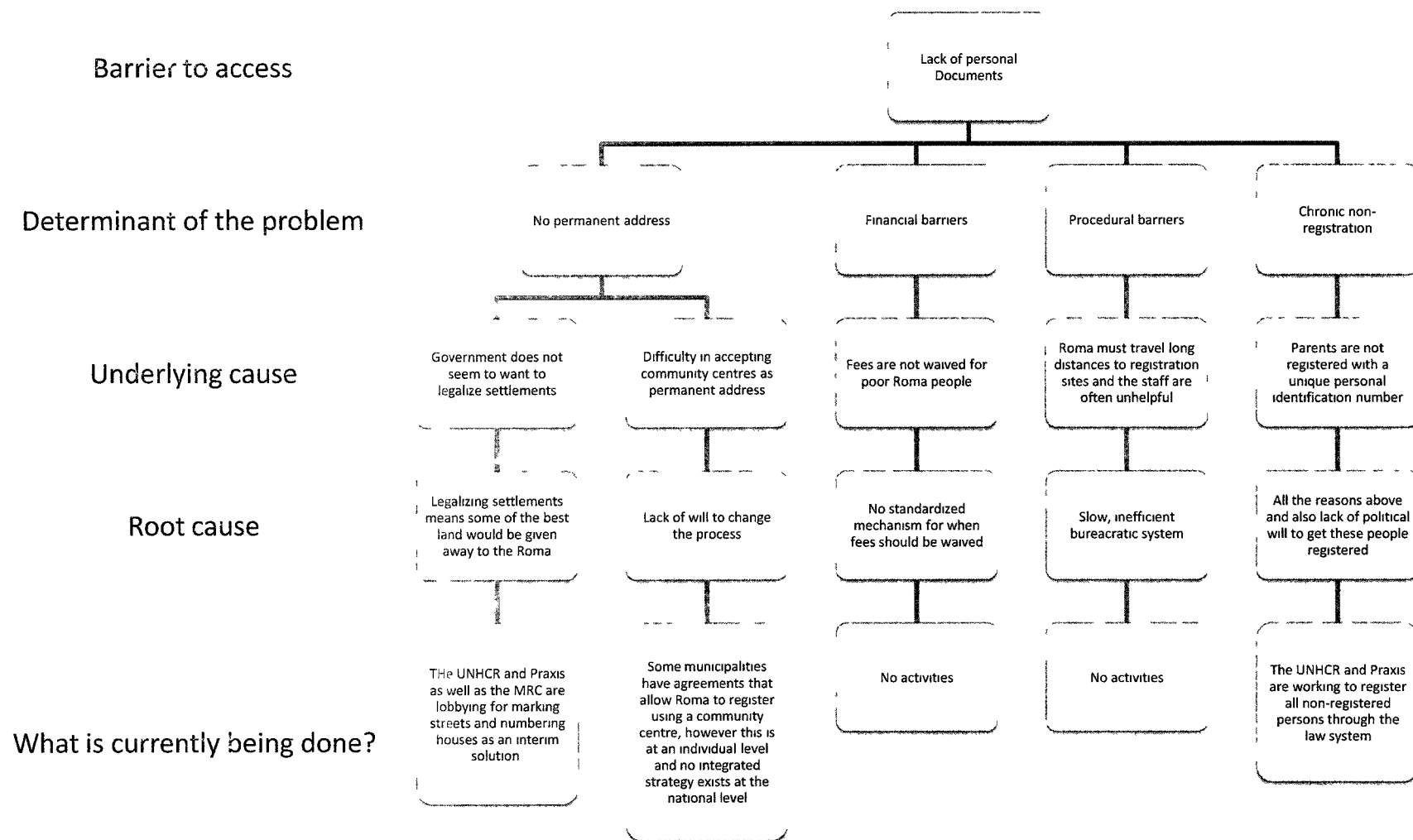
Summary of issues affecting the lack of personal documents

As described in chapter 5, the reason that Roma do not possess these documents seems not to lie in knowing how or where to register, but rather in the actual registration process.

Four main issues seem to affect the registration of Roma: the lack of a permanent address, financial barriers, procedural barriers, and chronic non-registration. Please see figure 7.1 for a graphical depiction of these issues, each of which will be discussed in detail below.

²²⁶ Socioeconomic status

7.1 Summary of issues affecting the lack of personal documents



This diagram is based on the Global Equity Gauge Framework (Global Equity Gauge Alliance 2004)

7.2.1.1 No permanent address:

As described in chapter 5, and summarized in figure 7.1, there are two main reasons that Roma do not possess a permanent address. These are (1) the fact that government officials do not want to legalize settlements as this would imply that some of the best land be given away to Roma, and (2) not allowing the Roma to register using the address of a community centre due to the lack of willingness to change the bureaucratic process.

What have others recommended?

- a) **Minority Rights Centre**, “Change the Regulation on determining housing numbers so that this operation together with marking streets in informal settlements could be performed. Thus, Roma that live in such settlements could register their residence and realize their social and economic rights, just as all other citizens.”²²⁷
- b) **World Bank**, “While a new and comprehensive registration effort is required in the long term... applying temporary “proxy-residential registration” through the municipal centers for social work or allocating temporary numbers to households instead of addresses could be a short term solution.”²²⁸

What is currently being done?

As described in figure 7.1, the UNHCR and Praxis as well as the MRC are lobbying for marking streets and numbering houses as an interim solution to the legal recognition of settlements. In addition, some municipalities have agreements that allow Roma to register using a community centre – for example Kragujevac. This is, however, at an individual level and no integrated strategy exists at the national level.

What has proven to work elsewhere in solving this problem?

Other countries that have large informal settlements, such as South Africa, have used informal addresses, such as housing numbers, PO Box numbers, and landmark addresses, as a

²²⁷ Colak, *Decade of Roma Information Booklet of Minority Rights Center: Abuses of Roma Rights in Serbia*.

²²⁸ Bodewig and Sethi, *Poverty, Social Exclusion and Ethnicity in Serbia and Montenegro: The Case of the Roma*.

means with which to provide an address to occupants without formalizing the settlement; thereby avoiding potential land claim registrations by occupants²²⁹.

Recommendations:

1. Until such a time as political will to legalize informal settlements exists, the current settlements should be equipped with temporary house numbers. In addition households should register with the local authorities to confirm their residence status.

2. An integrated strategy at the national level that allows Roma to register their permanent address as a local community centre needs to be implemented as an interim solution.

7.2.1.2 Financial barriers:

As described in chapter 5, and summarized in figure 7.1 on page 102, persons applying for an ID card must pay a Republic fee as well as a Municipal Administrative fee. Although it is possible to have both these fees waived, in reality the UNHCR has found little evidence to support that these fees are in fact reduced for Roma²³⁰. This is likely due to the fact that there are no standardized mechanisms in place to guide administrators on when to reduce fees.

What have others recommended?

- a) No recommendations on fee payments have been made to date

What is currently being done?

No activities are currently being implemented.

Recommendations:

4. Standardization and training to guide administrators on when to reduce fees would help maintain consistency and minimize discrimination.

7.2.1.3 Procedural barriers:

As described in chapter 5 and summarized in figure 7.1, many people find the registration process complex and cumbersome to complete. Individual applicants may need to travel long

²²⁹ Serena Coetzee and Antony Cooper, "What is an Address in South Africa?" *South African Journal of Science* 103 (November, 2007), 449.

²³⁰ Praxis and UNHCR, *Analysis of the Situation of Internally Displaced Persons from Kosovo in Serbia: Law and Practice*.

distances in order to obtain birth certificates or visit their closest registration office. They may also be faced with staff that lack the will to assist in the process or are inflexible in their demands. After completing the arduous application process, the processing time may be extremely long and documents may take months to reach the applicants²³¹.

What have others recommended?

- a) UNHCR, “Pass new procedural norms aimed at improving access to documents for IDPs [and Roma] in Serbia – either through the introduction of an amendment to existing laws on administrative proceedings and/or through the introduction of a new non-contentious procedure for determining the fact of birth.”²³²

What is currently being done?

The Ministry of Health is currently implementing a Roma Mediator Program, which aims to train selected Roma community members in health issues affecting the population in their settlements. In addition, this program has begun to train mediators in the process of applying for documentation.

Recommendations:

5. Review the registration procedure in order to determine where the process is arduous and implement administrative processes that overcome these barriers. For example, representatives within the settlements could be hired to assist in Roma the completion of necessary forms as well as educate on the application process.

6. An evaluation of the Roma health mediator program should be conducted in order to determine whether the program is working. This should be completed in conjunction with a publication of best practices from the evaluation.

7.2.1.4 Chronic non-registration:

As described in chapter 5 and summarized in figure 7.1 on page 102, the problem of chronic non-registration of Roma severely affects the new generation. As many children are born to parents

²³¹ Ibid.

²³² Ibid.

who do not possess a unique personal identification number and thus do not have legal status within Serbia, their children cannot register with the authorities²³³.

What have others recommended?

- a) **Minority Rights Centre**, "It is recommended to determine the number of people without health insurance and then to provide continued information about the procedure of obtaining health cards." ²³⁴

What is currently being done?

The UNHCR and Praxis are currently working to register all non-registered persons. They are implementing a program that provides legal advice and services to non-registered Roma and internally displaced persons (IDPs) in order to help them gain personal documentation²³⁵.

Recommendations:

7. The number of unregistered persons needs to be determined so that registration processes undertaken by the UNHCR and Praxis may be monitored as they continue to persevere with the registration of chronically unregistered Roma.

Conclusions on System Barriers (Personal Documentation)

This section has discussed how access to a health insurance card may be improved for members of the Roma community. The possession of a health insurance card is a precondition to accessing health care services therefore, it is crucial that this system barrier is overcome through the uptake of the recommendations outlined above.

Future research:

Further research into whether Roma want to register should be conducted, particularly among high risk groups such as returnees from Western Europe and internally displaced persons from Kosovo. Further research also needs to be conducted on the most efficient and effective ways to overcome the barriers to registering. Evaluation of the strategies currently in place would be

²³³ Ibid.

²³⁴ Colak, *Decade of Roma Information Booklet of Minority Rights Center: Abuses of Roma Rights in Serbia*.

²³⁵ Praxis and UNHCR, *Analysis of the Situation of Internally Displaced Persons from Kosovo in Serbia: Law and Practice*.

extremely helpful as a means with which to determine whether the current programs are in fact working.

7.2.2 Availability

Context

The analysis on the availability of services²³⁶, measured using the proxy of access to a family physician, revealed that availability is constant across all population groups, with only 40.1% of the Roma having a family physician. Although the availability of a family physician could be increased for the entire population, it is not a problem that is specific to the Roma population.

What is the evidence for the importance of having a family physician available?

There is much evidence to support the role that the family physician plays in allowing an individual to access the primary care system effectively. Most recently the 2008 World Health Report, Primary Health Care Now More Than Ever highlighted the essential role that family physicians play in maintaining positive health status²³⁷.

As discussed in chapter 5, the Roma people who are most affected by the lack of a family physician are; **(please see page 53 for the analysis on**

Availability)

Place: Roma living in urban centres are less likely to have a family physician

Race/ ethnicity: There is no difference between the Roma and general population with regards to whether they have a family physician.

Occupation: The employed Roma are less likely to have a family physician

Gender: Roma men are less likely to have a family physician

Religion: no data

Education: Roma with incomplete high school are less likely to have a family physician

²³⁶ Please see page 62

²³⁷ Evans and Van Lerberghe, *World Health Report: Primary Health Care Now More than Ever*.

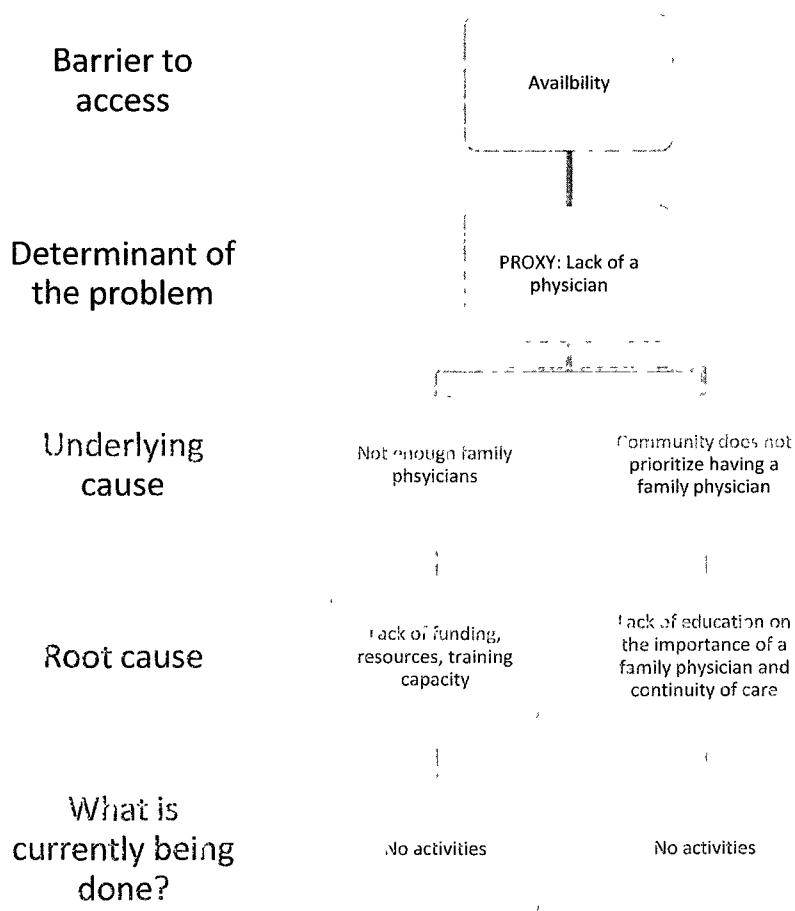
SES: There is no difference between the Roma and poorest quintile with regards to whether they have a family physician.

Social capital: no data

Summary of issues affecting the availability of family physicians

As described in chapter 5 and summarized in figure 7.2, the proxy for whether health services are available to an individual was measured using accessibility to a physician. As described in figure 7.2, there are two potential reasons that an individual would not have a physician; (1) there are not enough physicians, and (2) access to a physician is not prioritized by the individual or community. The first issue is a result of lack of funding, resources, or training capacity, while the second issue is a result of lack of education on the importance of a physician and continuity of care.

Figure 7.2 Summary of issues affecting the availability of services



What have others recommended?

- a) The Government has recommended that all, including the Roma, get their own chosen physician.

What is currently being done?

No activities are currently being implemented.

What has proven to work elsewhere in solving this problem?

Shortage of healthcare workers is a problem that affects countries in all regions of the world and many solutions have been proposed to mitigate this issue. The 2006 World Health Report on Working Together for Health outlines a number of strategies for scaling up the workforce including recommendations for training new health workers, optimizing the current workforce members' skills, and managing the migration of health workers²³⁸. In addition, the Global Health Workforce Alliance has developed a Resource Requirements Tool that can be used to (i) estimate and project the resources required for meeting their HRH plans; (ii) analyze the plans' affordability; (iii) simulate "what if" scenarios; (iv) facilitate the monitoring of scale up plans; (v) contribute to the development of the cost and financing component of Human Resource Management Information Systems²³⁹. As demonstrated above, there are a number of potential solutions to increase the number of persons that have a physician available.

Recommendations:

8. Although the availability of physicians is not an issue that disproportionately affects the Roma, research into the root causes of why persons do not have a chosen practitioner should be undertaken. With this knowledge, an integrative plan that takes into account the recommendations from the 2006 World Health Report and Global Health Workforce Alliance can be developed.

7.2.3 Geographical Accessibility**Context**

The analysis on the geographical accessibility to both primary care centres and general practitioners revealed that accessibility is excellent with 88.4% of the Roma living within 5km of a

²³⁸ Lincoln Chen and others, *The World Health Report 2006: Working Together for Health*. (Geneva, Switzerland: World Health Organization, [2006]).

²³⁹ More information on the Global Health Workforce Alliance can be found at <http://www.ghwa.org/>

primary care centre and 87.5% of Roma living within 5km of a general practitioner²⁴⁰. Although this level of access is excellent, the Roma are still much further away from primary care centres and polyclinics than either the general population or the poorest quintile.

As discussed in chapter 5, the Roma people who are most affected by geographical accessibility are as follows **(please see page 54 for the analysis on**

Accessibility):

Place: The rural Roma population is much less likely than the urban Roma to be able to access a primary care centre, a general practitioner or a polyclinic. In addition, the urban Roma are more likely to be further than 5km from the clinics as compared to the general population.

Race/ ethnicity: A larger proportion of the Roma are more likely to be further than 5km away from a primary care centre, general practitioner, or polyclinic than the general population.

Occupation: The unemployed are more likely to live further away from a primary care centre.

Gender: There is no difference between the male and female Roma population with regards to accessing a family physician.

Religion: no data

Education: Roma with incomplete high school are less likely to have a family physician

SES: A larger proportion of the Roma more likely to be further than 5km away from a primary care centre, general practitioner, or polyclinic than the poorest quintile.

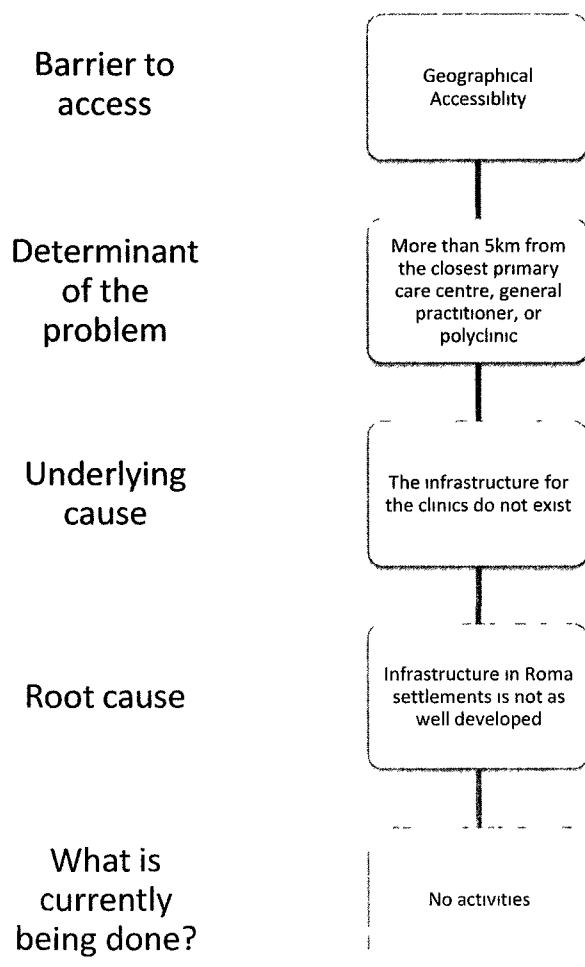
Social capital: no data

Summary of issues affecting geographical accessibility

As described in chapter 5, and summarized in figure 7.3, the proxy for whether health services are available to an individual was measured using geographical accessibility to a primary care center, general practitioner, or polyclinic. As described in figure 7.3, the main reason that a person lives further than 5km from a medical institution is simply due to lack of infrastructure. In the case of the Roma, this is likely due to the fact that the infrastructure of the settlements is not well developed, particularly in the informal settlements.

²⁴⁰ Please see page 63

Figure 7.3 Summary of issues affecting the geographical accessibility of services



What have others recommended?

- a) World Bank, "In cooperation with the non-government organizations, hospitals should form medical teams for field work. A medical team should consist of doctors, community-health nurses, social workers and Roma coordinators for health services. Roma mediators for health services mediate between the health services and Roma families. Medical teams should visit Roma families with health problems, educate people on health by working in

small groups, run counseling services in hospitals, check patients in hospitals, support Roma in realization of basic rights to health and social care.”²⁴¹

- b) **World Bank**, “Boosting a family medicine approach with primary health centers located close to and catering to Roma settlements can help tackle chronic health problems. This involves a **preventive health care** strategy of scaled-up immunization, preventive child health care and raising awareness among the Roma population most at risk. Overcoming access barriers relies crucially also on training staff in health care centers close to Roma settlements and on providing language and translation services, ideally through Roma staff.”²⁴²

What is currently being done?

The Government of Serbia is currently training and placing a network of Roma health mediators. It is hoped that these persons could act as inter mediatory between the Roma and healthcare workers. The goal of the Roma health mediators is also to identify community health problems and work with health professionals to aid them in visiting and performing clinics in the community.

What has proven to work elsewhere in solving this problem?

Although coverage of the population in Serbia is excellent, it is the rural population that is most disadvantaged. A systematic review²⁴³ on increasing the proportion of health professionals practicing in rural and underserved areas found very low quality evidence to support the following interventions,

- Health professionals from rural backgrounds are more likely to practice in rural areas
- Evidence from 4 quasi-randomized trials suggests that clinical rotations in a rural setting may influence medical students subsequent decisions to work in an underserved area

²⁴¹ Bodewig and Sethi, *Poverty, Social Exclusion and Ethnicity in Serbia and Montenegro: The Case of the Roma*

²⁴² Ibid

²⁴³ M. Chopra, “Which Interventions Increase the Proportion of Health Professionals Practising in Underserved Communities? A SUPPORT Summary of a Systematic Review” (August, 2008), <http://www.supportcollaboration.org/summaries.htm>

- The effectiveness of compulsory placement has been assessed by descriptive surveys with inconclusive results
- Loan repayments, direct incentives and medical resident-support programs to encourage rural placement have the highest service completion rates and physician retention rates²⁴⁴

Although these interventions are supported by very low quality evidence, this is the best evidence that exists and further research into the viability of these interventions should be conducted in the Serbian context if they are to be implemented.

Recommendations:

9. Geographical accessibility for rural Roma should be made a priority and evaluation of the feasibility of identified interventions would be helpful within the Serbian context.

Future Research

Further research into the modes of travel, such as whether people are using public or private transport, and travel time would be interesting in order to ascertain how much of a barrier this distance of 5km is in reality²⁴⁵.

7.2.4 Affordability

Context

The analysis of the affordability of services revealed that all three population groups are required to pay the same out-of-pocket expenses, however the Roma are much more likely not to be able to afford these costs and therefore not utilize the services; 56.4% of the Roma population did not utilize services in the previous month because they were too expensive²⁴⁶. In instances where the Roma do use health services, they are more likely to seek external assistance in order to pay for these services. With regards to spending on medications, it was found that all population

²⁴⁴ Ibid.

²⁴⁵ McLafferty, *GIS and Health Care*, 25

²⁴⁶ Please see page 67

groups had difficulty in buying medications, however, the poorest quintile and the Roma had the most difficulty with 70.1% and 67.4% not being able to pay for medications respectively.

As discussed in chapter 5, the Roma people who are most affected by user fees and drug co payments are as follows **(please see page 58 for the analysis on**

Affordability):

Place: There is no difference between rural and urban Roma with regards to ability to pay either user fees or drug co payments.

Race/ ethnicity: The Roma are much less likely to be able to afford both user fees and co payments for medications than the general population.

Occupation: There is no statistically significant difference between employed and unemployed Roma with regards to ability to pay either user fees or drug co payments.

Gender: There is no difference between male and female Roma with regards to ability to pay either user fees or drug co payments.

Religion: no data

Education: Roma with incomplete high school are much less likely to be able to afford copayments for medications

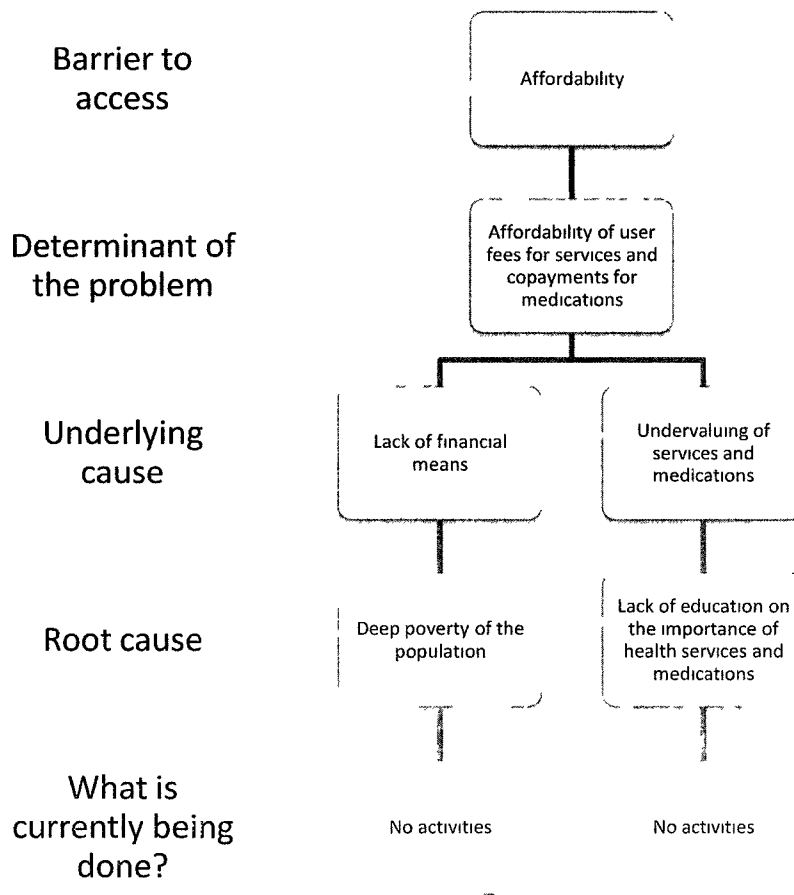
SES: The Roma are much less likely to be able to afford both user fees than the poorest quintile, however there is no difference with regards to the out-of-pocket payments for medications.

Social capital: The Roma appear to possess more social capital in this instance as they are more likely to be able to find external sources of funding.

Summary of issues affecting the affordability of health services and medications:

As described in chapter 5 and summarized in figure 7.4, affordability refers to both the affordability of user fees for services as well as the affordability of copayments for medications. As described in figure 7.4, there are two potential reasons that an individual cannot afford to pay the user fees or copayments; (1) they lack the financial means, or (2) they do not value health services or medications. The first issue is a result of poverty in the community, while the second issue may be a result of lack of education on the importance of health care and treatment or cultural differences between groups.

Figure 7.4 Summary of issues affecting the availability of services



What have others recommended?

- a) World Bank, "The widespread practice of out-of-pocket payments has a disproportionately negative effect on the very poor and is likely to prevent them from accessing health services in many instances. Attempts at tackling out-of-pocket payments and ensuring transparent

and free of charge access for the uninsured poor and vulnerable groups contributes to promoting Roma access to health care.”²⁴⁷

- b) European Roma Rights Centre, “In particular, in the context of review of mechanisms for financing the health care systems, governments should make sure that, user fees, etc., do not have a disparate impact on Romani communities; officials should further consider exemption of Roma and other vulnerable groups from such payments, where there is clear evidence of extreme duress.”²⁴⁸

What is currently being done?

No activities are currently being implemented.

What is the evidence for reducing user fees and co payments?

A high quality systematic review²⁴⁹ concluded that increasing the price of health services tends to decrease demand, regardless of true need. Unfortunately, this review also concluded that the effects on equity and health status could not be established due to the absence or low quality of the available evidence.

Another high quality systematic review on user fees for medication showed that implementing co payments for drugs results in a decrease in medication usage for life sustaining drugs and chronic conditions²⁵⁰. This may have adverse effects on peoples’ health and could lead to increased use of healthcare services in the long term. This research recommends that co-payments for medications be reviewed and associated costs decreased²⁵¹.

From these two systematic reviews, it would appear that user fees and co payments for medications have a negative effect on those persons that cannot afford to pay for them and these fees should be reduced for vulnerable populations.

²⁴⁷ Bodewig and Sethi, *Poverty, Social Exclusion and Ethnicity in Serbia and Montenegro: The Case of the Roma*.

²⁴⁸ Cameron, *The Right to an Identity*.

²⁴⁹ M. Lagaarde and N Palmer, "A Policy Brief Prepared for the International Dialogue on Evidence-Informed Action to Achieve Health Goals in Developing Countries (IDEAHealth)," *Alliance for Health Policy and Systems Research* (2006)

²⁵⁰ A. Ciapponi and S. García Martí, "What are the Impacts of Policies regarding Direct Patient Payments for Drugs? A SUPPORT Summary of a Systematic Review." (August, 2008), <http://www.supportcollaboration.org/summaries.htm>

²⁵¹ Ibid

Recommendations:

10. A reduction in the out-of-pocket payments that Roma must pay for both services and medications should be evaluated and introduced if deemed valuable and feasible.

Future research:

Further research on how the Roma value and use services should be conducted. For example, is it matter of them not valuing the services and therefore not prioritizing and paying for services, or is it a matter of the cost of the services.

In addition, further research into the sources of external funding would be extremely interesting from a social exclusion perspective as this may highlight an important informal income source for many Roma.

7.2.5 Acceptability

Context

No quantitative data on provider attitudes towards the Roma exists in Serbia. However from qualitative research conducted in this area, it would appear that discrimination against the Roma within the healthcare system is quite widespread²⁵².

As discussed in chapter 5, the Roma people who are most affected by discrimination are as follows: (please see page 65 for the analysis on Acceptability):

Place: No data

Race/ ethnicity: The Roma have reported numerous cases of discrimination

Occupation: No data

Gender: No data

Religion: No data

²⁵² Colak, *Decade of Roma Information Booklet of Minority Rights Center: Abuses of Roma Rights in Serbia*.

Education: No data

SES: The Roma are much more likely to report cases of discrimination than the poorest quintile.

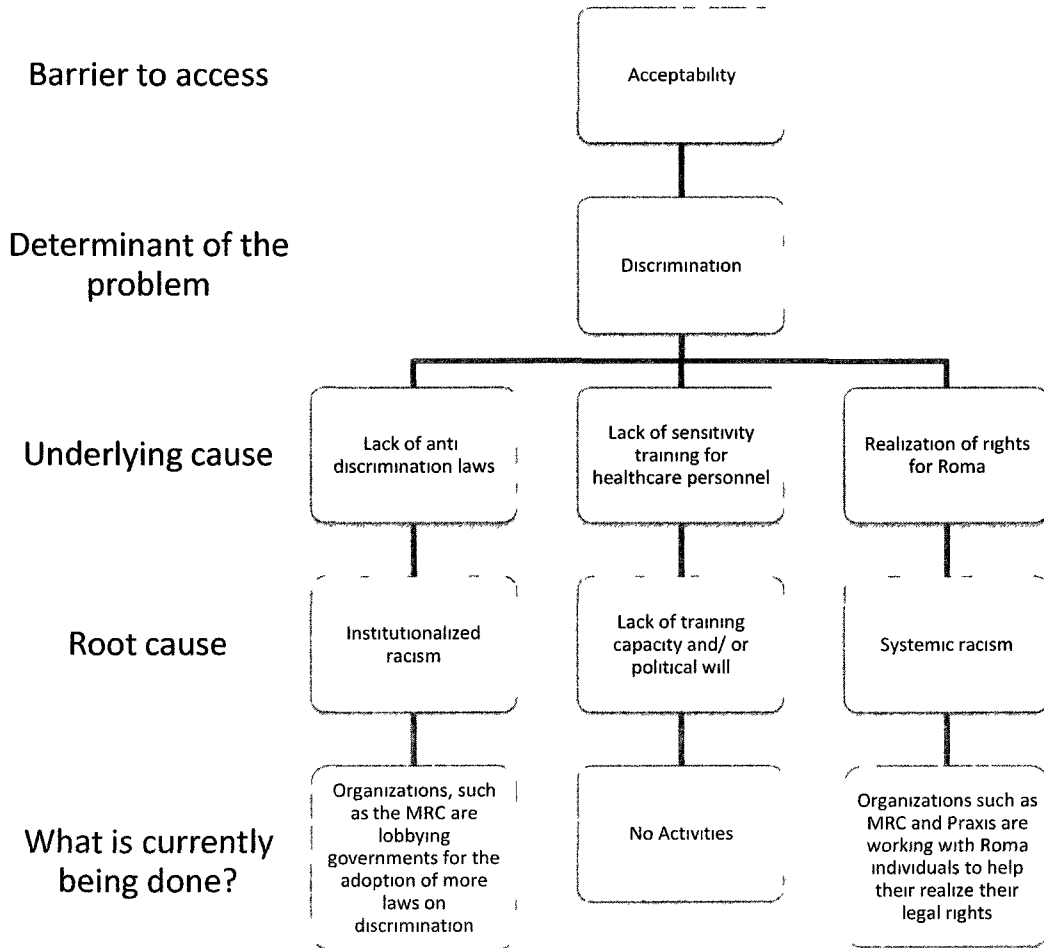
Social capital: no data

Summary of issues affecting discrimination

As described in chapter 5 and summarized in figure 7.5, although legislation prohibits any form of discrimination based on ethnicity, nationality, or religion, deeply rooted social prejudices are still evident in both the actions of individuals and institutions²⁵³. Strategies to mitigate discrimination have in the past focused on three main areas: (a) the adoption of anti-discrimination laws, (b) training for healthcare personnel, and (c) realization of rights for Roma people.

Figure 7.5 Summary of issues affecting discrimination

²⁵³ Ibid.



1.2.5.1 Adoption of anti-discrimination laws:

What have others recommended?

- a) Minority Rights Centre, "Urgent adoption of the Law Against Discrimination is a priority task. This law should comply with European Union recommendations. Without compliance, Serbia cannot meet its commitments to the citizens regarding equality and respect of human rights, as well as obligations towards the international community."²⁵⁴

²⁵⁴ Ibid

- b) Minority Rights Centre, “Overall the Law against Discrimination should be passed, in accordance with the current European and international standards; an efficient body for realization of this law should be founded and guarantees for its administrative independence should be given; it should also provide appropriate resources to ensure that the Law would become efficient.”²⁵⁵

What is currently being done?

As described in figure 7.5, organizations, such as the MRC, are lobbying governments for the adoption of more laws on discrimination.

Recommendations:

11. The adoption of the Law against Discrimination law, in compliance with European Union standards, would provide a legal mechanism with which to combat discrimination. In addition, resources for the implementation and monitoring of this law are necessary to ensure that it is effective.

7.2.5.2 Training for healthcare personnel

As described in chapter 5 and summarized in figure 7.5, there is a perceived lack of sensitivity by some health workers towards the Roma.

What have others recommended?

- a) Minority Rights Centre, “Training for people who work in hospitals should be organized. These trainings would enable them to recognize the needs and to build a partnership with organizations of civil society. Local medical institutions should become more open for needs of the community and more active in cooperation with the organizations of civil society. Thus they would become able “to recognize special needs of these groups regarding health

²⁵⁵ Antic, *Roma and Right to Health Care in Serbia*.

services, as well as their connection to the social needs, and to create programs for synchronized activities at all levels of the community.”²⁵⁶

- b) European Roma Rights Centre, “Conduct on a regular basis anti-discrimination training of public and private health care providers as well as include anti-discrimination training subjects in the curricula of medical universities and colleges.”²⁵⁷

What is currently being done?

No activities are currently being implemented.

Recommendations:

12. A comprehensive sensitivity training program aimed at all levels of health workers needs to be implemented; this includes training in the medical and nursing schools as well as sensitivity training in the workplace. In addition, internships in Roma settlements for medical and nursing students may improve relations.

7.5.2.3 Realization of rights for Roma

As described in chapter 5, and summarized in figure 7.5, within the healthcare system, many cases of discrimination have been recorded including: Roma being insulted by health professionals because of their ethnicity; refusal of treatment by health professionals; and refusal to attend to critical care patients who do not have a health card²⁵⁸. This systemic racism needs to be addressed by the Roma community.

What have others recommended?

- a) Minority Rights Centre, “It is necessary to provide adequate legal aid that would be available to the victims of discrimination and violation of human rights through giving free legal aid to the poor and to the members of weaker groups, including Roma. It is also necessary to improve Roma's abilities to represent their legal interests and to represent themselves.”²⁵⁹

²⁵⁶ Ibid.

²⁵⁷ Cameron, *The Right to an Identity*.

²⁵⁸ Colak, *Decade of Roma Information Booklet of Minority Rights Center: Abuses of Roma Rights in Serbia*.

²⁵⁹ Antic, *Roma and Right to Health Care in Serbia*.

- b) Minority Rights Centre , “It is necessary to organize campaigns of public informing on the right to health care and on legal redress that are at disposal to persons whose human rights are violated, particularly including campaigns in Roma language.”²⁶⁰
- c) European Roma Rights Centre, “Investigate reports of medical malpractice and other forms of human rights abuse in the health care system, and ensure that victims have access to adequate redress. Ensure that individuals or their relatives who want to sue medical facilities and/or individual medical practitioners have access to legal aid.”²⁶¹

What is currently being done?

Organizations such as MRC and Praxis are working with Roma individuals to help realize their legal rights and seek justice following acts of perceived discrimination.

Recommendations:

13. The continued assistance to individual Roma persons to help realize their rights is important as this creates a culture of empowerment.

14. Public campaigns educating Roma on their rights, including the right to healthcare need to be implemented as a priority.

Future research:

More research into the extent of discrimination and patient satisfaction needs to be conducted in order to develop strategies to mitigate the individual and systemic discrimination that currently exists.

7.3 Viability of the recommendations:

The fourteen recommendations outlined above need to be implemented as a priority within Serbia. It is important to note that implementation of the recommendations must take into account: the cost, effectiveness, and the impact on equity, of the proposed interventions; it must also be possible to evaluate the implemented interventions. Although an analysis of these

²⁶⁰ Ibid.

²⁶¹ Cameron, *The Right to an Identity*.

dimensions is beyond the scope of this research, careful planning and implementation of any intervention must take these criteria into account²⁶²

7.4 What this study adds to the state of knowledge and research

This research sought to assess whether the Roma population are able to effectively access primary care services, and if not, what barriers prevent them from doing so. The specific objectives of this research were threefold,

- 1 To apply the effective coverage framework that seeks to identify where the gaps in coverage exist by breaking down the barriers to access into its various components (acceptability, affordability, accessibility, availability and effectiveness),
- 2 To apply the framework to two Millennium Development Goals (MDGs), which address primary care interventions, in order to illustrate how the framework may be useful in identifying the barriers to achieving the MDGs, and
- 3 To make recommendations based on these gaps so that more specific programs and research addressing all aspects of access may be instated

This study clearly met these objectives. The first objective was met by inputting data from three household surveys into the effective coverage framework to measure where the gaps in coverage exist. The second objective was met through the application of the framework to two examples, acute respiratory infection and usage of contraception. This application revealed how the effective coverage framework can be applied to real world health needs. The third objective was met through the discussion and presentation of recommendations based on the gaps in coverage identified in chapter 5.

This report is timely as recognition of the importance of measuring and implementing equitable programs for the Roma population in Serbia has become a priority in the last three years.

²⁶² Resources for the measurement of effect on cost, equity, effectiveness, and the impact on equity can be found on the equity-oriented toolkit website [http://www.cgh.uottawa.ca/whocc/projects/eo_toolkit/index.htm], and on the Global Equity Gauge Alliance Website [<http://www.gega.org.za>]

Specifically, the Government of Serbia has not only demonstrated an internal commitment to its people, through the adoption of a set of Health Related Laws mandating that services be physically, economically and geographically accessible²⁶³, but has also demonstrated a commitment at the international level through participation in the European Decade of Roma Inclusion. It is hoped that this research has added to the knowledge and discussions around equity in access to healthcare services for the Roma, and has supported the urgent need for implementation of important public policy recommendations.

This research is based on the belief that in order to surmount a barrier, it must first be identified, and second, the willingness to overcome the barrier exists. The value of this research lies in the fact that it addresses this first aspect by breaking down access into its' various components so that each specific barrier may be identified and addressed separately. The second aspect requires willingness on the part of decision-makers to evaluate and implement the recommendations outlined not only by this research, but also by other research in the area. This thesis provides a concise summary of the evidence that may be used to advocate for better access to healthcare services on behalf of the Roma in Serbia.

²⁶³ Government of Serbia, *Health Care Law, Article 19; Official Gazette of the Republic of Serbia.*

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Appendix I – Map and Pictures of Roma Settlements in Serbia

Figure 1. Map of Roma settlements in Serbia

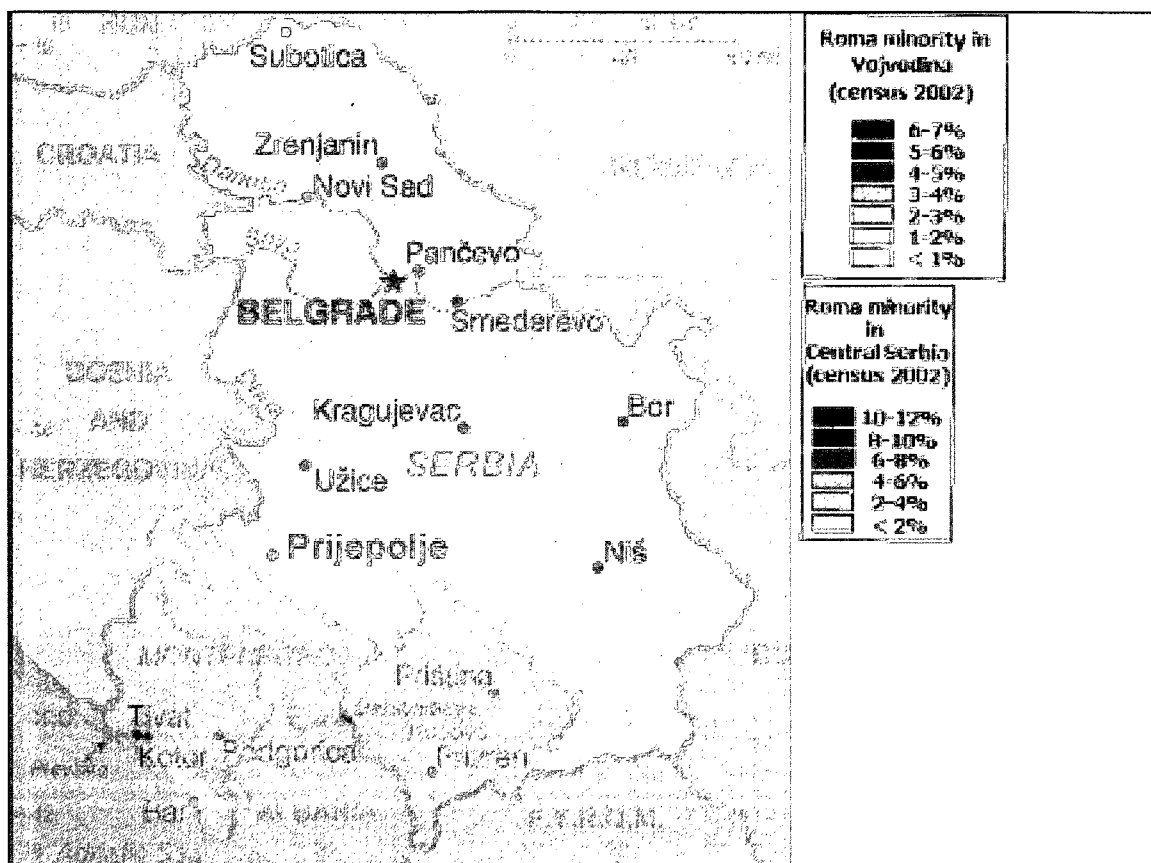


Figure 2. Semi-formal Roma settlement in Serbia



Figure 3. Informal Roma housing under the bridge in Belgrade *



Figure 4. Temporary housing under the bridge in Belgrade (the 'temporary' settlement was established in the early 1980's)*



***Figures 4 and 5 were taken from the book Beograd Gazela: Travel Guide to a Slum (<http://www.beogradgazela.net>)**

Figure 5. Roma woman in front of house in Southern Serbia (rural area)



Figure 6. Roma woman selling vegetables at a market in Belgrade



APPENDIX II: DATA SOURCES SEARCHED

Health data disaggregated by Roma

IPH - Batut Institute of Public Health (2008)
CARE International - Reproductive Health Report (2007)
MRC - Minority Rights Centre (2007)
World Bank - Living Standards Measurement Study (2007)
UNDP - Vulnerability Survey (2006)
UNICEF - Multiple Indicator Cluster Survey (2005)
World Bank - Living Standards Measurement Study (2003)
Oxfam - Health Status, Health Needs and Utilisation of Health Services (2001)

Health data not disaggregated by Roma

Government of Serbia

Institute of Public Health of Serbia
Institute of Public Health of Serbia - Epidemiology
Institute of Public Health of Serbia - Health institutions
Institute of Public Health of Serbia - Statistics of diseases
Institute of Public Health of Serbia - Survey on Population Health Status
Ministry of Finance
SORS - Survey on households' consumption
SORS - Vital Statistics

International Organizations

2006 Survey of Citizens Health Household Budget Survey
HIV/AIDS Register
HNP Stats
National Register and Institute for Pulmonary Diseases (For TB)
UNAIDS
United Nations Database
United Nations MDG monitoring
UNHCR Statistical Year Book
United Nations Statistics Division
World Bank National Health Account 2005
World Bank World Development Indicators
World Factbook
World Health Organization Global Info Database
World Health Organization Statistical Information System

Other Serbian Databases searched

Institute for Education Quality and Evaluation
Ministry of Education - Department for monitoring teachers' education
Ministry of Labour and Social Policy - Centers for Social Work
Ministry of Labour and Social Policy - LSMS
Ministry of Labour and Social Policy - Recipients of Social Assistance Data Base
National Bank of Serbia
National Employment Service
Programme for International Student Assessment
Republic Fund for Pension and Disablement Insurance of Employed Persons
Republic Geodetic Office
SORS - Average earnings per employee (RAD1 P)
SORS - Average earnings per employee (RAD1)
SORS - Department of Administration of Justice
SORS - Department of Construction
SORS - Department of Education

SORS - Department of External Trade
SORS - Department of Forestry
SORS - Department of Informational - Communicational technologies
SORS - Department of Prices
SORS - Department of Territorial Organization
SORS - Labour Force Survey (LFS)
SORS - National Accounts
SORS - National Accounts/External Trade
SORS - Population Census
Telekom Serbia and SORS - Department of Transport
Trends in International Mathematics and Science Study
UNICEF - Child Protection

Appendix III - Definitions of Data

INDICATOR	DEFINITION	METHOD OF COMPUTATION	RELEVANT DISAGGREGATION	DATA SOURCE
PERSONAL DOCUMENTS				
Health Insurance	The proportion of individuals that do not have health insurance coverage	The number of individuals that do not have health insurance divided by the total population surveyed	Based on self reported ethnicity of head of household (Roma vs. all others). (1) Self identified Roma (2) General Population (without self identified Roma or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	LSMS 2007
Denied medical services	The proportion of individuals that have been denied medical services because they did not possess the required personal documents	The number of individuals that were denied medical services divided by the total population that sought medical services	Based on self reported ethnicity of settlement in which they reside (Roma vs. all others). (1) Total (only households in Roma settlements) (2) General Population (without household in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	UNDP
Reason birth not registered	The proportion of individuals that did not register their child's birth for any of the following reasons; costs too much, must travel too far, does not know where to register, or other	The reason that an individual did not register their child's birth divided by the total population that did not register their child birth	Based on self reported ethnicity of head of household (Roma vs. all others). (1) Total (only Roma in Roma settlements) (2) Total (without Roma in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	
AVAILABILITY				
Members of the household without a family doctor	The proportion of households in which all members have a family doctor.	The number of households in which all members have a family doctor divided by the total number of households.	Based on self reported ethnicity of settlement in which they reside (Roma vs. all others). (1) Total (only households in Roma settlements) (2) General Population (without household in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	UNDP
ACCESSIBILITY				
The nearest Primary Medical Centre more than 5km away	The proportion of households that have a primary medical centre located more than 5km from their primary place of residence	The number of households that have a primary medical centre located more than 5km from their primary residence divided by the total number of households surveyed	Based on self reported ethnicity of settlement in which they reside (Roma vs. all others). (1) Total (only households in Roma settlements) (2) General Population (without household in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	UNDP

Appendix III - Definitions of Data

INDICATOR	DEFINITION	METHOD OF COMPUTATION	RELEVANT DISAGGREGATION	DATA SOURCE
The nearest General Practitioner more than 5km away	The proportion of households that have a general practitioner located more than 5km from their primary place of residence	The number of households that have a general practitioner located more than 5km from their primary residence divided by the total number of households surveyed	Based on self reported ethnicity of settlement in which they reside (Roma vs. all others). (1) Total (only households in Roma settlements) (2) General Population (without household in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	UNDP
The nearest Polyclinic more than 5km away	The proportion of households that have a polyclinic located more than 5km from their primary place of residence	The number of households that have a polyclinic located more than 5km from their primary residence divided by the total number of households surveyed	Based on self reported ethnicity of settlement in which they reside (Roma vs. all others). (1) Total (only households in Roma settlements) (2) General Population (without household in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	UNDP
AFFORDABILITY				
Not used healthcare services because they were too expensive	The proportion of individuals that did not use health services in the previous 12 months before the survey because the services were too expensive	The number of persons that stated the expense of health services as the main reason they did not use health services divided by the total population that did not use healthcare services in the previous 12 months.	Based on self reported ethnicity of head of household (Roma vs. all others). (1) Self identified Roma (2) General Population (without self identified Roma or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	LSMS 2007
Someone has assisted in paying for health care costs in previous 12 months	The proportion of individuals that received monetary assistance from an outside source. Outside sources include; relative or friend from Serbia or abroad, humanitarian organization, and state or company assistance	The proportion of individuals that received financial assistance divided by the total number of persons that paid for health services	Based on self reported ethnicity of head of household (Roma vs. all others). (1) Self identified Roma (2) General Population (without self identified Roma or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	LSMS 2007
Could not afford to pay for necessary medications	The proportion of households that could not afford to purchase medications prescribed to, and needed by, a member of the household in the previous 12 months.	The proportion of households that could not afford to purchase medications prescribed to, and needed by, a member of the household in the previous 12 months divided by the total number of households.	Based on self reported ethnicity of settlement in which they reside (Roma vs. all others). (1) Total (only households in Roma settlements) (2) General Population (without household in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	UNDP

Appendix III - Definitions of Data

INDICATOR	DEFINITION	METHOD OF COMPUTATION	RELEVANT DISAGGREGATION	DATA SOURCE
CHILD MORTALITY				
ARI IN CHILDREN UNDER 5				
NEED				
Child under 5 years with ARI	The presence of an acute cough in the previous 2 weeks accompanied by rapid or difficult breathing, and whose symptoms were due to a problem in the chest, or both a problem in the chest and a blocked nose, or whose mother did not know the source of the problem was defined as an ARI	Number of children up to 5 years of age who have had ARI (acute respiratory infection) over the last two weeks preceding the survey or during the survey is divided by the overall number of children up to 5 years of age	Based on self reported ethnicity of head of household (Roma vs all others) (1) Total (only Roma in Roma settlements) (2) Total (without Roma in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	Multiple Indicator Cluster Survey, Serbia (MICS 2005)
UTILIZATION				
Actual Utilization - <i>was not given medication to treat this illness</i>	Proportion of children up to 5 years of age who have had ARI (acute respiratory infection) over the last two weeks preceding the survey and were given medication to treat this illness	Number of children up to 5 years of age who have had ARI (acute respiratory infection) over the last two weeks preceding the survey and were given medication is divided by the overall number of children up to 5 years of age who have had ARI (acute respiratory infection) over the last two weeks	Based on self reported ethnicity of head of household (Roma vs all others) (1) Total (only Roma in Roma settlements) (2) Total (without Roma in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	Multiple Indicator Cluster Survey, Serbia (MICS 2005)
Effective Coverage - <i>not given antibiotics to treat ARI</i>	Proportion of children aged 0-59 months with suspected ARI in the previous 2 weeks (two weeks preceding the survey) receiving antibiotics	Number of children up to 5 years of age who have had ARI (acute respiratory infection) over the last two weeks preceding the survey and were given antibiotics is divided by the overall number of children up to 5 years of age who have had ARI (acute respiratory infection) over the last two weeks	Total (only Roma in Roma settlements) and Total (without Roma in Roma settlements - Ethnicity of head of the household (Serbian, Roma) - Wealth index quintiles (Poorest, Second, Middle, Fourth)	Multiple Indicator Cluster Survey, Serbia (MICS 2005)

Appendix III - Definitions of Data

INDICATOR	DEFINITION	METHOD OF COMPUTATION	RELEVANT DISAGGREGATION	DATA SOURCE
ACCEPTABILITY				
Recognition of importance - <i>did not seek advice or treatment for this illness from a medical professional</i>	The proportion of parents of children under 5 with ARI, who sought care outside the home including; asking a neighbour for advice, to holding a religious ceremony on the child's behalf, to going to a hospital.	Number of children up to 5 years of age who have had ARI (acute respiratory infection) over the last two weeks preceding the survey who sought care outside the home is divided by the overall number of children up to 5 years of age who have had ARI (acute respiratory infection) over the last two weeks preceding the survey.	Total (only Roma in Roma settlements) and Total (without Roma in Roma settlements - Ethnicity of head of the household (Serbian, Roma) - Wealth index quintiles (Poorest, Second, Middle, Fourth)	Multiple Indicator Cluster Survey, Serbia (MICS 2005)
EFFECTIVENESS				
Efficacy	The proportion of children who make a full recovery from ARI after being prescribed antibiotics divided by the total number of children prescribed the antibiotics	Pooled across 202 RCTs	no disaggregation	Ioannidis J P and Lau J. (2001)
Diagnostic Accuracy	Clinical diagnostic accuracy of uncomplicated sinusitis in children aged 0-16	Pooled rate across 7 studies	no disaggregation	Ioannidis J P and Lau J. (2001)
CONTRACEPTION				
NEED				
<i>Need - number of women sexually active who prefer not to have any more children</i>	The proportion of sexually active women aged 15-49 who prefer not to have any more children	The number of sexually active women aged 15-49 who prefer not to have any more children divided by the total number of sexually active women aged 15-49	Based on self reported ethnicity of head of household (Roma vs. all others). (1) Total (only Roma in Roma settlements) (2) Total (without Roma in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	Multiple Indicator Cluster Survey, Serbia (MICS 2005)
UTILIZATION				
Effective Coverage - <i>number of women who are pregnant who prefer not to be pregnant</i>	The proportion of pregnant women who would prefer not to be pregnant	The proportion of pregnant women aged 15-49 years who would prefer not to be pregnant divided by the total number of pregnant women aged 15-49 years.	Based on self reported ethnicity of head of household (Roma vs. all others). (1) Total (only Roma in Roma settlements) (2) Total (without Roma in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	Multiple Indicator Cluster Survey, Serbia (MICS 2005)

Appendix III - Definitions of Data

INDICATOR	DEFINITION	METHOD OF COMPUTATION	RELEVANT DISAGGREGATION	DATA SOURCE
Actual Utilization - <i>Currently using a modern method of contraception if do not want to become pregnant</i>	The proportion of women aged 15-49 yrs in marital or consensual unions, who are practicing or whose sexual partners are practicing any modern method of contraception. Modern methods cover any of the following: Female sterilization, Male sterilization, Pill, IUD, Injections, Implants, Condom, Female condom or Diaphragm/foam/jelly	Number of women aged 15-49 yrs in marital or consensual unions, who are practicing, or whose sexual partners are practicing any modern method of contraception divided by the total number of women aged 15-49 who are sexually active. Observation unit are women aged 15-49 years currently married or in union	Based on self reported ethnicity of head of household (Roma vs all others) (1) Total (only Roma in Roma settlements) (2) Total (without Roma in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	Multiple Indicator Cluster Survey, Serbia (MICS 2005)
ACCEPTABILITY				
Adherence - <i>failure of contraception within the first 12 months of use</i>	The proportion of women aged 15-49 yrs who experience an unwanted pregnancy during the first 12 months of contraception use	Taken from an individual study on failure of contraception rates in the US among disadvantaged populations	Data is on the US population and is disaggregated by age, union status, poverty status and ethnicity	Ranjit et al (2001)
Recognition of importance - <i>Currently NOT using any method of contraception</i>	The proportion of women aged 15-49 yrs in marital or consensual unions, who are practicing or whose sexual partners are practicing any method of contraception. Methods cover any of the following: Female sterilization, Male sterilization, Pill, IUD, Injections, Implants, Condom, Female condom or Diaphragm/foam/jelly OR lactational amenorrhoea method, periodic abstinence, or withdrawal	Number of women aged 15-49 yrs in marital or consensual unions, who are practicing, or whose sexual partners are practicing any method of contraception divided by the total number of women aged 15-49 who are sexually active. Observation unit are women aged 15-49 years currently married or in union	Based on self reported ethnicity of head of household (Roma vs all others) (1) Total (only Roma in Roma settlements) (2) Total (without Roma in Roma settlements or poorest wealth quintile) (3) Wealth index quintiles (Poorest)	Multiple Indicator Cluster Survey, Serbia (MICS 2005)
EFFECTIVENESS				
Efficacy	The failure rates were as follows: tubal ligation 0.17%, oral contraceptives 3%, implant 0.32%, injectable contraceptive 0.30%, Copper-T IUD 0.42%, diaphragm 18%, male condom 12%, no method 85%			Koenig et al (1998)

APPENDIX IV - DATA TABLES FOR ALL ANALYSES

		Poorest 20%	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	Poorest 20% sample size	Roma sample size	Source
PERSONAL DOCUMENTS												
Do the household members have health insurance?												
												LSMS 2007
Total	Health Insurance	90.2	81.1									
	No Health Insurance	9.8	18.9	<0.01	9.1	1.9	5.4%	12.8%	17375	3610	456	
Subanalysis by gender												
Male	Health Insurance	88.5	78.2									
	No Health Insurance	11.5	21.3	<0.01	9.8	1.9	4.3%	15.3%	8439	1723	230	
Female	Health Insurance	91.9	83.6									
	No Health Insurance	8.1	16.4	<0.01	8.3	2.0	3.3%	13.3%	8952	1887	226	
Has s/he ever been denied medical service due to lack of proper documents?												
												UNDP
	Yes	82.2	76.4									
	No	12.8	16.4	<0.01	3.6	1.3	0.4%	6.8%	7787	1215	800	
Reason birth not registered												
												MICS
	Costs too much	0	5.9	none	5.9		-0.6%	12.4%	66	5	51	
	Must travel too far	0	17.6	none	17.6		7.1%	28.1%	66	5	51	
	Does not know where to register	20	7.8	none	-12.2	0.4	-48.0%	23.6%	66	5	51	
	Other	80	68.6	none	-11.4	0.9	-48.7%	25.9%	66	5	51	
Know how to register birth												
												MICS
	Yes	57.1	70									
	No	42.9	30	none	-12.9	0.7	-51.4%	25.6%	84	7	60	
AVAILABILITY												
Does your household have a family doctor / Do all members of your household have a personal doctor?												
												UNDP
	Yes	55.6	56.2									
	No	41.6	40.1	none	-1.5	1.0	-5.8%	2.8%	8047	1293	822	
Male	Personal doctor	53.8	53.9									
	No Personal Doctor	43.5	42.1	none	-1.4	1.0	-6.3%	3.5%	6214	997	646	
Female	Personal doctor	61.8	64.8									
	No Personal Doctor	35.1	33	none	-2.1	0.9	-10.9%	6.7%	1833	296	176	

Poorest											
Indicator	Poorest 20%	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	20% sample size	Roma sample size	Source
ACCESSIBILITY											
Distance from the nearest Primary Medical Centre											
Less than 5km	95.7	88.4									
More than 5km	4.3	11.6	<0.01	7.3	2.7	4.8%	9.8%	7931	1265	803	UNDP
Distance from the nearest General Practitioner											
Less than 5km	89.2	87.5									
More than 5km	10.8	12.5	none	1.7	1.2	-1.3%	4.7%	7774	1253	721	UNDP
Distance from the nearest Polyclinic											
Less than 5km	59.6	41.4									
More than 5km	40.4	58.6	<0.01	18.2	1.5	13.7%	22.7%	7341	1179	775	UNDP
AFFORDABILITY											
If you have not used health services in the last month, what was the main reason											LSMS 2007
No Need	78.5	84.4	<0.05	5.85	1.1	1.7%	10.0%	11441	2529	352	
Other reason	21.5	15.6									
Breakdown of Other Reasons: Based on only those persons in need: If you haven't used health services in the last month what was the main reason											
Minor disorder, I treated it on my own	58.0	18.2	<0.01	-39.80	0.3	-50.8%	-28.8%	1682	543	55	
Minor disorder, I didn't treat it	4.6	3.6		-1.00	0.8	-6.2%	4.2%	1682	543	55	
Too far	7.0	1.8		-5.20	0.3	-9.3%	-1.1%	1682	543	55	
Poor service	0.7	0.0		-0.70	0.0	-1.4%	0.0%	1682	543	55	
Too expensive	14.9	56.4	<0.01	41.50	3.8	28.1%	54.9%	1682	543	55	
No health insurance	5.9	14.5		8.60	2.5	-0.9%	18.1%	1682	543	55	
Other	8.8	5.5		-3.30	0.6	-9.8%	3.2%	1682	543	55	LSMS 2007
Were there any periods in the past 12 months when your household could not afford purchasing medicines prescribed to, needed for a member of your household?											
Yes	70.1	67.4		-2.7	1.0	-6.7%	1.3%	8084	1292	831	UNDP
No	26.7	30.3									

	Indicator	Poorest 20%	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	Poorest 20% sample size	Roma sample size	Source
	Has someone assisted you in paying for health case costs in previous 12 months											LSMS 2007
	Yes	8	13 5	<0 05	5 50	1 7	-0 5%	11 5%	7804	1373	133	
	No	92	86 5									
ACUTE RESPIRATORY INFECTION												
NEED/ UTILIZATION												
	Need - Child under 5 years with ARI	2 3	14 1	<0 01	11 8	6 1	9 4%	14 2%	3838	397	1218	MICS
	Absolute number of children in need	9	172									
	Actual Utilization was given any medication to treat ARI	88 9	67 4	none	-21 5	0 8	-43 2%	0 2%	295	9	172	MICS
	Effective Coverage was given antibiotics to treat ARI	66 7	30 8	none	-35 9	0 5	-67 5%	-4 3%	295	9	172	MICS
ACCEPTABILITY												
	Recognition of importance - did not seek advice or treatment for this illness	12 5	11 3	none	-1 2	0 9	-24 8%	22 4%	207	8	124	MICS
EFFECTIVENESS												
	Efficacy of antibiotics to treat AR	nd	nd									
	Diagnostic Accuracy	nd	nd									
CONTRACEPTION												
NEED/ UTILIZATION												
	Need = number of women sexually active who prefer not to have any more children	57 3	61	none	3 7	1 1	-0 4%	7 8%	7198	808	1776	MICS
	Absolute number	463	1083									
	Effective Coverage = number of women who are pregnant who prefer not to be pregnant	30	30 5	none	0 5	1 0	-17 5%	18 5%	318	30	151	MICS
	Actual Utilization = Currently not using a modern method of contraception	89 6	96 9	<0 01	7 3	1 1	5 1%	9 5%	7895	838	2045	MICS
ACCEPTABILITY												
	Recognition of importance - Currently NOT using any method of contraception	69 6	74 8	<0 05	5 2	1 1	1 4%	9 0%	7198	808	1776	MICS

APPENDIX IV - DATA TABLES FOR ALL ANALYSES

Indicator	General Population	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	Gen Pop sample size	Roma sample size	Source
PERSONAL DOCUMENTS											
Do the household members have health insurance?											LSMS 2007
Total	Health Insurance	9/ 4	81.1								
	No Health Insurance	5/ 6	18.9 <0.01	13.3	3.4	9.7%	16.9%	17375	13309	456	
Subanalysis by gender											
Male	Health Insurance	93/ 6	78.2								
	No Health Insurance	6/ 4	21.3 <0.01	14.9	3.3	9.6%	20.2%	8439	6470	230	
Female	Health Insurance	95/ 3	83.6								
	No Health Insurance	4/ 7	16.4 <0.01	11.7	3.5	6.8%	16.6%	8952	6839	226	
Has s/he ever been denied medical service due to lack of proper documents?											UNDP
	No	8/ 8	76.4								
	Yes	7/ 2	16.4 <0.01	9.2	2.3	6.5%	11.9%	7787	5772	800	
Reason birth not registered											MICS
	Costs too much	0/ 0	5.9 none	5.9 NA		-0.6%	12.4%	66	10	51	
	Must travel too far	1/ 0	17.6 none	7.6	1.8	-13.7%	28.9%	66	10	51	
	Does not know where to register	2/ 0	7.8 none	-12.2	0.4	-38.1%	13.7%	66	10	51	
	Other	7/ 0	68.6 none	-1.4	1.0	-32.5%	29.7%	66	10	51	
Know how to register birth											MICS
	Yes	47/ 1	70								
	No	17/ 6	30 none	12.4	1.7	-9.1%	33.9%	84	17	60	
AVAILABILITY											
Does your household have a family doctor / Do all members of your household have a personal doctor?											
	Yes	53/ 9	56.2								
	No	45/ 4	40.1 none	-3.3	0.9	-6.9%	0.3%	8047	5932	822	UNDP

		General Population	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	Gen Pop sample size	Roma sample size	Source
Male	Personal doctor	51.4	53.9									
	No Personal Doctor	45.6	42.1	none	-3.5	0.9	-7.6%	0.6%	6214	4571	646	
Female	Personal doctor	62.3	64.8									
	No Personal Doctor	36	33	none	-3	0.9	-10.4%	4.4%	1833	1361	176	
ACCESSIBILITY												
Distance from the nearest Primary Medical Centre												
	Less than 5km		88.4									
	More than 5km	4.9	11.6	<0.01	6.7	2.4	4.4%	9.0%	7931	5863	803	UNDP
Distance from the nearest General Practitioner												
	Less than 5km		87.5									
	More than 5km	7.1	12.5	<0.01	5.4	1.8	2.9%	7.9%	7774	5800	721	UNDP
Distance from the nearest Polyclinic												
	Less than 5km		41.4									
	More than 5km	33.3	58.6	<0.01	25.3	1.8	21.6%	29.0%	7341	5837	775	UNDP
AFFORDABILITY												
If you have not used health services in the last month, what was the main reason												
	No Need	87.3	84.4		-2.93	1.0	-6.8%	0.9%	11441	8560	352	LSMS 2007
	Other reason	12.7	15.6									

Indicator	General Population	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	Gen Pop sample size	Roma sample size	Source
Breakdown of Other Reasons											
Based on only those persons in need If you haven't used health services in the last month what was the main reason											
Minor disorder, I treated it on my own	7 8	18 2	<0 01	-53 60	0 3	-64 1%	-43 1%	1682	1084	55	
Minor disorder, I didn't treat it	1 2	3 6		-0 60	0 9	-5 7%	4 5%	1682	1084	55	
Too far	1 9	1 8		-0 10	0 9	-3 7%	3 5%	1682	1084	55	
Poor service	3 0	0 0		3 00	0 0	-4 0%	-2 0%	1682	1084	55	
Too expensive	8 6	56 4	<0 01	47 80	6 6	34 6%	61 0%	1682	1084	55	
No health insurance	4 2	14 5	<0 01	10 30	3 5	0 9%	19 7%	1682	1084	55	
Other	6 5	5 5		-1 00	0 8	-7 2%	5 2%	1682	1084	55	LSMS 2007
Were there any periods in the past 12 months when your household could not afford purchasing medicines prescribed to, needed for a member of your household?											
Yes	38 5	67 4	<0 01	28 9	1 8	25 5%	32 3%	8084	5961	831	UNDP
No	59 6	30 3									
Has someone assisted you in paying for health care costs in previous 12 months											
Yes	5 3	13 5	<0 01	8 20	2 5	2 4%	14 0%	7804	6928	133	LSMS 2007
No	94 7	86 5									
ACUTE RESPIRATORY INFECTION											
NEED/ UTILIZATION											
Need Child under 5 years with ARI											
	1 1	14 1	<0 01	9 00	2 8	6 8%	11 2%	3838	2223	1218	MICS
Absolute number of children in need											
	114	172									
Actual Utilization - was given any medication to treat ARI											
	69 2	67 4	none	4 20	1 1	-7 1%	15 5%	295	114	172	MICS
Effective Coverage - was given antibiotics to treat ARI											
	36 8	30 8	none	-6 00	0 8	-17 2%	5 2%	295	114	172	MICS
ACCEPTABILITY											
Recognition of importance - did not seek advice or treatment for this illness											
	5 7	11 3	none	4 60	1 7	-3 3%	12 5%	207	75	124	MICS

Indicator	General Population	Roma	p-value	Absolute Difference	Relative Difference	LCI	UCI	Total Sample Size	Gen Pop sample size	Roma sample size	Source
EFFECTIVENESS											
Efficacy of antibiotics to treat ARI		88 no data									
Diagnostic Accuracy		73 no data									
CONTRACEPTION											
NEED/ UTILIZATION											
Need = number of women sexually active who prefer not to have any more children	47 7	61	< 0 01	13 30	1 3	10 6%	16 0%	7198	4614	1776	MICS
Absolute number	2200	1083									
Effective Coverage = number of women who are pregnant who prefer not to be pregnant	42 3	30 5	none	-11 80	0 7	-22 5%	-1 1%	318	157	151	MICS
Actual Utilization = Currently not using a modern method of contraception	77 8	96 9	< 0 01	19 10	1 2	17 7%	20 5%	7895	5012	2045	MICS
ACCEPTABILITY											
Recognition of importance											
Currently NOT using any method of contraception	57 5	74 8	< 0 01	17 3	1 3	14 8%	19 8%	7198	4614	1776	MICS
EFFECTIVENESS											
Efficacy	82-99%										

APPENDIX V - TABLES OF CONFIDENCE INTERVALS

						Poorest			Poorest					
			LCI -	UCI -	Roma	Poorest	LCI -	UCI -	Poorest	General	LCI -	UCI -	Gen Pop	
Indicator	Roma	Roma	Roma	sample	size	20%	Poorest	Poorest	20%	Pop	General	General	sample	Source
									size				size	
PERSONAL DOCUMENTS														
Do the household members have health insurance?														LSMS 2007
Total	Health Insurance	81.1				90.2				94.4				
	No Health Insurance	18.9	15.3%	22.5%	456	9.8	8.8%	10.8%	3610	5.6	5.2%	6.0%	13309	
Subanalysis by gender														
Male	Health Insurance	78.2				88.5				93.6				
	No Health Insurance	21.3	16.0%	26.6%	230	11.5	10.0%	13.0%	1723	6.4	5.8%	7.0%	6470	
Female														
	Health Insurance	83.6				91.9				95.3				
	No Health Insurance	16.4	11.6%	21.2%	226	8.1	6.9%	9.3%	1887	4.7	4.2%	5.2%	6839	
Has s/he ever been denied medical service due to lack of proper documents?														UNDP
	Yes	76.4	73.5%	79.3%	800	82.2	80.0%	84.4%	1215	88	87.2%	88.8%	5772	
	No	16.4	13.8%	19.0%	800	12.8	10.9%	14.7%	1215	7.2	6.5%	7.9%	5772	
Reason birth not registered														MICS
	Costs too much	5.9	2.5%	15.0%	51	0	0.0%	0.0%	5	0	0.0%	0.0%	10	
	Must travel too far	17.6	7.1%	28.1%	51	0	0.0%	0.0%	5	10	1.0%	45.0%	10	
	Does not know where to register	7.8	0.4%	15.2%	51	20	2.5%	55.0%	5	20	2.00%	44.8%	10	
	Other	68.6	55.9%	81.3%	51	80	44.9%	115.1%	5	70	41.6%	98.4%	10	
Know how to register birth														MICS
	Yes	70				57.1				47.1				
	No	30	18.4%	41.6%	60	42.9	6.2%	79.6%	7	17.6	5.00%	35.7%	17	
AVAILABILITY														
Does your household have a family doctor / Do all members of your household have a personal doctor?														
	Yes	56.2				55.6				53.9				
	No	40.1	36.7%	43.5%	822	41.6	38.9%	44.3%	1293	43.4	42.1%	44.7%	5932	UNDP
Male														
	Personal doctor	53.9				53.8				51.4				
	No Personal Doctor	42.1	38.3%	45.9%	646	43.5	40.4%	46.6%	997	45.6	44.2%	47.0%	4571	
Female														
	Personal doctor	64.8				61.8				62.3				
	No Personal Doctor	33	26.1%	39.9%	176	35.1	29.7%	40.5%	296	36	33.4%	38.6%	1361	

						Poorest 20%	LCI - Poorest 20%	UCI - Poorest 20%	Poorest 20% sample size	General Pop	LCI - General Pop	UCI - General Pop	Gen Pop sample size	Source
Indicator	Roma	LCI - Roma	UCI - Roma	Roma sample size	Poorest 20%	LCI - Poorest 20%	UCI - Poorest 20%	Poorest 20% sample size	General Pop	LCI - General Pop	UCI - General Pop	Gen Pop sample size	Source	
ACCESSIBILITY														
Distance from the nearest Primary Medical Centre														
Less than 5km	88.4				95.7									
More than 5km	11.6	9.4%	13.8%	803	4.3	3.2%	5.4%	1265	4.9	4.3%	5.5%	5863	UNDP	
Distance from the nearest General Practitioner														
Less than 5km	87.5				89.2									
More than 5km	12.5	10.1%	14.9%	721	10.8	9.1%	12.5%	1253	7.1	6.4%	7.8%	5800	UNDP	
Distance from the nearest Polyclinic														
Less than 5km	41.4				59.6									
More than 5km	58.6	55.1%	62.1%	775	40.4	37.6%	43.2%	1179	33.3	32.1%	34.5%	5837	UNDP	
AFFORDABILITY														
If you have not used health services in the last month, what was the main reason														LSMS 2007
No Need	84.4	80.6%	88.2%	352	78.5	76.9%	80.1%	2529	87.3	86.6%	88.0%	8560		
Other reason	15.6				21.5				12.7					
Breakdown of Other Reasons Based on only those persons in need. If you haven't used health services in the last month, what was the main reason														
Minor disorder, I treated it on my own	18.2	8.0%	28.4%	55	58.0	53.8%	62.2%	543	71.8	69.1%	74.5%	1084		
Minor disorder, I didn't treat it	3.6	2.0%	12.0%	55	4.6	2.8%	6.4%	543	4.2	3.0%	5.4%	1084		
Too far	1.8	0.0%	5.3%	55	7.0	4.9%	9.1%	543	1.9	1.1%	2.7%	1084		
Poor service	0.0	0.0%	0.0%	55	0.7	0.0%	1.4%	543	3.0	2.0%	4.0%	1084		
Too expensive	56.4	43.3%	69.5%	55	14.9	11.9%	17.9%	543	8.6	6.9%	10.3%	1084		
No health insurance	14.5	5.2%	23.8%	55	5.9	3.9%	7.9%	543	4.2	3.0%	5.4%	1084	LSMS 2007	
Other	5.5	0.0%	11.5%	55	8.8	6.4%	11.2%	543	6.5	5.0%	8.0%	1084		

Indicator	Roma	LCI - Roma	UCI - Roma	Roma sample size	Poorest 20%	LCI - Poorest 20%	UCI - Poorest 20%	Poorest 20% sample size	General Pop	LCI - General Pop	UCI - General Pop	Gen Pop sample size	Source
Were there any periods in the past 12 months when your household could not afford purchasing medicines prescribed to, needed for a member of your household?													UNDP
Yes	67.4	64.2%	70.6%	831	70.1	67.6%	72.6%	1292	38.5	37.3%	39.7%	5961	
No	30.3				26.7				59.6				
Has someone assisted you in paying for health case costs in previous 12 months													LSMS 2007
Yes	13.5	7.7%	19.3%	133	8	6.6%	9.4%	1373	5.3	4.8%	5.8%	6928	
No	86.5				92				94.7				
ACUTE RESPIRATORY INFECTION													
NEED/ UTILIZATION													
Need - Child under 5 years with ARI	14.1	12.1%	16.1%	1218	2.3	0.8%	3.8%	397	5.1	4.2%	6.0%	2223	MICS
Absolute number of children in need	172				9				114				
Actual Utilization - was given any medication to treat ARI	67.4	60.4%	74.4%	172	88.9	54.0%	99.0%	9	63.2	54.3%	72.1%	114	MICS
Effective Coverage - was given antibiotics to treat ARI	30.8	23.9%	37.7%	172	66.7	35.9%	97.5%	9	36.8	27.9%	45.7%	114	MICS
ACCEPTABILITY													
Recognition of importance - did not seek advice or treatment for this illness	11.3	5.7%	16.9%	124	12.5	1.0%	47.0%	8	6.7	1.0%	12.4%	75	MICS
EFFECTIVENESS													
Efficacy of antibiotics to treat ARI	nd				nd				88				
Diagnostic Accuracy	nd				nd				73				
CONTRACEPTION													
NEED/ UTILIZATION													
Need = number of women sexually active who prefer not to have any more children	61	58.7%	63.3%	1776	57.3	53.9%	60.7%	808	47.7	46.3%	49.1%	4614	MICS
Absolute number	1083				463				2200				
Effective Coverage = number of women who are pregnant who prefer not to be pregnant	30.5	23.2%	37.8%	151	30	13.6%	46.4%	30	42.3	34.6%	50.0%	157	MICS
Actual Utilization = Currently not using a modern method of contraception	96.9	96.1%	97.7%	2045	89.6	87.5%	91.7%	838	77.8	76.6%	79.0%	5012	MICS

					Poorest	LCI -	UCI -	20%		LCI -	UCI -	Gen Pop	
Indicator	Roma	Roma	Roma	sample size	Poorest 20%	Poorest 20%	Poorest 20%	sample size	General Pop	General Pop	General Pop	sample size	Source
ACCEPTABILITY													
Recognition of importance - <i>Currently NOT using any method of contraception</i>	74.8	72.8%	76.8%	1776	69.6	66.4%	72.8%	808	57.5	56.1%	58.9%	4614	MICS
EFFECTIVENESS													
Efficacy													
Diagnostic Accuracy													
OTHER													
Consumption below poverty line of 8883 dinars per month	45.8	41.2%	50.4%	456	30.4	28.9%	31.9%	3610					
Location of births													
skilled birth attendant present	93.9	91.8%	96.0%	488	98.2	96.2%	100.2%	165	99.4	98.9%	99.9%	792	
no skilled birth attendant present	6.1	4.0%	8.2%	488	1.8	-0.2%	3.8%	165	0.6	0.1%	1.1%	792	
Condom usage - uses a condom as proportion of population that uses modern contraception	32.8	21.3%	44.3%	64	50.6	40.1%	61.1%	87	66.9	64.1%	69.7%	1113	