

ECONOMIC
RESEARCH
FORUM



منتدى
البحوث
الاقتصادية

2010

working paper series

EQUITY IN HEALTH CARE IN THE
OCCUPIED PALESTINIAN TERRITORY:
A BENEFIT INCIDENCE ANALYSIS

Rasha Khatib and Awad Mataria

Working Paper No. 564

**EQUITY IN HEALTH CARE IN THE OCCUPIED
PALESTINIAN TERRITORY:
A BENEFIT INCIDENCE ANALYSIS**

Rasha Khatib and Awad Mataria

Working Paper 564

November 2010

This research has benefited from the financial contribution of ERF as part of the ERF-GDN Regional Research Competition. The content of this publication is the sole responsibility of the authors and can in no way be taken to reflect the views of ERF or GDN.

Send correspondence to:

Awad Mataria

Institute of Community and Public Health, Birzeit University

Email: awad@birzeit.edu

First published in 2010 by
The Economic Research Forum (ERF)
7 Boulos Hanna Street
Dokki, Cairo
Egypt
www.erf.org.eg

Copyright © The Economic Research Forum, 2010

All rights reserved. No part of this publication may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without permission in writing from the publisher.

The findings, interpretations and conclusions expressed in this publication are entirely those of the author(s) and should not be attributed to the Economic Research Forum, members of its Board of Trustees, or its donors.

Abstract

This paper employs a Benefit Incidence Analysis (BIA) framework of health care financing in the occupied Palestinian territory to trace the distribution of public spending on health care, and to provide some elements of response that would complement, and integrate with, the findings from previous literature on the topic for the case of the occupied Palestinian territory. With this aim in mind, the present paper attempts to address the following objectives: (i) to assess the budget and financing structure of the different health care providers in the occupied Palestinian territory, as related to various socioeconomic, locality, and ailment groups of the population; (ii) to assess the health status of the Palestinian population and its distribution over different: demographic, geographic and socio-economic groups, using generic mortality and morbidity indicators; and (iii) to assess how benefits of public spending are distributed across different groups of the population. The occupied Palestinian territory is not a classical example of a developing country aiming to improve equity in the health system and thus such evaluation will take into consideration the political instability of the country and its influence on the financing of the health care system.

ملخص

تستخدم هذه الورقة نظام تحليل معدل الفائدة الخاصة بتمويل الرعاية الصحية في الأراضي الفلسطينية المحتلة من اجل تخطيط عملية توزيع الإنفاق العام علي الرعاية الصحية و توفير بعض عناصر الاستجابة التي تتمم، و تتكامل مع، نتائج الأعمال السابقة في هذا الموضوع لحالة الأراضي الفلسطينية المحتلة . و بوضع هذا الهدف في الاعتبار، تحاول هذه الورقة أن تركز علي الأهداف التالية :

1. تحديد الميزانية و هيكل التمويل لمختلف مقدمي الرعاية الصحية في الأراضي الفلسطينية المحتلة، فيما يتعلق بالأمراض الاجتماعية-الاقتصادية المحلية لمجموعات مختلفة من السكان.
2. تحديد الحالة الصحية للفلسطينيين و توزيعهم إلي مجموعات سكانية و جغرافية و اجتماعية-اقتصادية مختلفة باستخدام مؤشرات عامة لمعدل الوفيات و نسبة انتشار الأمراض.
3. تحديد كيف توزع مزايا الإنفاق العام عبر مجموعات مختلفة من السكان. و الأراضي الفلسطينية المحتلة ليست نموذجا تقليديا للدولة النامية التي تهدف إلي تحسين المساواة في النظام الصحي. لذا، سوف يأخذ هذا التقدير في الاعتبار حالة عدم الاستقرار السياسي للبلاد و تأثيرها علي تمويل نظام الرعاية الصحية.

1. Introduction

The question of equity in income distribution within a country is concerned with “how much more resources are accounted for by rich people than poor people” (Stern et al., 2005). This is commonly addressed by assessing both absolute and relative inequality, respectively referring to: the “difference in” and “ratio of” the level of richness of different categories of the population. Here, should everyone’s income (or share of GDP) within a country increase by the same factor, the extent of absolute inequality increases while relative inequality remains unchanged. Empirical evidence established by Stern and colleagues suggests a positive relation between growth and societal inequalities (Stern et al., 2005). This is mainly because changes in income due to economic growth occur mostly for the richer part of the population. Consequently, although absolute poverty decreases with economic growth, absolute and relative inequality are likely to rise.

The above has pushed some development economists to call for going beyond targeting economic growth as an end per se—achieved by enabling technological advances and industrialization—but instead, to consider growth as a means toward achieving inequality reduction. For instance, Nobel Laureate Amartya Sen argues that growth should be utilized as a means to achieve development, which he defines as “the process of expanding the real freedoms that people enjoy” (Sen, 2000). This concept of freedom is achieved through a combination of increasing GNP (economic growth), establishing a set of social and economic arrangements, and promoting a framework of political and civil rights. Consequently, countries aiming to improve their economic growth should do so along with focusing on a wider development agenda, instead of assuming that the latter would be a necessary result of the former.

In the area of health care, limiting inequities implies striving to reduce avoidable disparities in physical and psychological wellbeing, which are repeatedly observed across individuals with different levels of social privileges (Braveman, 2002). Today, it is well-recognized that the financing mechanism of the health care system—a means by which money is mobilized and allocated to fund the activities in the sector—can directly affect the distribution of the burden and benefits of health care (Roberts et al., 2004). This is because money alone is a necessary but not sufficient condition for better health, and that more money does not necessarily produce more efficient and equitable health outcomes (Hsiao, 2007). Consequently, assessing how the health care system is financed remains an important step in evaluating equity, and an essential step on the way of developing policies that can improve fairness in health care delivery.

Accordingly, limited resources allocated by governments to the health sector should be directed towards interventions that are expected to positively impact the health indicators of the nation. Yet, if such allocation does not take equity into consideration, better indicators can be more easily achieved by benefiting primarily the better off, culminating into escalating inequalities in health outcomes (Gottret, 2006). This was illustrated in the series of Whitehall studies conducted in Britain between 1967 and 1988. The first of these studies, which included male civil servants only, found a steep inverse association between social class (as assessed by employment grade) and mortality, for a wide range of diseases. The hypothesis for the follow up study—the Whitehall II study—stated that differentials in mortality across socioeconomic groups would be narrowed following the implementation of the “access to health care for all” policy, embedded in the introduction of a national, tax-based system of health care financing in the UK, operationalized through the establishment of the famous National Health Services (NHS). Yet, results indicated that such system was unable to narrow the gradient, and that mortality differentials continued to persist (Marmot et al. 1991). Consequently, it became evident that improving access to health care is not a sufficient

endeavor, and something which would not necessarily reduce the prevalent gaps in health outcomes between the rich and the poor, and that targeting the poor through more equitable policies is required. These findings correspond to other evidence supporting the observation that financing a health care system would not automatically result in an enhancement in the effectiveness and efficiency by which health care services are provided, and hence would not help the poor and the most vulnerable, unless the nation embarks on a system approach to health care financing where equity is seen as an integral part of any development policy (Hsiao, 2007).

Various health indicators can be useful in assessing how effectively the health care system of a country is performing in achieving its main goal of enhancing the health status of the population. Yet, such average indicators might not reflect real disparities across the population, measured through assessing the variation of these indicators across different categories of the population. Identifying disparities and targeting them is likely to improve the overall health status of the country in the long-run and consequently enhance genuine development. This can be simply explained by the diminishing returns of health care where, at the margin, the gains from spending more on those who have less (the poor) are greater than the gains from spending more on those who have more (the rich) (Roberts et al., 2004).

Studies conducted in the occupied Palestinian territory (oPt) considered the redistributive and progressivity effects of health care payments, and their decomposition into vertical, horizontal and reranking effects (Abu-Zaineh, Mataria et al., 2008; Abu-Zaineh, et al., 2009 and Abu-Zaineh, Mataria et al., 2009). In addition, a recent publication examined the catastrophic and impoverishment effects of health care (Mataria, Raad et al., 2009). The first series of studies confirmed the “pro-rich” and regressive nature of the current structure of health care financing in the oPt, with lower-income groups bearing higher shares of the health care cost, as a proportion of their income, than do higher-income groups. On the other hand, although the worse-off appeared to have a disproportionately greater need for all levels of health care—primary, secondary and tertiary care—access to, and utilization of, all levels of health care emerged to be significantly higher for the better-off (Abu-Zaineh, et al., 2009). The last study of catastrophic and impoverishment effects signaled an alarming reduction in the capacity of Palestinian households to tolerate the cost of health care, under the prevailing conditions of political and economic instability of the oPt (Mataria, Raad et al. 2009). Such assessment is of great importance for policy makers since protecting people from catastrophic payment is an objective of the health care system.

However, in spite of the elaborate analysis in these papers, serious consideration was not given to the role played by the providers, and their policies, in limiting, or aggravating, prevalent inequalities. The present study employs a Benefit Incidence Analysis (BIA) framework of health care financing in the oPt to trace the distribution of public spending on health care (Yasbeck, 2008), and provide some elements of response that would complement, and integrate with, the findings from previous literature on the topic for the case of the oPt.

Measuring the benefits of government and public spending, through a BIA exercise, surged as a result of the interest in how government spending can alter the income distribution and living standards of the poor. According to McNamara, shifts in public expenditures represent one of the most effective techniques a government possesses to improve the conditions of the poor. Consequently, it is important for policy makers to measure the benefits derived from public spending, and from the provision of public services. Investigating the benefit incidence by a measure of living standards can be useful in informing decisions of reallocating public resources toward programs that benefit the poor (Selden and Wasylenko, 1992). This remains important because public goods usually do not have any price, and hence, measuring the benefits from their provision by cumulating information on prices is not a straightforward

process. One approach to measure such benefits involves using a BIA framework. This analysis is based on the assumption that the cost of providing public services is a reasonable approximation of how beneficial the public service is; i.e., how much it should be valued (Demery, 1997). BIA describes the distribution of health care subsidies across individuals ranked by a certain measure of living standards (O'Donnell Owen, 2008). The analysis is conducted by combining information on the unit costs of providing those services with information on the use of such services (Demery, 1997).

Results shall be used to formulate proper public policies to fulfill the main goal of enhancing the health status of the population, while having equity as an integral dimension of such venture. With this aim in mind, the present paper attempts to address the following objectives:

1. To assess the budget and financing structure of the different health care providers in the oPt, as related to various socioeconomic, locality, and ailment groups of the population.
2. To assess the health status of the Palestinian population and its distribution over different: demographic, geographic and socio-economic groups, using generic mortality and morbidity indicators.
3. To assess how benefits of public spending are distributed across different groups of the population.

The oPt is not a classical example of a developing country aiming to improve equity in the health system and thus such evaluation will take into consideration the political instability of the country and its influence on the financing of the health care system. The following Section provides a general overview of the Palestinian health care system and its organization. Section three follows with a description of the BIA framework, its steps and requirement, and the data used to conduct it in the local context of the oPt. Section four summarizes and discusses the study findings. The paper concludes with some recommendations in the last Section.

2. The Palestinian Health Care System

Economic growth in the oPt greatly reflects the political unrest in the area through its fluctuation and un-sustained rates. The GDP of the oPt has only slightly decreased post Oslo, but increased again between 1997 and 2000. This increase was not sustained due to Israeli measures that followed the explosion of the second Palestinian Intifada in September of 2000; since then the GDP has substantially decreased and continued to decrease (Fischer et al., 2001). A big proportion of the oPt's economy is dependent on aid from the donor's community, which has also been unstable and dependant on the political environment. Donors financing ranged between 13-16% of the economy's GNI between 1994 and 1997, after which it slightly decreased to around 12%. During the Intifada period (following September of 2000), aid increased (13.4% at the end of 2000) (Ajluni, 2003). Yet, again this increase was not sustained and decreased in 2006. This political unrest along with the unstable international funding affected the wellbeing of the Palestinian population, but had its greatest effect on the poor. In 1998, 20.3% of Palestinians lived under the poverty line (PCBS 1998). Recent data estimated that this number increased to 58% of Palestinians living below the income poverty line in 2007, with about half of them, 30%, living in extreme poverty—defined as households of two adults and four children living on 1,000 New Israeli Shekel (US\$250.6) or less per month (UNDP 2007).

Health service provision in the oPt varied across the years, with the changing political situation. Until 1994 health services were provided through the Israeli health care system, and

managed by the Israeli Civil Administration under the direction of the Israeli Ministry of Defense. The Oslo Accords—a series of negotiations between Israel and the Palestinian Liberation Organization—resulted in the signing of the declaration of principles on interim self-government arrangements in 1994. The result was to hand on the provision of different systems including the health care system to the Palestinian authority (Giacaman, Khatib et al. 2009). Since then health services in the oPt have been provided by different agencies, including: the Ministry of Health (MoH), United Nations Relief and Works Agency for Palestinian Refugees (UNRWA), non-governmental non-profit organizations (NGOs), and the private sector.

Recent data collected by the Palestinian Central Bureau of Statistics (PCBS) in 2005 indicated that there are 4,281 health institutions in the oPt, where the private sector possesses the majority of these (75.6%), followed by the MoH which had 14.4%; while 7.9% of the institutions belong to NGOs and 2.1% belong to UNRWA. Using direct and indirect approaches to estimating total health expenditures in the oPt, results suggested that a conservative estimate of health care expenditures as a percentage of GDP totaled up to 5.3-6.4% of the oPt's GDP. The MoH is the major health care provider, where 42.3% of total health care expenditures are assumed by the Ministry of Health. This is followed with out-of-pocket expenditures, which constitute 24.5% of the total. The NGO expenditures constituted 21.4% of total health expenditures, while UNRWA came last with 11.8% of the total (PCBS 2005).

Analysis of a household health expenditure survey conducted in 2004 by PCBS was used to measure the redistributive effect (RE) of health care financing on income distribution. Results of the aggregate approach indicate a negative redistributive effect of out-of-pocket spending, with a statistically significant increase in the Gini coefficient in the post-payment period; i.e., the financing structure is a pro-rich one. The redistributive effect of government and private insurance appeared to be positive, that is potentially pro-poor; however, the change in the Gini coefficient between the pre and post-payment periods was not statistically significant. Moreover, there was a negative redistributive effect of the total health care payments, that is health care payments in the oPt remain “pro-rich.” Income level was divided into deciles (in a disaggregate approach) for further assessment of the impact on income distribution. Here, the redistributive effect of out-of-pocket payments continued to be “pro-rich” for all income deciles; however, the redistributive effect of the government health insurance appeared to be “pro-poor”, and now significant after the 6th decile. The authors conclude that “innovative financing mechanisms” should be identified to limit the existing regressivity in the system (Abu-Zaineh, Mataria et al. 2008).

On the other hand, empirical evidence indicate that income inequality is relatively high in the oPt, with a Gini coefficient of 0.45 in the West Bank and 0.41 in Gaza Strip (Abu-Zaineh, Mataria et al. 2008). In Jordan, for example, the Gini coefficient of income distribution is 0.38, similarly in Israel it is 0.39 (World Bank, 2006). In terms of the distribution of gross income in the oPt, the richest percentile of the population is found to receive around one-third of the total, while the poorest percentile receives only 2%. Specific to health care, residents of the West Bank spend 18.5% of their income on health care, while residents of the Gaza Strip spend 14.5% of their income (Abu-Zaineh, Mataria et al. 2008). When the Palestinian Authority took over its responsibilities to manage the Palestinian health care system, the Ministry of Health was highly understaffed and undercapitalized. Such problems, which still persist today, jeopardize the quality of health care provided. Yet, such problems along with the centralized system can also increase the risk of inequity of health care provision.

Results from the catastrophic and impoverishment analyses conducted for the oPt found that, in 1998, 1.16% of Palestinian households reported catastrophic levels of health care payments

(defined as spending more than 40% of their nonfood expenditures on health care). The proportion of households with catastrophic payments slightly decreased in the following years, yet by 2007 this proportion doubled in comparison with 1998, where it reached 2.1% of households. This increase is partly due to the current structure of the governmental health insurance scheme (GHI)—the main insurance scheme in the oPt. This insurance scheme has a very low premium, and its wide coverage did not accompany major improvement in the capacity of the services provided, resulting in further deterioration of the quality as well as the availability of services. This deterioration led patients to seek care in the private sector regardless of the higher expenditure burden and thus increasing the likelihood of catastrophic payments. The increase in catastrophic payments is also attributed to the changing political situation in the oPt.

Moreover, restrictions on movement imposed by the Israeli army make it difficult for providers and personnel to deliver the care needed thus impeding improvements in the health care system (Department for International Development 2006). The most recent study that assessed access to health care was conducted in 2003, where results indicated that 88.9% of those in need of health care actually received it. Moreover, 4.0% of the sampled population indicated that they needed more than 1 hour to reach a healthcare facility, compared to only 0.4% in 2000; i.e., prior to the commencement of the Intifada, again indicating the effects of the unstable political situation on access to health care. In terms of cost, 33.3% of those seeking health care did not receive any due to high costs (PCBS 2004). The political unrest also led to increased unemployment, adding on to the proportion of individuals living under poverty (Mataria, Khatib et al., 2009).

Hence, risk factors to the Palestinian health care system that are likely to result in higher inequity can be summed into: 1. *The Current Financing System*, 2. *The Political Situation*. Even though equity concerns should be addressed in all health systems, the combination of these conditions in the case of the Palestinian health care system should make equity a priority for policy makers involved with the health care system and its financing.

3. Benefit Incidence Analysis

The literature provides 4 steps for benefit incidence analysis:

1. The analysis starts by ranking the recipients of the public health service by a certain measure of living standard (Yasbeck, 2008). In the oPt, income is not a very accurate measure of standard of living and tends to be underestimated; therefore, for the purpose of the present study, an asset index is developed and used to allow for ranking individual recipients of public health service by their standard of living.
2. The second step involves linking the individuals to the amount of public health services they utilize. This is measured repeatedly for the different types of services considered by the analysis (Yasbeck, 2008). For the purpose of the present study the following services are considered:
 - Number of visits to primary healthcare centers (PHC)
 - Number of outpatient visits
 - Number of inpatient visits
3. Calculation of the total amount of public health subsidies provided by the government is the third step in the analysis. This is calculated by multiplying the net per unit cost of providing the health care service by the number of units of publicly provided care used by each individual less the amount the individual may have paid for the health care service; i.e., any user fees (Yasbeck, 2008). Formally,

The service-specific public subsidy received by an individual:

$S_{ki} = q_{ki}c_{kj} - f_{ki}$, where (O'Donnell Owen 2008)

q_{ki} = quantity of service k utilized by individual i.

c_{kj} = unit cost of providing service k in the region j where individual i resides.

f_{ki} = amount paid for service k by individual i.

The total public subsidy received by an individual:

$S_i = \sum \alpha_k (q_{ki}c_{kj} - f_{ki})$, where (O'Donnell Owen 2008)

Σ = sum of k services

α_k = scaling factors that standardize utilization recall periods across k services.

q_{ki} = quantity of service k utilized by individual i.

c_{kj} = unit cost of providing service k in the region j where individual i resides.

f_{ki} = amount paid for service k by individual i.

Unit cost should be disaggregated to geographic region, then to facility, and finally to type of service. At this level, unit cost is calculated by dividing total recurrent expenditure by total units utilized. User fees are available from the household expenditure survey used for this analysis.

4. The last step in BIA is to analyze the distribution of net government health spending between the individuals grouped by the standard of living measure used.

Data

BIA requires micro-level data on living standards such as income, consumption, expenditure, or a wealth index. This is usually acquired from a national household survey. The survey should also distinguish between public and private consumption of health care. Further, it should have a short recall period to minimize recall bias on information regarding health care use (Yasbeck, 2008). The analysis also requires data at the national level that includes expenditure incurred in delivering health care services. This type of data is usually collected from National Health Accounts.

Household Health Expenditure Survey (2004) conducted by PCBS is used in the present analysis. This survey was established as a first step into developing national health accounts in the oPt, and focuses on household and individual expenditures on primary, secondary, and tertiary health care, as well as, other information on socio-demographics. Some 4,016 households were interviewed in the West Bank and in the Gaza strip. The dataset fulfills the requirements for BIA; the questions asked distinguish between public and private use of health services, has a short recall period were out-patient information asks about visits in the past month only and in-patient admission during the past year (PCBS 2004).

Data Preparation

The survey inquired about the presence of 17 items in each household: private car, refrigerator, water solar heater, cloths washing machine, gas oven, dish washing machine, central heating, vacuum machine, home library, TV, video, telephone line, Palestinian cell phone, Israeli cell phone, computer satellite, and internet. The availability of these items was used to establish an asset index, which later on helped dividing the different households covered by the survey into five quintiles. Households with the largest number of items are classified in the highest group, while those with the least number of items are categorized into the lowest group.

Utilization of services is measured using the number of visits to three different types of facilities: primary health care (PHC) facilities, outpatient facilities and inpatient facilities. Utilization is compared across all four different health care providers in the oPt: Ministry of Health (referred to as public), private, United Nations Relief and Works Agency (UNRWA) and Nongovernmental organizations.

Since National Health Accounts are not completely developed in the oPt, it is not possible to specify expenditures for each of the health care providers at each facility level. The analysis below provides utilization of services for the different health care providers stratified by standard of living; this analysis is repeated for each of the three facilities available. The analysis is then repeated using locality type stratifications instead of standard of living.

4. Results and Discussion

In summary, 3,239 individuals of the total sample reported having a disease in the past two weeks prior to the survey; of those, 2,212 reported having an acute disease, 457 reported having a chronic disease, the rest reported an injury, dental problems and/or psychological problems. Table 3 presents the distribution of reported acute versus chronic conditions across the different wealth index groups. Overall, around 17% of the sample reported having a chronic disease while the rest reported acute diseases. The burden of acute diseases appears to be distributed equally among the different wealth index groups; chronic disease burden also appears to be roughly equally distributed, yet it appears that the two extremes (the highest and the lowest quintiles) reported a slightly higher prevalence of chronic diseases compared to the second, third and fourth groups.

Table 4 presents the percentages of individuals who reported visiting each of the three different health care facilities and their distribution among the five wealth index groups. Overall, it appears that PHC have the highest number of visits, followed by inpatient visits. The least number of visits was observed for outpatient facilities. The lowest group appears to visit PHC slightly more compared to the other groups. Outpatient visits appear to be slightly higher for the extremes; highest and lowest compared to the middle groups while no trend was observed for inpatient visits.

Figures 1, 2, and 3 present the distribution of visits by wealth index group for each of the health care providers. Figure 1 presents PHC visits, and shows that visits to private PHCs increase with the increasing wealth index group, while visits to government, UNRWA and NGO PHC decrease with increasing wealth index group.

Figure 2 presents data for outpatient visits, the lowest wealth index groups reported higher visits to government outpatient facilities compared to the highest group, further, the lowest wealth index groups reported lower visits to private outpatient facilities compared to the highest group. Yet a trend for the overall wealth index group was not observed, also no trend was observed for UNRWA and NGO health care providers.

Figure 3 presents data for inpatient visits, with similar results to those presented in Figure 2.

Figures 4, 5 and 6 present visits to the 3 different types of facilities stratified by locality type (urban, rural and refugee camps). For PHC facilities, government PHC visits were similar across the different localities, while private visits appear to be highest for rural localities. As expected, UNRWA visits were highest in camp localities, followed by urban localities. NGO visits were highest in rural localities and lowest in camp localities.

Governmental visits were highest in camps for inpatient facilities. Private visits (similar to PHC facilities) were highest in rural localities. UNRWA visits were almost only present in urban localities. Inpatient facilities provided by the government showed similar results to outpatient facilities; where camps had the highest number of visits. Trends for private providers were also similar, with visits in rural localities being the highest.

5. Conclusions

Results above indicate that differences in type of disease as well as type of facility do exist between the different wealth indices. Acute diseases were roughly equally distributed among the different wealth groups, whereas chronic diseases appear higher among the lowest and the highest groups.

An overall look at differences in type of facility shows that the different wealth groups visit PHC, outpatient and inpatient facilities in equal proportions, yet when stratifying by type of health care provider differences do appear, in all three types of facilities visits to governmental health care services decreases with the higher wealth index, whereas private health care services increases with higher wealth index.

References

- Abu-Zaineh, M., A. Mataria, S. Luchini, and J-P. Moatti. 2009. "Equity in Health Care Finance in Palestine: The Triple Revealed Effects." *Journal of Health Economics* Vol. 28, Issue 6, pp: 1071-1080
- Abu-Zaineh, M., A. Mataria, S. Luchini and J-P. Moatti. 2008. "Equity in Health Care Financing in Palestine: The Value-Added of the Disaggregate Approach." *Social Science and Medicine* Vol. 66, N. 11, pp. 2308–20.
- Abu-Zaineh, M., A. Mataria, S. Luchini, and J-P. Moatti. 2009. "Decomposing Health Care Use Inequality in the Palestinian Context: A Microsimulation Approach." *European Journal of Health Economics*. (Submitted).
- Ajluni, S. 2003. "The Palestinian Economy and the Second Intifada." *Journal of Palestine Studies* Vol. 32, N. 3, pp. 64–73.
- Braveman, P. T., E. 2002. "Social Inequalities In Health Within Countries: Not Only An Issue For Affluent Nations." *Social Science and Medicine* Vol. 54, N. 11, pp. 1621–35.
- Demery, L. 1997. "Benefit Incidence Analysis." World Bank. *mimeo*.
- Department for International Development. 2006. *West Bank and Gaza Health Sector Expenditure Review*. Oxford: Oxford Policy Management.
- Fischer, S. A., Gamo Patricia Erickson, and von Allmen, Ulric. 2001. "Economic Development in the West Bank and Gaza since Oslo." *The Economic Journal* Vol. 111, N.472, pp. F254 –F75.
- Giacaman, R., R. Khatib, L. Shabaneh, A. Ramlawi, B. Sabri, G. Sabatinelli, M. Khawaja and T. Laurance. 2009. "Health Status and Health Services in the Occupied Palestinian Territory." *Lancet*. Vol. 373, Issue 9666, pp. 837 - 849.
- Gottret, P. and S., George. 2006. "Health Financing Revisited: A Practitioner's Guide." Washington DC: The World Bank.
- Hsiao, W. C. 2007. "Why Is a Systemic View of Health Financing Necessary?" *Health Affairs (Millwood)* Vol. 26, N. 4, pp. 950–61.
- Marmot, M. S., G.D. Stansfeld, S. Patel, C. North, F. Head, J. White, I. Brunner, E. A. Feeney. 1991. "Health Inequalities among British Civil Servants: The Whitehall II Study." *Lancet* Vol. 337, N. 8754, pp. 1387–93.
- Mataria, A., R. Khatib, C. Donaldson, T. Bossert, D. Hunter, F. Alsayed, and J-P. Moatti. 2009. "The Health-Care System: An Assessment And Reform Agenda." *Lancet* Vol. 373, N. 9670, pp. 1207–17.
- Mataria, A., F. Raad, M. Abu-Zaineh and C. Donaldson. 2009. "Catastrophic and Impoverishment Effects of Health Care Payments in the Occupied Palestinian Territory." *Applied Health Economics and Health Policy*, Vol. 8, Issue 6, pp. 393-405
- O'Donnell Owen, D. V. E., Wagstaff Adam, and Lindelow Magnus. 2008. "Analyzing Health Equity Using Household Survey Data." Washington DC: The World Bank.

- PCBS. 1998. *“Poverty in Palestine.”* Palestinian Central Bureau of Statistics. **2007**.
- PCBS. 2004. *Access to Health Services Survey-2003*. Ramallah, Palestinian: Central Bureau of Statistics.
- PCBS. 2004. *Household Health Expenditure Survey*. Ramallah: Palestinian Central Bureau of Statistics.
- PCBS. 2005. *Health Care Providers and beneficiaries Survey*. Ramallah: Palestinian Central Bureau of Statistics.
- Roberts, M. H., W. B. Peter, and Reich, Michael. 2004. *“Getting Health Reform Right: A Guide to Improving Performance and Equity.”* Oxford: Oxford University Press.
- Selden, T. M. and M. J. Wasylenko. 1992. *“Policy Research Working Papers: Benefit Incidence Analysis in Developing Countries.”* Washington DC Policy Research Dissemination Center, The World Bank.
- Sen, A. 2000. *“Development as Freedom.”* New York: Anchor Books.
- Stern, N., D., Jean-Jacques and Rogers, Halsey. 2005. *“Growth and Empowerment: Making Development Happen.”* United States of America: The MIT Press, Massachusetts Institute of Technology.
- UNDP. 2007. *“Poverty in the Occupied Palestinian Territory.”* Jerusalem: Development Times.
- World Bank. 2006. *“World Development Indicators.”* The World Bank, Washington D.C.
- Yasbeck, A. 2008. *“Attacking Inequality in the Health Sector: Operational Manual version 1.0.”* The World Bank , Washington D.C.

Figure 1: Primary Health Care Visits during the 2 Weeks Preceding the Study, by Wealth Index

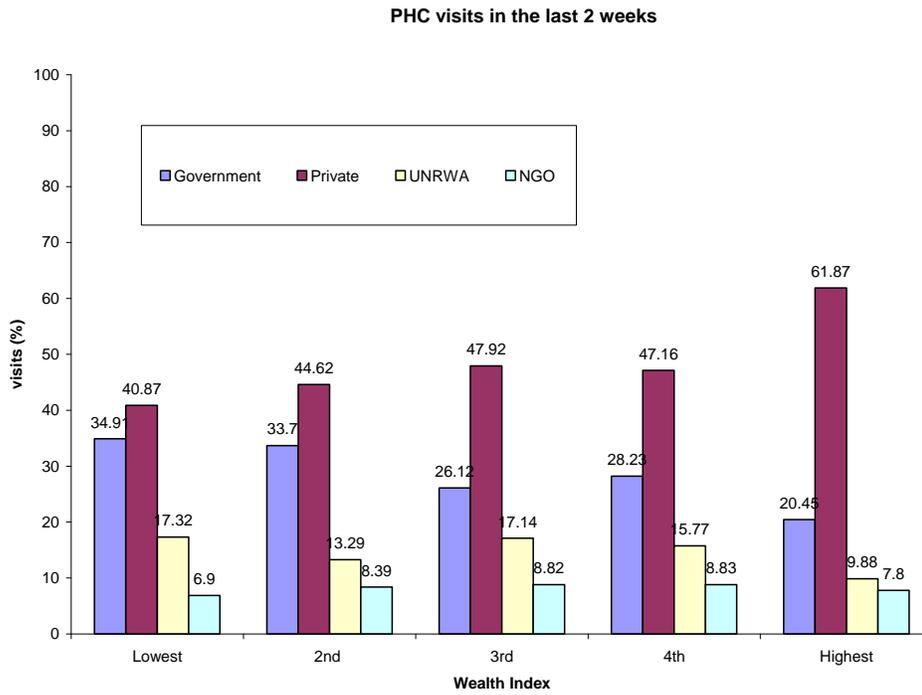


Figure 2: Outpatient Visits in the Month Preceding the Study, by Wealth Index

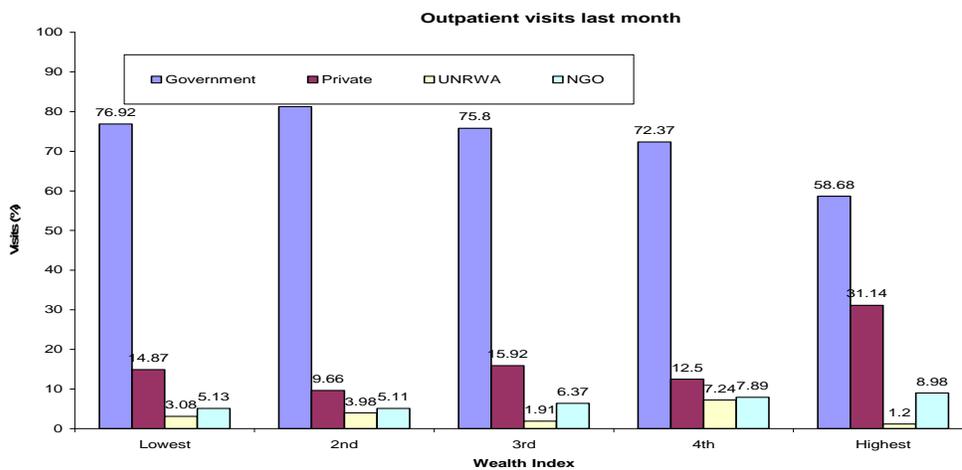


Figure 3: Inpatient Visits in the Year Preceding the Study, by Wealth Index

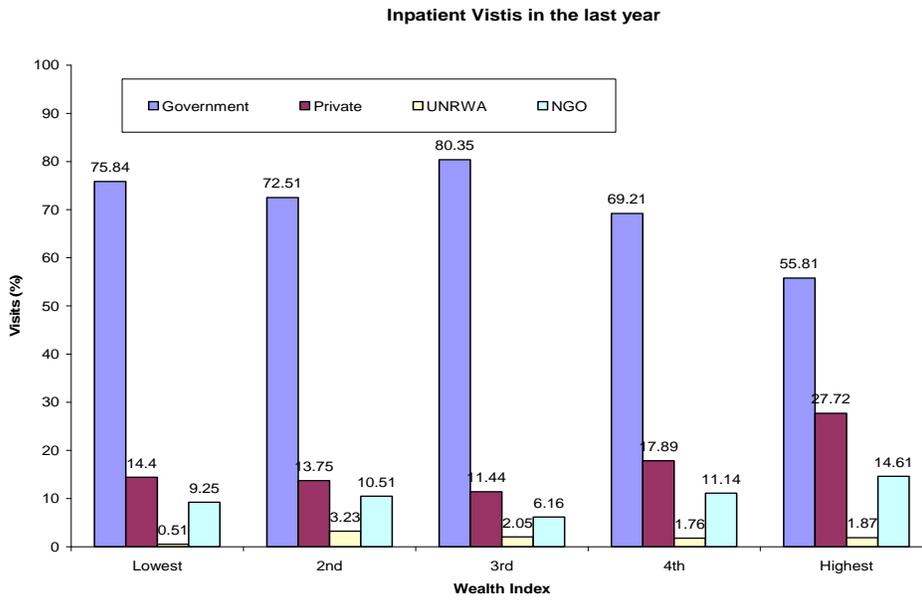


Figure 4: Primary Health Care Visits in the 2 Weeks Preceding the Study, by Locality Type

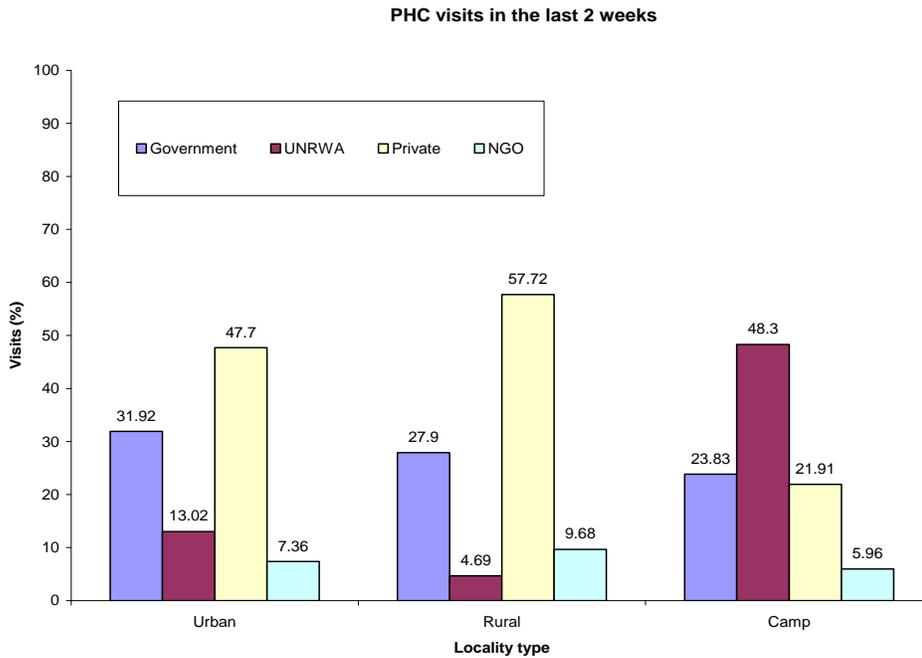


Figure 5: Outpatient Visits during the Month Preceding the Study, by Locality Type

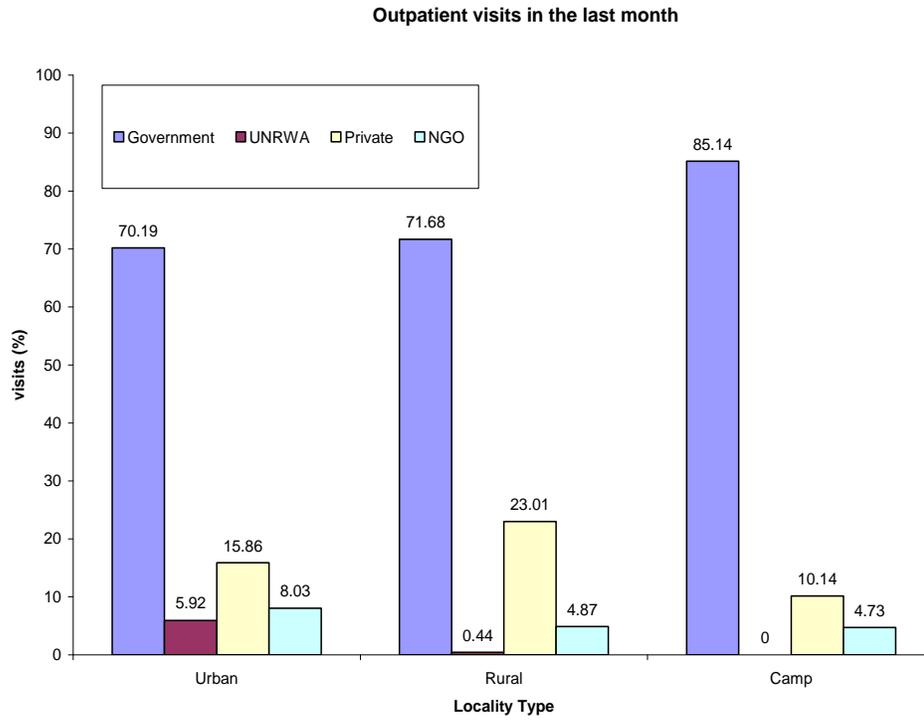


Figure 6: Inpatient Visits during the Past Year Preceding the Study, by Locality Type

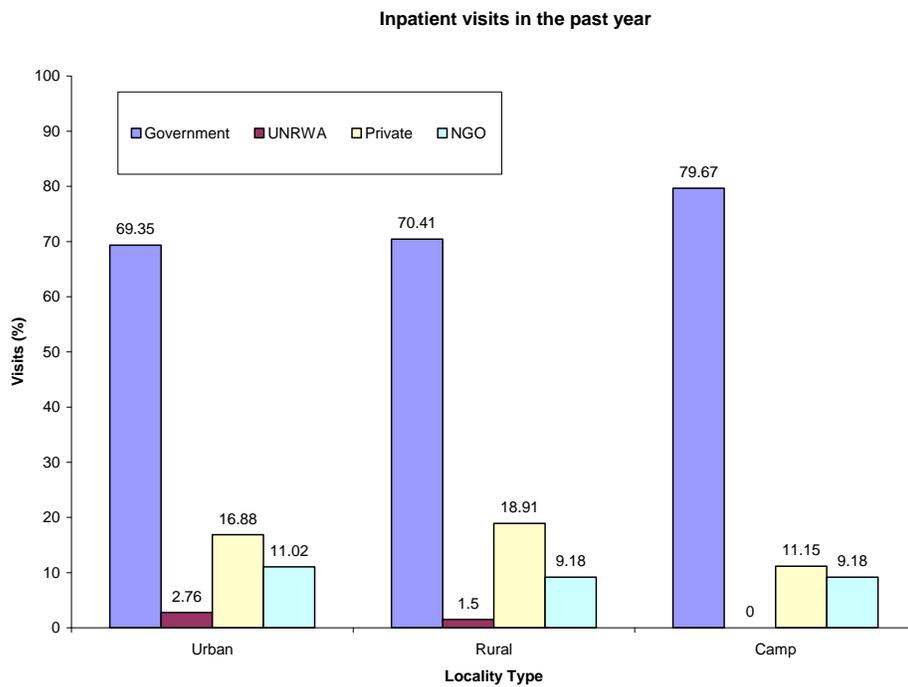


Table 1: Wealth Index

	Frequency	Percent of total
Lowest	5,006	19.90
2 nd	5,042	20.05
3 rd	4,807	19.11
4 th	5,253	20.89
Highest	5,043	20.05
Total	25,151	100.00

Table 2: Distribution of Visits by Facility

	Frequency	Percent
PHC - past 2 weeks	3092	12.29
Outpatient-past month	943	3.74
Inpatient – last year	1,922	7.63
Total sample	25,151	--

Table 3: Type of Disease Distribution by Wealth Index, N= 3,239

	Acute disease	Chronic disease
Highest	80.12	19.88
2 nd	84.50	15.50
3 rd	85.01	14.99
4 th	85.60	14.40
Lowest	79.54	20.46
Total	82.87	17.13

Table 4: Number of Visits to Each Facility by Wealth Index

	PHC	Outpatient	Inpatient
Highest	12.99	4.03	6.56
2 nd	12.70	3.26	7.60
3 rd	12.73	3.72	8.03
4 th	12.06	3.69	7.91
Lowest	13.90	4.08	8.11
Total (N)	3,238	943	1,921

Annex 1: Visits to Each Health Care Facility Stratified by Wealth Index

PHC Visits

	Government	UNRWA	Private	NGO
Highest	12.76	12.08	23.36	17.44
2 nd	19.35	21.19	19.57	21.71
3 rd	16.97	21.82	18.85	20.54
4 th	23.03	17.80	18.46	20.54
Lowest	27.89	27.12	19.76	19.77
Total (N)				

Outpatient Visits

	Government	UNRWA	Private	NGO
Highest	15.81	6.90	36.62	26.79
2 nd	17.74	37.93	13.38	21.43
3 rd	19.19	10.34	17.61	17.86
4 th	23.06	24.14	11.97	16.07
Lowest	24.19	20.69	20.42	17.86
Total (N)				

Inpatient Visits

	Government	UNRWA	Private	NGO
Highest	12.18	15.63	26.33	22.54
2 nd	19.30	18.75	21.71	21.97
3 rd	22.40	21.88	13.88	12.14
4 th	22.00	37.50	18.15	22.54
Lowest	24.12	6.25	19.93	20.81
Total (N)				

Annex 2: Visits to Each Health Care Facility Stratified by Locality Type

PHC Visits

	Government	UNRWA	Private	NGO
Urban	48.70	38.98	44.11	40.31
Rural	39.20	12.92	49.15	9.68
Camp	12.10	48.09	6.74	10.85
Total (N)	926	472	1528	258

Outpatient Visits

	Government	UNRWA	Private	NGO
Urban	53.55	96.55	52.82	67.86
Rural	26.13	3.45	36.62	19.64
Camp	20.32	0.00	10.56	12.50
Total (N)	620	29	142	56

Inpatient

	Government	UNRWA	Private	NGO
Urban	49.39	75.00	52.13	55.49
Rural	30.74	25.00	35.82	28.32
Camp	19.87	0.00	12.06	16.18
Total (N)	1223	32	282	173