



# policy

May 2014

## FREE MATERNAL CARE AND REMOVAL OF USER FEES AT PRIMARY-LEVEL FACILITIES IN KENYA



*Monitoring the  
Implementation and  
Impact: Baseline Report*

This publication was prepared by Jane Chuma (consultant) and Thomas Maina of the Health Policy Project.

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# Free Maternal Care and Removal of User Fees at Primary-Level Facilities in Kenya

## Monitoring the Implementation and Impact: Baseline Report

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**MAY 2014**

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# EXECUTIVE SUMMARY

## Introduction

This report presents the findings of a study conducted to establish baseline measures for evaluating the impact of the removal of user fees in dispensaries and health centres and the provision of free maternal health services in all public health facilities. These two policies were announced by President Uhuru Kenyatta in June 2013 and took effect immediately. The Ministry of Health, with support from USAID-funded Health Policy Project, identified the need to monitor and evaluate the impact of these two policies on utilisation, service provision, revenue collection, among other indicators.

## Overview of the Kenyan Health System

Health services in Kenya are provided by both the public and private sector, with the government owning 51.0 percent of all health facilities in the country. The private for-profit and not-for-profit sectors own 34.3 percent and 14.8 percent of all facilities, respectively. The health system relies heavily on out-of-pocket (OOP) payments as the main source of health care funding. In 2009/2010, OOP payments accounted for 36.7 percent of total health expenditure (THE).

Charging user fees and other out-of-pocket payments have negatively affected the use of health care services in Kenya (Mwabu, 1986; Mbugua et al., 1995; MoH, 2004; MoMS and MoPH, 2009). The majority of the population cannot afford to pay for health care, and the poor are less likely to utilise health services when they are ill. In addition, wide disparities in utilisation exist between geographical regions and between urban and rural areas (MoH, 2004; MoMS and MoPH, 2009). Socio-economic and geographic inequities are wider for inpatient care than outpatient care. Those who pay for care incur high costs that are sometimes catastrophic and adopt coping strategies with negative implications for their socio-economic status, while others simply fail to seek care (Chuma et al., 2006; Chuma et al., 2007).

To address the barriers to access caused by OOP payments and to facilitate progress towards universal health coverage, the government removed user fees in dispensaries and health centres, effective June 1, 2013. Maternal care services (including deliveries) in all public health care facilities are also provided free of charge. This baseline report documents the status of key indicators related to these two policies before the policy change and forms the baseline for semi-annual and annual evaluation.

## Methods

This report is based on data drawn largely from the Health Management Information System (HMIS) of the Ministry of Health (MoH), the 2012 Public Expenditure Tracking Survey (PETS Plus), and the Kenya Service Availability and Readiness Survey (SARAM) 2013. The Technical Working Group, established by the MoH to oversee the design and implementation of the two policies defined the indicators for the baseline and semi-annual and annual evaluations. Some of these indicators, mainly related to quality of care (e.g., availability of tracer medicines), were not available from the HMIS and were obtained from alternative data sources, including the 2012/2013 Public Expenditure Tracking Survey. The data presented cover the 12 months preceding the policy change.

## Results

### ***Utilisation of maternal health care services***

#### *Number of deliveries*

- 511,721 deliveries occurred in public health care facilities in the 12 months prior to the removal of deliveries fees. Of these, 90.5 percent were normal deliveries and 9.5 percent were through Caesarean section.
- The majority of deliveries occurred in hospitals (58.3%), with 41.7 percent occurring in dispensaries and health centres.
- The highest numbers of deliveries in public health facilities were recorded in Nairobi and Kiambu County and the lowest in Samburu County.

### ***Utilisation of antenatal care services***

- 731,976 new antenatal care (ANC) visits were made to public health facilities in the year preceding the policy change.
- Only 36.1 percent of pregnant women using ANC services in public health facilities made at least four visits. The 2008 Kenya Demographic and Health Survey (KDHS) estimated that 47.1 percent of pregnant women in Kenya attend at least four ANC visits. While this figure is higher than the estimate provided in this report, the difference is expected, considering that the data presented here only relate to those women seeking ANC in public health facilities. According to the 2008 KDHS, 16.4 percent of pregnant women seek ANC from the private sector (KNBS and ICF Macro, 2010). Moreover, the KDHS captures data directly from the women, unlike the HMIS, which captures data from the facilities. The differences in data sources and methodological approaches are to some extent responsible for the observed patterns.
- A significant proportion of women visiting public health facilities for ANC do not receive iron and folate supplements.

#### *Maternal deaths*

- 665 maternal deaths were reported in public health care facilities in the 12 months covered in this study. The deaths were highest in June 2012 and February and April 2013.
- The highest number of maternal deaths was reported in Mombasa (53), followed by Uasin Gishu (45) and Bungoma (39).

#### *Neonatal deaths and still births*

- 6,094 neonatal deaths were reported in public health care facilities in the study period. The number of fresh still births in the year preceding the policy change was 6,664.
- Neonatal deaths were highest in Muranga (586), Nakuru (486), and Nairobi (459) and lowest in Mandera (7), Tana River (14), and Samburu (17).

### ***Utilisation of outpatient services and level of user fees at dispensaries and health centres***

- 20,379,141 outpatient (OPD) visits were made in the 12 months preceding the removal of user fees in dispensaries and health centres.
- Children ages five years and below made 32.6 percent of all outpatient visits reported during that period.
- OPD visits were highest in June 2012 and May 2013 and lowest in September and December 2012.



- An annual per capita visit to dispensaries and health centres for the country was reported at 0.53.
- The highest level of per capita visits to dispensaries and health centres was reported in Taita Taveta (1.0) and Embu counties (0.96).
- The amount of user fees collected at dispensaries and health centres in the year preceding the policy change was KES 789,789,916. Of this, KES 409,713,064 was collected in health centres.
- On average, dispensaries collected KES 31,681,431 per month, while health centres collected KES 34,142,755 per month.
- The highest levels of revenue collection from user fees were reported in Kilifi, Nakuru, Nyeri, Nandi, and Kirinyaga counties. Wajir, Marsabit, Mandera, and Garissa recorded the lowest level of revenue collection during the year studied.

## Conclusions

- The number of deliveries taking place in health facilities remains low. The majority of deliveries occurring in public health facilities take place in hospitals, with only 41.7 percent occurring in dispensaries and health centres. Considering that dispensaries and health centres are closest to the population, and hospital level care is out of reach for many, there is an urgent need to identify ways of reversing this trend and ensure that women deliver in facilities closest to them.
- While the data presented are not adequate to explain why this pattern exists, anecdotal evidence suggests that many dispensaries and health centres might not be well equipped to handle deliveries, and even when they are, pregnant women bypass them because the services are perceived to be of lower quality when compared to hospitals. Therefore, mechanisms need to be established to strengthen primary health care facilities to offer effective delivery services. Only then will women adequately benefit from the free maternal care policy.
- The results have also shown that only a minority of pregnant women (36.1%) make the required minimum of four ANC visits. It is not clear whether pregnant women seek the additional visits from other types of facilities. However, this is unlikely considering that the 2008 KDHS estimated that only 16.4 percent of pregnant women seek ANC in the private sector. It is therefore important to continually address barriers to ANC services related to affordability, acceptability, and availability.
- There are a significant number of maternal, neonatal, and fresh stillbirths. Although it is not possible to compare these with national estimates, the numbers are high enough to raise concerns and warrant further exploration into the causes of these deaths in the health system.
- Dispensaries and health centres continued to raise a significant amount of revenue from user fees (KES 789,789,916). The compensation planned by the government under the new policy should, at a minimum, exceed this amount to ensure that services are not interrupted and that the gains from the removal of user fees are realised.
- Poverty seems to play a significant role in all the indicators reviewed. Counties with poor resources seem to perform worse than well-resourced counties, highlighting the importance of addressing inequity through appropriate resource allocation formulas, both at the national and county levels.

## ABBREVIATIONS

ANC	antenatal care
BEOC	Basic Emergency Obstetric Care
CBS	Central Bureau of Statistics
CEOC	Comprehensive Emergency Obstetric Care
GOK	Government of Kenya
HMIS	Health Management Information System
KDHS	Kenya Demographic and Health Survey
KES	Kenyan Shilling
KNBS	Kenya National Bureau of Statistics
MDG	Millennium Development Goal
MoH	Ministry of Health
MoMS	Ministry of Medical Services
MoPH	Ministry of Public Health
MoPHS	Ministry of Public Health and Sanitation
NHI	National Health Insurance
NHIF	National Hospital Insurance Fund
OOP	out-of-pocket
OPD	outpatient
PETS Plus	Public Expenditure Tracking Survey
SARAM	Service Availability and Readiness Survey
THE	total health expenditure
UHC	universal health coverage
USAID	United States Agency for International Development
WHO	World Health Organisation

## BACKGROUND

Achieving universal health coverage (UHC) currently dominates the global health policy agenda. Since its endorsement at the 58<sup>th</sup> World Health Assembly of 2005, governments, international organisations, civil society, and researchers worldwide have been engaged in active debates on how best to achieve UHC in different contexts. The 2010 World Health Report re-emphasized the need for countries to move rapidly towards this goal by modifying their health financing systems (WHO, 2010; WHO, 2011). More recently, in 2011, the 64<sup>th</sup> World Health Assembly urged countries to develop sustainable health financing structures. Many other initiatives have highlighted the important role of universal health systems (Eduardo, 2010).

Universal health coverage is defined as a state where the whole population of a country has access to appropriate promotive, preventive, curative, and rehabilitative health care when they need it and at an affordable cost (WHO, 2005). It has two main goals: enhance financial risk protection and increase access to needed care for citizens (WHO, 2010). Achieving these goals requires high levels of income and risk cross-subsidisation between the wealthiest and poor and the healthy and those that are ill. Universal coverage also embodies important health objectives, including equitable access, high-quality services, and broader social protection (Kutzin, 2001; Mills, 2007). If carefully planned and implemented, UHC can contribute towards overall social and economic development, poverty alleviation, and achievement of the Millennium Development Goals (MDGs).

However, the reality in most countries is that a significant proportion of the population do not seek care because they cannot afford to pay (Preker et al., 2002). When they seek care, they often incur high cost burdens, which have significant implications for their livelihoods (Chuma et al., 2007; Chuma et al., 2006; McIntyre et al., 2006; Russell, 2005). Globally, it is estimated that 150 million people suffer financial catastrophe each year due to health care payments and about 100 million are pushed into poverty (Xu et al., 2007). Although catastrophic health care payments exist in both rich and poor countries, more than 90 percent of the people affected reside in low-income countries (Xu et al., 2003). In Kenya, health care costs push about half a million people to live below the international poverty line every year (Chuma and Maina, Draft). Clearly, some urgent measures are needed to protect Kenyans from the negative implications of unaffordable health care payments.

### The Kenyan Case

The Kenyan government has committed itself to providing universal coverage for all its citizens by the year 2030. The Health Financing Strategy under development, Vision 2030, and the Kenya Constitution reflect this commitment, and universal coverage is identified as one of the development pillars that will support the country's transition from a low-income to a middle-income country by 2030.

The draft Health Financing Strategy aims to “contribute to national welfare, economic growth and increased productivity, through the establishment of a health care financing system which ensures the highest attainable standard of health for all Kenyans” (MoPHS and MoMS, 2009, p. 14). It is built around the following principles:

- Solidarity, where income and risk cross-subsidisation will play a major role
- Responsibility, ensuring that the health system puts people first and that health care providers offer quality services and promote efficiency
- Equity, where all Kenyans will have access to a basic package of health services according to their need
- Transparency, which involves ensuring that purchasers, providers, and users have access to information regarding the operations of the system

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The strategy identifies National Health Insurance (NHI), funded through payroll and general taxes, as the ultimate financing arrangement for universal coverage in the country. Under the new arrangement, the National Hospital Insurance Fund (NHIF) will be transformed into the NHI. The NHIF is regarded as the “vessel” that will enable the transition and lead the country towards UHC.

Kenya is making limited progress towards MDG 5 (Improve Maternal Health). Many women continue to die due to maternal-related complications. According to the 2008 Kenya Demographic and Health Survey (KDHS), the maternal mortality rate increased from 414 per 100,000 live births in 2003 to 448 per 100,000 live births in 2008/9 (KNBS and ICF Macro, 2010; CBS et al., 2004). Utilisation of antenatal care (ANC) services is also on the decline; the proportion of women making at least four antenatal visits declined from 64 percent in 1993 to 52 percent in 2003 and to 47 percent in 2008. Clearly, urgent attention towards improving maternal health is needed in Kenya.

### *History of health care financing in Kenya*

Kenya has a long history in making efforts to provide health services free of charge. Following independence in 1963, the post-colonial government made universal health care a major policy goal. Two years after independence, the government abolished user fees, which had been implemented by the colonialists, and began providing free health care for all in government facilities. This continued up to 1988, when the Kenyan government yielded to international pressure to introduce user fees and other major reforms in the health sector. Poor economic performance, inadequate financial resources, and declining budget were some of the reasons given to justify the re-introduction of user fees (GOK, 2001).

However, the fees were suspended in 1990 but re-introduced in phases in 1991 (Collins et al., 1996). The failure of the implementation in 1989 was attributed to various factors, including hurried implementation; massive declines in utilisation of health services; lack of quality improvements; and poor revenue collection (Collins et al., 1996; Mwabu, 1995; Mwabu et al., 1995; Mwabu, 1986). Following the re-introduction, fees were only charged for individual services like drugs, injections, and laboratory services and not for consultation as was previously the case.

The revenue collected at the facility level was returned to the district level to cater for public health needs within the districts. Health facilities were required to develop detailed plans for spending 75 percent of the revenue. A fee-waiving policy to protect the poor was put in place, and children below age five years and below could receive services free of charge. However, in reality, waiving mechanisms hardly existed (Mwabu, 1995).

Payment of user fees and other out-of-pocket expenses have had a negative impact on utilisation of health care services in Kenya (Mwabu, 1986; Mbugua et al., 1995; MoH, 2004; MoMS and MoPH, 2009). The majority of the population cannot afford to pay for health care, and the poor are less likely to utilise health services when they are ill. Wide disparities in utilisation exist between geographical regions and between urban and rural areas (MoH, 2004; MoMS and MoPH, 2009), with more inequity in inpatient care than outpatient care. Those who pay for care incur high costs that are sometimes catastrophic and adopt coping strategies with negative implications for their socio-economic status, while others simply do not seek care (Chuma et al., 2007; Chuma et al., 2006).

Besides introducing user fees, the government encouraged the development of the private health sector, which led to an upsurge in private health care providers in response to the demand for services. Rather than pay fees in public hospitals, which were perceived to offer low-quality care, people opted to pay for private services considered to have better quality. The private sector has since grown in Kenya, currently comprising 49 percent of all health services—but regulating it remains a major challenge (MoMS, 2008). Table 1 provides a summary of key health financing policy developments in Kenya.

Table 1. Development of health care financing policies in Kenya

Period	Policy	Equity impacts
Colonial period	User fees in all public facilities	Discriminative policy against Kenyans, imposed by colonial government
1963–1965	User fees continued to exist for two years after independence	
1965	User fees removed at all public health facilities Health services provided for free and funded predominantly through tax revenue	Potential for equity provided there are mechanisms to ensure that the poor benefit from the tax-funded system
1989	User fees introduced in all levels of care	Negative impact on demand for health care especially among the poorest population; decreased utilisation including essential services like immunisation
1990	User fees suspended in all public health facilities Waivers and exemption put in place to protect the poor and vulnerable; failure linked to poor policy design and implementation	Increase in utilisation patterns, confirming previous reports that user fees are a barrier to access
1991–2003	User fees were re-introduced in 1991, through a phased implementation approach starting from the hospital level.  Services for children under age five years and special conditions/services like immunisation and tuberculosis were exempted from payment; but user fees continued to exist in Kenya at all levels of care	Barrier to access, high out-of-pocket payments, catastrophic impacts, and negative implications for equity
2004	User fees abolished at dispensaries and health centres (the lowest levels of care), and instead a registration fee of KES 10 at dispensaries and KES 20 at health centres introduced  Services for children under age five years and the poor and special conditions/services like malaria and tuberculosis were exempted from payment	Utilisation increased by 70 percent; the increase was not sustained, although, in general, utilisation was 30 percent higher than before user fee removal  Adherence to the policy has been low, due to cash shortages
2007	All fees for deliveries at public health facilities were abolished	No data on extent to which policy was implemented and no evaluation
2010	A health sector services fund that compensates facilities for lost revenue associated with user fee removal was introduced  Dispensaries and health centres receive funds directly into their bank accounts from the treasury	Possible positive impacts on adherence to fee removal policy and equity
2013	Removal of user fees (10/20) in all public dispensaries and health centres  Removal of user fees related to maternal health care including deliveries in all public facilities (including hospitals)	Positive impact on equity, including increase in utilisation of health care services  Increase in deliveries assisted by professional health workers  Decline in maternal and neonatal mortality

## Rationale of the Study

It is in this context that the Jubilee Coalition government, which came to power in March 2013, committed to facilitating progress towards universal coverage by removing all user fees in public dispensaries and health centres and providing free deliveries in all public facilities. However, the two related policies—Free Maternal Health Policy and Abolition of the 10/20 User Fees, which came into effect June 2013 under a Ministerial Circular—need to be carefully implemented to achieve their stated objectives and have maximum positive impact.

Previous experience with the removal of user fees and “abolition” of delivery fees in the country have had limited impact. Evaluations have shown that fee removal is effective within the first few months, but that the majority of facilities re-introduce fees later for various reasons, including lack of supplies and medicines, delay in funds reimbursement, and need for additional support staff (Chuma et al., 2009). Continuous monitoring and evaluation of the new policies is therefore important—not only to ensure that the intended goals are achieved but also to identify any potential challenges early on in the process and make recommendations on how to address them.

As such, the Ministry of Health (MoH) seeks to monitor implementation of these policies and evaluate their impact. The **impact** of the two policies will be **defined** in terms of the following factors, among others:

- Facilities’ adherence to fee removal
- Revenue collection patterns
- Changes in patterns of service utilisation
- Quality of care
- Public funding levels
- Availability of drugs and related supplies
- Staff attitudes

To establish a baseline for evaluation, the MoH, with support from the USAID-funded Health Policy Project in Kenya, conducted an assessment of key demand- and supply-side indicators for the year preceding the two policy changes (June 2012–May 2013). The findings presented in this report will form the basis for semi-annual and annual evaluations.

## METHODOLOGY

### Data Sources

With assistance from the MoH’s Department of Health Information System, data were drawn from the Kenya Health Management Information System (HMIS) for June 2012–May 2013. Table 2 presents a summary of the variables identified for monitoring and evaluation, following consultation with the MoH and members of a Technical Working Group established to support the process. Some indicators, including those related to quality of care (e.g., availability of tracer medicines), were not included in the assessment because the data were not available from the HMIS. However, this data will be collected in selected health facilities for the semi-annual and annual evaluations.

Table 2. Summary of data needs and sources

Objective	Indicators	Frequency	Data sources
Document changes in outpatient utilisation patterns at public dispensaries and health centres	Outpatient visits by age group and gender	Monthly	<ul style="list-style-type: none"> <li>• HMIS</li> <li>• Facilities record reviews</li> <li>• Exit interviews</li> </ul>
Document changes in utilisation of maternal health services in all public health facilities	<ul style="list-style-type: none"> <li>• Proportion of pregnant women attending <math>\geq 4</math> ANC visits</li> <li>• Proportion of pregnant women attending ANC supplemented with iron/folates</li> <li>• Total number of deliveries</li> <li>• Total number of "normal" deliveries</li> <li>• Total number of caesarean section deliveries</li> </ul>	Monthly Monthly Monthly Monthly Monthly	HMIS
Assess quality of care in dispensaries and health centres (OPD)	<ul style="list-style-type: none"> <li>• Availability of tracer drugs</li> <li>• Patient waiting time</li> <li>• Views and perceptions of service users on the policy change, implementation process and community involvement</li> </ul>	Quarterly Semi-annual Semi-annual and annual	<ul style="list-style-type: none"> <li>• HMIS</li> <li>• Patient exit interviews</li> <li>• Focus group discussions</li> </ul>
Assess quality of care (maternal health services)	<ul style="list-style-type: none"> <li>• Number of facility maternal deaths</li> <li>• Number of facility neonatal deaths</li> <li>• Number of facility fresh still births</li> </ul>	Monthly Monthly Monthly	HMIS
Document changes in financial and human resources and other inputs in response to policy change	<ul style="list-style-type: none"> <li>• Financial resources received from government before and after policy change</li> <li>• Financial resources allocated specifically for compensation (OPD &amp; maternity fees)</li> <li>• Timely disbursement of funds and use</li> <li>• Levels of out-of-pocket payments before and after policy change</li> </ul>	Quarterly Quarterly Quarterly Semi-annual	<ul style="list-style-type: none"> <li>• Document reviews</li> <li>• In-depth interviews with facility in-charges and accountants</li> <li>• Key informant interviews with policymakers at national the level</li> </ul>
Document the implementation process and extent to which facilities are adhering to the changes and highlight any challenges	<ul style="list-style-type: none"> <li>• Extent to which facilities are removing user fees</li> <li>• Challenges related to implementation</li> <li>• Facility coping strategies</li> </ul>	Semi-annual Semi-annual Semi-annual	<ul style="list-style-type: none"> <li>• Patient exit interviews</li> <li>• In-depth interviews</li> </ul>

## RESULTS

The results are divided into four sections: (1) provision of maternal services in public health care facilities, (2) quality of maternal health care, (3) removal of user fees in dispensaries and health centres, and (4) baseline indicators for selected health facilities. For each variable, national- and county-level estimates are provided to demonstrate the distribution of the variables by geographical location.

### Provision of Free Maternal Health Care in Public Health Facilities

As directed by the president of Kenya on June 1, 2013, the baseline indicators for the provision of free maternal services in public health care facilities included the number of deliveries, antenatal care visits, maternal deaths, neonatal deaths, and fresh still births. Ensuring that women deliver in health facilities under the assistance of trained health workers is important in reducing health risks to both the baby and mother. Proper medical attention during delivery can reduce the risk of complications and infection that can lead to morbidity and mortality of the mother and child.

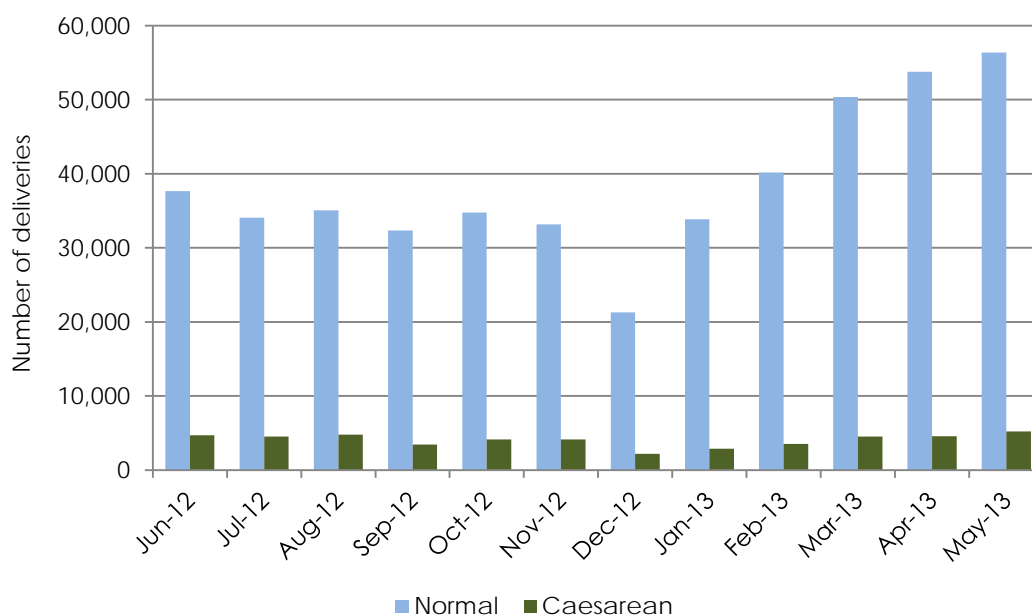
#### *Deliveries in public health care facilities*

A total of 511,721 deliveries occurred in public health care facilities in the 12 months prior to the policy change. Of these, 90.5 percent were normal deliveries, while 9.5 percent were through Caesarean section. The majority of deliveries occurred in hospitals (58.3%), with 41.7 percent occurring at dispensaries and health centres. Considering that dispensaries and health centres are more accessible to most of the population, especially the poorest segments, there is urgent need to build the capacity of dispensaries and health centres to effectively handle the majority of deliveries in Kenya. It is unclear from the data why most deliveries occur at hospitals. Future work should identify potential mechanisms to reverse this pattern towards seeking the lowest levels of care.

Figure 1 shows the distribution of deliveries in fiscal year 2012/2013. The highest numbers of deliveries were in March (54,888), April (58,347), and May 2013 (61,845). December 2012 recorded the lowest number of deliveries (23,496), followed by September (35,769). The proportion of Caesarean deliveries remained constant over the 12 months.



**Figure 1. Distribution of deliveries in public health care facilities by month, 2012/2013**



#### *Distribution of deliveries in public health care facilities by county*

Detailed information on the distribution of deliveries in public health facilities by county is provided in Annex 1. The highest number of deliveries was reported in Nairobi and Kiambu counties (n=30,228 and 26,814, respectively) and the lowest was recorded in Samburu (n=3,928). Other counties that reported significantly low numbers of deliveries at health facilities were Tana River (4,028), Lamu (4,328), Marsabit (4,534), Turkana (4,678), Isiolo (4,816), and West Pokot (6,456).

Note, however, that the number of deliveries is largely influenced by population size and structure of the different counties. Counties with the lowest number of deliveries at health facilities are some of the poorest in Kenya. For example, Turkana is classified as the poorest county, with a poverty level of 92.9 percent. Poverty rates in Isiolo, Mandera, Samburu, Tana-River, and West Pokot are 63.1 percent, 85.7 percent, 77.7 percent, 75.4 percent, and 68.7 percent, respectively. This suggests that poverty is a major hindrance to accessing maternal health services.

#### **Antenatal care in public health care facilities**

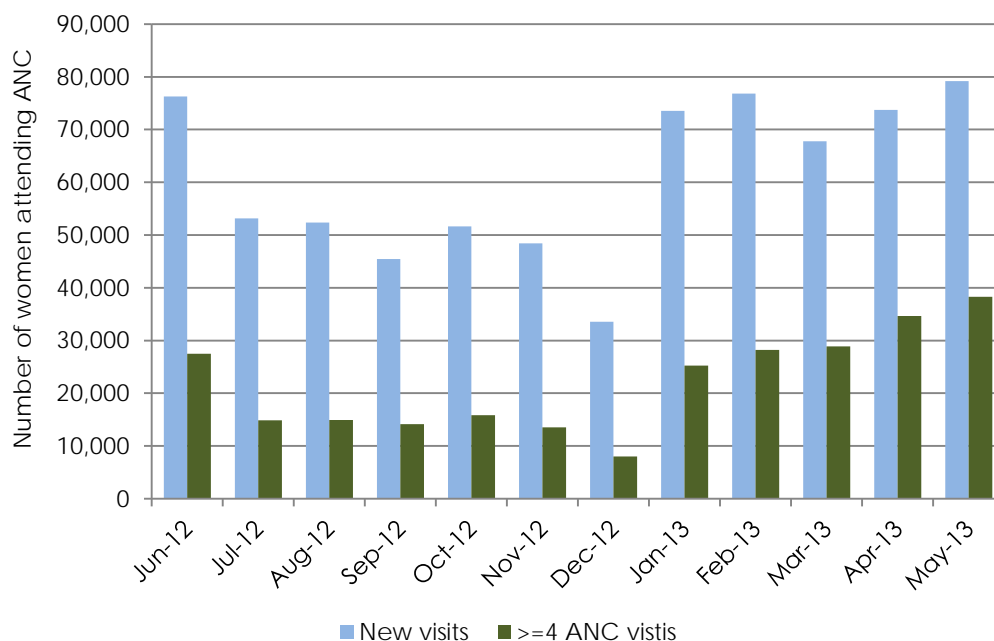
Antenatal care is important for the survival and well-being of the mother and child. The data analysis here focuses on the utilisation of antenatal care services in public health care facilities and compares them to the established international standards. Key variables are the proportion of mothers attending at least four ANC visits during their pregnancy and those who received folic and iron supplements. Country annual results for the fiscal year 2012/2013 are first presented, followed by distribution across counties.

The 2008 KDHS estimated that about 92 percent of pregnant women in Kenya receive antenatal care (i.e., make at least one ANC visit to a health care provider), and 16.4 percent seek ANC services from the private sector (KNBS and ICF Macro, 2010). However, only a minority make the required four visits (47.1%). In the 12 months preceding the policy change, 731,976 new ANC visits were made. Of these, only 263,946 (36.1%) women attended at least four ANC visits in public health care facilities. While this figure is lower than the KDHS estimate (47.1%), the difference is expected, as this study covered only those women seeking care in public health facilities. Moreover, the KDHS captures data directly from the women, unlike the HMIS, which captures data from the facilities. These differences in the data sources

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and methodological approaches are to some extent responsible for observed patterns. Figure 2 shows the distribution of the number of new ANC visits and pregnant women making at least four ANC visits.

**Figure 2. Attendance of ANC visits in public health facilities, 2012/2013**



Levels of supplementation with iron and folate were based on three indicators: percent of women supplemented with folate; percent supplemented with iron, and percent supplemented with iron and folate). This format was dictated by the structure of HMIS data. Discussions with staff from the HMIS department within the MoH indicated that, in some cases, women received iron and folate as separate supplements, while some supplements had a combination of both iron and folate. For these reasons, it is not possible to calculate the percentages, since it was not always clear whether the data reported under “ANC supplemented with iron and folate” include those women that received the combined supplements or those that received them separately.<sup>1</sup> Nonetheless, simple calculations indicate that the majority of women seeking ANC from public facilities do not receive iron and folate supplements.<sup>2</sup> The 2008 KHDS 2008 estimated that 68.7 percent of women who sought ANC care took iron supplements. This suggests possible complications in capturing this data in the HMIS, but it also suggests that some women might have purchased the supplements themselves.

### **Maternal and neonatal deaths and fresh still births**

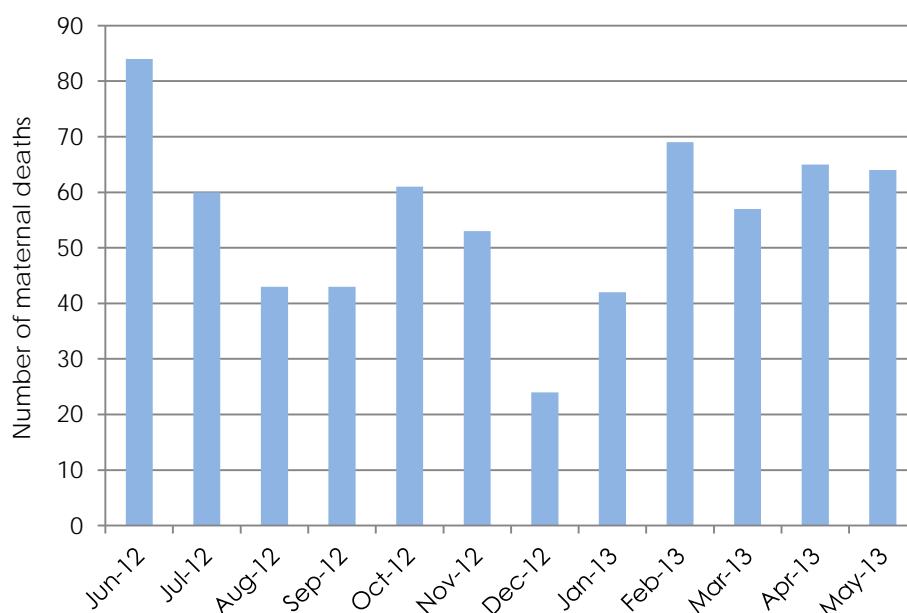
Maternal mortality is an important indicator of a country’s development and its reduction is one of the Millennium Development Goals. Data from the 2008 KDHS indicated an increase in maternal mortality from 414 in 2003 to 488 in 2008. It is not possible to estimate levels of maternal mortality using data available from the HMIS.

In fiscal year 2012/2013, 665 maternal deaths were reported in public health care facilities, representing 0.17 percent of total deliveries. Figure 3 shows the distribution of maternal deaths by month. The highest numbers of maternal deaths were reported in June 2012 (84) and February (69) and April 2013 (65).

<sup>1</sup> More reliable baseline data on these variables will be collected in a selected number of health facilities during the semi-annual evaluation, and the results will be used to update this report.

<sup>2</sup> Note that it was not entirely clear what was entered under which column, and cases of double counting are likely to be significant.

Figure 3. Distribution of maternal deaths by month, 2012/2013

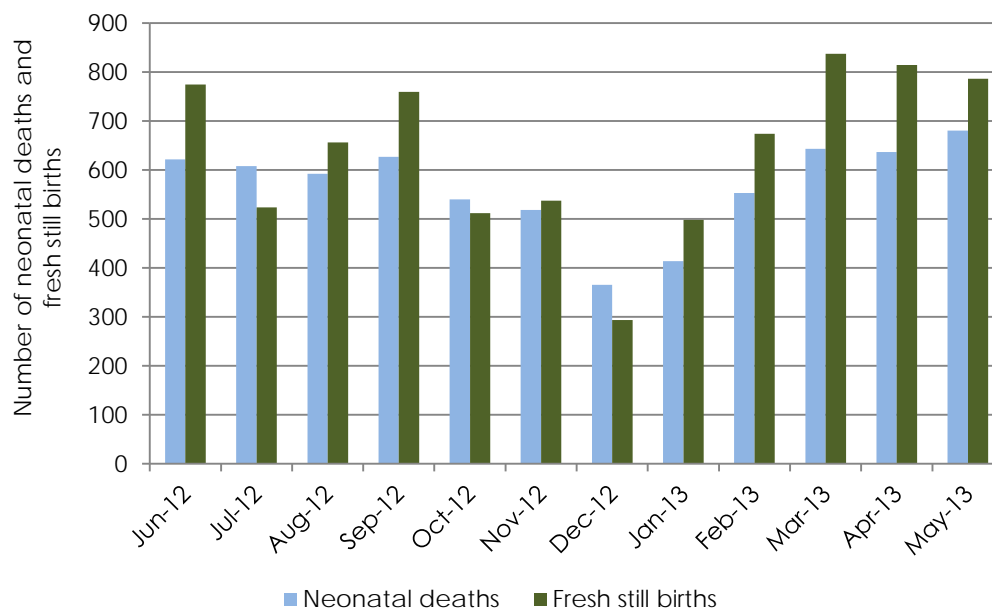


The distribution of the number of maternal deaths across counties is presented in Annex 2. The highest numbers of deaths were reported in Mombasa (53), Uasin Gishu (45), Bungoma (39), and Kakamega (38). Nyamira, Nyandarua, Bomet, Tana-River, and Tharaka Nithi reported the lowest numbers of maternal deaths.

Neonatal deaths totalled 6,094 in the year preceding the policy change (about 1.3 percent of all deliveries in public health care facilities).

The numbers of neonatal deaths were highest in Muranga (586), Nakuru (486), Nairobi (459), Uasin Gishu (428), and Kiambu (400). The lowest numbers were reported in Mandera (7), Tana River (14), Samburu (17), and Marsabit (18). A total of 6,664 fresh still births were reported in public health care facilities in 2012/2013. The numbers of fresh still births were highest in Kilifi (426), Mombasa (424), Nakuru (375), and Nandi (334). Figure 4 shows the distribution of neonatal deaths and fresh still births by month.

Figure 4. Number of neonatal deaths and fresh still births, 2012/2013



## Quality of Maternal Health Care

The Technical Working Group identified the following key measures of quality: availability of tracer drugs related to maternal health care, use of partographs, number of midwives per maternity unit, proportion of primary care facilities providing basic emergency obstetric care, and proportion of hospitals providing comprehensive emergency obstetric care. However, the HMIS did not have adequate data on these indicators for the baseline report. Thus, the data were drawn from the 2012 Public Expenditure Tracking Survey (PETS Plus) and the Service Availability and Readiness Survey (SARAM). Future semi-annual and annual evaluations need to consider that these two cross-sectional surveys are based on different methodologies than those used for this report.

### Availability of tracer drugs in health facilities

The 2012 PETS Plus only covered four tracer drugs (oxytocin, amoxicillin, benzyl-penicillin, and oral rehydration salts) and three tracer non-pharmaceuticals (condoms, disposable syringes, and disposable gloves) out of 20 tracer medicines and non-pharmaceuticals recommended by the MoH.<sup>3</sup> On average, drugs were available at 67 percent of public health facilities (see Table 3). Notable differences on overall drug availability across rural and urban public health facilities were reported in the 2012 PETS Plus (67% and 63%, respectively). However, rural dispensaries and health centres were better stocked compared with urban ones. Overall, 63 percent of public hospitals, 67 percent of public dispensaries, and 68 percent of public health centres had all the tracer drugs in stock.

<sup>3</sup> The MoH's tracer medicines include Amoxicillin 250mg Capsule/Tablet; Amoxicillin 125mg/5ml powder for oral liquid; Paracetamol 500mg Tablet; Cotrimoxazole 480mg Tablet; Artemether + Lumefantrine 20/120mg Tablet; Benzylpenicillin 600mg (IMU) vial; Epinephrine (Adrenaline) 1mg/ml (as HCl or hydrogen tartrate) Injection; Oral Rehydration Solution (ORS) (low osmolality), WHO formula (in sachet for 500ml); Oxytocin Injection 10 IU/ml in 1 ml ampoule; Retinol (Vit A) (as palmitate) Capsules; Water for injection 10ml ampoule; Glucose injectable solution, hypertonic (10 percent or 50 percent). The non-pharmaceutical medical supplies include: Syringe disposable 5cc with needle 21G Sterile; Cotton wool, absorbent, 400mg BP, white; Surgical gloves, size 7.5", Latex Sterile medium; Cotton, Gauze Plain 36" x 100yds, 1500gms BP weight White color, loosely woven and absorbent; Sodium hypochlorite 4-6 percent External solution; Ethanol 70 percent (denatured) solution. Contraceptives include: Hormonal Contraceptives: Ethinylestradiol + Levonorgestrel 30/150 micrograms tablet (Oral) OR Medroxy-progesterone acetate Depot Injection 150mg/ml in 1 ml vial; and Male condoms.

The study distinguished mothers' drugs from those of the children. In general, availability of drugs for mothers was low, and only 58 percent of all public health facilities reported having all the tracer maternal drugs in stock. Urban health facilities were more likely to have all maternal tracer drugs in stock (59%) when compared with rural public facilities (58%).

**Table 3. Availability of tracer drugs in public health care facilities, 2012**

	All	Public	Private	Public Rural	Public Urban
<b>Drugs available (%)—Average across all facility types</b>					
All drugs available	<b>67</b>	67	69	67	63
All 14 drugs for mothers available	<b>59</b>	58	62	58	59
All 8 drugs for children available	<b>78</b>	78	78	79	70
<b>All drugs available (%)—By facility type</b>					
Dispensaries and health posts	<b>67</b>	67	67	67	63
Health centres	<b>69</b>	68	74	69	61
Hospitals	<b>67</b>	63	80	61	66

Figure 5 shows the availability of mothers' drugs in selected facilities, as estimated in the 2012 PETS Plus.

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Figure 5. Availability of mothers' drugs in public facilities, by type, 2012

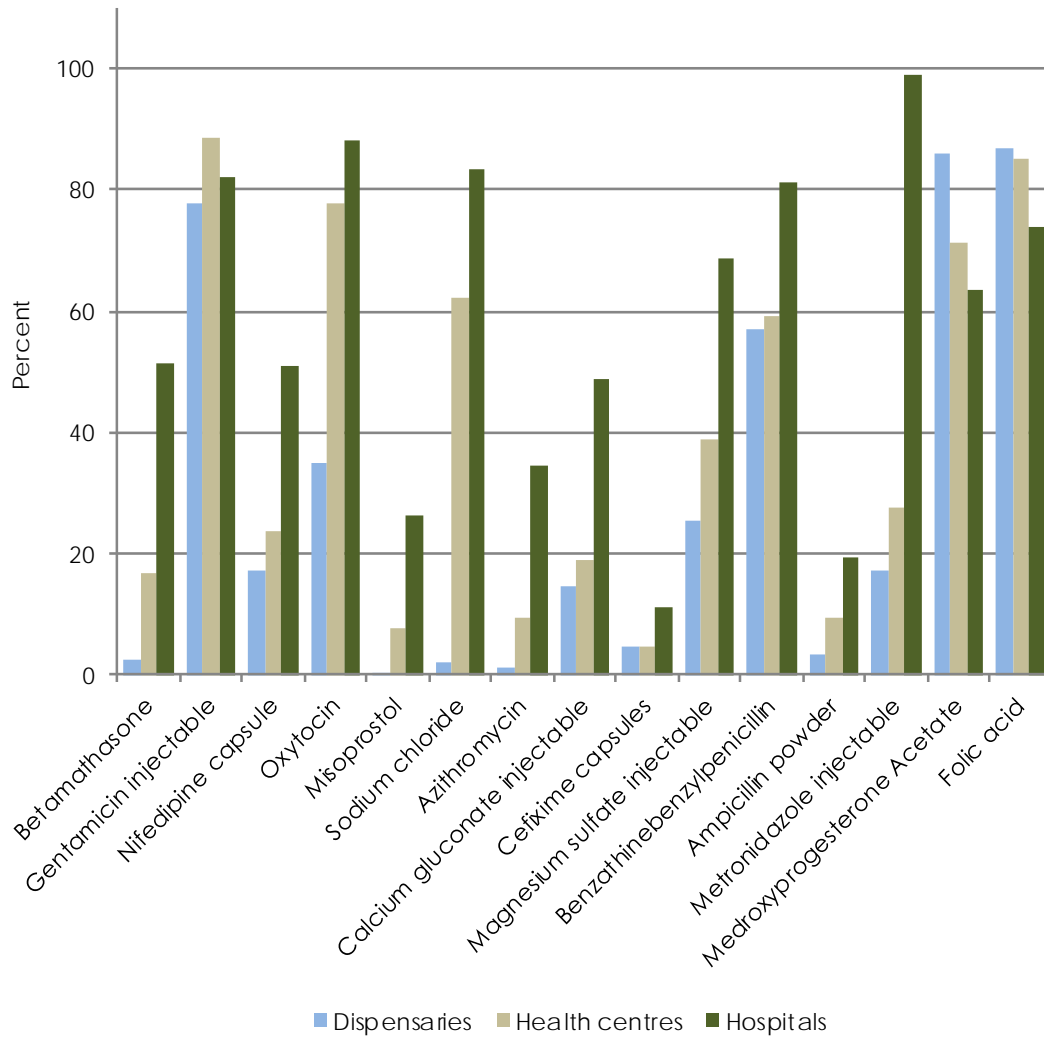
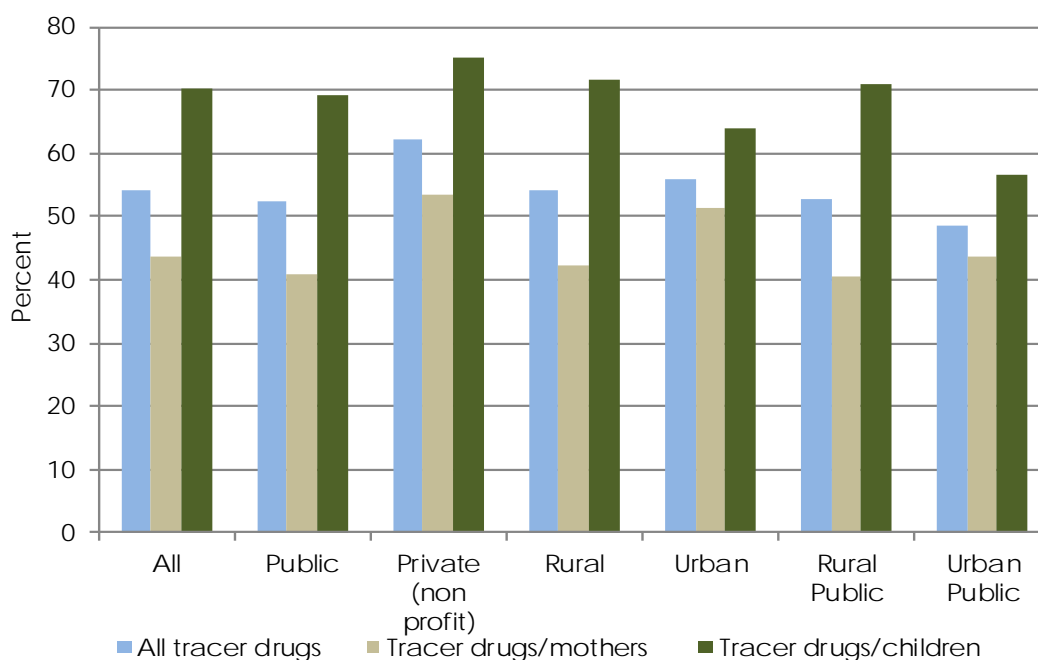


Figure 6 shows that 54 percent of all facilities had tracer drugs—of which, 62 percent were private and 52 percent were public. Tracer drugs for children were more widely available (70% of all facilities) than for mothers (43%). Regarding regional distribution, more urban facilities than rural facilities had all tracer drugs for mothers, but more rural facilities had all tracer drugs for children.

Figure 6. Availability of tracer drugs, 2012



### ***Provision of basic and comprehensive emergency obstetric care***

The WHO has identified various sets of indicators that need to be in place for a facility to be categorised as one that provides basic emergency obstetric care (BEOC) or comprehensive emergency obstetric care (CEOC). The 2013 SARAM collected information on these indicators from 8,401 facilities countrywide (33.7% rural and 66.3% urban). Of all facilities, 40.3 percent provide BEOC and 46.1 percent provide CEOC.

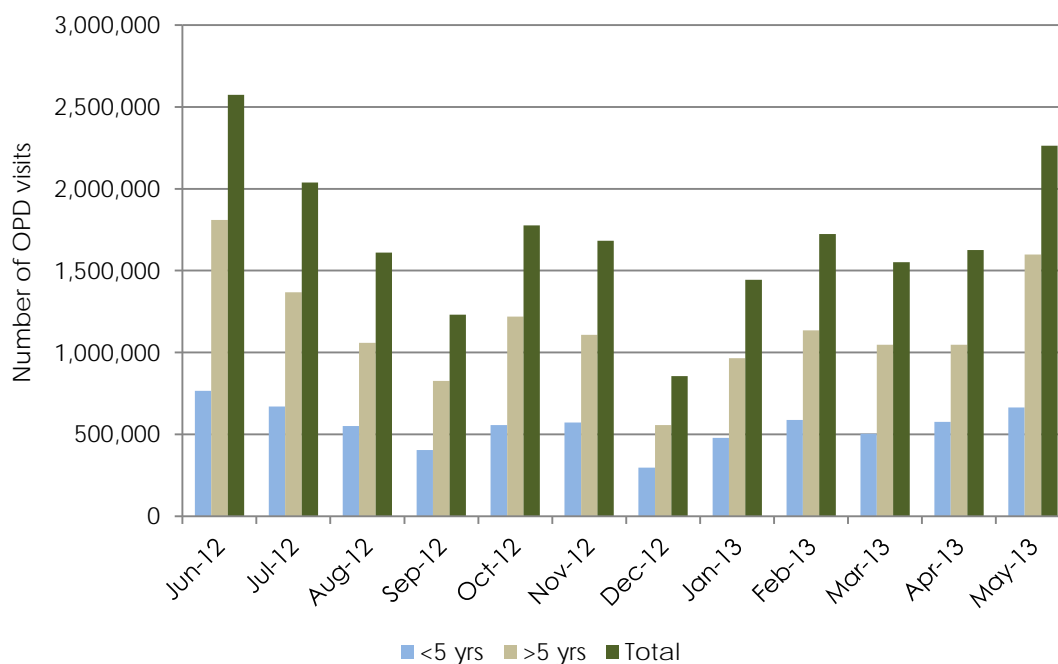
### **Removal of User Fees in Dispensaries and Health Centres**

It is expected that removing user fees will positively affect the utilisation of health care services. Baseline data on outpatient service use by age was collected, but not at the hospital level because the payment policies at this level have not changed. The key variables used were utilisation of outpatient visits by age (under five and over five) and its distribution over the 12-month period preceding the policy change. The findings are presented for the national level, county level, and finally a sub-set of facilities, which will be part of the semi-annual and annual evaluations.

### ***Utilisation of outpatient services in dispensaries and health centres***

Figure 7 shows the number of outpatient visits (OPD) per month reported in dispensaries and health centres. A total of 20,379,141 OPD visits were made over the year, and of these, 32.6 percent were visits by children below five years old. Visits were highest in June 2012 (2,574,417) and May 2013 (2,263,570) and lowest in December and September 2012 (855,402 and 1,232,183, respectively).

**Figure 7. Number of outpatient visits in dispensaries and health centres, 2012/2013**



The distribution of OPD visits by counties is shown in Annex 3. The annual per capita visits to dispensaries and health centres for the country was 0.53. The highest numbers of OPD visits per capita were reported in Taita Taveta (1.0), Embu (0.96), Busia (0.94), and Marakwet (0.9). Mandera (0.12), Turkana (0.13), Mombasa (0.18), Trans-Nzoia (0.21), and Bungoma (0.27) reported the lowest numbers of OPD visits at dispensaries and health centres (see Annex 4).

#### ***User fee revenue in dispensaries and health centres***

The amount of user fee revenue collected at dispensaries and health centres in 2012/2013 amounted to KES 789,789,916 (see Annex 5). Of this total, KES 409,713,064 was collected in health centres. On average, dispensaries collected KES 31,681,431 per month, while health centres collected KES 34,142,755 per month. The highest levels of revenue were reported in Kilifi, Nakuru, Nyeri, Nandi, and Kirinyaga counties. Wajir, Marsabit, Mandera, and Garissa recorded the lowest levels of user fee revenue.

### **Baseline Indicators for Selected Health Facilities**

The health facilities were selected based on the 2012 PETS Plus to allow for comparison with results of the semi-annual evaluation, especially for variables not captured within the HMIS and not included in this report. The PETS Plus was conducted in 15 counties, as indicated in Table 4, in a nationally representative sample of 302 facilities. Sampling was based on various factors including levels of urbanisation, poverty rates, and service delivery performance. It included both public (n=160) and faith-based facilities (142).

For the baseline study, the number of facilities chosen (65) was not based on national representation but rather the ability to provide detailed insight into implementation of the two policies. Poverty levels and the geographic distribution of counties were also considered. As such, the facilities were drawn from six counties: 3 poor (Kilifi, Makueni, and West Pokot) and 3 non-poor (Kirinyaga, Siaya, and Nairobi). All health facilities in the six counties will be included in the semi-annual and annual evaluations. See Annex 6 for the list of selected facilities and Annex 7 for classification of the counties by poverty level.



Table 4. Counties included in the PETS Plus

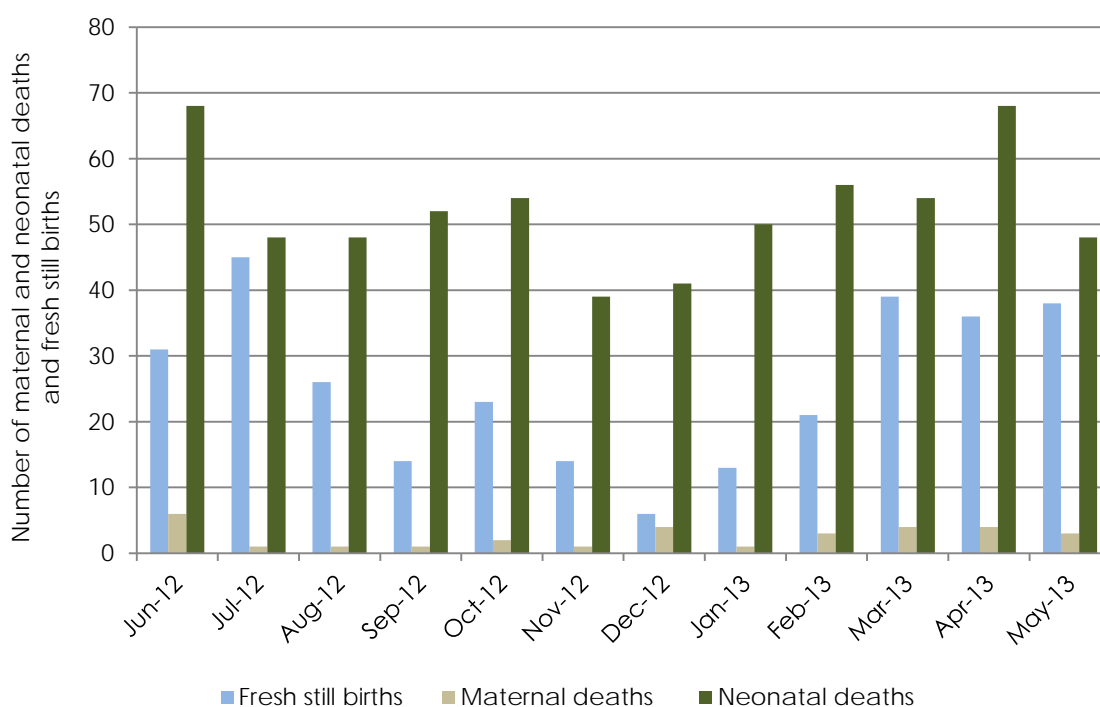
County	Poverty rate	County	Poverty rate
Bungoma	52.2	Nakuru	41.8
Homa Bay	43.1	Nyamira	46.3
Kilifi	66.9	Nyandarua	49.8
Kirinyaga	25.6	Siaya	35.6
Kitui	62.5	Trans Nzoia	50.1
Makueni	63.8	Uasin Gishu	44.6
Mombasa	37.6	West Pokot	68.7
Nairobi	22.0		

### Number of deliveries in selected health facilities

*Maternal and neonatal deaths and fresh still births in selected health facilities*

Figure 8 shows the distribution of maternal deaths, neonatal deaths, and fresh still births by month for the selected 65 health facilities. A total of 31 maternal deaths were reported in the 12 months preceding the policy change in eight of the facilities in the study sample. Three of the facilities reported more than five maternal deaths, with one facility reporting nine deaths. Three facilities reported one maternal death each.

Figure 8. Number of maternal and neonatal deaths and fresh still births in selected facilities, 2012/2013



*Antenatal care visits in selected health facilities*

Figure 9 shows the number of pregnant women making ANC visits to the selected facilities. About 34,558 pregnant women sought ANC in the 12 months preceding the policy change. Of these, only 38.3 percent made at least four ANC visits (the minimum recommended visits for antenatal care).

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Figure 9. ANC visits in selected health care facilities, 2012/2013

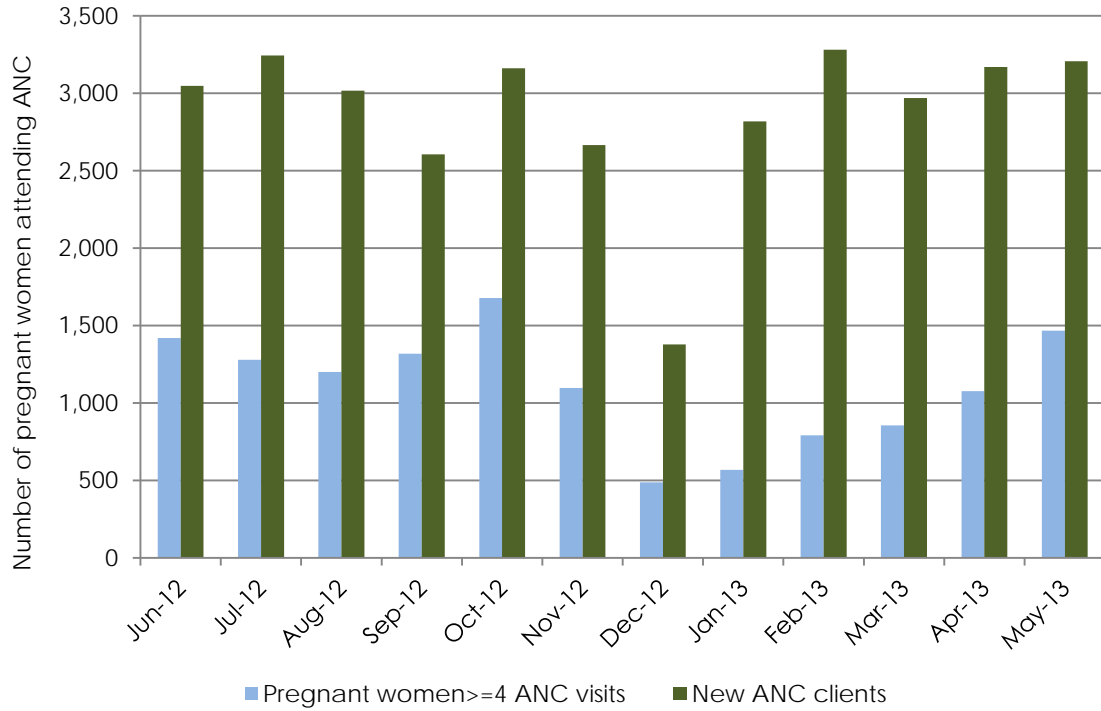
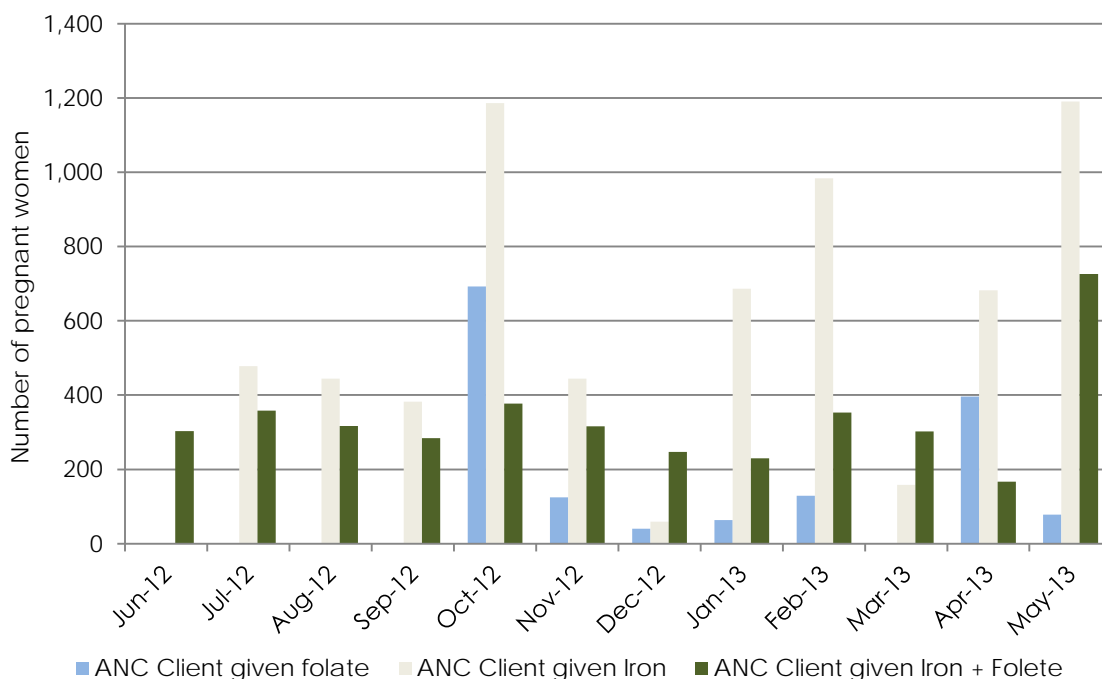


Figure 10 shows the number of pregnant women attending ANC who received iron and folate supplements.

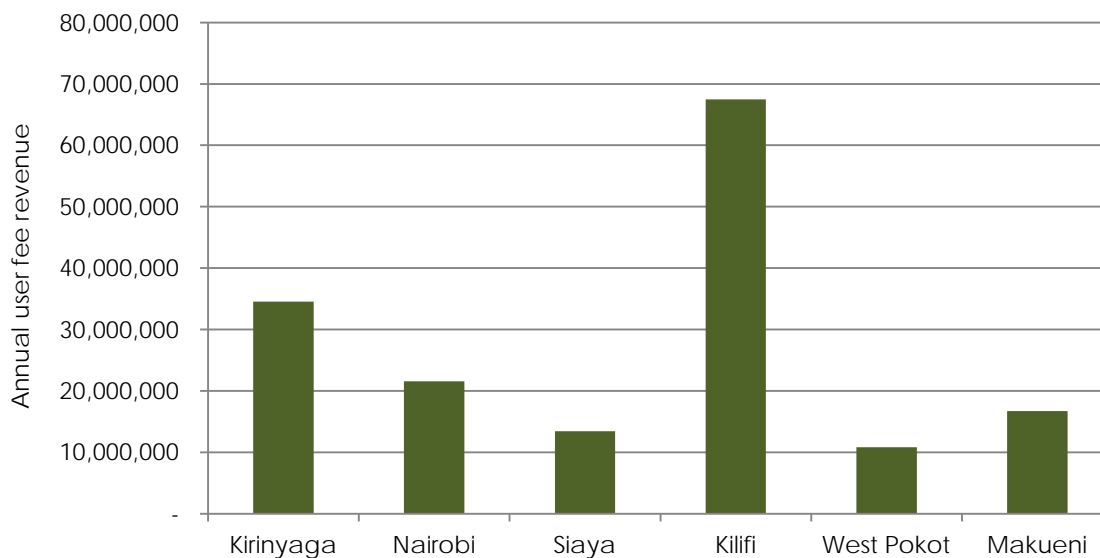
**Figure 10. Supplementation with iron and folate supplements, 2012/2013**



*User fee revenue in selected health facilities*

The selected 65 dispensaries and health centres collected KES 30,449,404 in user fee revenue in fiscal year 2012/2013. The share of contribution in the three non-poor counties amounted to 58 percent of total user fee revenue, compared with 42 percent in the three poor counties. The levels of annual user fee revenue collected at the 65 facilities are shown in Figure 11.

**Figure 11. Annual user fee revenue at selected dispensaries and health centres, 2012/2013**



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Data for user fee revenue from maternity care were not available for hospitals. Attempts will be made to collect this data from records during the semi-annual evaluation.

### LIMITATIONS

The data were drawn from the HMIS, and while the system plays an important role in providing data to inform policy in Kenya, there are limitations in using it to monitor and evaluate the two policies:

- It is not possible to directly attribute any change in observed patterns (e.g., regarding service quality) to the policies. However, improvements in related indicators reported by the facilities (either positively or negatively) can be attributed. Consequently, any observed pattern is likely to be the result of changes in reporting rather than the policy per se.
- The HMIS presents data differently for some indicators, using or combining different variables. For example, it is not possible from the current data to report the percentage of pregnant women attending ANC services who received iron and folate supplements.
- Some indicators are not represented in the HMIS. Although other data sources, such as the PETS Plus and the Demographic and Health Survey, have some of the missing data, they use different methodological approaches, making it difficult to compare and attribute observed changes to the two policies.
- It was not possible to calculate maternal and neonatal mortality rates because it was not clear from the deliveries observed, what proportion were live births (the denominator needed for such estimations).
- Examining data by facility and month reveals a significant amount of missing data (e.g., when a facility failed to report for a specific month). Under-reporting could greatly affect the evaluations and lead to the wrong conclusions.

High-quality, complete and standardised data are required to accurately attribute any observed patterns to the policy changes. Given the missing data, additional primary data should be collected in the selected facilities to supplement this baseline and inform future semi-annual and annual evaluations. Failure to do so will undermine the usefulness of the evaluations and lead to inadequate conclusions and policy recommendations.

### DISCUSSION AND CONCLUSIONS

This study provides baseline data for the evaluation of two policies: (1) removal of user fees in dispensaries and health centres and (2) removal of some maternal health care fees, including for deliveries in all public health facilities. The following conclusions can be drawn from the data and will help to inform the planned semi-annual and annual evaluations on the impact of the policies.

**Deliveries.** The number of deliveries taking place in public health facilities remains low, with the majority occurring in hospitals and only 41.7 percent occurring in dispensaries and health centres. Considering that dispensaries and health centres are more accessible to most of the population and lower in cost, there is an urgent need to identify ways to reverse this trend and ensure that women deliver in facilities closest to them.

While the data presented are not adequate to explain why this pattern exists, anecdotal evidence suggests that many dispensaries and health centres do not have the capacity to handle deliveries, and even when they do, pregnant women bypass them because the services are perceived to be of lower quality compared

with hospitals. Mechanisms must be established to strengthen and enable primary health care facilities to offer effective delivery services. Only then will women fully benefit from the free maternal care policy.

**ANC visits.** Only a minority of pregnant women (36.1%) make the required minimum of four ANC visits. It is not clear whether pregnant women seek the additional visits from other types of facilities. However, this is unlikely, considering that the 2008 KDHS estimated that only 16.4 percent of pregnant women seek ANC in the private sector. These findings highlight the importance of continually addressing barriers to ANC services, particularly related to affordability, acceptability, and availability of services.

**Maternal and neonatal deaths and fresh still births.** The numbers of maternal and neonatal deaths and fresh still births are still high. Although it is not possible to compare these with national estimates, the numbers are high enough to raise concerns and highlight the need to further explore the causes leading to these deaths in the health system.

**User fee revenue.** Dispensaries and health centres continue to raise a significant amount of revenue (KES 789,789,916) from user fees. The compensation planned by the government should, at a minimum, exceed this amount to ensure that services are not interrupted and that the gains from removing the user fees are realised.

**Poverty.** Finally, poverty seems to play a significant role in all the indicators under review. Counties with poor resources seem to perform worse than those with more, highlighting the importance of addressing inequity issues through appropriate resource allocation formulas, both at the national and county level.

## ANNEX 1. DISTRIBUTION OF DELIVERIES ACROSS COUNTIES

County	Jun-12	Jul-12	Aug-12	Sept-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Total
Baringo	747	663	697	707	694	680	573	855	814	896	927	1,150	9,403
Bomet	726	412	436	421	441	369	324	621	583	697	733	760	6,523
Bungoma	1,680	1,069	1,200	1,199	1,194	1,145	454	843	1,264	1,654	1,706	1,863	15,271
Busia	1,079	768	883	887	890	838	354	600	819	1,243	1,296	1,306	10,963
Elgeyo-Marakwet	341	555	501	590	557	476	447	601	609	682	632	854	6,845
Embu	617	843	877	604	740	806	267	372	635	1,019	1,012	1,030	8,822
Garissa	443	644	573	595	589	588	457	648	668	720	796	802	7,523
Homa Bay	1,418	881	903	898	849	853	596	1,288	1,256	1,486	1,579	1,739	13,746
Isiolo	189	417	409	393	430	411	222	307	387	499	564	588	4,816
Kajiado	503	490	488	456	501	389	188	414	614	751	849	882	6,525
Kakamega	2,050	1,419	1,497	1,466	1,419	1,334	834	1,387	1,655	2,087	2,199	2,473	19,820
Kericho	1,027	985	1,106	943	1,041	966	781	955	923	1,180	1,114	1,390	12,411
Kiambu	2,669	2,495	2,486	1,600	2,282	2,425	750	1,350	2,151	2,768	2,835	3,003	26,814
Kilifi	1,855	1,027	1,038	811	1,027	664	216	588	1,285	2,064	2,255	2,192	15,022
Kirinyaga	521	719	763	541	689	717	199	227	571	943	911	986	7,787
Kisii	2,052	1,340	1,390	1,356	1,379	1,270	1,247	1,920	1,867	2,124	2,275	2,536	20,756
Kisumu	1,448	1,366	1,352	1,352	1,256	1,033	396	813	1,203	1,490	1,706	2,003	15,418
Kitui	647	590	680	700	688	698	410	731	822	930	1,007	1,220	9,123
Kwale	962	526	559	518	532	570	182	765	961	1,312	2,843	1,366	11,096
Laikipia	709	815	847	510	694	787	679	779	795	994	997	1,180	9,786

Annex 1. Distribution of Deliveries Across Counties

County	Jun-12	Jul-12	Aug-12	Sept-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Total
Lamu	52	367	379	375	372	388	263	346	362	497	414	513	4,328
Machakos	1,396	942	1,010	846	927	877	307	510	930	1,314	1,330	1,455	11,844
Makueni	765	702	668	665	744	706	413	779	849	1,084	990	1,192	9,557
Mandera	317	401	427	439	486	479	345	558	512	548	692	736	5,940
Marsabit	129	362	371	386	399	306	305	391	375	479	491	540	4,534
Meru	1,338	1,207	1,165	1,020	1,078	1,202	436	249	769	1,481	1,505	1,691	13,141
Migori	2,003	793	830	857	941	905	580	1,627	1,619	1,842	1,851	2,111	15,959
Mombasa	1,614	1,554	1,537	1,121	1,435	1,529	617	698	1,057	1,756	1,869	2,120	16,907
Muranga	918	779	854	654	855	495	261	696	984	1,232	1,260	1,266	10,254
Nairobi	1,497	2,462	2,380	2,244	2,471	1,981	2,196	2,452	3,443	2,977	2,848	3,277	30,228
Nakuru	2,140	1,699	1,795	1,430	1,693	1,748	1,519	2,126	1,950	2,417	2,609	2,496	23,622
Nandi	419	623	687	698	676	682	590	736	705	922	953	1,085	8,776
Narok	577	596	653	633	649	634	527	740	670	822	879	928	8,308
Nyamira	766	479	552	506	500	500	428	782	796	966	956	995	8,226
Nyandarua	492	511	461	456	477	469	340	627	660	816	849	862	7,020
Nyeri	1,000	1,068	1,126	887	1,004	1,169	576	830	1,127	1,476	1,361	1,438	13,062
Samburu	25	334	359	365	349	329	247	305	306	410	428	471	3,928
Siaya	1,417	773	827	899	895	777	581	1,438	1,348	1,661	1,708	1,775	14,099
Taita Taveta	358	558	536	510	536	531	219	402	533	787	793	867	6,630
Tana River	114	318	359	322	336	316	203	265	333	427	496	539	4,028
Tharaka Nithi	294	496	597	510	527	513	268	397	480	646	787	724	6,239
Trans-Nzoia	532	603	663	560	648	729	570	700	754	757	850	950	8,316

Free Maternal Care and Removal of User Fees at Primary-Level Facilities in Kenya

County	Jun-12	Jul-12	Aug-12	Sept-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Total
Turkana	121	388	284	463	426	410	341	386	377	457	489	536	4,678
Uasin Gishu	1,128	1,087	1,100	904	1,042	1,154	926	1,113	1,170	1,422	1,415	1,448	13,909
Vihiga	597	496	491	462	497	434	194	489	642	783	865	978	6,928
Wajir	420	456	478	488	486	465	249	481	531	738	773	769	6,334
West Pokot	271	538	543	522	534	529	419	535	523	632	650	760	6,456
<b>Total</b>	<b>42,383</b>	<b>38,616</b>	<b>39,817</b>	<b>35,769</b>	<b>38,875</b>	<b>37,276</b>	<b>23,496</b>	<b>36,722</b>	<b>43,687</b>	<b>54,888</b>	<b>58,347</b>	<b>61,845</b>	<b>511,721</b>



## ANNEX 2. NUMBER OF MATERNAL AND NEONATAL DEATHS AND FRESH STILL BIRTHS, JUNE 2012–MAY 2013

County	Maternal deaths	Neonatal deaths	Fresh still births	Still births
Baringo	9	65	161	340
Bomet	2	55	64	370
Bungoma	39	178	274	575
Busia	28	107	163	312
Elgeyo-Marakwet	4	23	57	173
Embu	7	98	70	207
Garissa	19	75	48	232
Homa Bay	15	97	189	304
Isiolo	2	39	25	109
Kajiado	8	70	107	263
Kakamega	38	236	300	1,060
Kericho	7	150	155	1,062
Kiambu	25	400	277	708
Kilifi	23	147	426	1,027
Kirinyaga	4	59	52	104
Kisii	13	255	252	549
Kisumu	34	188	295	571
Kitui	16	90	164	395
Kwale	16	68	205	396
Laikipia	11	115	84	1,314
Lamu	5	24	47	94
Machakos	7	65	105	177
Makueni	13	40	167	352
Mandera	11	7	69	274
Marsabit	7	18	51	103
Meru	12	133	111	769
Migori	18	74	219	521
Mombasa	53	318	424	1,141
Muranga	4	586	96	169
Nairobi	23	459	183	2,036

Free Maternal Care and Removal of User Fees at Primary-Level  
Facilities in Kenya

County	Maternal deaths	Neonatal deaths	Fresh still births	Still births
Nakuru	39	486	375	1,074
Nandi	6	48	334	240
Narok	12	98	99	307
Nyamira	1	100	36	107
Nyandarua	1	81	48	219
Nyeri	12	130	98	323
Samburu	4	17	25	46
Siaya	23	99	218	499
Taita Taveta	5	56	86	209
Tana River	2	14	20	107
Tharaka Nithi	2	28	26	62
Trans-Nzoia	11	112	98	269
Turkana	7	53	35	107
Uasin Gishu	45	428	94	1,178
Vihiga	8	27	67	136
Wajir	3	21	52	174
West Pokot	11	57	113	283
<b>Total</b>	<b>665</b>	<b>6,094</b>	<b>6,664</b>	<b>19,867</b>

## ANNEX 3. OUTPATIENT VISITS AT DISPENSARIES AND HEALTH CENTRES

County	June '12	July '12	Aug '12	Sept '12	Oct '12	Nov '12	Dec '12	Jan '13	Feb '13	Mar '13	Apr '13	May '13	Total
Baringo	45,859	36,696	33,626	28,471	43,920	39,440	21,156	30,709	32,536	27,777	26,742	42,020	408,952
Bomet	75,864	49,996	36,709	33,701	48,383	52,389	29,283	40,101	48,750	44,083	49,527	55,501	564,287
Bungoma	52,093	42,190	31,176	25,017	37,112	42,798	18,202	27,958	36,585	33,146	39,285	47,725	433,287
Busia	58,941	45,776	39,705	28,207	41,269	40,675	16,170	28,983	41,557	33,428	34,581	50,748	460,040
Elgeyo-Marakwet	36,990	31,432	26,314	22,927	34,262	29,521	18,095	25,230	26,875	25,776	24,474	32,356	334,252
Embu	70,218	57,894	39,653	26,299	46,610	38,323	9,698	22,817	40,556	39,582	41,717	61,090	494,457
Garissa	19,888	19,352	19,905	18,179	18,072	22,093	12,847	23,116	19,060	14,929	15,911	18,387	221,739
Homa Bay	62,149	40,956	38,758	31,922	41,481	40,808	29,665	50,470	55,488	41,053	41,662	55,972	530,384
Isiolo	9,228	7,923	7,422	6,522	5,519	5,208	3,697	6,433	5,479	7,442	7,701	9,619	82,193
Kajiado	35,581	36,735	29,376	23,002	32,083	28,158	13,054	26,872	38,054	28,224	29,042	38,648	358,829
Kakamega	73,733	63,418	48,221	31,915	43,721	50,517	17,784	30,559	48,094	48,642	51,052	66,135	573,791
Kericho	58,080	37,272	27,994	25,467	36,352	36,824	21,060	29,121	34,397	29,740	28,629	40,153	405,089
Kiambu	101,543	72,548	53,019	36,053	56,248	50,306	11,073	36,311	48,177	48,193	57,064	74,927	645,462
Kilifi	85,786	79,875	62,475	53,392	78,497	82,043	39,765	51,943	57,625	52,218	58,253	66,306	768,178
Kirinyaga	73,383	52,657	42,507	29,241	40,069	38,231	4,212	10,244	27,642	37,208	37,104	49,525	442,023
Kisii	65,062	46,909	40,918	34,639	46,955	50,704	34,631	44,869	51,068	48,664	47,030	53,771	565,220
Kisumu	62,433	49,565	43,375	33,530	45,793	38,000	20,389	37,784	46,852	36,656	37,852	56,138	508,367
Kitui	96,543	88,616	71,470	51,190	83,244	69,248	34,880	94,579	101,440	62,570	79,608	93,045	926,433
Kwale	56,783	56,236	46,738	35,060	50,055	47,947	24,997	38,853	37,988	31,940	34,605	43,084	504,286
Laikipia	30,834	25,574	19,287	14,071	21,368	19,973	11,449	15,803	19,665	17,813	16,199	22,397	234,433

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Lamu	6,243	5,551	4,561	4,176	6,303	5,673	4,373	4,139	5,226	4,536	4,777	4,764	60,322
Machakos	94,388	84,037	62,664	44,584	64,748	54,143	18,816	47,376	60,611	54,154	65,067	95,995	746,583
Makueni	75,151	58,934	45,667	30,080	44,112	40,544	26,100	50,641	60,810	44,992	49,135	68,930	595,096
Mandera	11,936	10,863	9,038	11,791	11,745	9,938	10,115	6,134	8,089	11,783	10,370	12,206	124,008
Marsabit	12,554	7,606	6,810	5,543	6,095	7,120	6,083	6,635	6,114	4,722	7,029	9,212	85,523
Meru	103,752	71,870	51,546	35,594	61,631	47,600	16,198	39,010	57,200	50,615	57,892	78,167	671,075
Migori	74,777	40,735	38,234	28,693	39,154	39,447	29,768	51,593	56,792	93,122	43,872	53,928	590,115
Mombasa	18,813	15,923	13,152	12,161	17,463	19,359	8,045	9,553	10,453	8,259	15,370	16,812	165,363
Muranga	118,897	87,114	60,216	39,788	56,953	52,689	11,836	36,375	50,839	50,989	56,965	80,349	703,010
Nairobi	113,554	123,093	106,447	82,251	113,609	110,270	66,520	85,328	106,045	91,821	109,727	125,920	1,234,585
Nakuru	110,868	98,312	62,963	49,565	69,621	65,393	48,416	62,777	68,585	62,276	66,924	78,840	844,540
Nandi	75,780	41,671	32,694	30,485	44,978	41,344	24,650	37,802	40,503	37,377	36,766	45,330	489,380
Narok	41,015	30,238	29,336	18,364	26,085	24,782	14,453	26,462	27,825	24,323	25,406	196,110	484,399
Nyamira	30,880	23,013	20,699	16,083	21,618	19,367	13,903	18,974	18,361	20,629	20,179	23,062	246,768
Nyandarua	52,325	40,656	32,323	21,844	33,040	30,199	14,286	25,558	31,344	32,347	28,872	35,499	378,293
Nyeri	77,536	62,424	53,343	35,270	51,390	50,524	10,646	34,211	43,321	44,100	42,172	53,837	558,774
Samburu	10,588	8,145	7,167	6,990	9,318	8,446	5,823	8,375	8,922	6,916	9,504	25,486	115,680
Siaya	102,560	69,110	59,450	43,511	55,047	51,163	39,860	67,716	68,606	46,393	50,125	74,995	728,536
Taita Taveta	32,910	32,384	21,258	15,878	29,742	25,185	9,419	23,201	26,575	19,181	20,479	27,489	283,701
Tana River	9,923	11,074	7,074	5,665	10,748	8,655	2,252	6,279	9,153	5,765	9,030	8,674	94,292
Tharaka Nithi	43,604	32,252	20,293	14,531	24,098	20,034	9,290	23,227	23,678	19,507	23,815	28,294	282,623
Trans-Nzoia	24,392	13,871	10,823	8,442	13,280	17,696	11,622	13,603	16,745	15,530	14,288	15,352	175,644

### Annex 3. Outpatient Visits at Dispensaries and Health Centres

Turkana	13,638	8,627	9,960	9,266	9,967	8,134	4,879	10,290	10,084	6,050	8,823	11,856	111,574
Uasin Gishu	63,884	50,179	32,173	32,108	49,437	48,948	25,456	34,108	39,890	37,890	37,634	50,343	502,050
Vihiga	43,287	31,874	24,318	15,276	20,979	20,808	8,796	18,192	24,593	25,866	24,777	31,451	290,217
Wajir	18,406	17,012	15,580	13,221	17,970	16,022	12,370	13,046	15,960	15,609	17,080	18,904	191,180
West Pokot	21,765	20,547	14,412	12,218	15,675	16,159	9,320	10,730	9,825	8,321	10,918	14,218	164,108
<b>Total</b>	<b>2,574,417</b>	<b>2,038,735</b>	<b>1,610,849</b>	<b>1,232,183</b>	<b>1,775,819</b>	<b>1,682,848</b>	<b>855,402</b>	<b>1,444,090</b>	<b>1,724,037</b>	<b>1,552,157</b>	<b>1,625,034</b>	<b>2,263,570</b>	<b>20,379,141</b>

## ANNEX 4. UTILISATION OF OPD VISITS AND OPD VISITS PER CAPITA BY COUNTIES, JUNE 2012–MAY 2013

County	OPD visits	OPD visits per capita	County	OPD visits	OPD visits per capita
Baringo	408,952	0.74	Meru	671,075	0.49
Bomet	564,287	0.78	Migori	590,115	0.57
Bungoma	433,287	0.27	Mombasa	165,363	0.18
Busia	460,040	0.94	Muranga	703,010	0.75
Elgeyo-Marakwet	334,252	0.90	Nairobi	1,234,585	0.39
Embu	494,457	0.96	Nakuru	844,540	0.53
Garissa	221,739	0.36	Nandi	489,380	0.65
Homa Bay	530,384	0.55	Narok	484,399	0.57
Isiolo	82,193	0.57	Nyamira	246,768	0.41
Kajiado	358,829	0.52	Nyandarua	378,293	0.63
Kakamega	573,791	0.35	Nyeri	558,774	0.81
Kericho	405,089	0.53	Samburu	115,680	0.52
Kiambu	645,462	0.40	Siaya	728,536	0.86
Kilifi	768,178	0.69	Taita Taveta	283,701	1.00
Kirinyaga	442,023	0.84	Tana River	94,292	0.39
Kisii	565,220	0.49	Tharaka Nithi	282,623	0.77
Kisumu	508,367	0.52	Trans-Nzoia	175,644	0.21
Kitui	926,433	0.91	Turkana	111,574	0.13
Kwale	504,286	0.78	Uasin Gishu	502,050	0.56
Laikipia	234,433	0.59	Vihiga	290,217	0.52
Lamu	60,322	0.59	Wajir	191,180	0.29
Machakos	746,583	0.68	West Pokot	164,108	0.32
Makueni	595,096	0.67	<b>Kenya</b>	<b>20,379,141</b>	<b>0.53</b>
Mandera	124,008	0.12			
Marsabit	85,523	0.29			

## ANNEX 5. ANNUAL USER FEE REVENUE COLLECTION BY COUNTY, JUNE 2012–MAY 2013

County	Dispensaries	Health centres	Total
Baringo	6,562,080	5,887,872	12,449,952
Bomet	7,700,140	2,455,188	10,155,328
Bungoma	9,607,164	5,986,440	15,593,604
Busia	9,880,944	6,814,596	16,695,540
Elgeyo-Marakwet	6,580,120	6,990,876	13,570,996
Embu	13,968,528	8,134,056	22,102,584
Garissa	2,056,344	1,287,948	3,344,292
Homa Bay	5,745,696	582,000	6,327,696
Isiolo	765,396	5,364,792	6,130,188
Kajiado	3,713,764	1,689,240	5,403,004
Kakamega	13,810,116	12,224,700	26,034,816
Kericho	14,705,616	19,028,436	33,734,052
Kiambu	22,190,544	1,865,256	24,055,800
Kilifi	15,293,212	52,199,992	67,493,204
Kirinyaga	17,542,248	16,973,212	34,515,460
Kisii	7,471,584	12,007,044	19,478,628
Kisumu	4,019,556	7,830,600	11,850,156
Kitui	11,329,076	3,215,304	14,544,380
Kwale	12,479,464	9,811,056	22,290,520
Laikipia	6,087,864	5,219,880	11,307,744
Lamu	589,788	4,436,508	5,026,296
Machakos	9,642,076	12,722,172	22,364,248
Makueni	9,967,632	6,726,060	16,693,692
Mandera	568,116	1,846,092	2,414,208
Marasabit	1,022,376	1,172,280	2,194,656
Meru	15,775,308	119,760	15,895,068
Migori	8,972,580	12,633,564	21,606,144
Mombasa	4,933,240	4,488,684	9,421,924
Muranga	22,225,704	49,200	22,274,904

Free Maternal Care and Removal of User Fees at Primary-Level Facilities in Kenya

County	Dispensaries	Health centres	Total
Nairobi	1,234,024	20,337,132	21,571,156
Nakuru	19,115,884	20,007,792	39,123,676
Nandi	9,612,096	26,598,172	36,210,268
Narok	4,801,992	3,650,580	8,452,572
Nyamira	1,462,752	7,324,860	8,787,612
Nyandarua	6,454,392	3,458,268	9,912,660
Nyeri	18,419,856	20,605,452	39,025,308
Samburu	2,213,960	26,541,592	28,755,552
Siaya	12,449,976	997,840	13,447,816
Taita Taveta	3,565,992	12,969,728	16,535,720
Tana River	2,613,764	3,880,332	6,494,096
Tharaka Nithi	6,101,460	1,546,260	7,647,720
Trans Nzoia	6,061,416	9,143,700	15,205,116
Turkana	2,803,956	1,302,000	4,105,956
Uasin Gishu	7,026,960	4,661,784	11,688,744
Vihiga	3,176,220	12,552,960	15,729,180
Wajir	387,828	915,804	1,303,632
West Pokot	7,368,048	3,456,000	10,824,048
<b>Total</b>	<b>380,076,852</b>	<b>409,713,064</b>	<b>789,789,916</b>



## ANNEX 6. SELECTED HEALTH FACILITIES FOR THE SEMI-ANNUAL AND ANNUAL EVALUATION

County	District	Division	Facility name
Nairobi	Kamukunji	Pumwani	Pumwani Maternity Hospital
Nairobi	Kasarani	Kasarani	Prescott Dispensary
Nairobi	Kamukunji	Central	Upendo Dispensary
Nairobi	Kamukunji	Pumwani	Eastleigh Health Centre
Nairobi	Makadara	Makadara	Nairobi Remand Prison Health Centre
Nairobi	Makadara	Makadara	Makadara Health Centre
Nairobi	Kasarani	Kasarani	NSIS Health Centre (Ruaraka)
Nairobi	Embakasi	Dandora	Dandora II Health Centre
Nairobi	Embakasi	Embakasi	Umoja Health Centre
Nairobi	Kasarani	Kasarani	PSTC Health Centre
Nairobi	Kasarani	Kasarani	Kahawa Garrison Health Centre
Nairobi	Kasarani	Kasarani	Kahawa West Health Centre
Nairobi	Dagoretti	Dagoretti	Waithaka Health Centre
Nairobi	Embakasi	Mukuru	Mukuru Health Centre
Nairobi	Embakasi	Embakasi	Dandora I Health Centre
Nairobi	Kamukunji	City Square	Ngaira Rhodes Dispensary
Nairobi	Kasarani	Kasarani	Babadogo Health Centre
Kirinyaga	Kirinyaga South	Mwea	Kimbimbi Sub-District Hospital
Kirinyaga	Kirinyaga West	Central	Kerugoya District Hospital
Kirinyaga	Kirinyaga Central	Ndia East	Karima-ini Dispensary
Kirinyaga	Kirinyaga South	Mwea	Mutithi Health Centre
Kirinyaga	Kirinyaga West	Central	Kangaita Health Centre
Kirinyaga	Kirinyaga West	Central	Ucheru Community Health Centre
Kirinyaga	Kirinyaga South	Mwea	Murinduko Health Centre
Kirinyaga	Kirinyaga Central	Ndia	Baricho Health Centre
Kirinyaga	Kirinyaga Central	Ndia	Sagana Rural Health Demonstration Centre
Kirinyaga	Kirinyaga Central	Ndia	Gathambi Dispensary
Siaya	Ugenya	Ugunja	Ambira Sub-District Hospital
Siaya	Bondo	Usigu	Got Agulu Sub-District Hospital
Siaya	Ugenya	Ugunja	Got Osimbo Dispensary
Siaya	Gem	Yala	Ndere Health Centre
Siaya	Siaya	Uranga	Rwambwa Health Centre
Siaya	Rarieda	Madiany	Manyuanda Health Centre (Rarieda)
Siaya	Siaya	Boro	Kadenge Ratuoro Health Centre
Siaya	Ugenya	Ukwala	Ukwala Health Centre
Siaya	Siaya	Uranga	Hawinga Health Centre

## Free Maternal Care and Removal of User Fees at Primary-Level Facilities in Kenya

County	District	Division	Facility name
Siaya	Bondo	Usigu	Usenge Dispensary
Kilifi	Kaloleni	Mariakani	Mariakani District Hospital
Kilifi	Bahari	Bahari	Kilifi District Hospital
Kilifi	Bahari	Bamba	Midoina Dispensary
Kilifi	Bahari	Kikambala	Vipingo Rural Demonstration Health Centre
Kilifi	Bahari	Chonyi	Chasimba Health Centre
Kilifi	Bahari	Bahari	Matsangoni Model Health Centre
Kilifi	Bahari	Chonyi	Kizingo Health Centre
Kilifi	Ganze	Ganze	Ganze Health Centre
West Pokot	West Pokot	Chepareria	Chepareria Sub District Hospital
West Pokot	West Pokot	Kapenguria	Kapenguria District Hospital
West Pokot	West Pokot	Kapenguria	Kanglikwan Dispensary
West Pokot	West Pokot	Chepareria	Turkwel Health Centre
West Pokot	North Pokot	Alale	Alale Health Centre
West Pokot	West Pokot	Sook	Tamough Health Centre
West Pokot	Pokot Central	Lelan	Kabichbich Health Centre
West Pokot	West Pokot	Kapenguria	Keringet Health Centre
West Pokot	West Pokot	Kongelai	Serewo Health Centre
West Pokot	Pokot Central	Chesogon	Annet Dispensary
Makueni	Kibwezi	Makindu	Makindu District Hospital
Makueni	Nzau	Matiliku	Matiliku District Hospital
Makueni	Makueni	Wote	Mutulani Dispensary
Makueni	Makueni	Kathonzweni	Kathonzweni Health Centre
Makueni	Kibwezi	Kibwezi	Masongaleni Health Centre
Makueni	Mbooni West	Mbooni	Kaliani Health Centre
Makueni	Makueni	Wote	Nziu Health Centre
Makueni	Makueni	Kithuki	Kanzokea Health Centre
Makueni	Nzau	Mbitini	Mbenuu H. Centre
Makueni	Makueni	Kee	Mangala Dispensary

## ANNEX 7. CLASSIFICATION OF COUNTY BY POVERTY LEVEL, 2013

County	Poverty rate	Number of poor individuals	County	Poverty rate	Number of poor individuals
Turkana	92.9%	500,662	Homa Bay	43.1%	374,859
Mandera	85.7%	273,227	Nakuru	41.8%	556,168
Wajir	84.4%	328,024	Vihiga	41.3%	255,639
Marsabit	79.3%	171,250	Embu	40.8%	233,828
Samburu	77.7%	154,808	Kericho	39.2%	266,367
Tana River	75.4%	206,494	Mombasa	37.6%	335,150
Kwale	72.9%	535,821	Tharaka	36.9%	136,688
West Pokot	68.7%	258,873	Siaya	35.6%	286,615
Kilifi	66.9%	663,309	Narok	33.7%	226,406
Busia	66.0%	518,951	Nyeri	32.4%	245,077
Makueni	63.8%	631,865	Muranga	30.7%	311,699
Isiolo	63.1%	71,729	Lamu	30.6%	24,664
Kitui	62.5%	641,371	Meru	27.5%	365,219
Kisii	59.8%	627,423	Kirinyaga	25.6%	138,675
Baringo	58.5%	330,222	Kiambu	25.4%	386,258
Machakos	57.0%	685,222	Nairobi	22.0%	618,464
Elegeiyo Marakwet	55.2%	205,282	Kajiado	12.1%	58,803
Taita / Taveta	54.8%	168,240	Nyamira	46.3%	264,465
Garissa	54.5%	217,305	Migori	45.8%	349,238
Bungoma	52.2%	737,571	Kisumu	45.0%	447,946
Kakamega	52.1%	793,302	Uasin Gishu	44.6%	339,638
Bomet	50.7%	341,053	Nyamira	46.3%	264,465
Trans-Nzoia	50.1%	441,008	Migori	45.8%	349,238
Nyandarua	49.8%	269,719	<b>Kenya average</b>	<b>46.6</b>	<b>16,562,542</b>
Laikipia	48.1%	203,945			
Nandi	47.2%	364,000			

## REFERENCES

- CBS, Ministry of Health (MoH), Orc Macro. 2004. *Kenya Demographic and Health Survey 2003*. Calverton, Maryland: CBS, MoH, and ORC Macro.
- Chuma, J., L. Gilson, and C. Molyneux. 2007. "Treatment-seeking behaviour, cost burdens and coping strategies among rural and urban households in Coastal Kenya: an equity analysis." *Trop Med Int Health* 12(5): 673–686.
- Chuma, J., M. Thiede, and C. Molyneux. 2006. "Rethinking the economic costs of malaria at the household level: evidence from applying a new analytical framework in rural Kenya." *Malar J* 5: 76.
- Chuma, J., and T. Maina. Draft, submitted. "Do health care payments make Kenyans poorer?" *BMC Health Services Research*.
- Chuma, J., J. Musimbi, V. Okungu, C. Goodman, and C. Molyneux. 2009. "Reducing user fees for primary health care in Kenya: policy on paper or policy in practice?" *Int J Equity Health* 8: 15.
- Collins, D., J. Quick, S. Musau, K. Kraushaar, and I. Hussein. 1996. "The fall and rise of cost sharing in Kenya: the impact of phased implementation." *Health Policy and Planning* 11(1): 52–63.
- Eduardo, M. 2010. Attaining Universal Health Coverage. 2010. *A Research Initiative to Support Evidence-based Advocacy and Policy Making*. Milano: Global Health Group, Cergas, Bocconi University.
- Government of Kenya (GOK). 2001. *Welfare and Monitoring Survey II*. Nairobi: Ministry of Finance.
- Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. *Kenya Demographic and Health Survey 2008–09*. Calverton, Maryland: KNBS and ICF Macro.
- Kutzin, J. 2001. "A descriptive framework for country-level analysis of health care financing arrangements." *Health Policy (Amsterdam, Netherlands)* 56(3): 171–204.
- Mbugua, J., G. Bloom, and M. Segall. 1995. "Impact of user charges on vulnerable groups: the case of Kibwezi in rural Kenya." *Soc Sci Med* 41(6): 829–835.
- McIntyre, D., M. Thiede, G. Dahlgren, and M. Whitehead. 2006. "What are the economic consequences for households of illness and of paying for health care in low- and middle-income country contexts?" *Social Science & Medicine (1982)* 62(4): 858–865.
- Mills, A. 2007. *Strategies to Achieving Universal Coverage: Are There Lessons from Middle Income Countries*. London: Health Economics and Financing Programme, London School of Hygiene and Tropical Medicine.
- Ministry of Health (MoH). 2004. *Household Health Expenditure and Utilization Survey Report 2003*. Nairobi: MoH.
- Ministry of Medical Services (MoMS). 2008. *Facts and Figures on Health and Health Related Indicators*. Nairobi: MoMS.
- MoMS and Ministry of Public Health (MoPH). 2009. *Kenya Household Expenditure and Utilization Survey Report 2007*. Nairobi: MoMS and MoPH.

- Ministry of Public Health and Sanitation (MoPHS) and MoMS. 2009. *Health Care Financing Policy and Strategy: Systems Change for Universal Coverage*. Nairobi: MoPHS and MoMS.
- Mwabu, G. 1995. "Health care reform in Kenya: a review of the process." *Health Policy (Amsterdam, Netherlands)* 32(1–3): 245–255.
- Mwabu, G., J. Mwanzia, and W. Liambila. 1995. "User charges in government health facilities in Kenya: effect on attendance and revenue." *Health Policy and Planning* 10(2): 164–170.
- Mwabu, G. 1986. "Health care decisions at the household level: results of a rural health survey in Kenya." *Soc Sci Med* 22(3): 315–319.
- Preker, A., J. Langenbrunner, and M. Jakab. 2002. "Rich-poor differences in health care financing." In *Social Re-Insurance-A new approach to sustainable community health care financing*. Edited by Dro, D., and A. Preker. Washington, DC: World Bank.
- Russell, S. 2005. "Illuminating cases: understanding the economic burden of illness through case study household research." *Health Policy and Planning* 20(5): 277–289.
- World Health Organisation (WHO). 2010. *The World Health Report: Health Systems Financing: The Path to Universal Coverage*. Geneva: WHO.
- WHO. 2011. "Sustainable Health Financing Structures and Universal Coverage." *64th World Health Assembly, WHA Resolution 64.9*. Geneva: WHO.
- WHO. 2005. "Sustainable Health Financing, Universal Coverage and Social Health Insurance." *58th World Health Assembly, WHA Resolution 58.33*. Geneva: WHO.
- Xu, K., D. Evans, G. Carrin, A. Aguilar-Rivera, P. Musgrove, and T. Evans. 2007. "Protecting households from catastrophic health spending." *Health Aff (Millwood)* 26(4): 972–983.
- Xu, K., D. Evans, K. Kawabata, R. Zeramdini, J. Klavus, and C. Murray. 2003. "Household catastrophic health expenditure: a multicountry analysis." *Lancet* 362(9378): 111–117.





