ASSESSING PROVISION AND EQUITY IN LOW AND MIDDLE INCOME COUNTRY HEALTH MARKETS

a study from Kenya

FINAL REPORT

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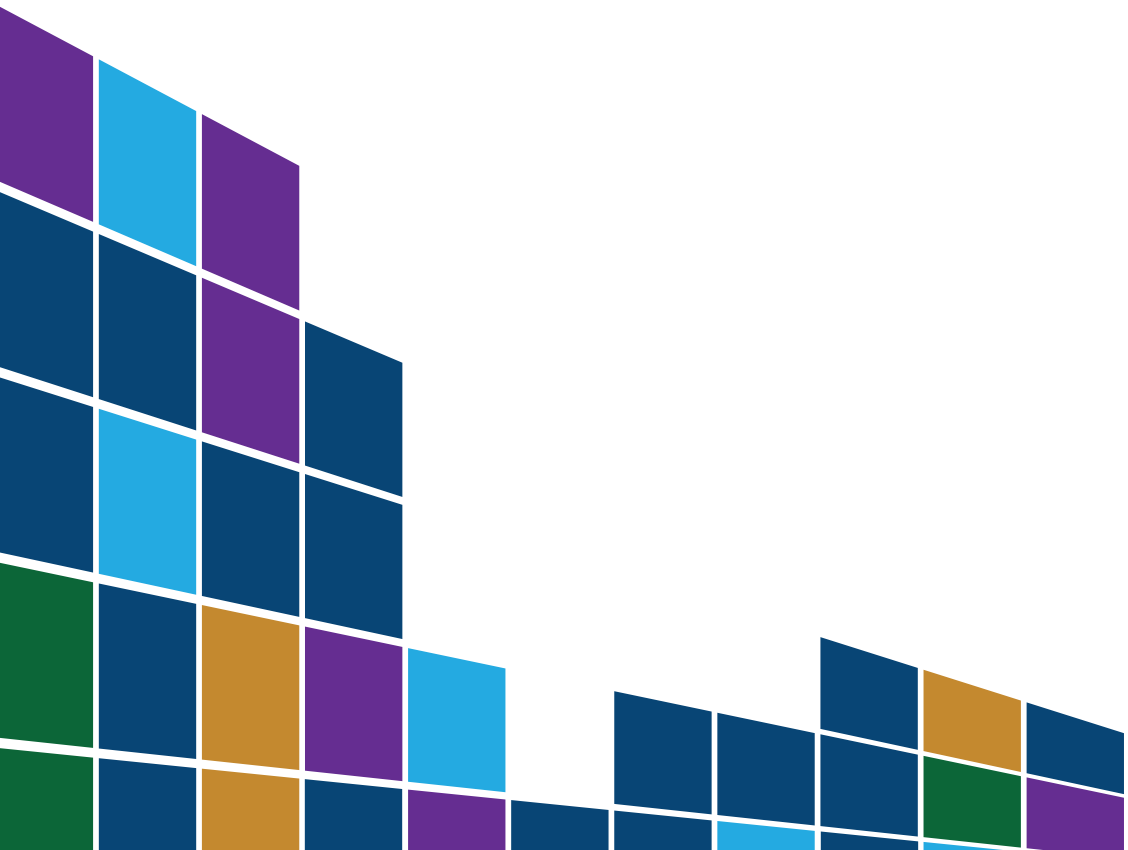

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SUMMARY

In Kenya the public sector provides 59.9% of all contraception, the remaining 40% delivered by commodity outlets, NGOs, faith-based organizations, social franchised providers, and for-profit clinics. Across many countries, population based surveys have shown that there is a socio-economic differential in sources of family planning, with women in higher wealth quintiles preferring the private sector. For routine childhood illnesses, the public sector is a preferred source of treatment for diarrhea, while the private sector is preferred for acute respiratory illness (ARI). The Demographic and Health Surveys (DHS) do not allow for more refined distinctions between types of private sector facilities, differentiation between sizes, patient volume, locale, or whether or not private providers are affiliated with franchised networks. DHS are not designed to provide sufficient estimates from each type of facility to be able to compare client characteristics, eliminating nuance between types of private sector facilities, or detailed information on equity in service use.

In order to compare client characteristics, specifically differences in client wealth across facility types, we conducted a cross-sectional survey of 2173 clients from 96 health facilities in urban areas of 6 counties in Kenya. The study was stratified by health facility type, focusing on four separate sectors: public, faith-based, private (non-franchised) and private (social-franchised). The study assessed client wealth using the EquityTool, a methodology developed in partnership with Population Services International, Metrics for Management and others, which reduces the number of questions that need to be asked to assess relative wealth. The wealth quintiles are those defined by the most recent, 2014, DHS, which is nationally representative.

The objectives of the study were to compare the wealth distribution of clients in each of the four sectors, focusing on clients who sought family planning or basic curative care for children under 5 with diarrhea, fever or ARI. A secondary objective was to assess if any of the four sectors fundamentally increased access to the health system for FP or child health clients, by addressing the concept of 'additional users' of the service.

The study found that there were significant differences in the wealth profile of clients in each of the four sectors. The public sector serves significantly more poor clients than each of the other three sectors when compared to the both national and urban wealth distributions.

All facility types serve a cross section of the urban population, with FBO, private, and franchised clinics each drawing more than 25% of their clients from the poorest two wealth quintiles. Nearly half of surveyed patients in private and franchised clinics were family planning clients, compared to only one-third of the patients in public and FBO clinics. Approximately 15% of clients were additional users for family planning, while 26% of child health clients were additional users. There were no significant differences by facility type for proportion of additional users of FP or child health services. Clients report that quality and accessibility matter most in choosing where to go for care. The importance of accessibility is supported by the localization of care-seeking. Clients are, regardless of facility type, highly stable: they traveled on average 20 minutes from home to facility, and 88% had visited the same facility before. Volumes in non

public-sector facilities are very low – and notably lower than provider self-reported patient numbers as recorded in the eligibility phase of this study.

There are a number of findings with implications for social franchises: they do better at reaching the poor than earlier studies had indicated, however no better than non-franchised private providers, and somewhat worse than FBO and public facilities. Franchises do a good job of making family planning accessible, outperformed in this only by the public sector, which provides access but sees proportionally fewer family planning clients. How franchise programs respond to these findings will be determined by the priority they put upon serving the poor or increasing service adopters.

This study provides additional context for how geographically proximate facilities in urban and peri-urban Kenya are serving clients of different wealth profiles. Such a study has not previously been conducted in Kenya, and is of interest for specific health system actors, as well as for those charged with the universal health coverage mandate.

BACKGROUND

A multi-country analysis entitled "The relationship between wealth and the use of health services in the private sector" was conducted by Metrics for Management for Population Services International (PSI). It revealed that while wealthier individuals do seek routine health services (family planning and curative care for children) from the private sector, the proportion differs widely by country, and even by reason for seeking care. The data available from Demographic and Health Survey (DHS) reports used in the analysis does not allow for detailed differentiation between types of private sector services. Notably, it does not differentiate between franchised and non-franchised private services – a distinction which is of interest to PSI and supporters of the franchising strategy for private sector service delivery.

To address this, Metrics for Management conducted a cross-sectional survey of clients at four types of health facilities in Kenya. To be included, clients needed to be attending the facility for family planning services (women aged 18-49), or to seek treatment for a child under age 5, for diarrhea, fever or respiratory issue. The four facility types compared in the study were public sector dispensaries and clinics, faith based facilities, private non-franchised facilities, and Tunza and Amua franchised facilities. Facilities were restricted to those located in urban and peri-urban areas, in order to facilitate comparison of clients and facility types[1].

Understanding where women and children seek care is an important first step in being able to provide affordable access to all and to ensure that the care being received is of high quality. The private sector is much more heterogeneous than the public sector, comprising both formal and informal sources of care. One DHS-based multi-country analysis found that poorer families are significantly less likely to receive appropriate treatment for diarrhea than rich families, and the private sector provides appropriate treatment less often than the public sector for poor families (1).

The DHS have provided an important source of information on the use of basic health services, with the ability to analyze data by various indicators of socio-economic status. In 2004, Gwatkin and colleagues noted that the use of health services is regressive (with the rich using more services than the poor), even for basic and preventive health services such as immunization, medical treatment of childhood illnesses (fever, diarrhea and respiratory infection) and antenatal care (2). DHS data also quantified the extent of socio-economic differences in use of health services by sector. The public sector provides more services to those in the poorest wealth quintile than the private sector, but neither sector sufficiently covers the poorest.

While this information provides a national perspective on use, uncertainties in the data resulting from recall bias and self-report, as well

[1] Urban focus due to the limited private facilities in rural settings, and the small numbers of clients present at the facilities that do exist.

as in appropriate categorization of health facilities, means that DHS data cannot tell us what the mix of patients is at any one facility. Do fewer poor people use private facilities there are fewer private facilities in rural or poor neighborhoods? We do not know. Do franchised providers serve the poor, but only in small numbers because the poor don't seek care frequently? Again, we cannot know from DHS cross sectional data.

In the studies noted above, wealth is measured using an asset or wealth index, derived from data collected at the household level in DHS and similar surveys. The wealth index is a relative measure of socio-economic status, based upon ownership of a variety of durable goods, livestock, and composition of one's house. The measure is relative because households are ranked and then divided into five equal groups (quintiles). When assessing the wealth of a sub-group, such as users of health services, it is possible to collect data on their asset ownership, and then place them within the national distribution – identifying to which quintile they belong. Collecting a shorter list of assets has been shown to be a valid and reliable way of assessing wealth (3).

We conducted this study in Kenya, a country undergoing an epidemiologic transition, and saddled with a significant burden of both communicable and non-communicable disease. Kenya continues to have wealth-related disparities in use of and access to preventive and curative primary health services as well as differences in quality by service type (4-7). This study uses relative wealth, dividing the Kenyan population into five quintiles of 20% each, ranked by the wealth index. Using such a measure ensures that these data are comparable to DHS surveys, and that differences in service utilization can be more easily compared across countries. In context, Kenya is a lower-middle income country with a per capita Gross National Income (2015) of $1340. Data from 2005 indicated that 33% of Kenyans live below $1.90/day (2011 PPP) (8).

In Kenya, 53% of married women use modern methods of family planning. However, there is significant difference in use between those in the wealthiest and poorest quintiles (57.7% vs 29.2%) (9). The private sector as a source of FP has declined from 40.5% in 2003 to 33.7% in 2014 (9,10), however it remains an important source for the those in the wealthiest 2 quintiles. Data from 2003 and 2009 show that among urban women, 31.7% in the poorest tercile used the private sector for family planning, as compared to 67.1% of those in the wealthiest tercile (11).

In the two weeks preceding the most recent DHS survey, 8.5% of children had symptoms of acute respiratory infection (ARI), 24.4% had fever and 15.2% had diarrhea. For all illnesses, care was sought from a health facility or provider for more than 55% of cases, irrespective of wealth quintile. Reported illness burden for ARI and fever has decreased appreciably since 2003, and care seeking has increased, with less difference between the rich and poor (9,10).

When children in Kenya show symptoms of acute respiratory infection, they are more likely to be taken to a private sector provider than to a public sector provider. In urban populations, 41.4% of children were treated in the public sector, while 57.8% were treated in the private sector. Within the urban population seeking care at a private source, 43.7% sought care at a private hospital, and 39.6% at a pharmacy (12).

Among children suffering from diarrhea, private providers treat approximately 30% of patients across Kenya. This increases to 47% of children in urban areas treated in the private sector, compared to 42% of children treated in the public sector. Within the private sector, private hospitals and clinics treat the majority (70%) of cases of diarrhea. Other facilities within the private sector category include private pharmacies, or mission hospitals and clinics. Source of treatment varies across wealth quintiles. Fifty-four percent of the highest wealth quintile uses the private sector,

while 38% use the public sector. Among those using the private sector, two-thirds seek care at a private hospital or clinic, with the remaining one-third seeking care at a mission hospital or clinic or at a private pharmacy. In the third and fourth quintiles, approximately 60% of users seek care in the public sector. And within the lowest two wealth quintiles, 46% (quintile 1) and 46% (quintile 2) use the public sector, while 33% of the lowest wealth quintile and 30% of quintile 2 use the private sector. Of those in the poorest wealth quintile, one-third seek care at a mission hospital or clinic, one-fourth seek care at a private hospital or clinic, and just under one-fifth of patients seek care at a private pharmacy or shop (12). Analyses of the 2014 Kenya DHS indicate that 32.5% of children with diarrhea do not seek care at all (13).

The private sector, and in particular social franchising, is well developed in Kenya. Social franchises, including PSKenya's Tunza network and Marie Stopes' Amua network, have prioritized improving access to family planning services by providing training and commodities to independent private providers. These networks also have a stated aim of improving access for the poor. However, evidence with regard to how well franchises and other private sector providers serve the poor is limited. 2014 surveys by Amua showed that 86% of their clients were from the top two wealth quintiles, when benchmarked against the 2008 Kenya DHS survey (14). Given that overall wealth in Kenya has likely increased between 2008 and 2014, these data may not accurately reflect the socio-economic status of franchised clients. It may also be that in the catchment areas served by social franchises, only the wealthy seek care, and public, faith-based, or private for-profit providers would all have equivalent client profiles. We cannot currently make these comparisons because similar data for other providers is not available.

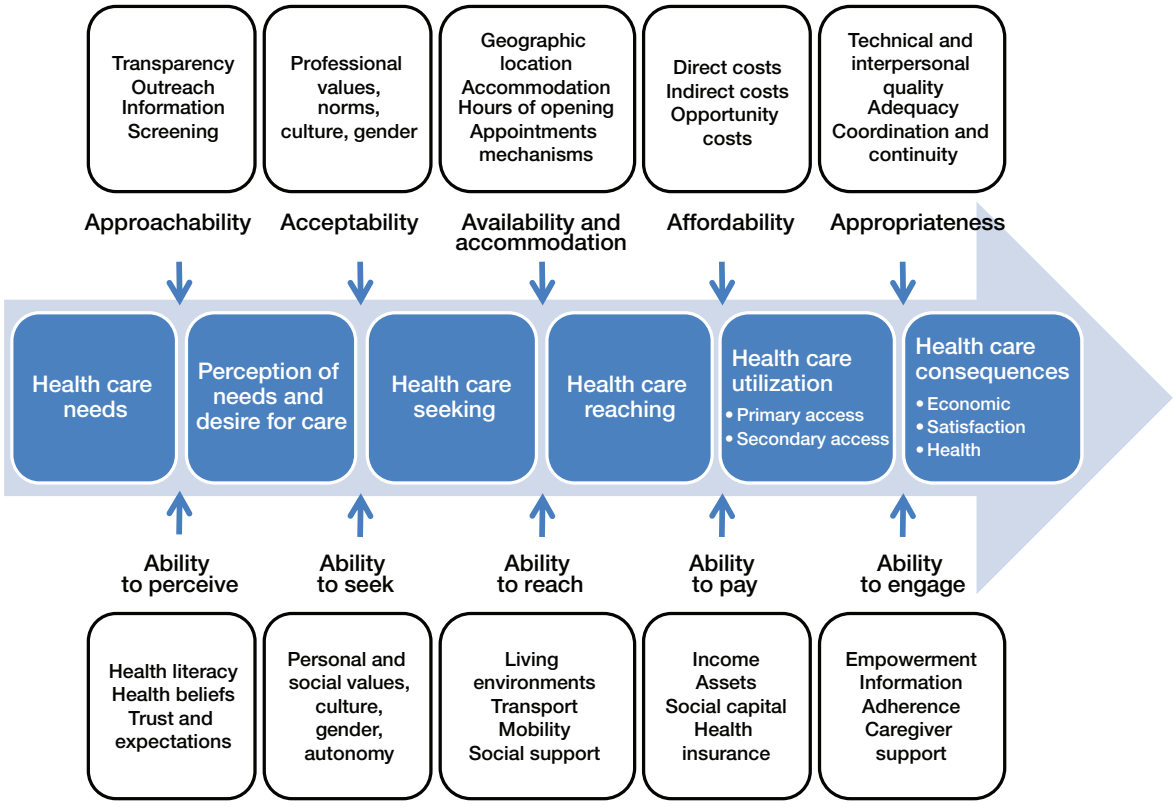
CONCEPTUAL FRAMEWORK

This study seeks to understand differences in the patient composition between health service facilities in the public, private, franchised, and faith-based sectors. Use of healthcare services is understood to be the key measurable point in a continuum of access which begins with predisposition and enabling factors, and continues through need for health care, geographic accessibility, availability, affordability, and acceptability of health services (15,16). Access to, and use of, healthcare services is a critical component of the Sustainable Development Goal (SDG) of Good Health and Well-Being (Goal 3). The SDGs call for universal access to sexual and reproductive health services, and an end to preventable child deaths (17). Understanding how facility coverage, quality, cost, and ownership affect patient decision-making for family planning and child health services addresses issues of health care utilization, as well as health care seeking and health care reaching, as seen in Figure 1, by Levesque et al (18). This knowledge can inform supply side interventions addressing availability and affordability, as well as demand side interventions addressing ability to seek, reach and pay for care, and will inform program planning in the future.

STUDY OBJECTIVES

1. To assess whether there are differences in the wealth status of clients of FP and IMCI services by health sector.
2. To describe the proportion of additional clients of FP and IMCI services, and assess if there are any differences by health sector.

FIGURE 1: A CONCEPTUAL FRAMEWORK OF ACCESS TO HEALTH CARE



METHODS

This section describes the design of the study, how facilities and clients were chosen, and the analysis methods used.

STUDY DESIGN AND SAMPLING STRATEGY

An observational, cross-sectional design was employed for this study. Women (18-49) seeking FP services for themselves or guardians seeking select curative care services for children (0-5) were interviewed at selected facilities after the service was received. The study was restricted to facilities in urban and peri-urban regions only, due to the higher concentration of private sector facilities in these areas.

One county from each region except the Nairobi and North-Eastern Regions was selected. These two regions were excluded due to the highly skewed nature of their wealth distributions. The most recent Kenya DHS survey indicates that wealth in the other 6 regions is more equally distributed.

Counties without any franchised (Tunza or Amua) or faith based facilities were excluded. One county from each former region with the highest number of franchised facilities was selected. Within the county, franchised facilities were listed and sorted by district (or sub-county). One sub-county from each county with at least 3 franchised facilities and 3 FBO facilities was randomly selected, and a second was randomly selected as the back-up. The back-up was selected in case the facilities in the chosen sub-county did not meet inclusion criteria listed below, or an insufficient number agreed to participate in the study.

The counties and sub-counties selected for the study are listed in Table 1.

TABLE 1: COUNTIES AND SUB-COUNTIES OF THE STUDY

REGION	COUNTY	SUB-COUNTY	BACK-UP
Central	Kiambu	Lari	Githunguri
Coast	Mombasa	Likoni	Mvita
Eastern	Machakos	Machakos	Athi River
Nyanza	Homa Bay	Homa Bay	Rachuonyo South
Rift Valley	Nakuru	Nakuru	Molo
Western	Kakamega	Butere	Kakamega Central

INCLUSION CRITERIA

Facilities had to be uniquely identified as belonging to one of the four categories below.

1. Public sector (Government) health centers or dispensaries
2. Faith-based, church, mission hospitals or clinics
3. Private for-profit hospitals or clinics with fewer than 5 beds
4. Private franchised facilities branded as Tunza or Amua, with fewer than 5 beds

Facilities were all located in an urban or peri-urban area, as defined by presence of a daily market and identifiable market center. Number of inpatient beds was not retained as an exclusion criteria, although efforts were made to select non-hospital private facilities.

Potential respondents were screened after services had been sought. If they met the inclusion criteria, they were asked to participate in the survey. Eligible respondents were women aged 18-49 who received a family planning service, or guardians of children aged 0-5 who sought care for fever, cough/respiratory infection, or diarrhea (IMCI services).

Ethical review for this study was received from AMREF (ESRC P247/2016) and the Marie Stopes Ethical Review Board (016-16). Approval to conduct the study was also sought and received from the Kenya Ministry of Health, the Christian Health Association of Kenya, Marie Stopes Kenya and Population Services Kenya.

DETAILS OF FACILITY SELECTION

Facilities were identified from the lists provided by Tunza and Amua franchise managers, as well as the Kenya Master Facility List (MFL), providing details of facility by county, sub-county, facility type and number of beds. Facilities that were listed as a level 4 or level 5 facility (equivalent to a district or referral hospital) were excluded from the initial frame, as were any private facilities listed as having more than 5 beds, and any facilities identified solely as lab or voluntary counseling and treatment (VCT) centers. After facilities were selected, it was discovered that the data on number of inpatient beds from the Kenya Master Facility List was incorrect or outdated, thus changing the original study inclusion criteria to discard the exclusion criteria based on number of inpatient beds.

Lists of facilities chosen to be assessed for eligibility were presented to each County Health Commissioner, and sub-county health administrator, where requested. County level permission was required to visit public sector facilities. County level permission was obtained without concern in 5 of 6 counties. In Mombasa county, numerous attempts to receive permission were made over the course of 3 weeks, and were unsuccessful. Given that two ethical review boards and the National Ministry of Health had already reviewed the proposed sample and given permission to conduct the study in the 6 selected counties, it was not considered an option to replace Mombasa county with another county. Additional details provided below.

All identified facilities in each selected district were visited prior to data collection in order to gain permission to conduct the study, and assess the facility's suitability for inclusion. Upon receipt of permission, facility in-charge personnel were asked to answer a short questionnaire detailing the types of services offered, and the average number of FP and IMCI clients seen daily. Information on client volume was used in the second stage of facility selection. In situations where not enough facilities from a particular stratum were found, interviewers were instructed to seek out

additional facilities that may not have been on the MFL. The MFL does not indicate if a facility is urban or rural or provide specific details on location, so interviewers also asked key informants (county health officials, other providers) if they knew where facilities were located, and did not visit those known to be rural. Determination of the final sampling frame for the study took two weeks of facility visits. During this time, 248 facilities were visited, of which 209 facilities were eligible for study inclusion.

Facilities which reported that they did not provide FP or child curative services were deemed ineligible, as were those which reported that they provided the services, but saw on average less than 1 client per day. From the remaining facilities, the sample was drawn. The number of eligible facilities in some county/stratum combinations resulted in a take-all approach. In places where it was possible to select, facilities were randomly selected after establishing a minimum daily volume of eligible clients required for each facility in that stratum. These minimum daily volumes ranged from 3-6 clients, depending on the client flow recorded during the eligibility visits. Potential respondents were then approached using pre-defined skip patterns based upon remaining at a facility for a minimum of two days. Interviewers were instructed to approach any woman vaguely appearing in the eligible age range, as well as anyone exiting with a child who could be 5 or younger.

DATA COLLECTION

Facilities over-reported their client volumes, particularly in the 3 non-public sector strata. As a result, data collection was extended from 3 to 4 weeks. Although a target number of responses per facility was set, this was not always achievable, and the sample was redistributed to other facilities. There were far fewer eligible faith-based facilities than planned for, including no eligible faith-based facilities in Mombasa. The allocated public and faith-based sample from Mombasa was reallocated to the other 5 counties. Four facilities revoked their permission to conduct the study after the initial visit, and the allocated sample for those facilities was also reallocated to facilities in the same stratum and county, if a replacement facility could not be found.

ANALYSIS

Analyses described below are descriptive. The wealth index results were calculated using the Kenya EquityTool methodology, comparing respondents to both the national and urban wealth distributions (3). T-tests and χ^2 tests are used where appropriate to compare results from the four strata. Given the multiple comparisons (between each pair within the four strata), statistical significance is determined only after applying the Holm-Bonferroni correction (19).

RESULTS

The multi-stage recruitment process began with 248 facilities visited for determination of eligibility and consent to participate in the study, if selected. Of these, 209 facilities were eligible for the study and consented to participate. Among those eligible, 96 facilities were chosen to be a part of the study, distributed across six counties and four strata. Facilities were chosen based upon reported data on patient volume. Table 2, below, indicates the distribution of facilities by stratum, as well as the number of clients successfully interviewed. As indicated above, no public or faith based facilities in Mombasa were included in the study.

TABLE 2: DISTRIBUTION OF STUDY FACILITIES AND RESPONDENTS BY COUNTY AND STRATUM

			NUMBER OF RESPONDENTS INTERVIEWED (RANGE AND TOTAL)			
COUNTY	STRATUM	FACILITIES	MINIMUM	MEDIAN	MAXIMUM	TOTAL
Nakuru	Public	6	22	24	24	141
	FBO	6	11	30	31	160
	Private	4	13	23	24	83
	Franchise	5	12	20	20	92
Mombasa	Public	0	--	--	--	0
	FBO	0	--	--	--	0
	Private	5	0	19	21	71
	Franchise	6	4	19	21	98
Machakos	Public	5	26	30	31	145
	FBO	3	16	30	42	88
	Private	4	1	19	25	64
	Franchise	6	0	18	28	88
Kakamega	Public	5	10	27	28	103
	FBO	2	6	15	24	30
	Private	4	15	22	26	85
	Franchise	5	2	19	20	79
Homa Bay	Public	5	28	29	33	149
	FBO	3	38	39	42	119
	Private	3	31	33	34	98
	Franchise	4	21	25	25	95
Kiambu	Public	4	29	29	30	117
	FBO	3	10	34	40	84
	Private	4	0	25	52	101
	Franchise	4	10	24	25	83

Of the 3,459 individuals approached to participate in the study, 98.5% agreed to participate. Of these 3,407 individuals, 3.3% were male, and the remainder were female. This is reflective of the fact that the study was focused on family planning clients and those seeking curative care for a child under age 5.

44% of the women approached were seeking services for themselves, while the remainder were seeking services for a child. Among those seeking services for themselves, 920 (62.4%) were there for family planning services, and thus eligible for the study.

With regard to potential respondents who sought care for children, 1,676 were children under age 5. Of these, 75% came to the health facility for at least one of the three childhood illness conditions – fever, diarrhea, or cough/respiratory illness. In summary, 63.8% (2173 out of 3,407) of those who consented to participate were eligible for the study. There were less than 1% of eligible clients who did not provide complete data.

Respondents were meant to be evenly divided across counties, within each stratum. However, this was not achievable with the resources available for the study. Permission to sample public sector clients in Mombasa county was not obtained, and there were no eligible faith-based facilities in the selected study areas in Mombasa county. Of the five remaining counties, Nakuru county had the largest number of eligible facilities, and consequently more clients were surveyed there.

No quota was established for family planning clients, even though we were aware they would be more difficult to capture. Nevertheless, a similar proportion of FP clients per county was observed. Table 3 illustrates the distribution of clients by stratum, and by reason for visit.

The mean age of male respondents was 33, while the mean age of female respondents was 28.5 (not significantly different by reason for visit). Figure 2 shows the age distribution of the respondents (adults speaking on behalf of the children visiting the facility, or family planning clients).

FIGURE 2: AGE DISTRIBUTION OF RESPONDENTS BY GENDER AND REASON FOR VISIT

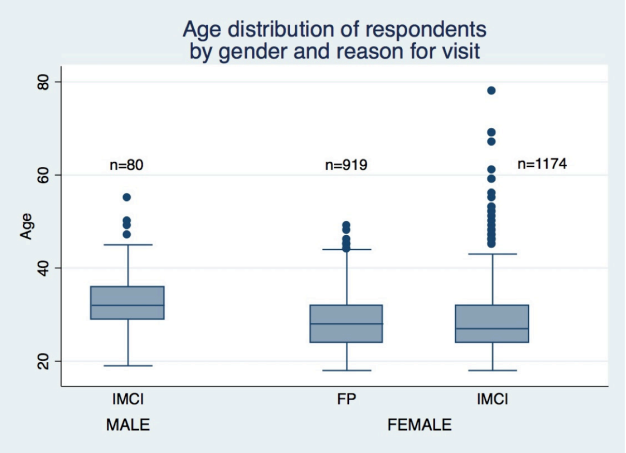


TABLE 3: DISTRIBUTION OF RESPONDENTS BY STRATUM, AND REASON FOR VISIT, BY COUNTY

	COUNTY						
STRATUM	**NAKURU**	**MOMBASA**	**MACHAKOS**	**KAKAMEGA**	**HOMA BAY**	**KIAMBU**	**TOTAL**
Public	141	0	145	103	149	117	655
FBO	160	0	88	30	119	84	481
Private	83	71	64	85	98	101	502
Franchise	92	98	88	79	95	83	535
FP	214	93	162	111	183	156	919
IMCI	262	76	223	186	278	229	1,254
Total	476	169	385	297	461	385	2,173

The high number of outliers in the female age distribution for IMCI clients is reflective of the fact that 2.7% of respondents were not the parent or legal guardian of the IMCI clients, and 90% of these were female respondents (grandmothers, etc.).

Respondents are most often married, however there are significant differences between FP and IMCI respondents. Table 4 details the marital status of respondents.

Over 60% of respondents had a secondary or higher education level, with 37% of respondents only having completed primary school.

All respondents were asked about asset ownership, using the reduced set of assets identified by the EquityTool as highly correlated with the 2014 Kenya DHS wealth index. While distribution of wealth by health facility is a primary research question of this study, it is important to also understand the overall distribution of wealth as seen in the study sample.

Respondents were surveyed at clinics in urban and peri-urban areas, however they may not live in these areas. Consequently, their wealth in comparison to both the national and urban benchmarks is examined. The table below outlines the overall distribution of respondents in comparison to national and urban benchmarks.

When compared to the national wealth distribution, respondents are predominantly found in the 4th and 5th wealth quintiles (wealthier quintiles). The fairly equitable distribution across urban quintiles indicates that clients in the urban and peri-urban facilities likely came from urban areas, and that the facility based sample was not overly skewed to one wealth quintile (See appendix C).

TABLE 4: MARITAL STATUS OF RESPONDENTS BY REASON FOR VISIT (PROPORTION)

	VISIT REASON		
MARITAL STATUS	FP	IMCI	TOTAL
Married / Living together	34.96	49.58	84.55
Never married	5.77	6.64	12.41
Divorced/Separated	1.38	0.92	2.31
Widowed	0.18	0.55	0.74
Total	42.30	57.70	100.00

TABLE 5: DISTRIBUTION OF RESPONDENTS BY NATIONAL AND URBAN WEALTH QUINTILE (N=2157)

QUINTILE	% IN NATIONAL QUINTILE	% IN URBAN QUINTILE
1 - Poorest	5.70	19.52
2	6.49	15.11
3	11.31	19.10
4	27.07	22.86
5 - Wealthiest	49.42	23.41
Total	100.0	100.0

FACILITY CHARACTERISTICS

During the eligibility screening, facilities were asked which services they routinely provide. At the time of the exit interviews, a facility survey was also completed for each facility, indicating what contraceptive methods they offer, and which methods are available on that day. Facility size (number of providers, and number of beds) was also assessed, as well as measures of access, including whether or not the facility sells medicines, and if they accept health insurance. The results provided below are only for those 96 facilities where client exit surveys were attempted.

Table 6 describes what services are provided, while Figure 3 shows the average number of FP methods offered and available (county specific results in Appendix A).

All facilities were required to provide FP for inclusion in the study, and the overwhelming majority of facilities also provide STI testing and treatment, HIV testing and treatment, and other child and adult health services. There is considerable variation in the provision of PAC services, as well as maternal health services.

TABLE 6: PROPORTION OF STUDY FACILITIES OFFERING VARIOUS SERVICES, BY SERVICE TYPE, COUNTY AND STRATUM

COUNTY	STRATUM	FP	PAC	MCH	STI TEST AND TREAT	HIV TESTING AND ARV	OTHER CHILD HEALTH	OTHER ADULT HEALTH
Nakuru	Public	100%	0%	67%	100%	100%	100%	83%
	FBO	100%	17%	67%	100%	100%	100%	83%
	Private	100%	100%	75%	100%	100%	100%	100%
	Franchise	100%	100%	100%	100%	100%	100%	100%
Mombasa	Private	100%	100%	100%	100%	100%	100%	100%
	Franchise	100%	67%	67%	100%	100%	100%	100%
Machakos	Public	100%	40%	100%	60%	100%	100%	100%
	FBO	100%	33%	67%	67%	100%	100%	100%
	Private	100%	0%	100%	75%	100%	100%	100%
	Franchise	100%	33%	83%	100%	100%	83%	100%
Kakamega	Public	100%	80%	100%	100%	100%	100%	100%
	FBO	100%	0%	50%	100%	100%	50%	100%
	Private	100%	75%	100%	100%	100%	75%	75%
	Franchise	100%	20%	100%	100%	100%	100%	100%
Homa Bay	Public	100%	40%	100%	100%	100%	100%	100%
	FBO	100%	0%	67%	100%	67%	100%	100%
	Private	100%	33%	100%	67%	67%	67%	67%
	Franchise	100%	50%	25%	100%	75%	100%	100%
Kiambu	Public	100%	0%	100%	100%	100%	100%	100%
	FBO	100%	33%	67%	100%	100%	100%	100%
	Private	100%	25%	100%	75%	50%	100%	100%
	Franchise	100%	75%	75%	100%	75%	100%	100%
Total	Public	100%	32%	92%	92%	100%	100%	96%
	FBO	100%	18%	65%	94%	94%	94%	94%
	Private	100%	58%	96%	88%	88%	92%	92%
	Franchise	100%	57%	77%	100%	93%	97%	100%

There are significant differences (p<0.01) in the number of methods available, and the number of LAPM methods available, across facility types. All data was captured via self-report from the facility manager or provider in charge.

For all methods, public facilities on average offered and had available the highest number of methods, followed closely by franchised private facilities (Figure 3). For LAPM alone, public facilities offered the highest number with franchised clinics close behind, but the social franchise facilities had the highest number of LAPM available. FBO and private facilities were the least likely to offer or have available all methods of family planning or LAPM alone.

The majority of facilities either had no inpatient beds, or had 10 or fewer inpatient beds. Notable outliers include one private facility in Nakuru with 76 beds, and 1 franchised facility in Kakamega and Kiambu with 60 and 50 beds respectively (Figure 4). Figure 5 shows the considerable variation among facility sale of medicines and acceptance of insurance. Public facilities were the least likely to sell medicines, while faith based facilities were the most likely (county specific results in Appendix B).

CARE SEEKING

To assess geographic and financial access, clients were asked how they travelled to the facility, how long it took, how much they paid, and if they had health insurance.

The majority (55.9%) of respondents walked to the health facility as their primary mode of transportation, while 24.8% of respondents took a motorbike taxi. Only 4% of respondents took their own vehicle (bicycle, motorbike, car) or a private taxi to reach the facility. The mean travel time was 23 minutes, however travel time varied by wealth status. Those classified in the bottom two quintiles of the urban wealth distribution had a mean travel time of 29 minutes, compared with 19.8 minutes for wealthier care-seekers (p<0.001).

FIGURE 3: MEAN NUMBER OF FP METHODS OFFERED AND AVAILABLE BY FACILITY TYPE

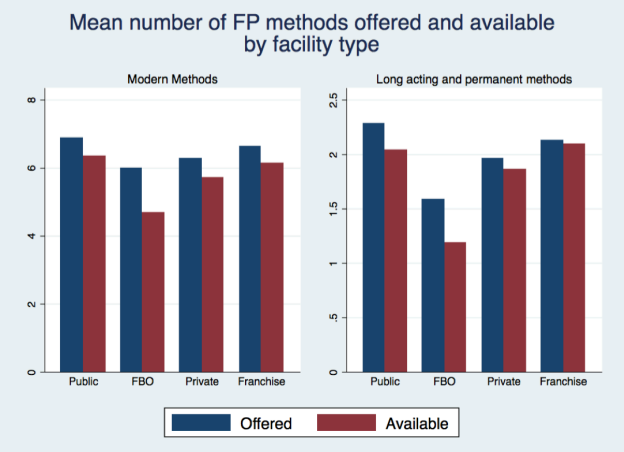


FIGURE 4: BOX PLOT OF FACILITY SIZE, BY FACILITY TYPE

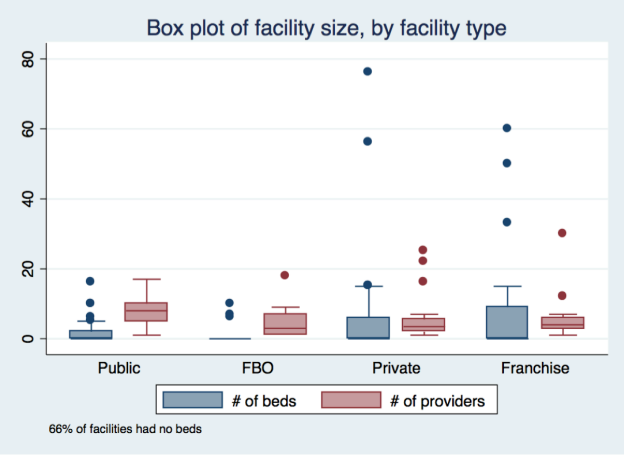
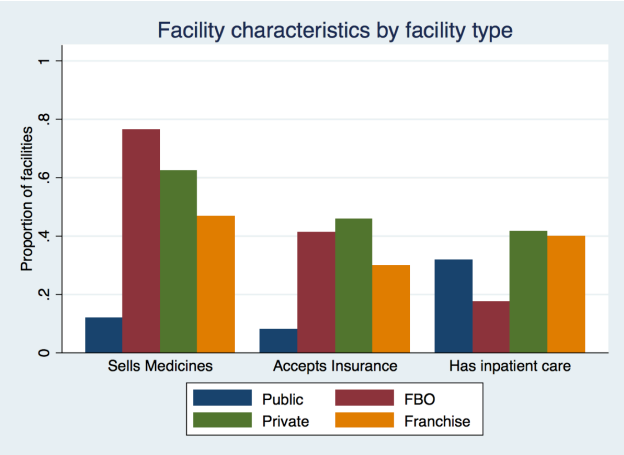


FIGURE 5: FACILITY CHARACTERISTICS, BY FACILITY TYPE



The vast majority (88%) of both FP and IMCI clients had been to the facility they visited before, with no significant differences between groups.

By facility type, there was no difference in first time visitors to FBO, private or franchised facilities, but a significantly smaller proportion of clients at public sector facilities were first time visitors. Clients were also asked why they chose the health facility, and were able to give multiple answers. Common answers were that the facility was nearby (44.4%), had good quality (40.1%), had the services needed (39.8%), was convenient (24.5%), or that providers were nice/friendly (23.6%).

With regard to cost of services and service affordability, clients were asked how much they paid, and if they had health insurance. Facilities were also asked if they accepted health insurance. 30% of franchised facilities, and 41% and 46% of faith based and private facilities respectively accepted insurance. Nearly 30% of clients had health insurance, but only 4.7% of them used the insurance for the visit. After removing one outlier observation, client payment was assessed for differences between facility type, and difference between reason for visit. Mean, median and 25th and 75th percentile values for payment are shown in table 7 below. There is a significant difference in mean amount paid between the public sector and the other three sectors, but no significant difference between clients of FBO, Private and Franchised facilities. The finding is the same when comparing mean cost of FP or IMCI services alone, by sector.

Those seeking care for childhood illnesses spent significantly more than those seeking family planning (KSH 263.8 vs 151.5, $p<0.001$). Family planning clients were mostly likely to visit private or franchised facilities, while those with ill children were most likely to visit public facilities (Table 8).

Among the clients who sought services for family planning, their primary method of FP used, or reason for seeking care, is seen in the table below. The majority of women came for injectables, while 12% came for a long acting reversible contraceptive (LARC), and 6.8% of women came for a removal of a LARC. Interestingly, 11.9% of clients received counseling only during their visit. No additional detail on whether this was their intention, or on quality of services was sought in this study.

TABLE 7: AMOUNT PAID FOR SERVICES, BY SECTOR VISITED

SECTOR	MEAN	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE
Public	22.7	0	0	0
FBO	279.7	100	150	350
Private	323.1	100	150	350
Franchise	310.7	100	150	400

TABLE 8: PROPORTION OF RESPONDENTS BY REASON FOR VISIT AND STRATUM

VISIT REASON	PUBLIC	FBO	PRIVATE	FRAN-CHISE	TOTAL
FP	10.08%	8.74%	11.78%	11.69%	42.29%
IMCI	20.06%	13.39%	11.32%	12.93%	57.71%
Total	30.14%	22.14%	23.10%	24.62%	100.00%

HYPOTHESIS TESTING

As noted above, this study had two main research questions. First to determine if differences exist in client wealth by facility type for FP and IMCI services. Second, to determine the proportion of additional clients (new to the health service or health system) for both family planning and IMCI clients.

Wealth

Table 9, below, shows the distribution of clients by national wealth quintile and facility type. Quintile 1 is the poorest, and quintile 5 is the wealthiest.

FIGURE 6: PRIMARY METHOD OF FP SOUGHT AT VISIT

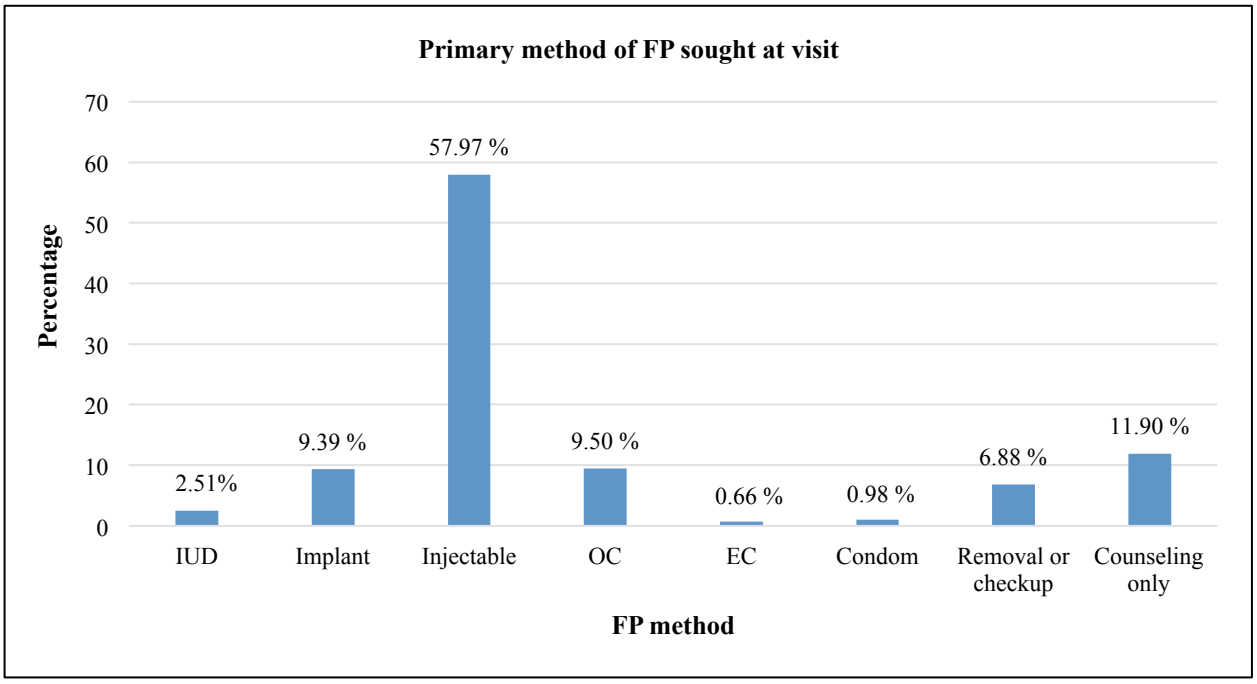


TABLE 9: PROPORTION OF CLIENTS IN EACH NATIONAL WEALTH QUINTILE, BY SECTOR (FACILITY TYPE VISITED)

NATIONAL QUINTILE	TYPE OF FACILITY				TOTAL
	PUBLIC	FBO	PRIVATE	FRANCHISE	
1	10.92%	5.70%	1.20%	3.55%	5.70%
2	11.54%	6.54%	2.41%	4.11%	6.49%
3	16.46%	10.34%	8.43%	8.60%	11.31%
4	30.92%	27.64%	26.71%	22.24%	27.07%
5	30.15%	49.79%	61.24%	61.50%	49.42%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

There is a significant difference in the wealth distribution between each pair of sectors (Public vs FBO, FBO vs Private, Public vs Franchise, etc.), with all differences significant at $p<0.05$ and after applying the Holm-Bonferroni correction. In other words, the wealth distribution of clients is significantly different in each of the four sectors, when compared to each other.

There is also a significant difference in the proportion of clients in the bottom two quintiles of the national distribution (those who are in the poorest 40% of the Kenyan population) between each pair of sectors. Differences between the public sector and the other three sectors, and between the FBO and private sectors are significant at $p<0.001$, while difference between the franchise sector and private or FBO sectors are significant at $p<0.05$. The franchise sector services more of the poorest than the private sector, but less than the FBO sector.

As all facilities surveyed are in urban or peri-urban settings, a more appropriate benchmark may be that shown below (Table 10) comparing clients only to urban Kenyan populations.

There is a significant difference in the wealth distribution of clients between each pair of sectors, except the Private vs Franchise groups. All other differences are significant at $p<0.05$ and after applying the Holm-Bonferroni correction.

When comparing the proportion of clients in the poorest 40% of the urban wealth distribution, the public sector serves significantly more of the poorest than each of the other three sectors ($p<0.001$ for all). The FBO sector serves significantly more of the poorest ($p<0.001$) than the franchised or private sectors. There is no significant difference between the proportion of poorest urban residents served between the franchised and private sectors.

There are regional differences in wealth as well, and this is seen in the exit interview data. As seen in Figure 7, approximately 12% of clients across all 4 sectors in Nakuru were from the poorest 2 urban quintiles, while 50% of all clients in Kakamega and 55% of all clients in Homa Bay were from the poorest 2 urban quintiles.

FIGURE 7: PROPORTION OF CLIENTS IN LOWEST TWO URBAN QUINTILES, BY COUNTY

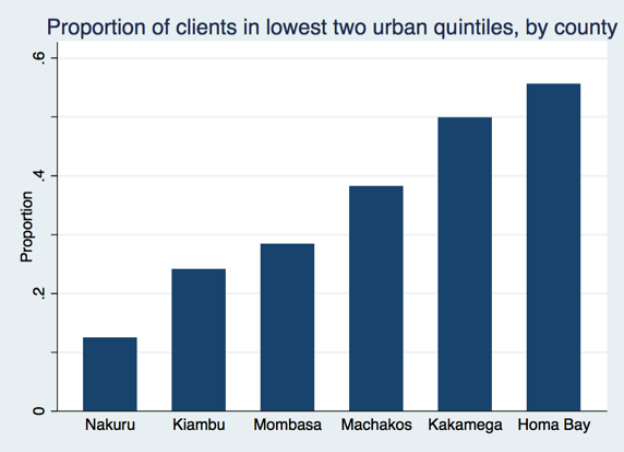


TABLE 10: PROPORTION OF CLIENTS IN EACH URBAN WEALTH QUINTILE, BY SECTOR (FACILITY TYPE VISITED)

NATIONAL QUINTILE	TYPE OF FACILITY				TOTAL
	PUBLIC	FBO	PRIVATE	FRANCHISE	
1	31.56%	18.60%	10.25%	13.26%	19.52%
2	20.21%	14.80%	12.76%	10.98%	15.11%
3	19.17%	19.24%	19.25%	18.75%	19.10%
4	17.70%	25.16%	25.94%	24.62%	22.86%
5	11.36%	22.20%	31.80%	32.39%	23.41%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Additional clients

In order to determine if any or all of the health sectors are contributing to an expansion in use of the health system, this study measures additional users for family planning and IMCI services. An additional user for family planning is defined as someone who is an initiator of modern family planning (either someone who has never used modern contraception before, or someone returning to contraception). For the purposes of this study, someone was defined as returning to contraception, and thus an initiator, if at least three months had passed since they last used a modern method[2]. An additional user in IMCI services is defined as someone who has never used the formal health sector before for the illness in question, either because they did not previously have a need, or because they sought care from an informal source.

Among the 916 women who came for family planning, 10.3% had never used a modern method before, and overall, 15.6% of women were additional users of family planning (Table 13). There was no significant difference by facility type.

Among child health clients, approximately 25% had never needed a health service before for that issue, with an additional 2.6% of children having been taken to an unqualified provider or no provider for a previous episode of the illness. There are no significant differences in the proportion of additional users across the four facility types (Table 14). In pairwise comparisons, the difference between Public and FBO facilities is no longer significant when the Holm-Bonferroni correction is applied.

TABLE 13: PROPORTION OF ADDITIONAL USERS OF FP, BY SECTOR (FACILITY TYPE VISITED)

ADDITIONAL FP USER	TYPE OF FACILITY				TOTAL
	PUBLIC	FBO	PRIVATE	FRANCHISE	
No	20.96%	17.79%	22.38%	23.25%	84.39%
Yes	3.71%	2.84%	4.91%	4.15%	15.61%
Total	24.67%	20.63%	27.29%	27.40%	100.00%

TABLE 14: PROPORTION OF ADDITIONAL CHILD HEALTH CLIENTS, BY SECTOR (FACILITY TYPE VISITED)

ADDITIONAL CHILD HEALTH CLIENT	TYPE OF FACILITY				TOTAL
	PUBLIC	FBO	PRIVATE	FRANCHISE	
No	26.52%	15.60%	14.47%	16.49%	73.08%
Yes	8.25%	7.36%	5.34%	5.98%	26.92%
Total	34.76%	22.96%	19.81%	22.47%	100.00%

[2] No standard definition for the amount of time lapsed before a family planning user is considered an initiator exists, however the Metrics Working Group (see www.m4mgmt.org) and the PME working group for the FP2020 initiative are both discussing the issue.

DISCUSSION

This study was designed to determine if there are differences in the wealth profile of primary care clients across facility types, in urban and peri-urban areas of Kenya, and implicitly to understand if the poor are seeking family planning and child health care, and if so from where. The study addresses distribution of those who seek primary care, with the goal of drawing lessons relevant both to this population and to those who do not yet seek services when in need. Despite some limitations in accessing facilities in Mombasa, this study is representative of services available to nearly 70% of all urban dwellers in Kenya (calculated from 2009 Census of Kenya (20)).

This research shows that public sector facilities serve a higher proportion of poor clients than other types of facilities. This may be explained in part by the lower price paid for services in the public sector, where over 75% of clients did not pay anything. There are no meaningful differences in the proportion of poor clients (those in quintiles 1 and 2) served by the private and franchised sectors, with FBO facilities having more poor clients. All three facility types serve a cross-section of the urban population, but with a leaning towards wealthier patients. There are also no significant differences in the mean amount paid by clients of these three facility types.

When examining 'structural' differences in facilities, including availability of services, this study found that FBO and public facilities were less likely to offer PAC services than private and franchised facilities, while FBO and franchised facilities are less likely to offer general maternal health services. All facilities included in the study had to be able to provide some FP, however FBO facilities have fewer methods of family planning available. Nevertheless, women seeking FP services were less likely to visit public sector facilities, as compared to other facility types. Public sector facilities had high client volume, but also had a larger volume of children eligible for the study. Assuming the sampling procedure was not executed differently in the public sector facilities, this finding indicates that there was in fact a lower proportion of women seeking FP at the public sector facilities. Reasons for preferring private and FBO facilities may include real or perceived differences in quality, lower waiting times, or improved provider-client interaction, as established by research in Kenya and elsewhere (21,22).

By design, the inference drawn from these findings are limited to those who do in fact seek formal health services. The sampling methodology, reliant upon the Kenya Master Facility List and local providers, meant facilities run by unqualified providers, or unregistered facilities, were unlikely to be sampled. Studies in Kenya and elsewhere indicate that urban poor are underserved by formal public or private sector facilities, and seek care at drug shops, informal providers or not at all (23-25). Analysis of the 2014 Kenya DHS survey showed that a substantial proportion of children who have diarrhea, ARI or fever either do not seek care at all or do not visit at a qualified health provider. For example, 33% of children under 5 with diarrhea in the 2 weeks preceding the survey did not seek care at a qualified provider. This may be reflective of a lack of access, a lack of a perceived need to seek care, or a lack of trust in available providers. Research conducted in informal settlements in Nairobi also indicated that a majority of children with diarrhea

do not receive appropriate treatment (26). There may be, therefore, a hidden sector of urban poor health care users, who pay for treatment from drug shops or informal providers, and may benefit from services provided by the formal sector.

No facility type stands out as expanding access to health services more than another, as measured by the two assessments of additional users (for FP and child health services). Understanding the value of a health facility (or facility type) in expanding access may be more meaningful in rural areas, where facilities are further away from each other. In urban areas, all types make a contribution. It is worthwhile reflecting on the unequal distribution of urban poor health care seekers across the 6 study sites (see Figure 6). The overall distribution of wealth in our study population is very similar to the distribution of wealth among urban dwellers of Kenya. However, when comparing the wealth of care-seekers in Nakuru, for example, to those of all urban dwellers in the Rift Valley region, the distributions are starkly different.[3] There are also inconsistencies across regions, which cannot be easily explained by a hypothesis that care-seekers overall may be wealthier, if the poorest do not have access to the formal health system. In Nakuru and Machakos, care-seekers are generally wealthier than the rest of the urban population of the region, while in Mombasa, they are similarly distributed; in Kakamega and Homa Bay the poorest two quintiles are less well represented among care-seekers, consistent with an access hypothesis. Finally, in Kiambu, care-seekers are poorer than the general population of urban dwellers, perhaps because the wealthiest in Kiambu seek care in Nairobi.

Access to care for the poorest urban dwellers is an important consideration. Our research found that although median travel time was 20 minutes (IQR 10-30 minutes), and that care-seekers prioritize convenience, those in the poorest two quintiles travel for significantly longer. While the majority of clients interviewed walked to the facility, suitable formal sector care may not be located near to the poorest.

Our findings on wealth distribution of clients, specifically in the franchised sector, are different to that found in recent studies conducted by the Tunza and Amua franchises. A recent study conducted by the franchise networks found that the vast majority of clients were from the wealthiest two quintiles. Those results were benchmarked against the national wealth distribution in 2008, whereas the results from this study are benchmarked against both the national and urban-only wealth distributions from 2014. Our study shows that nearly 25% of all franchised clients are poor (quintiles 1 and 2), and only 57% are from the wealthiest two quintiles. This is a still a wealthy-leaning clientele, but a great improvement on prior findings. The choice of comparison population matters greatly in this type of study both because of the inferences which can be drawn, and the accuracy of wealth measurement based on assumptions of nationally representative asset ownership. Notably, the possession of mobile phones increased from 60% nationwide in 2008, to over 90% in 2014; as a result, phone ownership is no longer a symbol of wealth (9). This study is one of the first to use the EquityTool – a validated, shorter version of the DHS wealth index that compares those sampled to national and urban wealth distributions (3). The choice of the comparison population is also extremely important to note in other studies of urban care-seeking. Several studies conducted in Kenya in recent years have created relative wealth quintiles from within the population studied – one region, city or slum area (26-28). The inference drawn about the poor or wealthy in such studies is different to what is demonstrated here, as the definition of wealthy, in particular, is in relation only to the others in the study, rather than to the entire country. When organizations such as franchises, or the Christian Health Association of Kenya, demonstrate a commitment to serve the

[3] Comparison of study data to author's analysis of Kenya 2014 DHS data; assertions represent trends, not comparisons of statistical significance.

poor, they are likely more interested in national comparisons, and should be cognizant of this in their research.

The public sector is usually thought of as having a mandate to be broadly accessible and affordable, while the same is not true for facilities in the other three strata of this study. In some of the selected study areas, however, it was difficult to find enough facilities in the private, FBO and franchised study strata. For franchises and other entities considering expansion to maximize impact, this study, in conjunction with others, demonstrates that franchises are better placed than other sectors to reach clients for family planning (29). While this study indicates that franchises see clients of similar wealth levels as other private providers, recent research in Kenya has shown that franchise providers see a larger number of family planning and child health clients (30). Franchises may thus be able to achieve greater impact through volume of poor seen, rather than proportion.

The study has three principle limitations. First, our study captured facilities in only two of four strata in Mombasa, because permission to conduct research in the public sector was not given, and eligible FBO facilities were not found. Eligibility for this study depended upon location, availability of FP services, and volume of clients. Facilities that reported having at minimum three eligible clients per day were considered for inclusion in the private, FBO and franchised strata, however in some private and franchised facilities, three or fewer eligible clients were encountered over 3-5 days. In order to achieve the full sample, the sample was reallocated, and proportionality of the sample across regions was somewhat compromised. Second, the study uses as the measure of wealth an index that is less precise than the DHS wealth index. There is some known miscategorization between adjacent quintiles, so when interpreting data, it is advisable to look at all quintiles, rather than focusing on one quintile alone. The shorter index was chosen due to the benefits conferred when interviewing outside of the household, including a shorter questionnaire and easier questions. Third, the study did not assess the wealth of those seeking care at drug shops or pharmacies. Several initiatives to train and equip these outlets to provide quality care, particularly for childhood illness, have occurred, and there is increasing international pressure to devolve provision of some FP methods to such facilities. There is no complete record of drug shops and pharmacies in Kenya, leading to difficulties in creating an appropriate sampling frame, as well as difficulty in knowing if these facilities are a valid comparison to those staffed by doctors and nurses. Nevertheless, this study is a first to compare client wealth across facility types, including franchises, and contributes to the literature.

CONCLUSION

This study adds nuance to recent findings from social franchisors that they are not serving the relatively poor. We find the same skew toward wealthy clients among franchises, but our evidence shows that across Kenya, all facilities serve a disproportionately wealthy clientele. The public facilities do best at reaching the poor, likely aided by free or highly subsidized services, but even they serve more rich clients than poor.

We find that franchises do better at reaching the poor than prior studies indicated. They perform somewhat better than FBO and private providers in both the range and availability of family planning services offered.

It is notable that the public sector is used more by the poor for treatment of childhood illnesses than for family planning. This holds true for additional users as well, with the public facilities having a greater proportion of new childhood illness patients than other facilities types, while private and franchised facilities have a greater proportion of additional family planning users than FBO or government facilities.

The study also confirmed an often-inferred finding about public vs. private facilities and their relative role within health systems. In Kenya, as in many other countries, private facilities play a significant role within the larger primary care system, serving a high proportion of all patients and all family planning and childhood illness patients in particular. There are more private facilities than public facilities, but the volume of clients at private facilities remains relatively small. Therefore, a network of private providers, engaged to work together to achieve shared health goals, can have a more significant impact on health service delivery in aggregate than individually. This facility-based study has confirmed the impact of private, FBO and franchised facilities, where client volume is often low, is more strongly seen when results are pooled rather than when individual facilities are examined.

Motivations for selecting providers was not the focus of this study, however some information can be cautiously inferred: Access remains important, with most patients traveling only 20 minutes on foot to a provider. While service cost, which is much lower in public facilities than private facilities, may play a role in determining health-seeking choices among the poor, costs were not reported as important. What patients report caring about is quality, accessibility/availability, and how they are treated. This is consistent with findings from many other health-seeking-behavior studies.

Taken together the findings suggest that private providers remain important within the larger health system, more so for family planning than childhood illness management. Franchised providers offer slightly more family planning options than other providers, and serve slightly more new adopters than FBOs or private facilities. While they serve the relatively poor (those in quintiles 1 and 2), they do worse at attracting the poor than public or FBO clinics, and no better than ordinary for-profit providers.

The results indicate that franchised providers in Kenya have had some successes in leveraging private markets to expand the reach and adoption of family planning. The target niche, and related social value, of franchised facilities is evident but not strong: franchised facilities serve more and

more new-adopter FP users than FBO or public sector providers, but numbers are still low in each facility and the poor are not well targeted. Greater use of demand side financing initiatives could increase access for the relatively poor.

This is the next challenge for social franchises: how to distinguish their role in the health sector either by reaching more poor (through direct or indirect subsidies, greater outreach, or other methods), or by emphasizing quality and access to a degree that franchised providers increase volumes relative to other sources of care, playing a more important role in overall market expansion than they do currently. This study suggests that both options are open to franchise programs, and that a strategy to distinguish franchises from other provider types would be helpful in explaining the value added to the health system by this delivery model.

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APPENDIX A: MEAN NUMBER OF FAMILY PLANNING METHODS OFFERED, AND AVAILABLE ON DAY OF VISIT, BY COUNTY AND STRATUM

		MODERN METHODS		LAPM	
COUNTY	STRATUM	OFFERED	AVAILABLE	OFFERED	AVAILABLE
Nakuru	Public	7.17	7.17	2.17	2.17
	FBO	6.33	5.50	1.83	1.67
	Private	7.00	7.00	2.50	2.50
	Franchise	7.00	7.00	2.00	2.00
Mombasa	Private	6.80	6.00	2.00	2.00
	Franchise	6.67	5.50	2.17	2.00
Machakos	Public	7.20	6.40	2.40	2.00
	FBO	5.67	4.33	0.67	0.50
	Private	6.00	6.00	1.75	1.75
	Franchise	6.83	6.33	2.17	2.17
Kakamega	Public	6.80	6.80	2.00	2.00
	FBO	4.00	3.00	1.00	0.50
	Private	5.50	4.50	2.00	1.50
	Franchise	6.40	6.40	2.00	2.00
Homa Bay	Public	5.60	4.60	2.00	1.80
	FBO	6.00	3.00	2.00	0.33
	Private	6.67	6.33	2.00	2.00
	Franchise	5.50	4.75	2.00	2.00
Kiambu	Public	7.75	6.75	3.00	2.25
	FBO	7.00	6.33	2.00	2.00
	Private	5.75	4.50	1.50	1.33
	Franchise	7.25	6.75	2.50	2.50
Total	Public	6.88	6.36	2.28	2.04
	FBO	6.00	4.71	1.59	1.19
	Private	6.29	5.71	1.96	1.87
	Franchise	6.63	6.13	2.13	2.10

APPENDIX B: FACILITY CHARACTERISTICS, BY COUNTY AND STRATUM

					NUMBER OF BEDS (RANGE)		NUMBER OF PROVIDERS (RANGE)	
COUNTY	STRATUM	SELLS MEDICINES	ACCEPTS INSURANCE	HAS INPATIENT CARE	MINIMUM (AMONG THOSE WITH BEDS)	MAXIMUM	MINIMUM	MAXIMUM
Nakuru	Public	33%	0%	33%	10	16	5	14
	FBO	67%	50%	33%	6	7	1	18
	Private	100%	75%	25%	76	76	2	25
	Franchise	60%	0%	60%	3	14	3	5
Mombasa	Private	20%	60%	60%	5	6	1	4
	Franchise	17%	50%	50%	7	15	2	12
Machakos	Public	0%	0%	40%	4	6	3	10
	FBO	100%	0%	0%	--	--	1	2
	Private	50%	25%	25%	7	7	1	6
	Franchise	33%	67%	50%	4	33	3	5
Kakamega	Public	0%	20%	0%	--	--	1	10
	FBO	100%	50%	0%	--	--	3	8
	Private	50%	25%	75%	3	56	3	22
	Franchise	20%	20%	20%	60	60	2	30
Homa Bay	Public	0%	20%	60%	2	10	2	17
	FBO	33%	33%	0%	--	--	1	7
	Private	67%	100%	67%	15	15	4	6
	Franchise	75%	0%	25%	15	15	1	6
Kiambu	Public	25%	0%	25%	5	5	2	12
	FBO	100%	67%	33%	10	10	1	9
	Private	100%	0%	0%	--	--	1	3
	Franchise	100%	25%	25%	50	50	1	12
Total	Public	12%	8%	32%	2	16	1	17
	FBO	76%	41%	18%	6	10	1	18
	Private	62%	46%	42%	3	76	1	25
	Franchise	47%	30%	40%	3	60	1	30

APPENDIX C: WEALTH DISTRIBUTION OF RESPONDENTS FROM STUDY VS. RESIDENTS OF KENYA

NATIONAL QUINTILE	RESPONDENTS FROM STUDY	URBAN RESIDENTS OF KENYA
1	5.70	6.00
2	6.82	8.30
3	11.96	10.60
4	26.75	26.10
5	48.77	49.00

Although this study was conducted only in select counties of Kenya (one from each of Kenya's former provinces, except Nairobi and North-east), the similarity between the two distributions lends credibility to the sample selection process. Clients of the selected health facilities in Kakamega, Kiambu, Homa Bay, Machakos, Mombasa and Nakuru counties are similarly wealthy to urban residents of Kenya overall.