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Extended Abstract - Barriers to the utilization of maternal health care facilities amongst urban poor populations in Ghana

Why study maternal health care utilization behaviours in urban areas?

The importance in utilizing maternal health care is critical to addressing poor maternal health outcomes, however there are many factors which determine a woman's ability to seek and access appropriate care. Overwhelmingly, we see that rural populations are far less likely to utilise maternal health services in both the developing world and Ghana more specifically. There is a large body of literature to support this – however, it can be hypothesised that large-scale surveys risk masking intra-region differences that would occur, for example the different experiences of populations within an urban area. It would be naïve to assume that urban landscapes and their populations are heterogeneous by nature. A walk through a city, whether in a developed or developing nation, will show that cities can contain huge levels of deprivation alongside comparative wealth. This paper seeks to challenge the idea of an 'urban advantage' – the pervasive idea that poor maternal health (and in fact poor health more generally) is a rural issue, and will become more important to policy makers as patterns of residence are changing in Ghana, and indeed SSA more generally.

The idea that people who live in cities are able to reap the benefits from living in close proximity to an abundance of services, goods, social connections and amenities is often termed the 'urban advantage', and succeeds in making urban dwellers 'better off' than their rural counterparts. In Sub Saharan Africa, it is rural populations that have experienced the greatest burden of ill health and mortality. However, mortality declines are occurring in SSA, and the gap between rural and urban areas has been narrowing in the last 30 years, largely due to improvements in rural health. However, more recent trends suggest that this continued narrowing is due in part to a deterioration in the health of urban dwellers, giving rise to the idea that urban areas may not bring favour or advantage to all their inhabitants.

The percentage of Ghana's population living in urban areas will increase from around half (47.8%) to just over three quarters (75.6%) between 2005 and 2050. According to UNHABITAT, the growth rate of Ghana's capital city Accra currently stands at around 3.2%pa (between 2005-2010). Whilst we can expect that Ghana's rural to urban shift will include some internal migration from the countryside towards the cities, the majority of growth will be explained by natural increase, and particularly through increases in the absolute numbers of births. This means that consideration of maternal health care is even more crucial in rapidly expanding urban areas.

A search of the current literature reveals a dearth of papers with an urban focus on maternal health. Even key papers on primary health needs of the urban poor neglect the issue of maternal mortality and the need for maternal health services. Indeed, there is the pervasive perspective that poor maternal health is a rural issue. This is where much policy and research focus has fallen in the last 20 years, and I would not suggest that this has been without due cause. Rural areas are often geographically remote and populations are marginalised from public services. However there is a danger that such an overwhelming bias in research and policy foci could mask problems faced by some urban residents, in particular the urban poor and urban slum populations. For the urban poor, who share the rural characteristic of low incomes, their proximity to health services may be undermined by their inability to afford the services they live so close to. Here, the geographical advantage becomes almost perverse in its nature – the urban poor are so close, and yet still so far, from being able to access healthcare.

Therefore, this paper aims to highlight the need for government and policy attention to be directed towards the urban poor if the Millennium Development Goals, particularly MDG5 for Maternal Health, are to be realised by 2015. The urban poor are comparatively disadvantaged, when

compared to their urban counterparts and when placed in their locational context. 2010 is the year that Ghana became 'more urban than rural', and so here there is a need to assess the picture of health within its cities, to ensure that development and positive changes continue.

Therefore, this paper seeks to address the following research questions:

What are the patterns of maternal care seeking amongst urban populations in Ghana?

Are there inequalities within urban settings?

Is household poverty a significant barrier within urban environments?

Methods

The analysis for this paper will utilize the 2007 Ghana Maternal Health Survey (GMHS), which collected data from households and individual women to produce Ghana's first nationally representative picture of maternal health. From the data set, only women who had given birth since January 2002 were selected for analysis, as these women had answered the more detailed questions relating to maternal and reproductive health. This left n 5032 women for Ghana as a whole. The data set was then reduced to women with urban residential status, which ensured that the analysis would focus solely on the urban women in Ghana. This left 1910 women for analysis. There will be some additional analysis of Ghana as a whole and for rural women, as this will enable comparisons to be made, and the position of the urban poor considered in relation to urban, rural and country-wide conditions. This thesis is primarily concerned with the experiences of the poorest women and to what extent, if any, they are marginalised from service use due to their poorer economic standing, so the data analysis will particularly focus on the patterns associated with the poorest wealth groups.

The primary objective of the study is to assess whether poorer members of society are less likely to utilize maternal health service, however the GMHS has no single question to determine a respondent's socio-economic status. Consumption and expenditure data is thought to be the most reliable kind of data to use when creating an index of wealth (Filmer and Pritchett 2001).

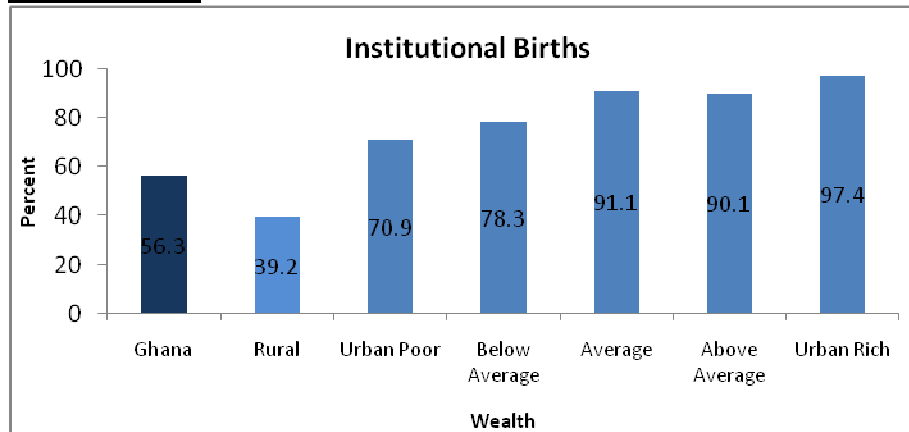
Unfortunately as the data collection process is very time consuming the DHS program does not gather this kind of data. There are however a series of questions which capture occupant living standards, which include details of household assets and consumer durables, which can be used to fashion a proxy indicator for household wealth using principal component analysis to reduce these elements into a single factor score for wealth. Whilst not as robust as expenditure data, this is still considered reliable measure, as assets are easily observable by the interviewer and will minimize measurement error from recall or social desirability biases (Howe et al 2008). It is also important to remember that using a measure which captures household assets may conceal how wealth is distributed *within* a household. Even in an apparently wealthy household, women may not have direct access to the assets and funds required to utilize health care, nor may they have the autonomy to make decisions about how household wealth is spent – healthcare for women may be considered less important. However, a household wealth indicator is considered a useful proxy measurement in the absence of more detailed individual income and expenditure information.

A series of logistic regression models will be fitted to assess significant predictors for utilizing each 'stage' of maternal health services (good quality antenatal care, delivery, postnatal). The outcome variable for service utilization is equal to either zero or one (i.e. 0 = did not use a skilled birth attendant, 1 = did use a skilled birth attendant), therefore binary regression modelling will be used. Variables imputed into the model were chosen using a combination of bivariate level significance, and through consulting the literature on maternal health care to determine important factors.

Results (Please see full paper for discussion of antenatal care use and postnatal care use patterns)

85.9% of women in urban Ghana received skilled delivery care, which is substantially higher than the figure for rural areas (39.3%) and the national figure of 57.1%. 85.5% of urban women delivered their most recent child in a health facility, the majority of which were government run facilities (74.7% of facility births). However, when disaggregated by wealth, there are clear differences in utilisation rates.

Figure 1: Percentage of women giving birth in a health facility for their most recent birth, by wealth quintile.



Whilst having a skilled birth attendant at delivery is almost a certainty for the richest urban women (96.6% of the wealthiest quintile), for the poorer women the figure is closer to 70%. Whilst still faring far better than rural women (where less than 40% of women utilize skilled birth attendants), the situation of the urban poor compares unfavourably to other urban wome

From the logistic regression model (see Fig 2, pg4), factors associated with higher odds of delivering with a skilled birth attendant are belonging to Christian and Moslem religion, Akan ethnicity, increased educational attainment, **increased household wealth** (Odds ratio = 13.4, wealthiest with poorest as reference category), never being married or in union, receiving more than 4 antenatal visits and receiving antenatal care from doctors, nurses and midwives.

Conclusions

In terms of answering the proposed research questions:

What are the patterns of maternal care seeking amongst urban populations in Ghana?

At the aggregate urban level, service is use is very high, and considerably higher than rural populations. Antenatal care use is almost universal(98.4%), and 57% of women access care in their first trimester of pregnancy. In terms of delivery care, 85.9% use a skilled birth attendant, and almost all of these supervised births take place in a health facility (85.5%)- three quarters of women giving birth in a health institution utilise government facilities. Postnatal care is the weakest element on the maternal health spectrum, but 77.2% of urban women still have a skilled check up in the first 6 weeks after giving birth.

Are there inequalities within urban settings?

This question looks to examine the idea of the urban advantage and disaggregate the overall results – and it is evident that the high rates seen above are not universal across urban population groups. The maternal health dividends that populations can reap from living in urban areas are not evenly distributed – the poorest women are less likely to access antenatal care early and regularly, are less likely to use a skilled birth attendant during delivery and less likely to have a postnatal check up after their birth.

Is household poverty a significant barrier within urban environments?

When other factors are held constant in the logistic regression modelling, household wealth level is one of the most statistically significant variables. When we take into account other variables which in previous studies have proved to be significant, (such as parity, and maternal education), there is still a strong relationship between household wealth and the likelihood of delivering with a trained doctor or midwife.

Figure 2: Significant variables from the binary logistic regression model to measure likelihood of delivering in a health facility, urban Ghana, 2007.

<i>Variable</i>	<i>Odds Ratio</i>	<i>P Value</i>	<i>95% Confidence Interval</i>	
Age				
15-19	0.473	.031	0.239	0.934
20-29	1.000	.023	-	-
30-39	1.242	.208	0.886	1.742
40-49	0.781	.000	0.488	1.249
Religion				
No Religion	1.000	.005	-	-
Christian	2.443	.009	1.250	4.773
Moslem	1.757	.178	0.774	3.988
Traditional/Spiritual	0.602	.436	0.168	2.162
Ethnicity				
Akan	1.000	.002	-	-
Ga/Dangme	1.976	.032	1.061	3.682
Ewe	0.825	.421	0.516	1.319
Mole/degbandi	0.534	.055	0.281	1.013
Other	1.344	.269	0.796	2.269
Educational Status				
No Education	1.000	.000	-	-
Primary (incomplete)	1.015	.948	.653	1.578
Primary (completed)	1.771	.074	.946	3.316
Middle	2.016	.001	1.317	3.086
Secondary and Higher	3.941	.000	1.828	8.498
Marital Status				
Currently married	1.000	.019	-	-
Currently cohabiting	0.704	.102	0.462	1.072
Currently non union	1.001	.997	0.605	1.655
Never in union	2.154	.023	1.110	4.181
Wealth Quintile				
Urban Poorest	1.000	.000	-	-
Urban Poor	1.195	.348	0.823	1.735
Urban Average	3.127	.000	1.958	4.994
Urban Rich	2.572	.000	1.606	4.117
Urban Richest	6.421	.000	3.071	13.427
Number of skilled antenatal visits				
0 - 3	1.000	.000	-	-
4 or more	3.548	.000	2.430	5.180
Provider of antenatal care				
Nurse/Midwife	1.000	.006	-	-
Doctor	1.095	.628	.758	1.583
No skilled care	0.229	.002	.090	.583

$R^2 = 0.389$