8 June 2009

Use of and unmet need for injectable contraception

Recent publications have brought attention to the increasing popularity of injectable contraceptives. In Sub-Saharan Africa, injectables are the most popular contraceptive method chosen by more than one out of every three women using modern contraception (Lande and Richey, 2006). Injectable use doubled between 1995 and 2005 protecting over 32 million women worldwide from unintended pregnancy in 2005 alone (Lande and Richey, 2006). As use of injectables continues to increase, the ability of health systems to meet this growing demand for services will largely depend on the availability of easily accessible, high quality, reliable services. The World Health Organization estimates that 57 countries, many in Sub-Saharan Africa, are experiencing a critical shortage of doctors, nurses, and midwives essential to achieving the Millennium Development Goals (WHO, 2006). Task sharing is an approach which has been used successfully in many settings to address the critical shortage of medical professionals and expand access to a range of life saving technologies including HIV care and support, detection and treatment of infectious diseases, and maternal and child health services (UNAIDS and WHO, 2005; Lewin et al., 2005)

Understanding trends in contraceptive use and unmet need for family planning is critical to creating policies which respond to current gaps in service delivery and address future needs for services to meet existing and unmet demand. Creating non clinic-based mechanisms to deliver services has the potential to expand access to underserved populations and reduce pressure on weak health systems. This document examines patterns of the current use of and unmet demand for injectable services. Trends in use of clinic and non clinic-based services for injectables, differentials in injectable use by place of residence, and potential negative consequences of increased use of injectables are explored. Information described in this paper is intended to inform the Technical Consultation on *Expanding Access to Injectable Contraception.*

Current level of injectable use and unmet need for services

Data from recent Demographic and Health Surveys (DHS) were reviewed to identify trends in injectable use and unmet need for injectable services. Levels of contraceptive use vary substantially among countries with the vast majority documenting relatively low levels of injectable use. Among 46 countries with recent DHSs, 24 countries report prevalence rates of injectable use among married women of reproductive age (MWRA) of less than 5 percent. Despite low usage rates, in ten of these countries injectable use accounts for between 23 percent and 46 percent of modern method use. Indonesia, Namibia, and South Africa support much higher use with more than one in five MWRA using injectable contraception in each country (28 percent, 22 percent, and 28 percent respectively). In these countries, injectable use accounts for between 41 and 49 percent of modern method use. In the remaining 19 countries, the prevalence of injectable use ranges from 18 percent in Malawi to 5 percent in Ghana.

Differentials in injectable use by urban and rural residents were of particular interest in the analysis. It is hypothesized that disparities in the distribution of health resources,

specifically health care professionals, combined with restrictive policies related to in what type of facility and what type of provider can offer injectable contraception contributes to a large unmet need for injectables, particularly in rural areas.

Urban/rural differentials in injectable use were examined for 21 developing countries. Countries were purposively selected based on having injectable use rates of at least 5 percent of MWRA. As expected, in most countries use of injectables by women in urban areas exceeds use by rural residents (12). (See Figure 1) Substantial urban/rural differentials are observed in countries with large rural populations and are most common among nations in Sub-Saharan Africa. It is unclear, however, if the differences observed in injectable use are attributable to differences in provider or user preferences, to differential access to services, or to some other factor.

Data on the unmet need for injectables are available for 32 countries. The level of unmet need is based on the percent distribution of currently married women who are not using a contraceptive method but who intend to use in the future and report injectables as their preferred method. The highest level of unmet need for injectables is observed in Ethiopia with nearly three-quarters of women (72 percent) reporting a preference for injectables. Most countries report levels of unmet need for injectables between 25 and 50 percent of women who intend to use contraception in the future (19). Thus, the data show a substantial unmet need for injectables. DHS does not ask women with an unmet need for family planning who say they intend to use contraception in the future why they are currently not using a method. Therefore, the analysis is unable to elucidate the reasons for non-use among women with an unmet need for injectables.

Trends in injectable use

According to *Population Reports*, the percentage of married women using injectable contraceptives has increased in 40 of 44 developing countries since 1995 (Lande and Richey, 2006). In order to understand recent trends in injectable use, data were examined for 33 countries with two consecutive DHS since 1997. Among 33 countries with recent data on contraceptive trends, four countries – Bolivia (from 1.1 to 8 percent), Ethiopia (from 3.1 to 9.9 percent), Indonesia (from 27.8 to 31.8 percent), and Madagascar (from 4.7 to 10.2 percent), document an increase in injectable use of approximately 1 percentage point per year.[1] In the majority of countries (15), injectable use also increased albeit more slowly (between 0.18 percentage points and 0.80 percentage points per year). In 13 countries use of injectables changed less than one percentage point between the two surveys and only in Bangladesh was a decline observed.

In order to understand the potential impact of increased injectable use on the health

[1] Other countries in SSA have experienced earlier increases in injectable use, notably —Kenya 7.1 points 1993-2003; Malawi 16.2 points 1992-2004; Namibia 14.1 points 1992-2007; Uganda 7.7 points 1995-2006; and Zimbabwe 6.7 points 1994-2006. Unconfirmed reports also suggest significant increased have been observed in Rwanda - 9.5 points 2005-2008.

system, the analysis examined the current source of supply reported for injectables. For comparison, the last reported source of supply for oral contraceptives was also reviewed. Both methods offer similar short acting protection, have similar service delivery requirements in terms of client screening and care, and have the potential to be supplied through non-clinic based services. Examining trends in the use of supply channels for oral contraceptives provides insight into potential opportunities for expanding access to injectables.

A small group of countries were selected in order to explore patterns in contraceptive supply for injectables and pills. Countries were purposively selected which have implemented community-based distribution programs in the past, support significant levels of pill[2] and injectable use, and represent a range of social and development context. For the nine countries examined, almost all injectables were supplied through clinic facilities, in both urban and rural areas (Figure 2). Bangladesh stands out as a clear exception to this trend with 10 and 15 percent of injectables supplied by CBW in urban and rural settings, respectively. Pharmacies play a limited role in supplying injectable users in most countries with the exception of Zimbabwe. Little difference in the source of supply for injectables was observed among urban and rural residents.

In contrast to injectables, pill users obtain their method from a more diverse pool of suppliers. (Figure 3) Clinics supply a smaller portion of pill users compared to injectable users in every country. Rural residents rely more heavily on clinics for pills compared to urban residents, except in the case of Ethiopia and Malawi. In these two countries, CBWs are also an important source of pills in rural areas. Pharmacies supply a large percentage of pill users in Bangladesh, Ethiopia, Kenya, Morocco, urban Namibia, urban Swaziland, and Zimbabwe. Patterns of contraceptive supply show that users of injectables rely almost exclusively on clinic-based services while pill users patronize a wider variety of contraceptive suppliers. In general, pill users in urban areas utilize non clinic-based services to a greater extent than women in rural settings. This trend could be a result of declining support for community-based distribution in rural areas and increased access to pharmacies in urban centers.

To examine trends in source of supply over time, three countries were selected for in-depth analysis. This analysis examines trends in source of supply as a percentage of total method use rather than market share. This approach highlights which sources family planning services support increased method use and changes in user behavior over time. It is particularly interesting to observe changes in source of supply as support for community distribution programs has declined in many countries. Figures 4, 5, and 6 illustrate three distinct country examples. In Bangladesh, increased pill use is mainly attributed to increased use of pharmacies in both urban and rural settings and while the importance of CBWs as a source of supply is on the decline, these workers continue to play a significant role in rural areas. In contrast, urban and rural pill users in Zimbabwe

[2] Pill use is generally low in most SSA countries. Therefore, countries with pill use of 2 percent or higher where included in the analysis.

show distinct patterns of accessing contraceptives. In rural areas, increased pill use is attributed to increased dependence on clinic-based services. In urban areas a distinctly different trend is observed, where pill users shift from clinic-based services to increased use of pharmacies and CBWs. Malawi, on the other hand, is experiencing a decline in pill use and depends heavily on clinic distribution. In all three countries injectable users depend almost exclusively on clinic distribution.

Trends in use of non clinic-based services among pill users indicates that pharmacies and community-based workers can play an important role in meeting the increasing demand for temporary methods. Alternative channels for delivering health services are particularly important in countries where health systems are weak, over-burdened, or poorly distributed.

Potential adverse consequences of increased injectable use

Over-dependence on any single method restricts contraceptive choice and, in the case of injectables, places a high burden on the health system's human and financial resources. Policy makers and program managers raise concern that increased injectable use will displace use of long-acting and permanent methods. It is impossible to determine what would happen to contraceptive use in the absence of injectable contraceptive. However, examining trends in modern contraceptive use in countries with high rates of injectable use provides some insight into the effect of increased injectable use on the method mix. Twelve countries with trend data and high rates of injectable use (5 percent or higher) were selected for analysis. Trends in contraceptive use were examined to identify changes in use of modern methods over the 10 years preceding the most recent survey. A decrease in use was defined as a change of more than one percentage point.

Out of the 12 countries, two (Indonesia and Kenya) demonstrated a decrease in at least one modern method. Use of pills and IUDs declined in both countries. Kenya also documented a decline in female sterilization, while Indonesia witnessed a decline in implants. For most countries reviewed, increased injectable use coincided with increased use of long acting and permanent methods. Ghana, Malawi, Namibia, Tanzania, Uganda, Nepal, and Bolivia all experienced an increase in LAPM. In Madagascar, Zambia, and Zimbabwe use of LAPM has remained relatively stable. This evidence shows that injectable use has contributed to the overall rise in modern method use rather than merely substituting for other methods. (data not shown) Although it should be noted that injectables represent an increasing proportion of the modern method mix in most of these countries (9).

According to the UNPD, failure rates among injectable users are among the highest of any contraceptive method. Injectables yield a 12-month failure rate of 2.9 per 100 episodes. This report also found exceptionally high discontinuation rates among injectable users. Authors estimate that nearly 50 percent of injectable users will stop using injectables within 12 months due to ***method-related reasons*** (UNDP, 2004).

Use of and unmet need for injectable contraception

Twelve-month method specific discontinuation rates for ***any reason*** are available for 22 countries.[3] Analysis of 12-month, all-reason discontinuation shows similar rates for pills and injections (47.6 and 49.2 respectively) (EngenderHealth, 2007).

Lower rates of discontinuation are associated with higher prevalence of injectable use and discontinuation decreases in most countries over time (EngenderHealth, 2007). Evidence suggested that counseling on side effects may improve method continuation (Lande and Richey, 2006).

To a large extent, concerns that increased injectable use will supplant LAPMs appear misplaced. In most countries, increased injectable use has contributed to an overall increase in contraceptive prevalence rather than substituting for other modern methods. Injectable users are more likely than users of other contraceptives to discontinuation use for method-related reasons and high rates of discontinuation threaten the potential benefits of increased contraceptive uptake. Programs need to address the underlying causes of discontinuation and assist women in the process of switching methods. It is also clear that long-acting and permanent methods are underutilized in many countries, particularly in Sub-Saharan Africa. There are, also, real concerns regarding the cost of supplying the increasing number of injectable users with subsidized methods.

Conclusions

1) Levels of injectable use vary substantially among countries. Injectable use represents between a quarter and a half of all modern method use in the majority of countries examined.
2) In Sub-Saharan Africa injectable contraceptives are the most popular method among modern method users.
3) Substantial urban/rural differentials in injectable use are observed in countries with large rural populations and are most common among nations in Sub-Saharan Africa.
4) The unmet need for injectable contraception is significant. In most countries, more than a quarter of women who intend to begin using contraception would prefer to use injectables.
5) The rate of increased injectable use varies substantially among countries. Most countries examined are experiencing slow, but steady increased use of injectables.
6) Among those countries experiencing an increase in injectable use, clinic-based services supply almost all users.
7) In general, pill users in urban areas utilize non clinic-based services to a greater extent than women in rural settings. This trend could be a result of declining support for community-based distribution in rural areas and increased access to pharmacies in urban centers.
8) Trends in use of non clinic-based services among pill users indicate that

[3] Continuation rates for injectables are available for 19 countries only.

pharmacies and community-based workers can play an important role in meeting the increasing demand for temporary methods.

9) Increased injectable use does not appear to supplant use of LAPM. In most countries, injectable use contributes to an overall increase in contraceptive prevalence rather than substituting for other modern methods. Documented country experience shows that programs can achieve increased injectable use and increased use of LAPM simultaneously.
10) Discontinuation rates for injectable contraception are on the decline in many countries, but remains unacceptably high.

Use of and unmet need for injectable contraception

References

EngenderHealth/The ACQUIRE Project. *Reality √. New York: EngenderHealth, 2007.*

Lande, R. and Richey, C. "Expanding Services for Injectables," *Population Reports*, Series K, No. 6. Baltimore, INFO Project, Johns Hopkins Bloomberg School of Public Health, December 2006.

Lewin SA, Dick J, Pond P, Zwarenstein M, Aja G, van Wyk B, et al. Lay health workers in primary and community health care. Cochrane Database of Systematic Reviews 2005, Issue 1. Art. No.: CD004015. DOI: 10.1002/14651858.CD004015.pub2.

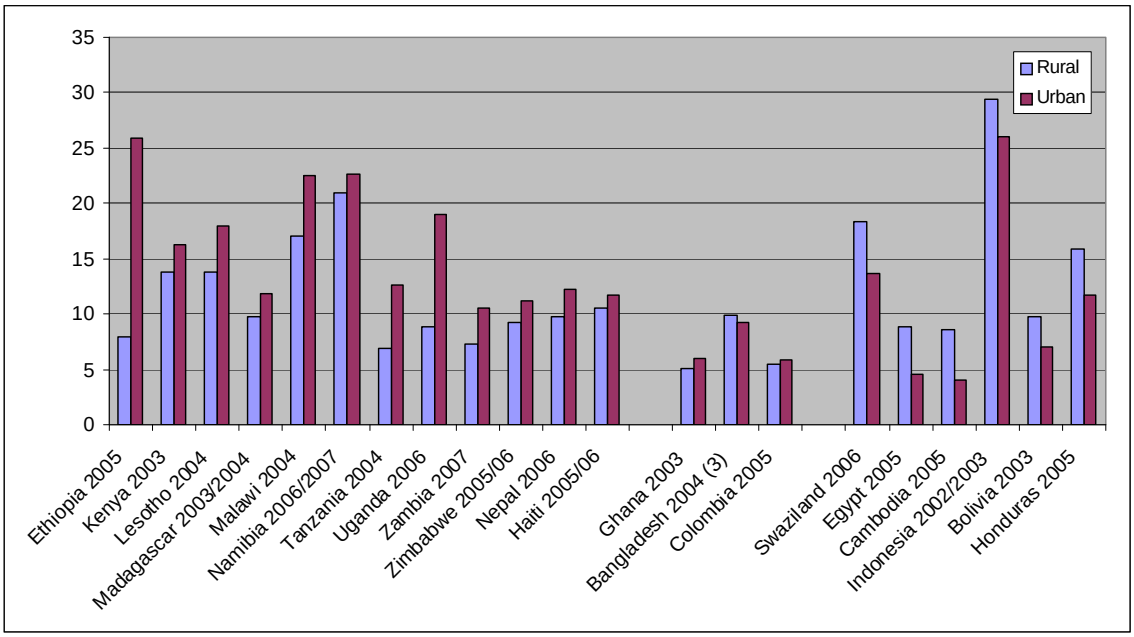
UNAIDS and WHO. Expanding access to HIV treatment through community-based organizations. Geneva: A joint publication of Sidaction, the Joint United Nations Programme on HIV/AIDS UNAIDS) and the World Health Organization (WHO), 2005.

United Nations Department of Economic and Social Affairs/ Population Division. *Levels and trends of contraceptive use as assessed in 2002.* Geneva: UNPD, 2004.

World Health Organization. *The world health report 2006: working together for health.* Geneva: World Health Organization, 2006.

Use of and unmet need for injectable contraception

Figure 1. Current injectable use by residence in select countries



Use of and unmet need for injectable contraception

Figure 2. Source of supply for injectables by residence for select countries

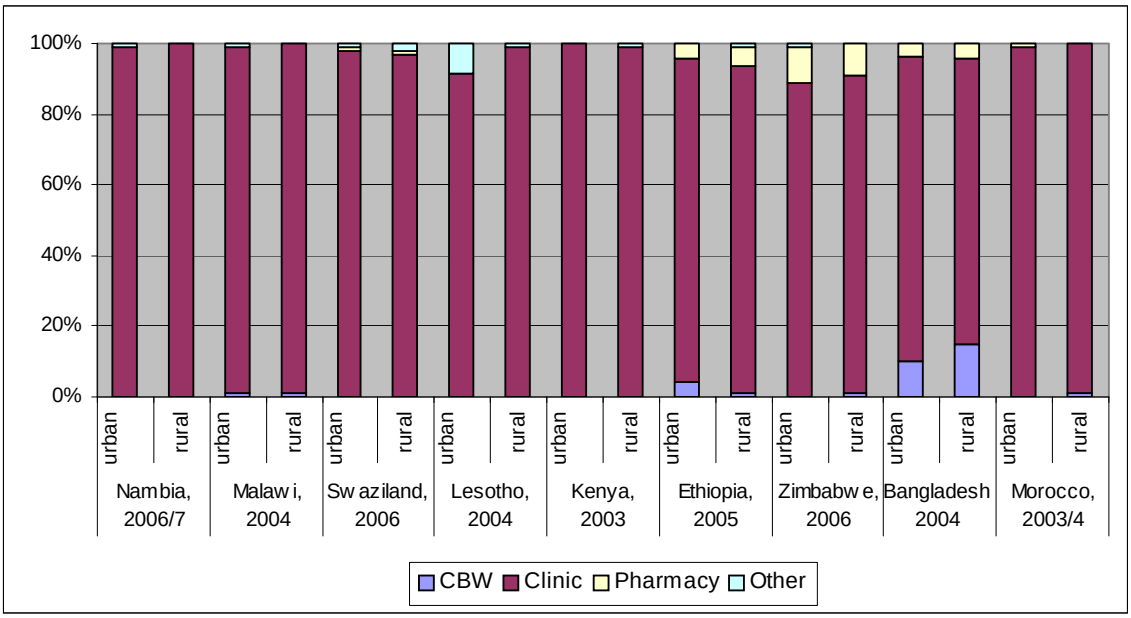
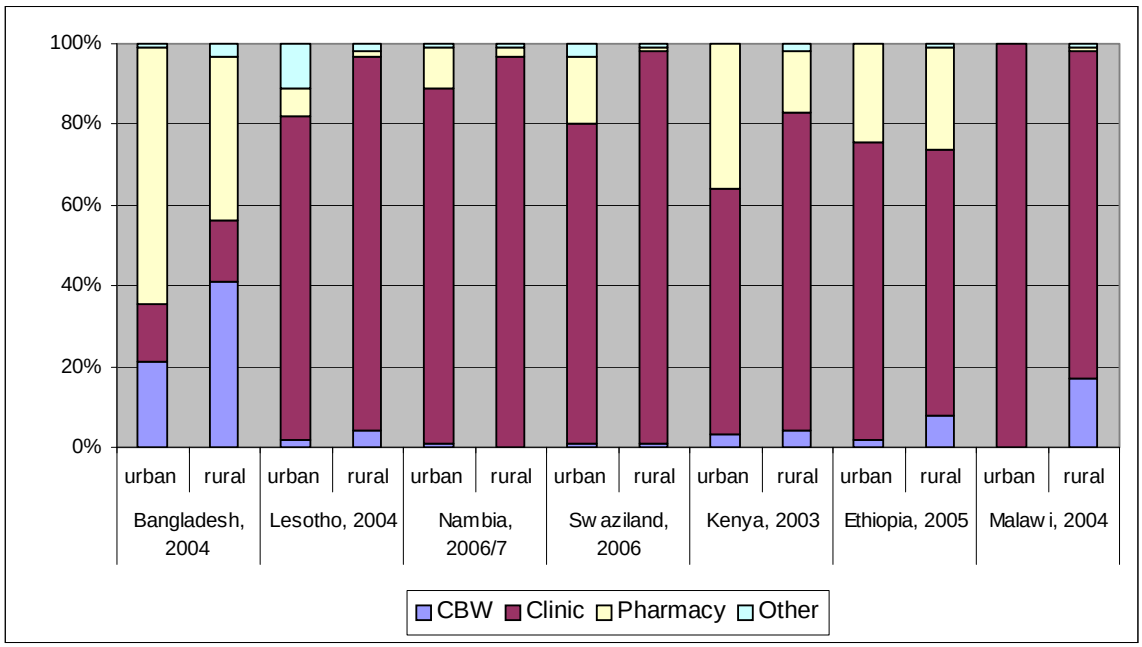
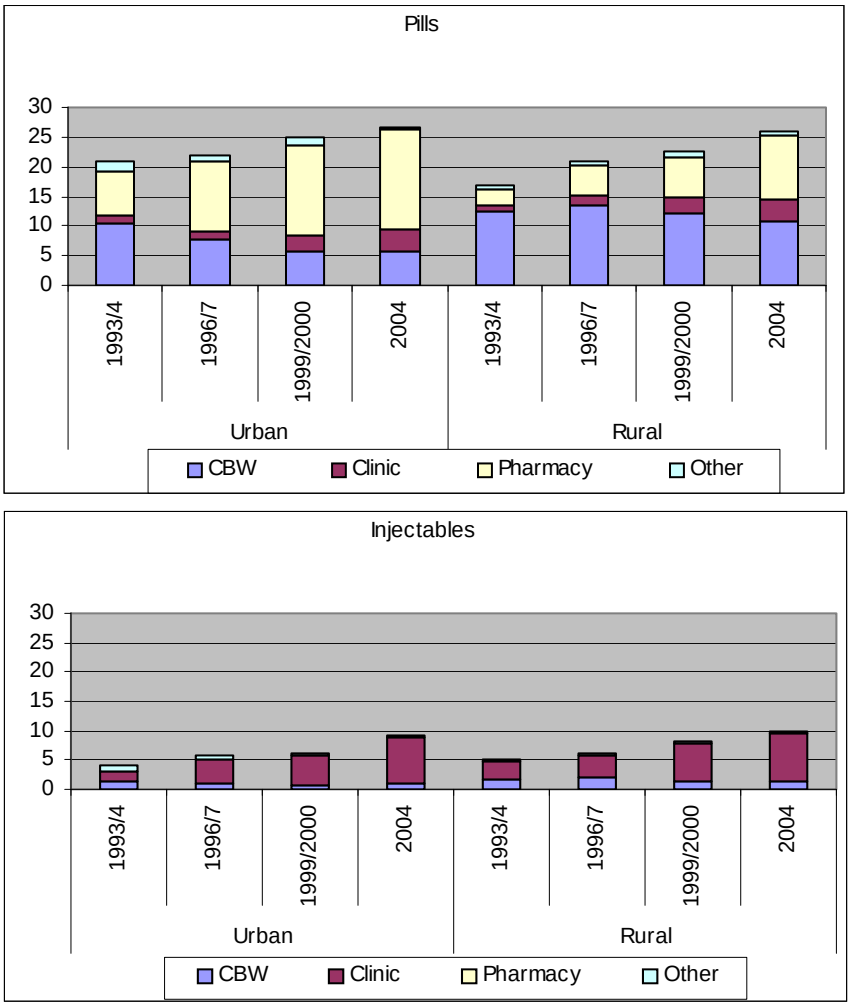


Figure 3. Source of supply for pills by residence for select countries



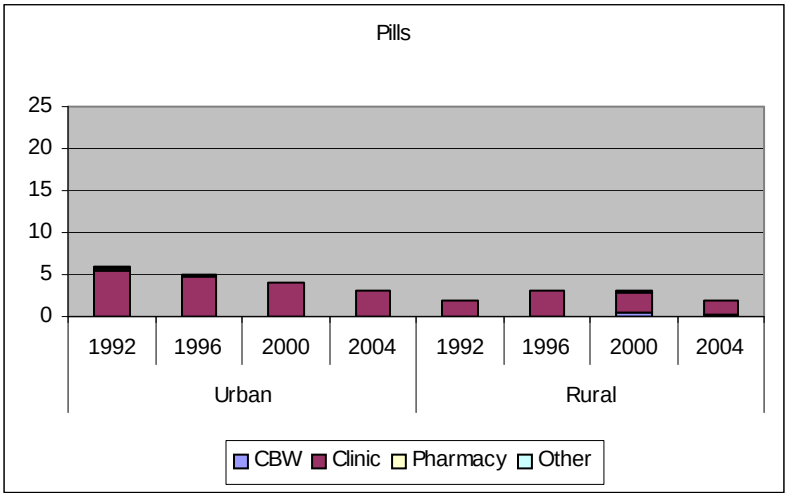
Use of and unmet need for injectable contraception

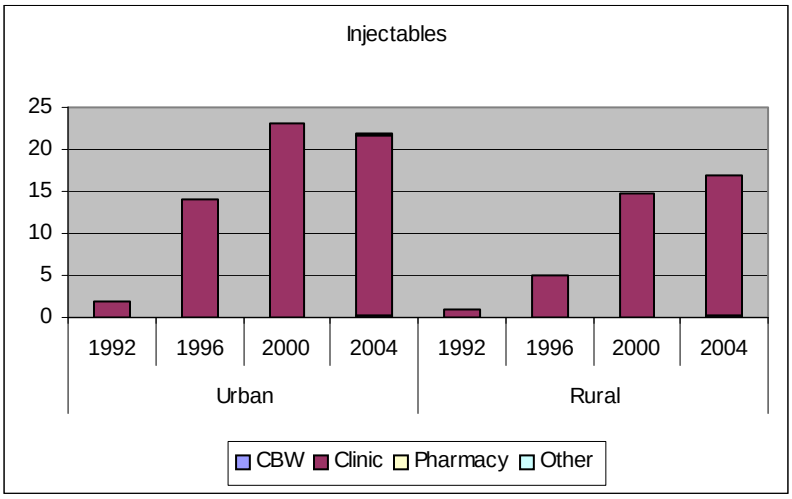
Figure 4. Trends in source of supply for pills and injectables by residence in Bangladesh



Use of and unmet need for injectable contraception

Figure 5. Trends in source of supply for pills and injectables by residence in Malawi





Use of and unmet need for injectable contraception

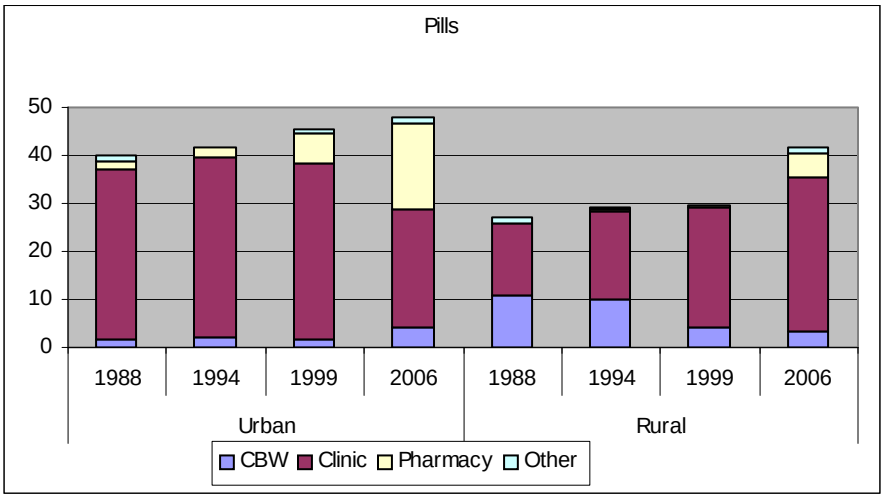
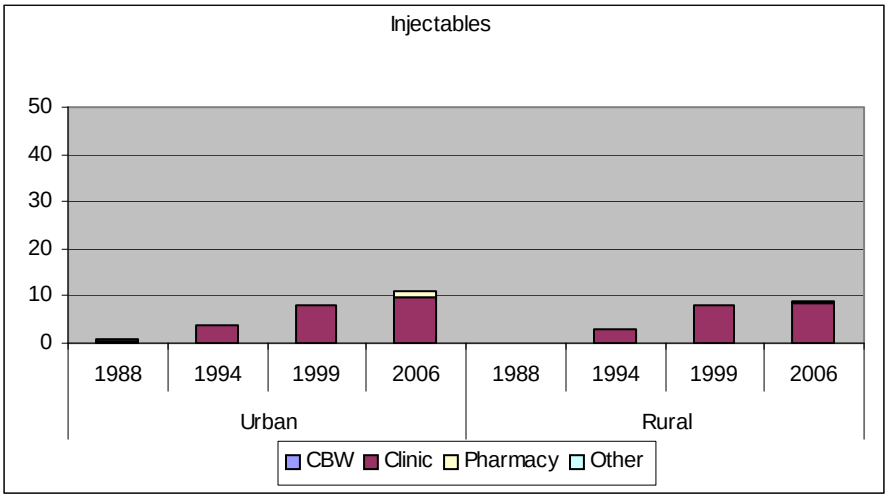



Figure 6. Trends in source of supply for pills and injectables by residence in Zimbabwe