

Paper presented at the 19th IUHPE Conference, Vancouver, Canada,
10-15 June 2007.

**PMTCT SERVICES IN A RURAL DISTRICT MUNICIPALITY OF THE
EASTERN CAPE, SOUTH AFRICA**

Prof Nancy Phaswana-Mafuya*

Prof Dan Kayongo**

*Address Correspondence to: Research Director, Social Aspects of HIV/AIDS and Health
(HSRC) and Visiting Professor, University of the Western Cape, 10 Nederburgh

Crescent, Tulbagh, Port Elizabeth, 6025,

South Africa

nphaswanamafuya@hsrc.ac.za

Tel/Fax: +27 41 3609791

**Eastern Cape Regional Training Centre

Walter Sisulu University

South Africa

HSRC RESEARCH OUTPUTS

5183

Abstract

Background: A performance assessment aimed at getting information on operational quality of PMTCT services among health facilities in a resource-poor municipality of the Eastern Cape was conducted in 2004. This paper reports findings of a sub-section of the performance assessment, i.e. perceptions of the PMTCT programme by government officials in the Eastern Cape of South Africa.

Methods: A focus group study was carried out among a convenient sample of 44 officials – 20 males and 24 females aged between 28 and 55. Four focus group interviews were conducted with these officials by trained moderators.

Results: Coverage not satisfactory due to limited sites and gross staff shortage. PMTCT infrastructure in some sites not meeting basic standard (no basic room and sanitation facilities). Drugs and Supplies run out of stock in some facilities (e.g. test kits, food supplements, bactrim, folic acid, cotromoxazole). Support and Supervision of sites was reported to be good, though monitoring and evaluation was not done effectively.

Program Receptiveness was poor due to stigma.

Conclusion: There are organizational, human resource, infrastructural and social challenges in the administration of PMTCT programme. The information emanating from this study should be considered when identifying best practices for expanding and providing PMTCT services.

Key words: *PMTCT, Eastern Cape, HIV/AIDS, HIV+ mothers, South Africa*

Introduction

Mother-to-child transmission (MTCT) is by far the largest source of HIV infection in children below the age of 15 years (Peltzer, Skinner, Mfecane, Shisana, Nqeketo & Mosala, 2005). An estimated 200 million women around the world become pregnant each year, of which 2.5 million are HIV-positive (UNAIDS, 2002). At least half a million infants and children have already died from AIDS, undermining child survival gains made in earlier years through comprehensive child health programmes (UNICEF, 2003). HIV/AIDS accounts for 7.7% of deaths of children under five years of age in Sub-Saharan Africa and in certain countries accounts for more than 40% of deaths (Walker, Schwartlander & Bryce, 2002). Based on annual antenatal surveillance, approximately 34.5% of pregnant women between 25 and 29 years were HIV+, and about 29.5% of pregnant women aged 30 to 34 were living with the virus in South Africa in 2001. In 2004, an estimated 37 000 children in South Africa acquired HIV from their mothers around the time of birth and an additional 26 000 children were infected with HIV through breastfeeding (Medical Research Council, 2004). MTCT is an overwhelming source of HIV infection in young children (De Cock, Fowler, Mercier, de Vincenzi, Saba & Hoff et al., 2000). Prevention of mother-to-child transmission (PMTCT) programmes have now been introduced in most countries affected by the epidemic with programmes moving from pilot projects to national programmes in Kenya, Malawi, Uganda, Botswana and South Africa (Chopra, Doherty, Jackson & Ashworth, 2005).

The overall prevalence among antenatal care attendees for the Eastern Cape Province of South Africa has risen to 27.1% in 2003 (Department of Health, 2003). It is also estimated that, in the Eastern Cape Province, there are 50,000 HIV+ children who acquired their infection from their mothers (Department of Health, 2005). There are approximately 302 facilities offering PMTCT services (37.6% coverage) in the province. In addition, the province boasts 15 "master" trainers and 64 trainers for PMTCT. A performance assessment of all key health facilities providing PMTCT services in a resource-poor municipality of the Eastern Cape was conducted in 2004 in order to get information on operational quality at the level of service provision as well as assess knowledge and perception of quality of services with the overall goal of identifying best

practices for expanding and providing PMTCT services. This paper reports findings of a sub-section of the performance assessment, i.e. perceptions of PMTCT services by officials in a rural district municipality of the Eastern Cape. The rationale for the study is to come up with best practice guidelines for PMTCT so as to help improve the effectiveness and efficiency of PMTCT services and inform any planned expansion of the programme.

METHODS

Design and Setting

A qualitative focus group study was carried out with Local Service Area (LSA) officials of a rural district municipality in the Eastern Cape of South Africa. The researcher chose focus group interviews or simply focus groups over other qualitative data collection methods such as in-depth personal interviews, case studies, oral and life histories. This choice was based on the findings of other researchers who advanced arguments that focus group interviews are very useful data collection techniques prior to programme planning and implementation (Martins *et al.*, 1999; WHO, 1995 and Schurink *et al.*, 1998 in De Vos). The following reasons have been provided by the above-mentioned authors on the advantages of focus group interviews, that they:

- Produce a wider range of information, ideas and insight than individual responses secured separately (synergism)
- Allow for one participant's remark to trigger a chain reaction from other participants (stimulation)
- Bring about original ideas compared to individual interviews (serendipity)
- Give the participants an opportunity to actively participate in the study process and in improving their own lives (empowerment)
- Provide opportunities for members to become aware of, to expand and to change their thoughts, feelings and behaviour regarding self and others (self-awareness)

The EC Province is situated along the south-east coast of South Africa and covers an area of 170 000 km², representing about 14% of the country's landmass. It has a population size of approximately seven million, representing 16% (third largest) of the South African population (RSA National Treasury, 2001). The non-urban population amounts to nearly 4 100 000, and dense concentrations of rural and peri-urban settlements occur in other districts and areas. This province is economically disadvantaged, with relatively inadequate access to services compared to the other eight provinces. In 1996, 68.3% of households in this province had insufficient electricity supply; 46.5% did not have access to basic water supply, and 35.8% did not have access to basic sanitation (RSA National Treasury, 2001). The province has the highest unemployment rate in the country (48.5%), with a per capita disposable annual income of R7800 (\$918) (Mahlalela, Rohde, Meidany, Hutchison & Bennett, 2001). The poverty rate (percentage of population in poverty) was estimated at 63.3% (Mahlalela et.al. 2001), the second highest in the country. The population of the district in which the study was undertaken is 1.8 million people, with an average population density of 114 people per square km. Some 65% of the people are unemployed, 49% do not have access to sanitation and 77% do not have a safe water source. The majority of health care facilities in this district have no water or electricity. Shortage of doctors is a major problem affecting the quality of care in the district hospitals. The main health problems in the district are TB, HIV/ AIDS, STIs and poor maternal and child health which includes malnutrition (Statistics South Africa, 2005).

Sample and Procedure

A convenient sample of 44 officials – 20 males and 24 females aged between 28 and 55 in the four LSAs of the selected district, participated in the study during the month of July 2004. These officials were approached by the researcher and invited to join the focus group discussion on the set date. Four focus group interviews were conducted with these officials by trained moderators involving the following key informants: HIV/AIDS Manager, MCHW coordinator, Trainer, Information officer, PMTCT coordinator, Pharmacist, Nutritionist, Health promotion officer and Social Worker. There were five officials who could not participate as they were held up in other emergency meetings.

Designing the focus group interviews' guide

An initial set of loosely and broadly framed questions for discussion also referred to as focus group agenda or guiding questions (Martins *et al.*, 1999: 140), was developed. It was reviewed and modified on the basis of two pilot focus group interviews. Eight guiding questions, which were posed to elicit in-depth information and insight into participants' perceptions of PMTCT services were formulated, sequenced in an understandable and logical way as follows:

PMTCT Coverage: Do the LSAs have enough PMTCT sites and PMTCT staff? How many pregnant women, pregnant women tested for HIV, pregnant women receiving nevirapine, infants receiving breast milk substitutes are reached through the program? How many HIV + mothers are followed up at 3 months, 6 months and 12 months.

PMTCT Infrastructure: Do the facilities in the LSA have the necessary infrastructural requirements for PMTCT, i.e. enough space, private counseling rooms, room facilities, laboratories with necessary equipment for testing and testing equipment for HIV Rapid Test.

PMTCT Drugs and Supplies: Do you have a PMTCT drugs and supplies system in your LSA which ensures that drugs and supplies are procured and distributed effectively and efficiently?

Support and supervision: Does the LSA receive PMTCT support from province? Does the LSA provide support to facilities. What is the nature of the working relationship between facilities, LSAs and province.

Monitoring: How many patients is the program reaching in the LSA? What percentage of ANC patients receive HIV testing? What percentage of mothers, who are HIV- infected And delivered at a PMTCT site, are receiving ARVs for PMTCT? How many infants did the program prevent from getting HIV?

Program receptiveness: what is the general perception of the PMTCT program? Is it seen as good or bad? Positive or negative?

Conducting Focus Group Interviews

Moderator selection and preparation: 2 moderators were selected as facilitators of focus group discussions. These moderators were chosen because they had communication skills such as listening, probing, reflecting, paraphrasing, attending, observing and responding. However, further training was provided to the moderators to ensure that they were well prepared to deal with anticipated problems such as the disruptive behaviour of an emergent leader among participants and also to help them develop a genuine interest in hearing other people's thoughts and feelings, become spontaneous, have a sense of humour, become empathic, be able to admit own biases, express thoughts clearly and be flexible.

Size of focus groups: The average number of participants in each group was 10. The group size was small enough for all the participants to have the opportunity to share insights, to identify themselves as members, to engage in face-to-face interaction and to exchange thoughts and feelings among themselves. It was also large enough to provide diversity of perceptions as recommended in literature (Schurink *et al.* 1998; Feldman, 1995; Smit, 1995; Leggett, 1997 & Folch-Lyon *et al.*, 1981).

Procedure: The procedures followed for the focus group interviews were derived from Krueger (1994). The field work team was warmly welcomed. The focus group members introduced themselves. Accordingly, the moderators welcomed the participants, thanked them for taking time to meet with them and put them at ease. They made them feel relaxed in order to develop trust amongst themselves. The first question was posed and this served as an "ice-breaker" to create a comfortable environment in which participants felt free to share their opinions. The purpose of the focus group discussion was explained to the participants prior to the beginning of the discussion. The moderators indicated that they were there to explore their experiences of PMTCT services. They indicated that the information gathered would help the district municipality to fine-tune and improve its *ongoing* PMTCT expansion efforts. The moderators reassured participants that all views

were acceptable; they were free to argue, disagree, question and discuss issues with others in the room. Participants were also requested to enlist their names on the attendance register. The moderators then moved on to the subsequent questions, ensuring that opinions were elicited from all the participants, while encouraging and maintaining a lively and relevant discussion. It was necessary, from time to time, to “probe”, in order to elicit additional information or clarification. Moderators took notes using notepads and recorded the focus group discussions on audio-tapes. The discussion of focus group interviews was recorded accurately without neither changing the words nor leaving out material. The moderators observed and recorded non-verbal cues in each group, e.g. the emotional tone of the discussion, important hand gestures and unusual behaviour. One of the moderators took notes in order to ensure that all information was captured. The discussion facilitator (moderator) also wrote key points on the flip chart. The researcher combined the moderator’s notes, the notes transcribed from the tape, the notes written on the flipchart in compiling each focus group discussion report. The focus group discussions were conducted in English. Each focus group discussion lasted for about two and half hours. Issues of confidentiality were discussed. The moderators were assured of confidentiality.

Data Analysis

After fieldwork, qualitative data analysis was conducted. The researcher and moderators observed the guidelines for analyzing qualitative data as outlined by various researchers using a phenomenological approach (Poggenpoel, 1998 in De Vos; Miles & Huberman, 1994 and Clark *et al.*, 1998). They:

- Paid attention to words and phrases in participants’ own vocabularies that capture the meaning of what they do or say;
- Identified different themes and looked for underlying similarities between them;
- Named and categorised themes (open coding); and
- Made connections between a category and its subcategories (axial coding)

The researcher did open coding, i.e. identifying, naming, categorizing and describing phenomena. Essentially each line, sentence, paragraph was read in search of the answers

to the questions which had been asked. Axial coding was done, i.e. relating categories in focus group interviews' data. Subsequently, thematic content analysis was done, i.e. categories were generated using techniques such as checking for word repetitions, key words in context, cutting and sorting.

Trustworthiness

Qualitative data analysis requires clear, explicit reporting of data so that the reader will be confident of, and can verify, reported conclusions. It requires keeping analytic strategies, coherent, manageable and repeatable as the study proceeds (Miles and Huberman, (1994). The researcher adopted various strategies to ensure trustworthiness of the interpretation of the data espoused by Miles and Huberman (1994). These included:

- *Participant checking*: Periodic feedback sessions were held to present the results of the data collection to the participants to test whether they agree with them.
- *Data cross-checking*: stepping back to consider what the analyzed data mean and to assess their implications for the questions at hand in order to ensure that the data are credible, defensible, warranted, and able to withstand alternative explanations.
- *Moderator reviews*: the focus group moderators had regular meetings to cross-check the quality of each other's data sets.
- *Ongoing reflection on data*: the researcher began the analysis almost in tandem with data collection in order to identify tentative interpretations or emerging hypotheses during the fieldwork process.
- *Peer reviews*: the researcher brought two peers who were knowledgeable on qualitative analysis as well as the substantive issues involved in the study, into the analytic process. Approximately 20% of the data were given to these peers to rate the initial codings. These peers served as a cross-check, sounding board, and source of new ideas and cross-fertilization. A 94% agreement rating was achieved.

Ethical Considerations

Ethical approval for the study was secured at the Walter Sisulu University Ethics and Bio-safety committee. Participants were advised on: (a) their status as volunteers, (b) their right to refuse to answer any question, (c) the legal liabilities of their participation, (d) confidentiality, and (e) limitations of anonymity due to the nature of the study. All participants consented verbally to participate in the study. Participants were given an opportunity to decline participating before or at any point in the study. The moderators answered all participant questions.

Study Limitations

The norm with focus group interviews is that participants should not be familiar with each other as Martins *et al.* (1999) argue that the familiarity of focus group members may present special difficulties during interviews. It is believed that people who regularly interact (either socially or at work, such as close friends, family members, colleagues and relatives) may respond more on past experiences, events or discussions than on the immediate topic of concern. The moderators explained this shortcoming to the participants and requested to attempt to be as objective as possible. Another limitation was that the participants were not separated according to gender in accordance with the general rule that there should be separate focus groups for males and females especially among the youth because girls often do not speak much in a discussion with boys, especially if there are more boys than girls in the group (WHO, 1995: 189; Clark *et al.*, 1998: 138 and Swanepoel, 1997: 103). Since the participants in this study were all senior managers who not only were familiar with each other but also often worked and held meetings together, it is assumed that having them in one group may not have affected participants' interaction negatively.

Findings

PMTCT Coverage

Participants indicated that there were few PMTCT sites across the four LSAs resulting in over-crowding of existing sites. This posed a challenge in terms of implementing PMTCT services in view of the increasing number of PMTCT clients in spite of the fact that PMTCT services are offered on a daily basis. The problem of coverage was also exacerbated by the lack of dedicated PMTCT staff at LSA level. The HIV/AIDS managers were said to be overloaded dealing with VCT, HIV, STIs, ordering of test kits, ordering of formula and distribution of ARVs in addition to overseeing PMTCT services. The gross staff shortage was said to affect the quality of PMTCT services because of time constraints which result in inability to do follow ups where necessary, i.e. monthly routine forms which were supposed to be submitted to the LSA not followed. Participants did not have information about coverage in as far as the numbers of pregnant women, pregnant women tested for HIV, pregnant women receiving nevirapine, infants receiving breast milk substitutes that are reached through the program are concerned. They did not know how many HIV + mothers are followed up at 3 months, 6 months and 12 months. The reason attributed to this was poor recording due to high workload.

"When we started with the PMTCT program at another LSA, we had only one site serving a population of 460 000 people with 4 Hospitals and 42 clinics only".
"There are too many forms to handle and lots of documents to complete every month and this aggravates the high workload problem"

PMTCT Infrastructure

Participants indicated that while the PMTCT infrastructure is available in some sites (i.e. laboratories with necessary equipment for testing, testing equipment for HIV Rapid Test, counseling rooms); there were however sites without basic standard facilities where one consulting room is used for the support group meetings, ANC mothers counseling, ARV

drugs roll-out, VCT, issuing formula and general health consultation. Some sites have no private rooms at all; they lack privacy because other duties have to be performed in them and this results in the counseling session being interrupted because people keep on knocking and also make noise which disturb the counseling session. Others have consultation rooms that are very small - there is no waiting area, no supply storage room, no VCT room, no oxygen, no obstetric equipment, no basic room and sanitation facilities such as furniture, running water, electricity plugs, heaters, basins, plugs for brighter light to be used when examining the client and the rooms are very cold in winter. Other sites use borrowed space. Other sites have no communication facilities at all.

"There is sometimes a communication breakdown between the sites and the LSAs due to lack of communication facilities; most sites have only 1 fax machine and 1 photocopier which are not functioning properly due to lack of maintenance"

"Some sites have only one telephone line in the complex situated in the matron's office which makes it difficult to communicate with clients".

PMTCT Drugs and Supplies

Participants indicated that while some sites had an effective drugs and supplies issuing system and stock control, others did not have the system. They indicated that there are managerial issues that often created drug supply problems. The problems included shortage and high attrition rate of professional staff; limited management capacity at district and health facility levels; inadequate inventory control and weak monitoring and evaluation system, resulting in overstock, stock-outs, and expiry of some product; limited quality assurance of drugs due to shortage of human resources, weak information system, and lack of quality control equipment; periodic shortage of essential drugs due to lack of reliable consumption and/or morbidity data for procurement; irregular updating of inventory management tools such as stock cards or bin card; inadequate storage, equipment, and handling capacity in pharmacies and laboratories, compromising product security and safety; lack of standard operating procedures, current reference materials,

and manuals for use at health facilities and lack of space at pharmacies to ensure confidentiality for testing, counseling and treatment.

"Occasionally blood test kits, food supplements, bactrim, folic acid, cotromoxazole run out due to communication breakdown between sites and LSAs, lack of coordination of services, limited support service), lack of uniform drugs and supplies procurement, delays in procurement, and poor distribution system as well as poor tracking system".

"While in the one LSA they give 4 tins of formula for the newborn baby and increase the tins monthly by one until the child is six months, in order to encourage the mother to come back and thus monitor her general health status and that of the baby, in another LSA, the newborn baby is given 8 tins because mothers lived far and struggled with transport to get to the site".

"There was no formula for babies from Nov 2003 until 5th January 2004 because it was taken to PHC in another hospital and was dispensed to nutrition clients by the nutritionists as they thought it was for nutrition meanwhile it was for PMTCT clients".

Support and Supervision

It was indicated that there is a good working relationship between facilities, LSAs and Province. The Province provides support to LSAs and facilities in the best way they can under serious staff shortages. Similarly, the LSAs provide as much support as possible to the facilities. The participants acknowledged the support they receive from Province and from other doctors. Participants indicated that the LSAs provide physical support to sites especially when the programme is being started – e.g. provides orientation for programme initiation. However, most of the managers at LSA level were never orientated on basic information on PMTCT as a result they lack insight. They inform facilities about workshops and meetings. They pay visit sometimes, and discuss problems freely, listen and attend to the problems. They inform facilities of any changes. They keep them informed of any trainings due. They provide all the necessary drugs for PMTCT services e.g. NVP. Whenever there is a need for supplies, they respond promptly and they are always available to help. HIV/AIDS managers indicated that they cannot perform

frequent facility visits even though transport is available due to time constraints as they have to oversee the VCT, STI, and PMTCT programs as well as attend meetings and workshops. This is attributed to the fact that the PMTCT program is not integrated with other programs e.g. TB, STI's , MCHW at LSA levels. This creates under performance, delays in rolling out of the PMTCT program and compromises the quality of the services rendered. It was recommended that assistant managers should be hired to assist the HIV/AIDS manager.

"We communicate frequently with the sites"

"There are forums for discussing and reporting matters relating to PMTCT program i.e. in-service meetings, workshops and support groups, PMTCT steering committee"

"We are working well together with them in the sense that we have meetings with them though not regular".

"We provide support in terms of PMTCT supplies, equipment, treatment, food supplements; follow up visits, training and in-service education".

There is no integration between MCWH and HIV/AIDS directorate which affect both programs since they are supposed to speak the same language".

Monitoring and Evaluation

Participants indicated that while the PMTCT monitoring system was in place (i.e. clear definitions of indicators - % of ANC patients receiving VCT, % of mothers who are HIV+ and delivered at PMTCT site, % of women receiving PMTCT, etc; standard tools, data source and methodologies as well as clear guidelines and protocols; the system was not effectively used. HIV/AIDS managers were not effectively monitoring the program because of time constraints since they have to oversee other programs. Similarly, facilities struggled to send statistics in time because of work overload, poor recording system and poor reporting skills i.e. no statistics on acceptance rate. Consequently, it was difficult to assess program performance, detect and correct performance problems and make more efficient use of the program resources.

"LSAs have the DHIS which is not used effectively, thus there were no proper records as to which PMTCT services had been delivered".

Program Receptiveness

Participants indicated that unlike VCT which has become a buzz word, PMTCT was not well-publicized and therefore stigmatized. This may be caused by the fact that there is generally no reading material, information leaflets with pictures, no brochures and no videos on PMTCT. There are program managers at LSA level who show no interest in the program.

"Sometimes when PMTCT meetings are called, some managers never attend because they do not take PMTCT as a priority and this creates a gap in knowledge about what is happening in the program yet their programs are directly impacted upon by HIV/AIDS".

Discussion

Although it is not the intention of qualitative research to generalise the findings, the groups involved in this study demonstrated a remarkable consensus, among and between groups on the issues under discussion. Responses to the focus group study raised important issues to be taken into consideration in improving the PMTCT program. The challenges highlighted in this study with regard to coverage, infrastructure, drugs and supplies, support and supervision, monitoring and evaluation as well as programme receptiveness have been reported in related studies (Mashego and Peltzer, 2005; Health Systems Trust, 2004; Mavundla, 1998; Gilson, Alilio & Heggenhougen, 1994; Ramlagan, Petros, Simbayi, Arihihenbuwa, & Brown, 2006; Dorkenoo, Gumede, Maluleke & Shaikh, 2003, Peltzer, et.al. 2005; Visser, Mundell, Villiers, Sikkema and Jeffery, 2005). It is clear from the findings that there is a need to increase PMTCT staff probably through supplementing clinic staff with PMTCT trained lay counselors, offering support to PMTCT providers, both material (e.g. transport) and psychosocial support (mentorship); expanding the PMTCT program to new sites and to enlarge the scope of activities within existing sites to reach more women. This requires human resources and expertise, co-

ordination and collaboration between partners, a well-functioning supply system and resource mobilization. Strong leadership and good co-ordination of the many institutions and individuals is critical to successful scaling up. There is also a need to improve infrastructure to meet the required standards. It should be ensured that every facility meets the criteria from PMTCT i.e. has at least 2 PMTCT trained nurses, has access to Nevirapine and formula, has space and equipment for delivery, has VCT in progress, private consulting rooms, etc. Plans to upgrade the physical infrastructure of PHC facilities across the Eastern Cape Province and other South African provinces need to be expedited. There is a need to improve PMTCT drugs and supplies across the four LSAs. USAID (2007) noted that interventions to address drugs and supplies managerial problems should include assistance in quantification for procurement, in-service training, quality assurance, storage improvements, inventory control, record keeping and reporting, and development of manuals and standard operating procedures. Good record keeping and information management are key to improving quantification of requirements as well as supply management, which will ultimately lead to better pharmaceutical procurement practice. An improved record keeping system includes: putting in place an active stock management system and ensure availability of basic tools (e.g., stock cards, bin cards, inventory status reports, adverse drug reaction reports) for all PMTCT products at the site and instituting a quarterly reporting system for PMTCT product consumption and stock status. A functioning inventory management system is required to prevent stock-outs. Pharmacy staff from the PMTCT implementation sites should be trained in PMTCT inventory management. Scarcity of pharmaceutical personnel presents a challenge to keeping up with the continuous demand for accurate recording and reporting. Monitoring and evaluation in the four LSAs should be strengthened. This will allow strategic interventions where required. National and departmental policies and programs may contain deficiencies that will only be identified through monitoring and evaluation. Continuously monitoring of the progress in PMTCT implementation, identifying problems, troubleshooting and adapting implementation strategies cannot be overemphasized. Further, continuous monitoring of coverage with and quality of services using data collected for clinical and administrative management is critical. There is a need to establish standards for information systems.

LSAs need to follow up regarding the statistics from clinics communicating with clinic and use DHIS system. An uninterrupted supply of NVP, formula and laboratory supplies must be guaranteed. This requires either procurement through the usual channels of drug supply or the establishment of parallel system (e.g. identifying an NGO that could be responsible for procuring and distributing supplies). The finding that program receptiveness was not so positive may be attributed to the fact that stigma and discrimination attached to HIV/AIDS still somewhat hampers the effectiveness of HIV/AIDS related programs. Early intervention strategies such as PMTCT are thus sometimes compromised. PLWHA who reveal their status are often subjugated to victimization and discrimination and this has even, at times, resulted in death of PLWHA (Ramlagan, Petros, Simbayi, Arihihenbuwa, & Brown, 2006: no page number). This happens everywhere starting from their own homes, within the communities they live in, as well as at work. In a similar study of pregnant women within the PMTCT program in Gauteng, South Africa, Dorkenoo, Gumede, Maluleke and Shaikh (2003) also found that stigma persists at the family and community level. Peltzer, et.al. (2005) in their study of factors influencing the utilization of PMTCT services by pregnant women in the Eastern Cape, South Africa, also found that women were isolated, insulted, excluded from family and community events because of their HIV status. It could be reiterated as in Peltzer et.al's study (2005), that community education and awareness campaigns on PMTCT are essential components for the success of the program. This study has highlighted important issues to be considered in improving the effectiveness and efficiency of PMTCT services and to inform any planned expansion of the program. It is important to mention that some of the above-mentioned recommendations have been incorporated in a procedures manual which has been developed and is currently being disseminated throughout the Eastern Cape Province as a PMTCT mentoring tool.

Acknowledgements

Funding from CDC to conduct the study

Regional Training Center of Walter Sisulu University for making other resources available to conduct the study

Local Service Area managers who agreed to participate in the study

References

Abdool-Karim, Q., Abdool-Karim, S. S., Nkomokazi, J. (1991). Sexual behaviour and knowledge of AIDS among urban black mothers. Implications for AIDS intervention programmes. *South African Medical Journal*, 80(7), 340-3.

Abdool-Karim, Q. (2001). Barriers to preventing human immunodeficiency virus in women: Experiences from KwaZulu-Natal, South Africa. *Journal of the American Medical Women's Association*, 56(4), 193-6.

Baltusse, R.M.; Ye, Y.; Haddad, S. & Saueborn, R.S. (2002). Perceived quality of care of primary health care services in Burkina Faso. *Health Policy Plan*, 17 (1): 42-49.

Bassett, M.T. (2002). Ensuring a public health impact of programs to reduce HIV transmission from mothers to infants: the place of voluntary counseling and testing. *American Journal of Public Health*, 92 (3): 347-351.

Chopra, M.; Doherty, T.; Jackson, D. & Ashworth, A. (2005). Preventing HIV transmission to children: quality of counseling of mothers in South Africa. *Acta Paediatrica*, 94: 35-363.

Clark, M., Riley, M., Wilkie, E., & Wood, R. (1998). *Researching and Writing Dissertations in Hospitality and Tourism*. Thomson Business Press.

Cohen, S., Gottlieb, B.H., & Underwood, L.N. (2000). Social Relationships and Health. In S. Cohen, L.G. Underwood, & B.H. Gottlieb (Eds), *Social Support Measurement and Intervention* (pp 1-25). New York: Oxford University Press.

Creek TL, Ntuny R, Mazhani L, Moore J, Smith M, Shaffer N, Kilmarx PH. (2004). *Knowledge, attitudes, and practices among midwives and counselors regarding*

prevention of mother to child transmission of HIV (PMTCT) - Botswana, 2003. Int Conf AIDS. 2004 Jul 11-16; 15: abstract no. ThPeB7037.

De Cock, K.M.; Fowler, M.G.; Mercier, E.; de Vincenzi, J.; Saba, J.; Hoff, E.; et.al. (2000). Prevention of mother-to-child HIV transmission in resource-poor countries: translating research into policy and practice. *JAMA*, 283: 1175-1182.

De Vos, A.S., & Fouche', C.B. (1998). Data analysis and interpretation: Univariate analysis. In A.S. de Vos (ed.) *Research at Grass Roots* . Pretoria: Van Schaik Academic.

Department of Health. (2003). Appraisal of Home/Community Based Care Projects in South Africa 2002-2003. Pretoria: National Department of Health.

Doherty, T.; Besser, M.; Donohue, S.; et.al. (2003). *An evaluation of the Prevention of Mother-to-Child Transmission (PMTCT) of HIV initiative in South Africa – lessons and key recommendations*. Health Systems Trust, 2003.

<http://www.hst.org.za/publications/599>.

Doherty, T.M.; McCoy, D.; Donohue, S. (2005). Health System Constraints to optimal coverage of the prevention of mother-to-child HIV transmission programme in South Africa: lessons from the implementation of the national pilot programme. *African Health Sciences*, 5: 213-218.

Donabedian, A. (1980). *Explorations in quality assessment and monitoring (Vol 1): the definition of quality and approaches to its assessment*. Washington D.C.: Health Administration Press.

Dorkeno, E.; Gumede, T.; Maluleke, K. & Shaikh, N. (2003). Prevention of mother-to-child transmission: a report of an assessment of a pilot programme in 15 health facilities in Gauteng Province. Cape Town: Human Sciences Research Council.

Feldman, M.J. (1995). *Strategies for Interpreting Qualitative Data*. Qualitative research methods series 33. California: Sage.

Folch-Loyn, E. et al. (1981). "Conducting Focus Group Sessions." *Studies in Family Planning*, 12(12): 443-449.

Gilson, L.; Alilio, M. & Heggenhougen, K. (1994). Community satisfaction with primary health care services: an evaluation in the Morogoro region of Tanzania. *Social Science & Medicine*, 39 (6): 767-780.

Health Systems Trust. (2004). *The national primary health care facilities survey 2003 – Limpopo*. Durban: Health Systems Trust and Department of Health.

Jackson DJ, Chopra M, Doherty T, Ashworth A. (1997). *Quality of counselling of women in South African PMTCT pilot sites*. Int Conf AIDS. 2004 Jul 11-16; 15

Krueger, R.A. (1994). *Focus groups: A practical guide for applied research*. Second Edition. London: SAGE Publications Inc, Thousand Oaks.

Leggett, T. (1997). "Introduction to Focus Group Research." Unpublished Paper. Durban: University of Natal.

Lindlof, T.R. (1995). *Qualitative communication research methods*. California: Sage.

Mahlalela, X.; Rhohde, J.; Meidany, F.; Hutchinson, P & Bennett, J. (2001). *Primary Health Care in the Eastern Cape Province, 1997-2001*. Bisho: Eastern Cape Department of Health, South Africa.

Mashego T-AB & Peltzer, K. (2005). Community perception of quality of (primary) health care services in a rural area of Limpopo Province, South Africa: a qualitative study. *Curationis*, 28 (2): 13-21.

McCoy, D.; Besser, M.; Visser, R.; and Doherty, T. (2002). *Interim Findings on the national PMTCT Pilot Sites: Lessons and Recommendations*. Durban: Health Systems Trust.

Miles, M.B., & Huberman, A.M. (1994). *Quantitative data analysis*. 2nd ed. California: Sage.

Miller, G.E. & Cole, S.W. (1998). Social relationships and the progression of human immunodeficiency virus infection: A review of evidence and possible underlying mechanisms. *Annual Behavioural Medicine*, 18(1), 49-57.

Moskowitz, J.T. (2003). Positive affect predicts lower risk of AIDS mortality. *Psychosomatic Medicine*, 65, 620-626.

Phaswana-Mafuya, N. & Peltzer, K. (2005). HIV Knowledge, risk perception and risk behaviours among technikon staff in the Eastern Cape, South Africa. *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD)*, 11 (1): 132-148.

Peltzer, K.; Skinner, D.; Mfecane, S.; Shisana, O.; Nqeketo, A & Mosala, T. (2005). Factors influencing the utilization of prevention of mother-to-child-transmission (PMTCT) services by pregnant women in the Eastern Cape, South Africa. *Health SA Gesondheid*, 10 (1): 26-40.

Peltzer, K.; Mosala, T.; Dorkenoo, E. & Gumede, T. (2003). *Health facility baseline report on Prevention-of-Mother-to-Child-Transmission (PMTCT) in a district of the Eastern Cape*. Johannesburg: Ford Foundation.

Phillips, L.J. (1998). *Anxiety, depression and HIV*. Department of Psychiatry, Edmonton: University of Alberta Hospital.

Poggenpoel, M. (1998). *Data analysis in qualitative research*. In De Vos, A.S. (ed)

Research at grassroots: A primer for the caring professions. Pretoria: J.L. Van Schaik Publishers.

Ramlagan, S., Petros, G., Simbayi, L., Arihihenbuwa, C., & Brown, B. (2006). *Othering: Women's perceptions of stigma and HIV/AIDS in South Africa*. Poster presentation. Toronto: XVI International AIDS Conference 13-18 August 2006.

Reerink, I.H. & Sauerborn, R. (1996). Quality of care in primary health care settings in developing countries: recent experiences and future directions. *International Journal of Quality of Health Care*, 8: 131-139.

RSA National Treasury. (2001). *RSA National Intergovernmental Fiscal Review, 2001*. Cape Town: Formaset Printers.

Schurink, W.J., Schurink, E.M., & Poggenpoel, M. (1998). *Focus group interviewing and audio-visual methodology in qualitative research*. In De Vos, A.S.; *Research at Grassroots: A primer for the caring professions*. Pretoria: J.L. Van Schaik Publishers.

Shisana, O.; Mehtar, S.; Mosala, T.; et al.. (2005). *HIV risk exposure in children: A study of 2-9 year olds served by public health facilities in the Free State, South Africa*. Cape Town: HSRC Press.

Shisana, O., Rehle, T., Simbayi, L., Parker, W., Bhana, A., Zuma, K., Connolly, C., Jooste, S., Pillay, V. et al. (2005). *South African National HIV Prevalence, Incidence, Behaviour and Communication Survey*. Cape Town: Human Sciences Research Council Press.

Shisana, O. & Simbayi, L. (2002). *South African national HIV prevalence, behavioural risks and mass media household survey 2002*. Cape Town: Human Sciences Research Council.

Smit, G.J. (1995). *Research guidelines for planning and documentation*. Pretoria: Southern Book Publishers.

Statistics South Africa (2005). *Achieving a better life for all. Progress between Census '96 and Census 2001*. Pretoria.

Summers, J., Robinson, R.C.L., Zisook, S., Atkinson, J.H., McCutchan, E., Deutsch, R., Patterson, T. & Grant, I. (2000). The influence of HIV-related support groups in survival in women who lived with HIV: A pilot study. *Psychosomatics*, 41, 262-268.

USAID. (2007). Developing Commodity Procurement support for the Ethiopia PMTCT program. Government of Ethiopia, Management Sciences for Health.
<http://www.who.int/hiv/amds/ethiopia2.pdf>

UNAIDS (2006). *2006 Report on the global AIDS epidemic*. Geneva: UNAIDS.

UNICEF. (2003). Mother-to-Child transmission of HIV/AIDS.
www.unicef.org/programme/hiv/focus/mtct.htm. Accessed 18 September 2003.

Visser, M., Mundell, J., de Villiers, J., Sikkema, K., & Jeffery, B. (2005). Development of structured support groups for HIV-positive women in South Africa. *Journal of Social Aspects of HIV/AIDS*, 2(3), 333-343.

Walker, N.; Shwartlander, B.; Bryce, J. (2002). Meeting international goals in child survival and HIV/AIDS. *Lancet*, 360: 284-289.

WHO. (1990). *Measuring consumer satisfaction with health care*. Copenhagen: WHO Regional Office for Europe.

WHO. (2001). *Prevention of mother-to-child transmission of HIV*. Geneva: WHO.