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Pharmacists' attitudes toward an integrated patient management system in a public hospital in Southern Africa: A phenomenological exploration

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Abstract

The pharmacy departments of hospitals in Botswana use the Integrated Patient Management System to collect and process patients' treatment data. The rationale for this is to collate quality information for evidence-based decision-making relating to care provision. Yet limited studies have been conducted on the usefulness of this support system in Botswana. The study aimed to explore the attitudes of pharmacy staff toward the Integrated Patient Management System used for collecting and processing data of patients on antiretroviral therapy. It was conducted in a pharmacy department of a public hospital in Gaborone, the capital city of Botswana. A qualitative approach was adopted, underpinned by interpretative phenomenological analysis. Data were collected from 18 purposively selected pharmacy staff using a semi-structured interview format. Data analysis followed a step-by-step thematic approach using interpretative phenomenological analysis framework. Five super-ordinate themes emerged from data analysis: (1) data capturing: an extra-task, (2) knowledge and experience of the Integrated Patient Management system, (3) training and education, (4) mentoring and supervision, and (5) data quality: impact on patients' care. Pharmacy staff have limited knowledge of the Integrated Patient Management System, including its utilisation in data capturing. Further research is needed to explore factors influencing pharmacy staff use of IPMS.

Keywords: Antiretroviral therapy, data quality, Integrated Patient Management System, patient records, pharmacy staff.

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Introduction

This paper reports on a qualitative study into the attitudes of pharmacy staff toward the Integrated Patient Management System (IPMS) used for collecting and processing data of patients on antiretroviral therapy (ART) in a public hospital in Botswana. Sub Saharan Africa makes 9% of the world population and carries two-thirds of the total human immunodeficiency virus (HIV) burden of the world, which in essence equates to 22.9 million people living with this condition in this region (World Health Organisation [WHO], 2007).

Botswana is one of the countries in Sub-Saharan Africa that is hardest hit by the HIV and acquired immunodeficiency syndrome (AIDS) pandemic (United Nations General Assembly Special Session on HIV/AIDS [UNGASS], 2010). In 2012, an estimate of 300,000 people with HIV and AIDS was reported to live in Botswana. While this state has a population of approximately two million people, its adult HIV prevalence is 24.6 %, a rate considered the second highest in the world (Center for Disease Control [CDC] Botswana, 2012). As a result, the government of Botswana scales up its ART programme in order to address the health needs of all its citizens living with HIV. The quality of care for this patient group can be enhanced if treatment data timely and accurately captured, and analysed to inform evidence-based decision-making. This can be achieved with the help of a well-organised ART patient data management system, a view echoed by Herrmann, McKinnon, John, Hyland, Martinez and Cain (2008). Specifically, these authors noted that effective information management systems are needed, particularly in instances where there are high incidence and prevalence of health conditions, such as HIV and AIDS, to generate quality data and inform healthcare decisions.

The pharmacy staff of the study site use IPMS for ART patient data management. The IPMS collects a large quantity of data and processes the same to inform evidence-based decision making. This means that the pharmacy staff use the information collected by the IPMS to make important clinical decisions about patients' care. Examples of such decisions include changing medication regimens and dates of appointments. These decisions can be accurately made with the help of quality data (Creswell, 2009). The question now arises, what is quality data? Quality data has six attributes: accuracy, reliability, credibility, timeliness, completeness and appropriateness (Creswell, 2009). The quality of data is determined by the degree at which the data set meets these criteria. A data set is therefore said to be of a high quality when it is relevant, accurate, and available in a timely manner to decision-makers for planning and healthcare delivery purposes (Herrmann et al., 2008). Antiretroviral therapy is not a once-off treatment, but rather a continuous, and lifelong treatment. Thus, patients on antiretroviral medication require prolonged monitoring of their health status, and their clinical records serve as a point of reference to guide the administration of such medications. It is therefore critical not only to capture accurate patients' clinical data, but it is also important to increase the ease at which healthcare professionals access and retrieve such data.

Whilst capturing and retrieving quality data using IPMS is evident in developed countries (e.g. the United Kingdom), there is hardly any evidence of this in developing countries (like Botswana) despite the increase in use of this data support system in the same (Foster, Biggs, Melvin, Walters, Tudor-Williams & Lyall, 2006). Both private and public hospitals in Botswana have been using IPMS since the year 2004. To date, this support system has not been empirically

investigated in Botswana. Hence, there are grounds for investigating the nature and acquisition of attitudes toward IPMS since quality care provision will depend on such an understanding.

Methodology

Paradigm

This study adopts a qualitative methodology that is underpinned by a constructivist paradigm, which has an ontological assumption of multiple realities. The researchers believe that engaging with healthcare workers who have experience and knowledge of IPMS and work closely with patients on ART can enable them to understand the realities about issues of data quality of patients on ART and IPMS. These beliefs are consistent with the assumptions of a constructivist paradigm. The researchers therefore employ this paradigm to guide the conduct of the study.

Research Design

The study adopted a qualitative approach using individual interviews. The methodological underpinning was provided by phenomenology, specifically interpretative phenomenological analysis (IPA) (Smith, 2009). This strand of phenomenology requires the researcher to go beyond the description of phenomena, reporting not just what participants verbalise about their experience, but also offering expert analysis of these experiences (Smith, Flowers & Larkin, 2009). Adopting this approach can generate comprehensive insights into the attitudes of pharmacy staff toward IPMS for patients on antiretroviral therapy in a pharmacy department of a public hospital in Botswana.

Sampling and sample

The population of this study comprised all pharmacy staff who work in the study site. The researchers used a criterion purposive sampling to select participants of the study. This is a non-probability sampling approach that allows for the recruitment of participants based on specific eligibility criteria (Babbie, 2010). Eligibility for recruitment was based upon having at least two years' experience of using IPMS within a pharmacy setting, and working with patients on ARTs.

Participants were recruited for participation in the following way. One of the authors met with the pharmacy staff in order to explain the study, its inclusion criteria, and to answer queries. Each pharmacy staff was given an information leaflet, and a letter of invitation for participation. All pharmacy staff (25) expressed willingness for participation, and thus formed a volunteer sample pool from which individuals were purposively recruited or selected. Recruitment

commenced with one pharmacy staff, and continued until category saturation was achieved. This was the point that the data collection process failed to reveal new information relevant to address the aim of the study (Sandy, 2013). A total of 18 pharmacy staff was recruited and participated in the study.

Data collection

Data were collected from June to September 2014 from participants using a semi-structured interview schedule that was designed in line with IPA guidelines (Smith, 2009). The data collection took the format of individual interviews. This approach to data collection was adopted because its contextual and relational aspects are significant to understanding people's perceptions (Polit & Beck, 2012). All interviews were initiated by the following statement: '*Kindly share with me your views regarding the Integrated Patient Management System used for capturing and retrieving data of patients on antiretroviral therapy.*' Probes and prompts were used to elicit in-depth information from participants. All interviews were audio-recorded and conducted in a private room of the study site. Each interviews lasted for about 45 to 60 minutes. Notes were also taken to capture and describe non-verbal cues observed during interviews.

Data analysis

Data analysis and collection were conducted in parallel in order that the selection of participants could be guided by the data already yielded. All audio-recorded interviews were transcribed verbatim into textual materials. The transcripts were then subjected to analysis using the IPA framework of data analysis (Smith, 2005), which consists of six stages (Table 1). It is worth noting that data analysis using this framework is not a linear activity, but rather a reiterative process that may require researchers to shift frequently between the analytical stages.

Table 1: From Transcript to Master Table of Themes (Smith, 2005)

Stage 1: Reading and reading transcript to familiarize with participant's account.
Stage 2: Making notes of interesting issues about participant's account.
Stage 3: Development of emergent themes that capture meaning of participant's account.
Stage 4: Searching for connections across emergent themes.
Stage 5: Development of a master table of themes containing superordinate themes, sub-themes and keywords or phrases from transcript.
Stage 6: Development of a single master table of themes from master table of themes of individual transcripts.

Ethical considerations

Permission to conduct the study was granted before data collection by the University of South Africa's Research Ethics Committee, the Botswana Ministry of Health's Research and Development Committee, and the Botswana Ministry of Education and Skills Development. Permission to access the study site was requested and obtained by the researchers from the management team of the study site. Participants were informed that participation was voluntary, and their rights of not-to-answer any part or all of questions were respected. Written informed consent was obtained from participants, and they were free to withdraw at any time. Study participants were assured that their responses would be kept confidential, and great care was taken to change any information by which a participant could be identified.

Results

Five superordinate themes emerged from the data analysis, and these were (1) data capturing: an extra-task, (2) knowledge and experience of IPMS, (3) training and education, (4) mentoring and supervision, and (5) data quality: impact on patients' care. These themes are discussed below using excerpts from participants' narratives.

Data capturing: an extra-task

This theme relates to participants' views of data capturing. They stressed that data capturing is an additional task of lesser importance relative to care provision. Most of the participants claimed that their main function is patient care. They stressed that the role of care provision is related to timely and accurate administration of antiretroviral medication.

“Our main role in this department is to make sure that all patients living with HIV are provided with treatments on time. Patients are our priority in this department. We do not have time to waste on other things.”

All participants emphasized that the pharmacy department can be a stressful work environment. They claimed that this is usually the case on Mondays and Fridays. Participants described these days of the week as peak periods for the administration of antiretroviral medications.

“Mondays and Fridays are our busiest days. Most of our patients visit the department on these days to collect their ARTs. So, the responsibility to update patients' data should be re-allocated to healthcare auxiliaries.”

Most participants reported that the pharmacist staff have made several requests for their responsibility of data capturing to be re-allocated to healthcare auxiliaries. They attributed such requests to the limited number of pharmacy staff that were available to address patients' needs. They stressed that adopting such a task shifting approach would help reduce the experiences of stress encountered by pharmacy staff. However, a few participants reported that these requests were also a function of limited confidence on the part of the pharmacy staff to use the data capturing system. Added to this, they attributed the pharmacy staff's limited confidence to inadequate experience and knowledge of how to use the IPMS.

"Some of us are not trained on how to use the IPMS. However, some have been trained but they have not been updated on how to use this system. This is the problem, and it affects the quality of data we capture."

Knowledge and experience of IPMS

The data were clear that the use of manual patients' records is at least partly the result of limited experience and knowledge of IPMS. Most participants therefore welcome training in this area of pharmacy practice, as the use of manual records may result in poor data quality and inadequate care provision.

"I must admit that I am not knowledgeable about the use of the IPMS. So, I try to record all treatment activities of patients on paper. But I must also admit that I sometimes lose the papers, and this may have a negative impact on the quality of patients' care."

Some participants were clear of the inability of a few pharmacy staff of using the IPMS to access and retrieve patients' information. Such difficulties, participants stressed, were a function of limited or lack of knowledge of this data support system. It is therefore not surprising, some participants claimed, for pharmacy staff to sometimes resort to using manual approaches to data management. However, some participants reported that this approach to data management has negative implications, such as data loss that in turn negatively impact on the quality of patients' reports and subsequent care provision.

"Some staff of this pharmacy department do not know how to prepare accurate and good reports of patients' treatments using the IPMS. On the other hand, some participants claimed that the amount of reporting required distracts them from doing what matters; provision of patient care."

Even though the pharmacy staff were aware of the value of timely and accurate reporting of patients' data, a few of them considered the frequency of reporting (bimonthly requirement) extremely tasking because of the lack or limited

technical knowledge of how to use the IPMS. Some participants, therefore, highlighted an urgent need to offer pharmacy staff training on the use of IPMS.

Training and education

Training and education were discussed on a number of occasions during interviews as factors that influence data quality. Most participants reported that they have attended formal training on the application of the IPMS. However, they added that they have not attended any update workshop on the use of this information support system since their training.

“Most pharmacists have been trained how to use the IPMS. But because of the heavy workload we sometimes do not use it. So, we gradually forget how to use it. We therefore need to be updated periodically.”

Although the need for regular update sessions on the application of the IPMS was frequently emphasised during interviews by some participants, they reported that a minority of pharmacy staff had not received any training on the same. The same participants noted that the untrained pharmacy staff often report difficulties with using the IPMS to capture patients' data. Participants therefore suggested for guidelines to be developed to enhance consistency in the use of the IPMS, quality of patients' data, and subsequent care provision.

“It is good to have guidelines on how to use the IPMS. They serve as reference points when you forget how to use it. Guidelines are particularly useful for new staff. Guidelines offer consistency in data capturing and reporting, and promote the provision of quality care.”

Some participants talked about the link between data quality and knowledge of computers. They reported that a minority of pharmacy staff lacked information technology skills, and hence, they need to be trained on how to use the basic functions of a computer. The rationale for this is to improve data quality: capturing and retrieving.

“Not knowing what to do and lack of skills and knowledge of how to use a computer are the stumbling blocks. These are the problems in this unit. They prevent us from doing what we are meant to be doing: recording data, and reporting. But these problems can be addressed with the help of adequate support systems.”

Mentoring and supervision

Most participants were of the opinion that working in a pharmacy department can be stressful. They stressed that this is particularly the case when it involves

the administration of medication to a large group of patients living with HIV. Participants therefore call for regular provision of support to pharmacy staff to alleviate work-related stress.

“Supervision and mentoring are essential: they help us to grow in the way we work with patients, capture data, cope and defend against anxieties experienced in practice.”

A minority of participants stipulated that these support systems are not to be perceived as luxuries, but they should be perceived as integral components of the strategy for effective professional working.

“New employees of this department need to be coached into good ways of working. These support systems help us to achieve this aim. So, senior pharmacy staff should be trained on how to mentor and supervise junior colleagues.”

Some participants were critically aware that supervision and mentorship enable pharmacy staff to capture quality data, and deliver quality care to patients. However, few participants noted that pharmacy staff were not always supported in the context of quality data capturing, and this might have a negative impact on their work with patients.

Data quality: Impact on patients’ care

There was consistency among most participants of a relationship between data quality and patients’ care. They seemed to agree that the availability of quality data would enable pharmacy staff to offer quality and timely care to patients, including those on ARTs.

“I sometimes get frustrated when some of my colleagues fail to make effort to capture and report data on time. Such failures might negatively impact on clinical decisions and care, like timely prescriptions and administration of medication.”

Some participants reported that feelings of frustrations are common emotional reactions among pharmacy staff. They attributed these emotional reactions to the occasional absence of data to inform clinical decisions and care provision.

“I am angry today because I am unable to administer the correct dose of medication to some patients. The histories of the patients are not complete: very limited information on medication prescribed and administered in the past.”

Participants are critically aware that lack of or limited information about patients may delay quality care provision. They therefore suggested for pharmacy staff to

be encouraged to always capture quality data. Doing so, they stressed, would promote timely clinical decision-making and patient care. Some participants were of the opinion that data capturing, and making data available on time are behavioural problems that could be improved.

“It must be remembered that providing quality care to patients cannot be achieved in the absence of quality data. It is therefore important to have regular meetings to discuss lapses in data capturing, and to learn from the experience.”

Participants frequently talked about the benefits of pharmacy staff meetings. They noted that convening meetings to reflect on best practice and areas for improvement would enhance pharmacy staff's skills and commitment to quality data capturing and retrieving. They added that such meetings would involve discussions of barriers to quality data capturing, and how to address the same.

“Our staff meetings have helped us a lot to improve the way we capture and retrieve patients' data. We need to meet on a regular basis and to be guided by clear agendas: this must include aspects that may deter quality data capturing.”

Participants were critically aware that there were barriers to quality data capturing using the IPMS. Power failure is one of the barriers that was repeatedly mentioned by participants. Participants reported that the IPMS was centrally controlled by the Botswana Ministry of Health's main database. They reported that the Botswana national grid, which frequently failed to provide power to the study site, powered this database. The absence of power, participants stressed, made it difficult to capture complete data. Another threat was the absence of a backup power system, and some pharmacy staff's limited commitment to data capturing.

“Irrespective of the knowledge of IPMS some of my colleagues are not keen to capture data. This in itself has a negative impact on the quality of data, which in turn may affect the quality of care given to patients.”

Discussion

There was some degree of consistency among most participants that data capturing is an additional task to an already busy schedule of pharmacy staff. They described it as an activity that distracts pharmacy staff from fulfilling their primary function of care provision. Generally, pharmacy departments were perceived by participants as stressful work environments. Given that people are more likely to experience feelings of stress and subsequent burnout if exposed to busy work environments over a prolonged period of time, pharmacy staff would prefer to focus on their primary function rather than on data capturing (Hedt-Gauthier et al., 2012). It is therefore not surprising to note that they often made

requests for the task of data capturing to be re-allocated to healthcare auxiliaries. Whilst meeting such a request might contribute to stress reduction, the data were clear that the main source of stress reported in this study was lack of knowledge and confidence on the part of pharmacy staff on how to use the IPMS. Thus, some pharmacy staff with these deficits often resorted to using a pen and a paper to capture patients' treatment data. Such an approach to data capturing has implications of losing or misplacing patients' data, and subsequent provision of inadequate or sub-standard care.

Participants considered supervision and mentoring an effective support system that might enable pharmacy staff to cope with the stressful nature of their work environments, and to deliver quality care to patients (McKimm, 2003). Given that the provision of quality care was one of the primary focusses of the pharmacy staff (Cullum et al., 2008), participants therefore suggested for supervision and mentoring to be integrated in the support strategy of this professional group. They however warned that supervision and mentoring are not universal remedies for poor data quality and sub-standard care. They therefore added that these approaches were to be supplemented by training and education.

Pharmacy staff were critically aware of the need to provide quality care to patients. Participants noted that training and education on the IPMS would improve the pharmacy staff's confidence and knowledge of this support system. Yet some pharmacy staff were not trained on how to use the IPMS. And most of those who were trained had not been updated for a number of years on the application of this support system. Taking this into account, it was not surprising that the pharmacy staff often requested for guidelines and information on IPMS to enhance consistency in its use, including the timeliness and accuracy of data capturing (Hedt-Gauthier et al., 2012). The pharmacy staff's lack of or limited basic computer skills was considered a barrier to the timeliness and accuracy of data capturing. Whilst this indicates the need for training in this area, participants also reported other barriers, like power failure and commitment to data capturing. Power failures sometimes led to the use of a pen and a paper to capture patients' data.

Rigour of the study

Framework of trustworthiness posited by Guba and Lincoln (1994) was adopted in this study, as it fits in well with the qualitative world of multiple realities and ways of knowing. This framework includes five criteria: credibility, dependability, confirmability, transferability and authenticity.

The production of stable data is what Guba and Lincoln (1994) refer to as dependability. Confirmability relates to the degree of agreement between two or more researchers about the accuracy, meaning and relevance of data. It is also

about ensuring that the findings of a study represent participants' information or narratives. Credibility refers to approaches researchers will employ to ensure confidence in a study, and believability of its findings. These criteria were assured using a number of approaches. All interviews were audio recorded and transcribed verbatim. All interviews were guided by an interview schedule, and notes were also taken during interviews to capture the non-verbal reactions of participants, and other relevant observations. Individual and group interviews were followed immediately by a debriefing session to alleviate anxieties participants might have experienced, and if indicated, to refer for psychological support. Member checking was carried out. This means transcripts were sent to participants to determine their accuracy, and in all cases participants were satisfied. The second researcher carried out the validity checks on the master list of themes. This was to ensure that the themes were relevant and evidenced in the data.

With regard to authenticity, this criterion relates to the extent to which researchers fairly show a range of realities. It thus requires researchers to provide detail descriptions of a range of participants' lived experiences and feelings tone of participants' lives in relation to a phenomenon studied. Transferability refers to the degree to which the results of a study can have utility or applicability in other settings similar to the study area. These criteria were assured here by writing this manuscript or report with detailed descriptions of the methods and context of the study, participants' varied lived experiences of the use IPMS.

Limitations of the study

Whilst the study has generated insight into the use of IPMS and patients' data quality, it has some limitations. The study was carried out in a single pharmacy department of a hospital. Pharmacy staff of the study site may be different from pharmacy staff of other hospitals in the context of their experiences of the use of IPMS. Additionally, the findings of the study are based on retrospective accounts of pharmacy staff of their experiences of IPMS. Such accounts are subject to memory bias. The findings are not generalisable, but they are transferable to other pharmacy departments where IPMS are used as data capturing tools.

Recommendations

Based on the study findings, the researchers recommend that the pharmacy staff should be trained on basic computer skills and how to use the IPMS. It is also critical for update workshops on the use of IPMS to be organized for all pharmacy staff. Further research is needed to explore factors influencing the quality of treatment data of patients on antiretroviral therapy.

Conclusion

A range of findings emerged from the data analysis. The pharmacy staff have limited or lack of knowledge of IPMS. This deficit in knowledge contributed to the pharmacy staff's lack of or limited confidence in the utilisation of IPMS, and occasional use of a pen and a paper to capture patients' data. The manual approach (pen and paper) to data capturing carries the risk of misplacing data, which in turn may lead to the provision of sub-standard care. The data were clear about the pharmacy staff's quest to capture quality data and offer quality care. But this pursuit was not always realised because of barriers, such as power cuts and deficits in knowledge of the use of IPMS. Hence, the need for training and education on this information support system.

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References

- Babbie, E. (2010). *The Practice of Social Research* (12th ed.). Boston: Wadsworth Cengage Learning.
- CDC Botswana (2012). *HIV/AIDS in Botswana*. (Online) March, 18 (2014) at <http://www.avert.org/hiv-aids-botswana.htm>. (Retrieved March 18, 2014).
- Creswell, J.W. (2009). *Research Design. Qualitative, Quantitative and Mixed Methods Approaches* (3rd ed.). London: Sage Publications.
- Cullum, N., Ciliska, D., Haynes, R.B. & Marks, S. (2008). *Evidence-based Nursing: An Introduction*. Oxford: Blackwell Publishing Ltd.
- Foster, C.J., Biggs, R.L., Melvin, D., Walters, M.D., Tudor-Williams, G. & Lyall, E.G. (2009). Neurodevelopmental outcomes in children with HIV infection under 3 years of age. *Developmental Medicine and Child Neurology*, 48, 677-682.
- Guba, E. G. & Lincoln, Y.S. (1994). Competing paradigm in Qualitative Research. In Denzil, K.D. and Y.S. Lincoln. *Handbook of Qualitative research*, Thousand Oaks, CA: Sage Publications.
- Hedt-Gauthier, B.L., Tenthani, L., Mitchell, S., Chimbwandira, F.M., Makombe, S., Chirwa, Z., Schouten, E.J. Pagano, M. & Jahn, A. (2012). Improving data quality and supervision of antiretroviral therapy sites in Malawi: an application of Lot Quality Assurance Sampling. *BMC Health Services Research*, 12,196. doi: 10.1186/1472-6963-12-196.
- Herrmann, S., McKinnon, E., John, M., Hyland, N., Martinez, O.P. & Cain, A (2008). Evidence-based, multifactorial approach to addressing non-adherence to antiretroviral therapy and improving standards of care. *Internal Medicine Journal*, 38 (1), 8-15.

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- McKimm, J. (2003). Educational supervision, personal support and mentoring. Centre for Educational Development.
- Polit, D.F. & Beck CT. (2012). *Nursing Research: Generating and Assessing Evidence for Nursing Practice* (9th ed.). Philadelphia: Lippincott.
- Sandy, P. T. (2013). Motives for self-harm: Views of nurses in a secure unit. *Journal of International Nursing Review*, 60(3), 358-365.
- Smith, G. (2009). *Factors Associated with Early Onset of Sexual Activity in Aboriginal Adolescents*. Subiaco, Western Australia: Telethon Institute of Child Health Research.
- Smith, J.A. (2005). Semi-structured interviewing and qualitative analysis. In Smith JA, Harre R & van Langenhove L. (Eds.), *Rethinking Methods in Psychology*. London: Sage.
- Smith, J.A., Flowers, P. & Larkin, M. (2009). *Interpretive Phenomenological Analysis: Theory, Method and Research*. London: Sage.
- United Nations General Assembly Special Session on HIV/AIDS report (2010). *2014 Progress Report submitted by country*. (Online). November 20 (2014), At <http://www.unaids.org/en/ataanalysis/knowyourresponse/countryprogressreports/2014countries>.
- World Health Organisation (2007). *Helping Parents In Developing Countries Improve Adolescents' Health*. Geneva: WHO Press.