ORIGINAL RESEARCH ARTICLE

Human Resource Challenges to Integrating HIV Pre-Exposure Prophylaxis (PrEP) into the Public Health System in Kenya: A Qualitative Study

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Abstract

Extensive planning will be necessary to integrate HIV pre-exposure prophylaxis (PrEP) into public health systems. In Bondo and Kisumu, Kenya, we conducted interviews with 16 district and provincial public health stakeholders and held consultations with 18 provincial and 23 national public health stakeholders on topics related to PrEP rollout. We coded interview transcripts and created memos summarizing responses. We documented consultation discussions through note taking. Human resource challenges identified included increased workload and insufficient personnel, the need for task shifting/sharing, training needs, infrastructural requirements, discrimination and stigma by staff towards at-risk clients, and providers' personal priorities about offering PrEP. These challenges paralleled current challenges related to integration of antiretroviral therapy (ART) and could be partially addressed prior to PrEP rollout. The recommendations for training staff are likewise grounded in lessons from ART and have practical application for program planners developing training curricula for PrEP delivery. *(Afr J Reprod Health 2015; 19[1]: 54-62).*

Keywords: Human resources; pre-exposure prophylaxis; PrEP integration

Résumé

Il faudra une planification exhaustive pour intégrer la prophylaxie de la pré-exposition du VIH (PPrE) dans les systèmes de santé publique. A Bondo et à Kisumu, au Kenya, nous avons mené des entrevues auprès de 16 districts et des intervenants provinciaux de santé publique et nous avons tenu des consultations avec les 18 provinces et 23 parties prenantes nationales de santé publique sur des sujets liés au déploiement de la PPrE. Nous avons codé les transcriptions des entrevues et avons créé des mémos qui font un résumé des réponses. Nous avons documenté des discussions de consultation par le biais de la prise de notes. Les problèmes de ressources humaines qui ont été identifiés comprennent la charge de travail accrue et un manque de personnel, la nécessité pour le transfert de tâches / partage, les besoins de la formation, les besoins en infrastructures, la discrimination et la stigmatisation par le personnel envers les clients à risque, et les priorités personnelles des prestataires offrant environ PPrE. Ces défis étaient en parallèle avec les défis actuels liés à l'intégration de la thérapie antirétrovirale (ART) et pourraient être partiellement traitées avant le déploiement de la PrEP. Les recommandations pour la formation du personnel sont également fondées sur les enseignements de la TAR et ont une application pratique pour les planificateurs de programmes qui élaborent des programmes de formation pour la livraison de la PPrE. *(Afr J Reprod Health 2015; 19[1]: 54-62).*

Mots-clés: Ressources humaines; prophylaxie de la pré-exposition; intégration de la PPrE

Introduction

Preparing for the rollout of new methods for preventing negative health outcomes requires strategic planning. The antiretroviral (ARV) drug Truvada© (tenofovir disoproxil fumarate/ emtricitabine [TDF/FTC]) has been shown effective as pre-exposure prophylaxis (PrEP) against HIV among adherent users in a range of populations and geographical contexts[1-3]. If public health officials in developing countries decide to seek approval for the new use of TDF/FTC as PrEP (vs. treatment, for which it is already used), and if it is approved, extensive planning will be

necessary to integrate this new method and its associated services into each country's public health system.

Oral PrEP services will likely include regular HIV testing and counseling, periodic laboratory tests to monitor liver and kidney function, adherence counseling, behavioral risk-reduction counseling, drug dispensation[4], and client reminders and follow-up. A likely option will be to integrate these oral PrEP services into existing service delivery, such as HIV treatment and family planning. This will naturally have effects on the staff providing current services.

Human resource issues have long been at the forefront of discussions about health systems, including staff shortages, the "brain drain" of trained personnel to developed countries, the difficulty of recruiting staff to rural areas, and task shifting or sharing as a responsive strategy to these problems[5-12]. Adding new HIV prevention methods like oral PrEP into the mix of services already not fully covered by current staff poses challenges not unlike those already being encountered.

The FEM-PrEP clinical trial tested TDF/FTC as pre-exposure prophylaxis among HIV-negative women at risk of HIV infection in four sites in sub-Saharan Africa. As part of an ancillary study of FEM-PrEP at the Bondo, Kenya site, we interviewed public health stakeholders at the district and provincial levels and held consultations with provincial- and national-level public health stakeholders on topics related to planning for the rollout of PrEP in Kenya. Here, we present results related to the human resource challenges of integrating oral PrEP into the public health system.

Methods

This research was conducted by FHI 360 and Impact Research and Development Organization following ethical approval by FHI 360's Protection of Human Subjects Committee and Kenyatta National Hospital/University of Nairobi Ethics and Research Committee. All interview respondents gave their signed informed consent to participate. The consultation discussants were not consented, as the consultations were not considered human subjects research by the ethics committees.

We conducted 16 semi-structured interviews on topics related to the rollout of oral PrEP. The respondents consisted of 11 male and 5 female public health stakeholders ranging from 28 to 62 years of age and hailing from the Ministry of Health, research organizations, and non-governmental organizations (NGOs) at the district and provincial levels interviewed on topics related to the rollout of oral PrEP. Their occupations included medical superintendents, HIV and STI coordinators, medical officers, program coordinators, and nursing officer in-charges. Interviews were recorded and transcribed. Using the qualitative data analysis software QSR Nvivo 9, one data analyst coded the transcripts structurally and created memos with data summary tables reflecting responses. A second analyst verified and synthesized the interview data.

We conducted one day-long consultation in Kisumu with public health stakeholders at the provincial level, consisting of 18 participants from the Ministry of Health, NGOs, research organizations, and local clinical trial staff. Sociodemographic data were not collected. The consultation consisted of information presentations and discussion on the FEM-PrEP trial and ancillary study, followed by a round-table discussion on topics related to PrEP integration.

We held a one-day consultation in Nairobi with 23 public health stakeholders at the national level with participants from the National AIDS and STI Control Program of the Ministry of Health, other Ministry of Health officials, National AIDS Control Council, universities, research institutes, NGOs, a United Nations agency, and clinical trial site staff. Both sets of public health stakeholders invited to participate in the consultations were selected for either their leadership and decision-making roles within their organizations at the national and provincial levels and/or their expertise on PrEP. Again, sociodemographic data were not collected from the consultation participants. The format consisted of information sessions and discussion on the FEM-PrEP trial and ancillary study, followed by breakout sessions in which each group discussed distinct aspects of PrEP implementation.

Both consultations used questions the research team had developed to guide the discussions. During the consultations, members of the research team took notes and then prepared summary reports for later distribution to consultation participants. For the results presented here, we synthesized the consultation information related to staffing issues with the interview data results.

Results

Increased workload and insufficient personnel

Stakeholders at the provincial consultation cited the added workload for staff as an operational challenge to incorporating PrEP service delivery into existing services, such as Maternal and Child Health clinics, (CCCs) for HIV-positive clients, family planning centers, and HIV testing and counseling points. They noted that HIV care and treatment personnel (at the CCCs) are some of the most overburdened staff in the healthcare delivery system.

While discussing workload as a challenge, national consultation participants also stated that staff in government facilities typically expect extra pay when new innovations are introduced into service delivery; they therefore anticipate that staff will resist the increase in workload stemming from the introduction of PrEP and will expect more pay. This was framed as an issue undermining staff buy-in. Indeed, one local public health stakeholder we interviewed suggested providing monetary incentives to providers to motivate them to incorporate PrEP into the services they offer.

Regarding workload, stakeholders in the consultations and interviews pointed out that there will likely be an inadequate number of personnel, particularly providers, to handle the increase in clients and services offered. National stakeholders discussed the potential for confusion among providers due to adding a new service to the services they are already expected to provide; however, bringing in additional providers, they said, could help to alleviate this problem. Similarly, a public health stakeholder interviewed recommended having a professional trained in PrEP implementation in every service outlet, and several others stated that sufficient additional staff would be necessary for capacity building to integrate PrEP into existing services, in addition to training staff.

In addition to discussing the need for more providers, provincial consultation participants noted that more qualified pharmacists would be needed to help with stock forecasting and to be accountable for drug supplies to prevent stock outs. More laboratory personnel would be needed to handle increased laboratory testing to monitor liver and kidney function and the possibility of participants developing drug-resistant viral strains.

The need for task shifting/sharing

Stakeholders in both consultations discussed task shifting as playing an important role in PrEP service delivery. In provincial stakeholders' discussions of lessons from HIV testing and counseling, task shifting was described as an effective response to a need to change policies to accommodate limited resources; namely, initially HIV rapid testing was performed only by laboratory personnel, but the task was later shifted to lay counselors. With proper quality control and training in place, stakeholders felt that non-laboratory staff could provide the ongoing HIV testing and counseling services for PrEP as well.

National stakeholders discussed task shifting/sharing as necessary due to all cadres of staff not being present in all types of facilities. For example, in comprehensive care centers (CCCs), where there are only nurses, nurses will be required to prescribe (normally done by clinical officers in the most middle and lower-level health facilities and by doctors in higher-level facilities), dispense (normally done by pharmacists), and keep records (normally done by data officers).

When we asked national stakeholders whom should be authorized to dispense PrEP, they discussed that existing policies regulating who is authorized to dispense ARVs—and PrEP—will need to be revised based on realities on the ground and resources available in facilities. For example, current law allows pharmacists and pharmacy technologists to dispense ARVs, but as mentioned above, in CCCs nurses and clinical officers may need to be able to dispense these drugs, too. Peer educators, they recommended, should also be

considered. National consultation discussants observed that it would be easier for some consumers to get PrEP from a peer educator than from medical staff, because peer educators (e.g., of sex workers) understand peers' activities and how to reach them. They suggested that PrEP first be prescribed by a clinician and then dispensed by an authorized person who can best reach out to key groups such as sex workers. Processes for community-based ARV distribution should also be reviewed for strategies applicable to PrEP distribution.

Training needs for existing and new staff

Training was a frequent topic of discussion among public health stakeholders in our study. For example, we asked the public health stakeholders we interviewed what would be needed to create the necessary capacity to offer daily PrEP in the public health system. The majority of respondents stated that capacity building and training for staff, particularly health care providers and "community resource persons," would be essential. Specific areas they recommended to include in the training would be how TDF/FTC works to prevent HIV infection, what is involved in the service provision of PrEP, use of any new equipment, and data collection and reporting. Consultation participants also recommended training to address staff discrimination of high-risk clients.

Participants in the provincial consultation also focused on staff training and made the following recommendations based on lessons learned from training activities related to ART rollout:

1. **Be strategic about whom to train.** Due to limited resources, only staff who are actually going to implement PrEP should be trained initially. Supervisors should be sensitized so that they can select people who will actually be helpful in supporting the program. Eventually, after start-up of PrEP service provision, all staff should be trained to allow for easy timetabling and movement of staff between departments.
2. **Establish follow-up and mentorship mechanisms.** Schedule immediate follow up after training on PrEP to ascertain whether staff are actually following the guidelines. In addition, mentorship programs after training should be required to give the program a push and to monitor what is happening on the ground.
3. **Conduct continuous education and training** to maintain staff's knowledge and skills and to ensure sustainability.
4. **Create a pool of trainers at the district and facility levels** to enable training on a continual basis, in small doses that will align with the schedule at the facility and avoid interrupting services.
5. **Conduct facility-based trainings** rather than one-time, class-based trainings in hotels. This will enable staff to be observed and mentored.

Public health stakeholders in the national consultation also made recommendations related to whom to train, as well as who should conduct the trainings and how to create staff buy-in. They said that training needs to start with senior personnel at the national level, followed by the provincial, district, and facility levels. This cadre of personnel will then train the other service provision staff and monitor their performance. Participants noted that training heads of facilities will create necessary buy-in for PrEP service delivery, which will in turn facilitate allocating duties to staff. Also, training of facility staff should be conducted locally by the head of the facility and the supervisors rather than by foreign trainers or trainers from outside the local area. This localized training will help create staff buy-in, which may help address potential staff expectations of an increase in pay to offer PrEP services. Community-level training will also be needed and should include community health workers and home-based care coordinators, as "these are the people who are in real touch with the community."

Due to their concern that staff will perceive PrEP as an added work responsibility for which additional remuneration is owed, they also recommended that pre-implementation and refresher trainings stress that PrEP service delivery is not additional work but is rather another HIV prevention option for clients. To address sustainability, they also recommended that pre-service training on PrEP for medical students be added to the curriculum so that graduating service

providers will have been trained on PrEP. In addition, they said that PrEP service delivery should be added to performance contracts (terms of reference) at the national level, followed by the provincial and district levels, so that providers will take PrEP provision more seriously.

Infrastructural Requirements

Infrastructural requirements for staff to be able to do their jobs properly were also discussed by participants in the consultations and interviews. Four interview respondents said that improvement of the physical infrastructure would be necessary to build capacity for PrEP service delivery. This included expanding facilities to increase space, furnishing facilities, and providing laboratory equipment. Proper storage should also be provided to store oral PrEP drugs at health care facilities.

Similarly, provincial consultation participants also recommended addressing the lack of storage space for drug supplies, such as in CCCs. They also noted that given the need to do resistance testing and establish the liver and kidney function of clients, well-equipped laboratories would be needed.

For their part, national consultation participants focused on the lack of space in some health facilities as problematic for handling the volume of clients who would be coming for PrEP services. This could be addressed by expanding existing facilities, using available space to provide multiple complementary services, and by decentralizing PrEP clinics so that clients could access services from clinics near their residences. The lack of work equipment for outreach workers was also discussed, with the provision of sophisticated mobile vans with designated lab and examination rooms recommended.

Discrimination and Stigma

Both sets of consultation participants brought up the likelihood of staff members' discrimination and stigma towards PrEP clients. Provincial stakeholders discussed the potential for reception personnel to label PrEP clients as promiscuous and stressed the need for friendly, trained staff to direct clients to "the PrEP service bay." Since a PrEP intervention will require routine HIV testing, they also said, there will be a need to provide "friendly" HIV testing services.

National stakeholders described providers' current negative attitudes towards high-risk clients (e.g., men who have sex with men [MSM] and commercial sex workers) as a gap in professionalism that should be addressed through targeted training for providers. For example, they said that some providers are not willing to conduct rectal exams on MSM to screen for STIs due to their negative attitudes towards MSM. They noted that providers' negative attitudes can therefore lead to certain services, potentially including PrEP in the future, not being provided to high-risk, stigmatized groups.

Priorities of Providers

Participants in the national consultation noted the problem of differences in providers' priorities regarding how to manage clients' health. For example, when a client comes to the hospital, a particular clinician may not think that PrEP is a priority for the client and may therefore not recommend it.

Discussion

In our interviews and consultations with public health stakeholders, participants discussed staffing issues they anticipated related to future rollout of oral PrEP in Kenya. Their recommendations, while specific to oral PrEP, are also applicable to other new ARV-based HIV prevention methods on the horizon, such as tenofovir 1% gel (shown effective in the CAPRISA 004 trial[13]), a vaginal ring, or an injectable. The concerns they discussed also speak to human resource issues relevant throughout sub-Saharan Africa.

Notably, most of the findings mirror the staffing challenges that have been encountered in the context of ART rollout in sub-Saharan Africa, particularly with the integration of ART into other service delivery areas such as family planning and antenatal care. For example, the increased workload and consequent or pre-existing staff shortages have long been raised in ART integration as on the one hand leading to staff stress and burnout, difficulty adhering to time-consuming guidelines, and brief or poor quality

counseling, and to high patient volume and longer wait times on the client side[14-19]. To address the problem of untenable workloads and staff shortages with regard to ART service delivery, researchers have calculated staffing needs required to meet client needs for HIV treatment provision[20-22], as well as measured HIV treatment staffing shortfalls in sub-Saharan Africa[23]. Similar calculations will be needed to forecast increased human resource needs for integrated PrEP service delivery, including planning for lay health workers to whom certain tasks might be assigned or shifted. It has been recommended that a combination of task shifting and an increased number of providers will be required for provision of integrated combination HIV prevention[24,25].

Other staffing problems public health stakeholders in our study recommended be addressed for PrEP are also carryovers from ART service delivery and/or health systems problems in general, such as infrastructural needs to improve working conditions for staff[11,15,17]. The issue of the chronically low pay of healthcare staff is also not new and has been attributed as an impetus, along with poor working conditions, for the exodus of healthcare workers from sub-Saharan African countries[26]. In addition, although most health care providers perceive new programs as added workload and expect to be compensated to provide them, in most instances the new programs can be added by simply reorganizing and making more efficient client flow rather than having to add more staff or incentivize regular staff. PrEP, for example, could be offered on designated days when patient flow is lower; this would be a decision made at the facility level.

Another long-standing problem in HIV-related service delivery is stigma and discrimination among staff ranging from reception staff to providers towards members of key populations or towards people who are already infected[19,27-31]. Providers' considerations of who may be appropriate for PrEP relies on the providers and clients first being able to discuss the client's potential or actual engagement in unsafe sex, a discussion which may not be easily had; in "cases without an index infection to discuss, only a frank discussion between a nonjudgmental healthcare provider and a forthcoming patient in the course of routine healthcare maintenance will reveal that the patient is having unsafe sex"[32]. Finding ways to address discrimination among staff is critical.

Workload, personnel shortages, task shifting, poor working conditions and infrastructure, and discriminatory attitudes and practices are issues that need to be addressed now for ART service delivery, irrespective of PrEP implementation. Finding ways to address them prior to introducing PrEP will pave the way for a smoother transition into an expanded portfolio of HIV prevention offerings including oral PrEP, but also other forthcoming ARV-based HIV-prevention interventions. Possible "solutions" include more extensive task shifting/sharing, and decentralized service delivery models using non-clinical workers[33,34].

Planning for training related to PrEP implementation can also begin now. A recent multinational study found that policymakers, healthcare workers, and NGOs were concerned about the challenges of providing adequate training to providers, with researchers recommending that comprehensive training packages be developed and tested before PrEP is implemented[35]. Based largely on lessons learned from ART rollout, the recommendations from public health stakeholders in our study with regard to staff training focused on strategic planning of a phased approach to training different cadres of staff in a particular order, and the need for ongoing training and monitoring of staff on the ground. Of particular note was stakeholders' focus on ways to cultivate staff buy-in (e.g., by training heads of facilities first, as well as localized training in facilities conducted by heads of facilities and supervisors rather than foreign instructors), which will be pivotal to effective service provision that addresses clients' needs. Similarly, the role of provider and other stakeholders' reactions to and support for new methods was found relevant for the introduction of new contraceptive methods[36].

Training recommendations should prove helpful for people charged with developing training curricula related to PrEP introduction. As noted, training topics should include stigma and discrimination among staff and the mechanics of PrEP service delivery. Another key focus should be building providers' capacity to help clients

decide whether PrEP is an appropriate strategy for them, one that they will be able to adhere to and that fits their current life circumstances[37]. Other training topics must address providers' concerns about the safety and efficacy of PrEP, which may influence their willingness to offer PrEP to their patients[38], and their concerns about monitoring side effects and adherence[39].

One suggestion respondents made was to integrate PrEP into pre-service training. We would note that to date, the Government of Kenya has not integrated training of other HIV service components into pre-service training for basic (diploma level) nursing officers or clinical officers; an option would therefore be to integrate the general HIV-related issues, including PrEP, into pre-service training requirements. However, some medical training colleges have already introduced HIV management courses at higher national diploma (post-basic) levels. In addition, many universities and other tertiary colleges offer HIV management courses at both certificate and diploma levels, and many clinical staff attend these courses after basic and even post-basic training in clinical medicine.

Strengths of our research include the timeliness of the study, given clinical trial findings of PrEP's effectiveness, and the inclusion of public health stakeholders at multiple administrative levels. A limitation of our research is that few providers were included, as our aim was to recruit public health stakeholders in leadership positions who have the ability to influence policy. A few studies have focused on attitudes of providers in the United States regarding the prescribing of PrEP[38-41]. However, similar and additional research on providers' decision making processes is needed to inform provider trainings both in the United States[42] and sub-Saharan Africa.

Conclusions

The staffing issues brought up by the interview respondents and consultation discussants in our study echoed concerns already present in ART integration. It would make sense, then, that preparation for PrEP implementation should draw from lessons learned during the scale-up of ART integration, such as those discussed. The utility of thinking about human resource issues prior to rollout of PrEP and of framing these issues in a context of ART service delivery and integration is that steps to address them can be initiated prior to the rollout of new HIV-prevention methods. This will be to the benefit of both integrated ART service delivery and PrEP integration.

Acknowledgements

We would like to thank the research participants; Loice Magaria, Maggy Makau, Erika Martin, Peter Mwarogo, Isaac Oguma, Zablon Omungo, Fred Owino, and Priscyllar Wamiru, who assisted with the consultations; and Amy Corneli, Kate MacQueen, and Cindy Geary at FHI 360 for critiquing our drafts.

FEM-PrEP was conducted under two grants funded by the United States Agency for International Development (USAID): the Contraceptive and Reproductive Health Technologies and Research Utilization Program, and the Preventive Technologies Agreement, which also funded the manuscript preparation. Early support for the study was also provided by the Bill & Melinda Gates Foundation. Gilead Sciences, Inc. donated Truvada© and placebo. The views expressed in this publication do not necessarily reflect those of FHI 360, the funding agencies, or Gilead Sciences, Inc.

Contribution of Authors

Natasha Mack: Designed study and data collection instruments, conducted data analysis and interpretation, drafted manuscript

Christina Wong: Contributed to data collection, provided critical comments and revisions.

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