

Introduction

Male circumcision (MC) has been practiced for centuries. In resource-poor settings, most circumcisions are still done outside the formal health sector as a rite of passage into adulthood or as a religious observance. For over twenty years many ecological studies have shown that there is a strong geographical correlation between MC practices and lower HIV prevalence, and numerous observational studies have also identified lack of circumcision in men as a risk factor for acquisition of HIV, particularly among men at higher risk of acquiring HIV. It has been difficult, however, to unravel to what degree the apparent protective effect of MC is due to confounding, as many factors such as religion and ethnicity are associated with MC and also have a major influence on risk behaviours. Randomized controlled trials were therefore initiated to assess the safety and efficacy of MC in reducing female to male HIV transmission in Kenya, Uganda and South Africa.

The Orange Farm Study in South Africa was the first to confirm the association between MC and reduced HIV risk that had been reported from observational and epidemiological studies over the past decade. The study, funded by the Agence Nationale de Recherches sur le Sida (ANRS), was stopped prematurely in mid-April 2005 on the recommendation of the study's Data Safety Monitoring Board (DSMB) and the MC intervention offered to the control group. Trial data were analysed and results demonstrated a 60% protective effect (95% CI 32-76%) for adult MC (Auvert et al, 2005).

The remaining two randomised controlled trials, funded by the US National Institutes of Health, were carried out in Kisumu, Kenya, among men aged 18-24 years and in Rakai, Uganda, among men aged 15-49 years. The trials, which completed enrolment of patients in 2005, were stopped by the DSMB in December 2006 based on the results of the interim data analysis. The interim results revealed a 53% reduction in HIV incidence in circumcised men in the Kenya trial and a 48% reduction in HIV incidence in circumcised men in the Uganda trial.¹

Now that MC has been confirmed in three randomized trials to provide significant protection against the acquisition of HIV it is undoubtedly necessary to explore ways to quickly scale up the provision of male circumcision services. Particular attention will need to be paid to the high HIV prevalence countries of sub-Saharan Africa where circumcision is not widely practiced. Already, in some settings, demand for MC has risen and MC is being provided in some public and private sites. This opportunity must be used to strengthen male sexual and reproductive health services and the provision of other HIV prevention strategies.

Many questions are likely to be raised, however, about strategic approaches to service delivery including: what are the ranges of possible approaches, which populations and ages should be prioritized, what are the costs involved, and who will deliver the services? Experience from the introduction and scale up of reproductive technologies can provide some useful lessons for MC service delivery scale up.

¹ NIH News Release. *December 13, 2006. Adult Male Circumcision Significantly Reduces Risk of Acquiring HIV. Trials in Kenya and Uganda Stopped Early.* Available at <http://www.nih.gov/news/pr/dec2006/niaid-13.htm>

Lessons learned from introduction and scale-up of reproductive health technologies

Over the past several decades a number of new clinical contraceptives or other reproductive health (RH) technologies – including new methods and novel techniques/equipment for existing methods or procedures – have been introduced on a wide scale in the developing world including, for example, female sterilization using minilaparotomy under local anesthesia, no-scalpel vasectomy, Norplant®, and manual vacuum aspiration for treatment of abortion complications. This paper reviews lessons learned from FP/RH programmes, along with country examples of these experiences – both positive and negative – that highlight these lessons. Adapting and applying these lessons is likely to help smooth MC introduction, ensure that services are safe and good quality, reduce the likelihood of increased risky behaviors in newly circumcised men, and facilitate scale-up and sustainability of MC services.

The many lessons that have been learnt while introducing new FP/RH technologies have direct application to the introduction of MC for HIV prevention. Inadequate attention to introduction may lead to a host of problems, including:

- poor quality services resulting in post-procedure infections or other negative sequelae (due to either a poorly managed introduction or, conversely, if there really is no formal introduction and demand leads to a proliferation of inadequately trained people offering MC services);
- inadequate counseling resulting in uninformed decision making (coercion in the worst case scenario)
- poor communication strategies and inadequate counseling leading to confusion and misunderstandings about the degree of protection conferred by MC, and risk compensation among newly circumcised men;
- low use due to poor reputation of the services or inadequate availability or access;
- cultural- or religious-based opposition from, for example, the community, political or religious leaders, and service providers; and
- services that are not sustainable in terms of coverage and/or quality.

Critical issues to consider for new technology introduction

Listed below are some of the critical issues that need to be addressed as part of the introduction of any new technology, based on lessons learned from introduction of FP and RH technologies over the years. Each is addressed in more detail in the remainder of this paper.

1. Begin with a well defined strategy that plans for scale-up and sustainability from the start
2. Develop local ownership of programmes and strong political support
3. Focus on the fundamentals of care* for facility-based service delivery
4. Understand the limits of training
5. Link training to supervision
6. Increase access through non-physician providers
7. Explore alternative models for service delivery
8. Design holistic programmes that address supply and demand
9. Capitalize on opportunities to work with men
10. Adequately address the many issues needed for going to scale

*Informed and voluntary decision making, assuring medical safety for clinical procedures, and quality assurance

1. It is more than just the method

Figure 1. Issues to address for introduction of a new clinical service



Perhaps the most critical lesson we have learnt about introduction of a new clinical procedure, method or technology, is that it is more than just the innovation itself. Other health systems issues need to be considered and addressed. Fig 1 provides some examples of other issues that need to be addressed during the introduction process. Thinking needs to be in terms of the 'system' into which the new technology will be introduced; the innovation itself is just one piece of the puzzle and focusing primarily on the innovation is unlikely to lead to quality services that address people's health needs (see Box #1). Changes needed as part of the introduction must be incorporated into all ongoing aspects of the system – for example, scope of routine services, protocols and guidelines, training programmes, budgets, new staff orientations, and performance expectations – for them to be sustained after external support ends and internal staff change. It is not enough to transfer new capacities to individuals; innovations must be introduced into the different parts of the system.

Box 1. More than just the innovation

Postabortion care (PAC) includes three elements: treatment of abortion complications, postabortion family planning and linkages to broader RH services. In Colombia, providers were attracted to MVA technology for treatment of abortion complications because it saves resources and is safer for women being treated. Initial introduction activities focused primarily on MVA and other aspects of PAC services such as counseling and family planning (FP) provision, received less attention because they were not new issues and because staff had some experience with FP. While there was good uptake and use of MVA there was not an increase in use of FP among postabortion clients. To promote better integrated and more client oriented PAC, EngenderHealth shifted focus, beginning with what makes up the package of PAC, for example carrying out training in PAC counseling (including family planning) first, before providers were trained to do MVA.

Source: Escandon, et al. 1999.

2. Begin with a well defined strategy that plans for scale-up and sustainability from the start

Given the myriad of issues that need to be addressed in order to successfully introduce a new technology, it is critical to have a well thought-out strategy from the start. This strategy should address all of the various pieces of the puzzle (see Fig 1). Issues related to scale-up and sustainability should be given serious consideration right from the start. As part of the strategy development process, it is important to agree on a goal for the programme. With MC, for example, is the goal to introduce MC as an HIV prevention approach and get as many men who are interested circumcised? Is it to provide safe circumcision services? Is it to use MC as an entrée to working with young men – a population who do not often access health services? Is it to introduce MC within the context of a broader prevention programme? Or, is the goal a combination of these objectives?

The World Health Organization's Strategic Approach to Strengthening Reproductive Health Policies and Programmes has been used in 25 countries to introduce or strengthen a wide variety of reproductive and other health concerns (e.g. comprehensive RH, FP, abortion care, adolescent health, and HIV services). Figure 2 shows the systems framework that guides the Strategic Approach.

Figure 2. Systems framework guiding the strategic approach



The Strategic Approach is a participatory process that promotes in-country ownership and recognizes that decisions related to introduction of new health services require an understanding of the relationships between the three points of the triangle in the systems framework:

1. people, the potential users of the innovation being introduced (What are their needs and perspectives on the innovation? How do we safeguard their rights?, etc.);
2. the policies and institutional capabilities of the service delivery system into which the innovation will be introduced (What is the capacity of the system to absorb the new technology? What changes in policy are needed?, etc.); and
3. the innovation itself, along with the mix of related services and technologies that already exist within the system (How accessible are current services/technologies? What is involved in providing them and the innovation? What is involved in using them?, etc).

The Strategic Approach also takes into account how these interactions are influenced by the broader sociocultural, economic and political context. It is a valuable process that can lead to the development of a realistic introduction strategy and can smooth the introduction of any health care technology or innovation.² Box #2 highlights an example of the successful use of the Strategic Approach in Brazil.

Box 2. Implementing the strategic approach to improve quality of reproductive health services in Brazil

Brazil is the first country where the use of the Strategic Approach has progressed through all three stages of the process. The Stage I strategic assessment, placed priority on improving the provision of currently approved contraceptives before adding new ones. Out of this grew a Stage II demonstration project, conducted from 1995–1997 in São Paulo State. This participatory action-research project designed and tested interventions to enhance the capacity of a resource-poor, decentralized health service system to offer good-quality reproductive health services. Municipal authorities and community women's organizations worked together to plan and manage a variety of activities to expand the range of contraceptive options and introduce services and programmes for men and youth. Considerable improvements in service availability, RH orientation and quality of care were made. The project also demonstrated that expansion of reproductive choice could occur at the municipal level within existing resource constraints.

The challenge for Stage III was to test whether and how the model could be replicated in other municipalities. The Stage III scaling-up project worked in four additional municipalities from 1997–1998. Baseline diagnostic activities and subsequent interventions revealed that deficiencies in RH care and barriers to improvements were fundamentally similar in all municipalities involved and many of the lessons learned in Stage II were directly applicable. Other Stage III interventions included the development of briefing papers summarizing key findings and lessons from the Stage II project, and a series of policy dialogues and workshops with national-level policy-makers and other stakeholders.

A comprehensive evaluation, conducted from 1999-2000, showed that the project led to sustained improvement in the quality of RH services. Although funding had ceased, many project initiatives and changes in service delivery continued. All municipalities involved saw the "project" as an ongoing activity. Service statistics demonstrated increased utilization and numbers of new users, as well as expanded contraceptive choice.

Source: http://www.who.int/reproductive-health/strategic_approach/brazil.en.html

Although it is important to recognize that a one size strategy will not fit all settings, in general there are three phases the strategy should include: a) introduction, b) expansion and c) institutionalization (see Table 1). These phases may, in some cases, overlap and run concurrently.

² See Fajans P, 2006. Country experiences with the strategic approach can be found at: www.who.int/reproductive-health/strategic_approach/

Table 1. Examples of activities during each phase of introduction of an innovation

Introduction (pilot phase)	Expansion	Institutionalization (“going to scale”)
<ul style="list-style-type: none"> • Engage key stakeholders as partners • Meet with key policy makers to build support & obtain commitment • Conduct needs assessments • Develop national introduction strategy • Train small group of well-qualified clinicians • Identify champions to support and advocate for the new technology • Support & work with a few high quality sites to implement demonstration projects • Develop preliminary training and client education materials • Operations research • Monitoring & evaluation 	<ul style="list-style-type: none"> • Review lessons learned & disseminate results from introduction • Get buy-in and cultivate partnerships with larger number of stakeholders • Develop & disseminate national service delivery guidelines • Develop/adapt training standards & materials (e.g. curriculum, job aids) • Train trainers, supervisors & providers • Engage the community • Develop client information & education materials • Support & work with additional sites • Register unique equipment or supplies • Develop performance monitoring guidelines • Introduce quality improvement approaches • Establish linkage and referral mechanisms • Operations research • Monitoring & evaluation 	<ul style="list-style-type: none"> • Incorporate the new services into the national monitoring, training, supervision and management information systems • Ensure any unique equipment/ supplies needed are included in the nation supply chain, including that they are on the MOH list of basic medical equipment • Integrate training into pre-service system (e.g. medical and nursing schools) • Support expansion throughout the health system • Ensure quality of services is maintained • Monitoring & evaluation

Box #3 presents a country example of how a comprehensive strategy can lead to successful introduction, expansion and sustainability of an innovation.

3. Develop local ownership of programmes and strong political support

Developing local ownership of programmes at the national, regional and district levels, and in the community, is essential for successful introduction and sustained services. Equally as essential is developing strong political support among stakeholders within the health system, as well as outside of it as appropriate for the innovation (for MC, this might include community-based organizations working on HIV prevention, activists, traditional circumcisers, etc). Developing this ownership and support should begin at the start. Ideally the strategic planning process should be lead by the government – either the MOH or some group composed of members from various departments or divisions of the government – working in collaboration with others such as local NGOs and private providers. Guidance provided by international NGOs, UN agencies or donors experienced in introduction of new technologies is invaluable and can help prevent many of the common pitfalls that might otherwise be encountered.

Box 3. Starting with the strategy: a successful national programme for expanding vasectomy services in Mexico

In 1989, Mexico's largest provider of FP services, the Instituto Mexicano del Seguro Social (IMSS), working with EngenderHealth, initiated a long-term strategy for the introduction of no-scalpel vasectomy (NSV) including moving provision of services from hospital to primary care settings. The introduction strategy involved a comprehensive approach for training and assisting facilities in the introduction, organization, and management of services including supervision and promotion of vasectomy. The phased introduction included: 1) training a core group of doctors off-site; 2) establishing four pilot sites to demonstrate effectiveness of NSV and gain practical experience; 3) conducting comprehensive whole-site training to develop integrated vasectomy services at the primary care level, including training providers in NSV on-site, developing skills of all facility staff involved in providing vasectomy and related medical services, building support among administrators, and providing technical assistance to supervisors; and 4) expansion of the number of NSV sites.

Well over a decade after the introduction of NSV services, the demand and acceptance of vasectomy in Mexico has increased steadily and remains strong (from 6,000 per year in the late 1980s to over 21,000 per year in the early 2000s). By the time USAID concluded its support to the Mexican FP programme in 1999, the vasectomy programme was well institutionalized. The day-to-day implementation of the programme continues very much according to its original design. The strength of the programme and the fact that the public sector accounts for the vast majority of all vasectomies performed in Mexico speak to the strong political support that the programme received during its introduction. The programme also benefited from the close coordination that existed between the major government departments and public sector service delivery organizations who worked together in an inter-institutional group.

The fact that NSV is offered by general and family physicians in primary healthcare facilities made the service more accessible and helped to strengthen the concept of integrated care. The vasectomy programme served as a crucial introduction point for male services in Mexico. The vision of men's RH services has gradually shifted across all institutions. Strategies to develop and implement a much broader definition of sexual and reproductive health services for men are now being examined.

Sources: Cisek and Juarez. 2003 & Jezowski, et al. 1995.

For lasting impact, it is crucial to identify and cultivate champions for change, and sustained leadership by a committed individual or group within the system or institution who believe in the value of the innovation being introduced. This can help to smooth introduction, get buy-in, address resistance, and increase the chances of lasting impact. Ideally these individuals will also have the capability to commit resources to the introduction process and help ensure long term commitment. Over the years, experience has shown that programmes are unlikely to be sustainable when payments are made to facilities or institutions for each procedure performed, staff costs are covered, or providers are paid because they have to do more work. Once there is no longer an outside source of money, there is also no more programme

4. Focus on the fundamentals of care for facility-based service delivery

This service delivery model, developed by the ACQUIRE Project,³ is a distillation of EngenderHealth's decades of work in introduction and support of clinic-based FP/RH services. The Fundamentals of Care evolved from the vast and varied experiences of RH programmes and are based on years of listening to what communities and clients said they desired and what managers, supervisors, and providers said they needed to provide high-quality services. The three essential elements of the Fundamentals of Care are:

- informed and voluntary decision making;
- assuring medical safety for clinical techniques and procedures; and
- quality assurance.

In essence these fundamentals underlie the success of past FP and RH activities around the world all are critical for MC services. They are routine and basic, yet their finer points often are not well appreciated or understood, and are considered “old hat” by many programme managers. Without this focus on fundamentals, no amount of innovation, evidence, or best practice can be integrated into programmes and sustained. The Fundamentals of Care are built upon a framework of clients' rights and staff needs.⁴ This model ensures client-centered care on the one hand and an enabling atmosphere for service providers on the other, with the end result being good-quality care.

Informed and voluntary decision making refers to the process by which an individual arrives at a decision about health care, based on up-to-date information, knowledge, and understanding of all available options, including details of procedures and their consequences. It assumes that individuals have both the right and the ability to make their own health care decisions. Through effective client-provider

interaction, appropriate counseling, and safeguarding clients' rights, providers can enable voluntary decisions that help clients achieve good health and practice health behaviors.⁵ Barriers to informed and voluntary decision making persist for many clients around the world as a result of social factors, laws, policies, service delivery practices, resource constraints, and service providers' attitudes (see Box #4).

Medical safety for clinical procedures is a critical issue for both clients and providers, encompassing the procedures themselves and the clinical environment in which they are carried out. Clinical techniques and procedures are considered safe when skilled providers are practicing according to updated, evidence-based standards, guidelines and infection prevention protocols, within a physical structure appropriate for managing clinical services and with access to resources to support safe clinical services. Clearly safety of circumcision is an issue in the minds of men – in a review of studies conducted in areas of nine sub-Saharan countries where circumcision is not widely practiced, willingness to be circumcised was high, although concerns about safety were among the most consistent potential barriers to use of MC.⁶ An example of improving medical safety of clinical FP is described in Box #5.

Quality assurance is a continuous process requiring strong management systems that create a positive enabling environment for service providers to carry out their work. Provider performance is key to quality care, and provider support of new services (as opposed to opposition or bias) can make or break introduction of a new technology at the service level (see Box #6). To improve performance, providers need clear job expectations, feedback on performance, motivation, adequate infrastructure, supplies and equipment, up-to-date knowledge and skills, and simple, practical tools to continuously improve quality (see Box #7). Quality assurance is strongly linked to supervision (discussed below). As any new service is expanded outside demonstration project sites – sites that received significant technical, financial and moral support – it becomes a challenge to maintain the same degree of quality that was seen at those original sites.

3 The ACQUIRE Project (Access, Quality, and Use in Reproductive Health) is a five-year global cooperative agreement funded by the USAID. ACQUIRE is managed by EngenderHealth.

4 For details on client's rights and staff needs see EngenderHealth, 2003a.

5 Client-provider interaction includes all encounters, both verbal and nonverbal, that an individual has with a health care worker. Counseling is a specific form of client provider interaction aimed at helping clients confirm or reach informed and voluntary decisions about their health care and to understand the details of their chosen treatment, procedure or family planning method.

6 Westercamp and Bailey. 2006.

Box 4. Informed choice for female sterilization in Latin America

Between 1998 and 2001, EngenderHealth collaborated with MOHs, other government agencies, and NGOs in the Dominican Republic, Guatemala, and Mexico to determine whether women receive adequate counseling and information for making an informed and voluntary choice to end fertility. While the studies provided strong evidence that most women choose sterilization voluntarily, findings also indicated that many decisions were not fully informed. In two of the three countries, many women reported that they received little or no information about their contraceptive options and that they were not told about the risks of surgery nor what to expect during and after the procedure. The studies indicated that providers tended to tell clients what they felt they needed to know, rather than ask clients about their needs and interests and tailor information to an individual's knowledge gaps and circumstances.

Important exceptions to women making their own autonomous decisions included a few cases in which husbands decided for their wives and others in which doctors decided that sterilization was indicated on medical grounds. Postpartum sterilization clients experienced the least-effective informed choice safeguards. Some clients reported that they were not informed about their contraceptive options during their antenatal visits, and that they felt rushed to make a decision about postpartum sterilization while under the physical and emotional strain of labor and delivery. Of particular concern was the finding that the right and ability of women at high risk of future pregnancy-related complications to make an informed choice was sometimes overridden by the physician on medical grounds.

Source: EngenderHealth. 2003b.

Box 5. Improving medical safety of female and male sterilization procedures in Bangladesh

In the late 1970s, female and male sterilization were the primary family planning methods available in Bangladesh. In 1979 and 1980, there was an apparent increase in the number of deaths related to these procedures. Detailed investigation found that anesthesia overdose and infection (primarily tetanus) were the leading causes of death attributed to tubal ligation. Common practice was to administer intramuscular or intravenous medications (most commonly a combination of Demerol, Phenergan and diazepam) in addition to local anesthesia during female sterilizations. Vasectomies, on the other hand, were for the most part preformed under local anesthesia alone – use of systemic sedatives and analgesics was relatively uncommon. There were no vasectomy-related deaths attributed to anesthesia during this period; all were related to post-procedure scrotal infections. It was common practice at that time for surgeons to do vasectomies without wearing gloves. To improve medical safety of female and male sterilization procedures, EngenderHealth worked with local counterparts to introduce minilaparotomy under local anesthesia to reduce the risk of anesthetic complications during tubal ligation, and to improve infection prevention practices in sites providing both tubal ligation and vasectomy.

Sources: Grimes et al. 1982 & Rosenberg et al. 1982.

Box 6. Importance of provider support

After the Yuzpe method of emergency contraception (EC) was approved by the US FDA in 1998, many providers feared that the use or wide availability of these pills would result in 'irresponsible sex.' Providers felt that this behavior could contradict or counteract existing information messages or prevention methods. Studies showed, however, that women who use EC do not abandon contraception; neither do they use EC as their main means of family planning. Organized efforts by the women's health community in the US operating on many fronts helped to address provider's concerns and shift their opposition and biases to support of EC. In 2000, EC prevented over 50,000 pregnancies in the US and the dramatic increase in use of EC may be responsible for a significant part of the decrease in abortions seen throughout the US between 1994 and 2000.

Sources: Jones et al., 2002; Glasier & Baird, 1998; Graham et al., 2002

Box 7. COPE® for continuous quality improvement

COPE® (Client-Oriented, Provider Efficient Services) is a process and set of tools developed by EngenderHealth to help supervisors and staff continuously improve the quality of the services they provide; to make services more responsive to clients' needs; and to make their work environment more efficient, cost-effective and supportive. COPE® provides staff with practical, easy-to-use tools to identify problems and develop solutions using local resources, and it encourages all levels of staff and supervisors to work together as a team and even to involve clients in assessing services. The process emphasizes staff involvement and ownership of services, self-assessment, and teamwork. It recognizes staff members' understanding of local conditions and resources, and provides a forum for discussion among staff. COPE® has been adapted and used to improve the quality of a variety of health services, including FP and other RH care, prevention of mother-to-child transmission of HIV, antiretroviral therapy, child health, maternal health, and cervical cancer prevention.

Source: EngenderHealth. 2003a.

5. Consider the service site as the organizing point for training

It is crucial to understand the limits of clinical skills and other training in the context of introduction of new technologies. While clinical skills training is essential, it is not sufficient for introduction of a technology and resulting quality services. All of the other pieces of the puzzle (see Fig.1 on page 1) are equally as critical to success of the programme.

Experience from FP/RH programmes around the world suggests that considering the service site as the organizing point for training – i.e. using a whole-site training approach – is best during introduction of a new technology. Whole-site training (WST) is an approach to training aimed at meeting the learning needs of an entire site by, assessing the site's training needs, tailoring training to different levels of staff, emphasizing teamwork and sustainability, applying a range of training strategies, and linking supervision and training. WST training allows for the entire site to be 'prepared' for the new service, helping to prevent problems that often arise when only one person (or at best a few people) from a service sites goes off for training and upon return tries to introduce a new service. The likelihood of successful introduction of the innovation is increased with WST because it builds support among administration and other pertinent staff, including shifting negative staff attitudes that may exist; addresses counseling and informed choice issues; identifies infrastructure, supply and equipment needs; and ensures appropriate infection prevention practices are in place, to name a few. The country examples in Box #8 highlight the benefits of WST.

Box 8. Advantages of whole-site training

In Mexico, the Instituto de Seguridad y Servicios Sociales para los Trabajadores del Estado (ISSSTE) developed regional training centers for their NSV programme. While this centralized, off-site training was successful in helping physicians develop a solid NSV technique, it did not provide a comprehensive approach for introducing and institutionalizing vasectomy services at the trainee's own facility. Once this became apparent, ISSSTE modified its training approach to conduct whole-site training leading to more successful introduction of NSV.

In the early 1990s EngenderHealth began activities to improve infection prevention in FP programmes in Nepal. District staff traveled to Kathmandu for training. They were to return to their districts, train others, and implement proper practices at their site. This approach met with little or no success—infection prevention was not measurably improved. Key problems included: workshops were highly sought-after and often the most appropriate staff did not attend; the curriculum provided too much information; training was conducted in an upgraded facility, far more modern and well-equipped than those found in the districts; newly trained staff found their colleagues resistant to change; follow-up was inadequate; basic supplies were often not available; and supervisory visits to district facilities were rare. Once it became clear that institutional change would not occur unless a new approach was used, a whole-site training approach, that included establishing supervisory teams, training on-site, and linking training to supervision, was adopted. A broad range of barriers to quality service delivery (over and above inappropriate infection prevention practices) became apparent. Training and supervision teams worked with the sites to address many of these problems and at the same time, began to develop a system that would provide ongoing support for quality of care.

Sources: Cisek and Juarez. 2003. and Stanley, et al. 2001.

A variety of approaches can be used to meet a site's training needs as part of a WST approach, including different types of trainings and training conducted at different locations. For example, types of training could include orientations to new services or concepts for all staff at a site, and knowledge updates and skills training for those who will be directly involved in provision of the innovation. The locations for training can be on-the-job (i.e. training that occurs as staff conduct their daily activities), on-site (i.e. organized training workshops that occur at the service site where the staff will use the new skills), and regional or central trainings (i.e. training that occurs somewhere other than where the services will be provided; often referred to as off-site training).

One training strategy that has been successful is to use off-site training early in the programme – this initial clinical skills training might even occur in another country – with the goal that this first group of select individuals trained become trainers and advocates/champions for the new technology. Then, in the second phase of introduction, these trainers would do the clinical skills training on-site, as well as train additional trainers. The country example in Box #3 included successful use of this two-tiered type training strategy. For sustainability, it is critical to establish local training capacity, eventually integrating training into ongoing pre- and in-service training programmes within the country (see Box #9).

Another important training issue is how much training is needed. Training to competence is the key. Competency-based training is learning by doing; it focuses on the specific knowledge, attitudes and skills needed to carry out the procedure.⁷ Emphasis is on the trainee's actual performance with the new procedure or skill. Competence is based on the trainer's objective assessment and evaluation of overall performance according to established national and/or international standards. A clinical skills checklist (also called competency-based qualification checklists), which includes critical steps the trainee must perform satisfactorily, can be prepared based on the standards, and used to evaluate trainees. Such clinical skills checklists have been developed for a variety of FP and other RH services for example, NSV, IUDs and Norplant implants, as well as other health care services.⁸ As with other clinical and surgical procedures, there will not be a 'magic' number of circumcisions a provider must

7 Sullivan R, et al. 1997.

8 See No-Scalpel Vasectomy Curriculum, 1997 (currently being revised), EngenderHealth; IUD Course Notebook for Trainers, 2006, JHPIEGO; Norplant Implants Course For Nurse-Midwives. Trainers' Notebook, 2000, Uganda Ministry of Health.

perform during training in order to be competent – it will depend on various factors including each individual trainee's previous surgical experience, manual dexterity and capacity to learn. Certification is best left in the hands of an authorized entity in the country such as; the Ministry of Health, a professional body such as the medical or nursing council, or an educational institution (e.g. medical or nursing school).

Box 9. Establishing local training capacity

The five year Safe Reproductive Health (SRH) Programme was designed to introduce and expand hospital-based reproductive health services in major public sector health systems in Egypt. One year following the close-out of the project, an evaluation showed that some improvements were sustained, while others had been discontinued. Turnover of trained staff, especially nurses for counseling and infection prevention, had diminished the capacity developed in the early years of the programme. No system had been set in place to train new staff to ensure ongoing capacity in these areas. In the absence of an externally supported training programme, new training needs had not been met.

EngenderHealth had a different experience in Turkey, where one component of increasing access to quality long-term and permanent FP options was to build strong public sector training capacity. The approach to in-service training focused on capacity building and sustainability. Initially a select group of Turkish doctors were sent outside the country to be trained in female and male sterilization by minilaparotomy and NSV, respectively. The doctors eventually became master trainers and their sites became national training centers. Over the years, Turkey's training programme became institutionalized through the development of a training infrastructure that includes both residency and in-service training programmes – 10 teaching hospitals with minilaparotomy training in their ob/gyn programmes; 15 teaching hospitals with NSV training in their urology residency programmes; 4 national training centers for minilaparotomy; and an additional 4 national training centers for NSV.

Sources: EngenderHealth, 2000. & Searing, et al. 2003.

6. Link training to supervision

To make training as effective as possible and to support quality services, it is important to link training to ongoing supervision. In other words, when the training stops, the supervisory system and the supervisor must take over, providing follow-up, a supportive environment for staff to use the new skills they have learned, and additional on-the-job training as needed (or at least the ability to recognize when additional training is needed). Training providers without institutional support does not produce change that is fully incorporated into the actual delivery of services. Inappropriate training, poor follow-up and weak supervisory systems often result in poor quality of care. Box #10 presents a country example of problems that can arise when training is not linked to supervision. Whole-site training, mentioned above, is one approach to linking the supervisory and training systems. It involves both internal and external supervisors in assessing training needs and in planning, developing and conducting training to meet the identified needs. Supervisors then provide follow-up and support trainees, regardless of where they were trained.

Box 10. When training is not linked to supervision

In Uzbekistan, EngenderHealth conducted contraceptive technology updates as part of a postabortion care programme. Supervisors were not included in the training. Some providers were unable to practice what they had learned because of supervisor resistance to new ways of doing things. This experience highlighted the need to garner supervisor support and keep them involved with the activities of the new PAC programme.

Source: Escandon, et al. 1999.

Facilitative supervision is an approach to supervision that emphasizes mentoring, joint problem solving, and two-way communication between the supervisor and those being supervised – traditional "inspection" is not conducive to helping sites achieve continuous quality improvement. Instead of finding fault and leveling blame at individuals, the emphasis is on determining whether or not existing work processes are planned, designed, and implemented in such a way as to achieve high-quality services that meets clients' needs. The key components of facilitative supervision include: supervisors as a catalyst for quality improvement; joint problem solving, with full staff participation and using simple, practical tools; facilitative styles of communication and support; and supervisors with solid technical knowledge of the services provided at the sites they supervise. Box #11 describes the successful use of facilitative supervision in the Tanzanian FP programme.

Box 11. Facilitative supervisors

In Tanzania, the FP programme expanded rapidly in the early-mid 1990s including an expansion in the number of sites that offered all available modern contraceptive methods. Key to the expansion were six zonal doctor-nurse teams whose role was to facilitate the integration of permanent and long-acting methods into existing FP services. They were trained to assist sites in identifying what they needed to provide quality FP services and in meeting those needs internally or with external assistance. Working with the MOH and service sites, the zonal teams ensured that service quality was strengthened. The zonal teams worked with site staff to try to eliminate problems before they occurred. They facilitated communication between the sites and their zonal or central headquarters and between public sector and private sector service providers. They also improved linkages between the various sites in their area as well as between each site and its respective headquarters.

Source: Ben Salem and Beattie. 1996.

7. Increase access through non-physician providers

The reality is, that doctors are simply not accessible to many people around the world, especially in resource poor settings. Physicians are typically clustered in urban areas and are frequently not located in service sites below the district hospital level, although these are the service sites most accessible to many people. Doctors are often overloaded with curative care and preventive procedures end up getting lower priority.

Increasing access to clinical FP/RH services through non-physician providers has been successful in many settings. Over the years, for example, nurses have become one of the major service providers of IUDs throughout the developing world. Clinical officers safely conduct C-sections, minilaparotomy under local anesthesia for female sterilization, NSV, repair of simple obstetric fistula, and a variety of other surgical procedures. In addition, providers such as nurses, midwives, and nurse practitioners – in addition to clinical officers – safely provide clinical services such as IUD and Norplant® insertion and removal, postabortion care including MVA, and cryotherapy for treatment of cervical precancer. Table 2 provides some representative examples of mid-level provision of clinical FP and other RH services.

Table 2. Some published examples of clinical FP/RH services provided by non-physicians

Clinical procedure	Cadre	Country	Reference
C-sections	Assistant medical officers	Mozambique	Pereira et al., 1996
	Clinical officers	Kenya	Dovlo D 2004
Cryotherapy for treatment of cervical precancer	Nurses	Thailand	Royal Thai College of Obstetricians and Gynaecologists/JHPIEGO Cervical Cancer Prevention Group. 2003.
Emergency obstetric surgery	Assistant medical officers	Tanzania	Dovlo D 2004
IUD insertion and removal	Nurses, midwives, physician's assistants & medical students	Many developed and developing countries	For review see Salem, 2006
Minilaparotomy for female sterilization	Clinical officers	Malawi	Solo, et al. 2005a.
	Nurse-midwives	Thailand	Dusitsin et al., 1980
	Paramedics, nurse midwives, midwives, & nurses	various South East Asian countries	Hue, 1980
MVA abortion	Midwives	South Africa	Warriner IK et al. 2006
	Doctor assistant, midwives	Vietnam	Warriner IK et al. 2006
Norplant insertion and removal	Nurses & midwives	Ghana	Solo, et al. 2005b.
		Indonesia	Affandi et al., 1987
		Kenya	Bradley et al., 2001
	Clinical officers	Malawi	Solo, et al. 2005a.
NSV for male sterilization	Medical assistants, nurses, midwives, & paramedicals	China	Xu, et al., 1993
	Clinical officers	Malawi	Solo et al. 2005a
	General and family physicians*	Mexico	Cisek and Juarez; 2003.
	paramedics	Thailand	Ratana-Olarn, 1991
	Paramedics, nurse midwives, midwives, and nurses	various South East Asian countries	Hue, 1980.
Postabortion care including MVA	Nurse & midwives	Ghana, Kenya, Nigeria & Uganda	EngenderHealth and Ipas. 2001
		Zambia	Mtonga & Ndhovlu. 2001
Wide range of surgical procedures	Clinical officers & medical assistants	Malawi	Adeloye, 1993.

*vasectomy historically largely performed by urologists

Increasing access through non-physician providers has often required working at both the policy and programme levels to: a) effect change in policies that restrict provision of specific clinical services to physicians or even to specialist physicians (e.g. ob/gyns or urologists); b) conduct demonstration projects where non-physicians provide the clinical methods; and c) provide TA to incorporate non-physician provision into services and programmes (see Box #12).

Box 12. Increasing Norplant access in Ghana

The training of more than 600 nurses in Ghana to insert and remove Norplant® has had a significant impact on the acceptor rate, quality of services, and number of sites providing such services. Prevalence increased 10-fold from 0.1% in 1998 to 1% in 2003. When Norplant® was introduced in the mid-1990s, training was restricted to physicians, in part because the existing policy was not explicit about whether nurses could perform insertions and removals. When women initially came for Norplant® services, there was often a long line and no doctor available, and as such the method was there but not really accessible. These difficulties were documented and used to help bring about the necessary policy change. As a result, the 1996 *National Reproductive Health Service Policy and Standards* clearly spelled out that nurses were allowed to provide Norplant®.

Source: Solo, et al. 2005.

8. Explore alternative models for service delivery

The goal of service delivery is to give people maximum access to quality services. Limited access – often a major barrier to use of health services in resource poor settings – may be related to living long distances from facilities, transport costs, costs of services themselves, stigma associated with a particular services, inconvenient hours that conflict with family/home/work/school responsibilities, etc. There are many models for delivering health services and there is no one ideal or preferred approach that works in all settings or for all services, although in general it is desirable to provide services at the lowest level of the health system feasible. The choice of which model(s) to use, and thus where and when to deliver services, should be made primarily with the objective of optimizing access to safe services for clients. Another factor that must be kept in mind is the timing of delivery. In the case of MC, that could be infant, pre-adolescent, young adult and/or adult.

Vertical versus integrated services. Services are vertical if they are delivered by dedicated providers or in facilities dedicated to a specific service. For example, HIV testing provided at a stand alone VCT Center would be considered vertical. On the other hand, when services are provided by a range of staff and available at sites providing a wide variety of services, they are considered integrated. HIV counseling and testing provided by a variety of the staff working in a primary health clinic would be an example of integrated services.

Services tend to be more integrated at lower levels of the health system, such as primary care, and less integrated in secondary and higher level facilities. In general, integrated services are more available to larger numbers of people because they do not require visits to specialized facilities – which may be few and long distances from where many people live – and because they are provided by more staff. Integrating new technologies into existing services usually allows for an innovation to be introduced, and eventually scaled up, more rapidly since this approach builds on health infrastructure already in place. Box #13 presents a country example of successful integration of PMTCT services into existing reproductive and child health services.

All services, however, do not lend themselves to being integrated in the truest sense of the word; for example surgical sterilization or C-section, and it may be that MC will fall into this category as well. Services which by their nature are more vertical, can be more integrated if there are good linkages between services sites and effective referral mechanisms in place.

Box 13. Integration of PMTCT into reproductive and child health services in Tanzania

In 2003, EngenderHealth working with the Tanzanian MOH, the Evangelical Lutheran Church, and the Elizabeth Glaser Pediatric AIDS Foundation, established PMTCT services within existing reproductive and child health (RCH) services at hospitals, health centers and dispensaries. Comprehensive PMTCT services are now available in antenatal care clinics, the labor ward and post-delivery at 22 sites in Arusha Region in Northern Tanzania. Introduction activities included: participatory assessments and planning; community sensitization; simple renovations; training on PMTCT, counseling and client provider interaction skills, FP, and stigma reduction; reorganization of client flow as needed; assuring availability of supplies; and supportive supervision. In total, over 6,000 women receive counseling each quarter, with nearly all accepting HIV testing. The percentage of women and their infants receiving Nevirapine has increased over time to approximately 80% and 55%, respectively. In addition, modern contraceptive use following delivery has increased. In 2005, we began introducing VCT into FP and other RCH services (postnatal care and under five clinics), including couples counseling, in 15 of the 22 sites. This has led to increased service quality and client satisfaction, increased numbers of FP clients and use of contraception, strengthened postnatal care, and comprehensive RCH services available under one roof. HIV-negative women receive ongoing counseling to negotiate safer sex. HIV-positive women are referred for care and treatment, and followed up to ensure they are accessing services.

Source: Mphuru, et al. 2006.

Static versus outreach services. Static services are those that are offered regularly at established health facilities. Outreach services – also called mobile services – are provided at a facility that normally does not offer the service, such as a church, school or health clinic (see Box #14). In some cases, mobile services might actually be provided in a vehicle such as a van, camper or bus. With outreach services, the services are taken to where the people are. Strengths and limitations of these two approaches are presented in Table 3 on the next page.

Box 14. Mobile services to increase access

Mobile services, on a seasonal schedule, are used to provide a large percentage of sterilizations services in Nepal. Mobile services are usually offered at rural health clinics. Trained staff visit the clinic for a specified period of time (e.g. 5-10 days) and bring the supplies and equipment they need to provide male and female sterilization services. These mobile services reach a large number of clients, but have the potential to create conditions that can lower quality of care. Historically, poor sanitation, poor infection prevention practices, crowding, lack of privacy, long travel and waiting times, and a stressful working environment were problems encountered at mobile service sites. EngenderHealth and local partners implemented a quality of care programme focusing on mobile services to resolve these issues.

Source: Stanley, et al. 2001.

When outreach service are provided on a regularly scheduled basis (e.g. weekly, monthly), the outreach sites are sometimes referred to as satellite clinics. Outreach services can also be provided through a mass campaign, where services are an occasional event, provided for a designated period of time in a specific location. Campaigns may be designed to systematically cover geographic areas where static services are unavailable/inaccessible, or to reach a specific target group. Campaigns have been used for HIV testing, polio immunization, and cervical cancer screening. Alternatively, campaigns may be organized around visiting surgeons who provide services such as obstetric fistula repair or eye surgery for trachoma complications. A mass campaign-type approach could be appropriate for MC in some circumstances, for example, during school vacations for adolescent boys.

Table 3. Strengths and limitations of static and outreach clinical services

	Static clinical services	Outreach clinical services (mobile)
Strengths	<ul style="list-style-type: none"> • Services are available regularly. • Better availability and storage of equipment and supplies. • Easier continuity of care. 	<ul style="list-style-type: none"> • Greater access to services • More convenient for clients, as less time and money are spent to travel to a distant static site. • Increased community participation.
Limitations	<ul style="list-style-type: none"> • Access to services may be limited if they are not available at widely distributed sites. • On-going efforts required for promotional activities. 	<ul style="list-style-type: none"> • Requires intensive planning, organization, and coordination (supplies, equipment, staff, community linkage for promotion). • Cost and time for “mobile” team, linked with type of transportation, geographic terrain, and quality of roads. • Conditions in the temporary facilities may lead to a lower quality of care. • Limited time for counseling and less privacy may mean client information is compromised. • Follow-up care or treatment of complications may be problematic.

Adapted from Alliance for Cervical Cancer Prevention, 2004.

9. Design holistic programmes that address supply and demand

As noted above, taking a whole-site, whole-system approach results in availability of quality FP/RH services. Clearly, developing capacity to provide quality services is necessary with any innovation, but it is usually not enough. It is also necessary to create demand for new services, although getting men to come to MC services, at least in some settings, may not be a problem given the level of interest and demand for the procedure that has already been seen in some sub-Saharan African countries. Ideally, a coordinated package of integrated interventions creates synergy between supply and demand, ensuring that quality services are in place and that there are people interested in using them. Mutually reinforcing communication strategies that impact on knowledge, attitudes and ultimately behavior yield the best results in terms of stimulating demand. Mass media are effective in creating knowledge, but interpersonal communication has a greater impact on changing attitudes that actually influence behavior. Men have less contact with health workers than do women, and personal contacts – friends, relatives, and co-workers – are key to introducing new ideas and providing support for behavior change. Using satisfied clients to inform other men about vasectomy has been a successful strategy in a variety of settings. Individuals that are exposed to messages from multiple sources are more likely to take action, therefore, multimedia campaigns are most likely to succeed. Box #15 describes the use of a coordinated supply and demand approach to increase men's use of RH services in Guinea.

Box 15. Addressing supply and demand to transform men into clients in Guinea

Guinea's Ministry of Health and EngenderHealth used a "supply-and-demand" framework to increase access to and stimulate public demand for men's RH services. Capacity to deliver men's RH services was built at two public-sector health centers in Conakry. Staff were trained on the introduction of the services; training including dealing with negative attitudes and biases, and understanding the benefits of services for men. Staff consulted with men in the community on how to develop a more supportive environment for men's services. To stimulate demand, local partners engaged in activities such as training of peer educators, developing messages about male involvement, facilitating lectures by imams in mosques, and radio/TV broadcasts. Staff enthusiastically implemented changes to make services more welcoming to men and took part in outreach efforts with men in the community. Men's use of RH services and the local community's approval of and interest in such services rose notably after the intervention. The one-year evaluation found that the number of men visiting a health facility on their own had risen sizably, as had the number who accompanied their wives during FP/RH care visits.

Source: EngenderHealth, 2003d.

10. Capitalize on opportunities to work with men

In many settings, men do not tend to come to formal health services for preventive care. And, although men may be the main decision makers regarding the use of FP in many cultures, they otherwise play a limited role in FP/RH of their partner and usually they themselves take little responsibility for contraception. When men do come to sexual and reproductive health service sites with their partners, service providers – who are used to talking with women – may not feel comfortable working with men. Male-friendly service initiatives have worked to make facilities more welcoming to men and to change staff attitudes and improve their comfort providing services to men. Programmes have used innovative approaches to engage men when they do come to FP and RH service sites with their partners, as well as to draw men in to health services (see Box #16).

Box 16. Involving men in reproductive health decisions

To increase the constructive participation of men in RH decision making, EngenderHealth programmes have taken advantage of occasions when men are already within health facilities to provide targeted information, counseling, and services for men. For example, in Turkey, husbands are often present at the time of their wives' abortion due to a legal spousal consent requirement, thus providing opportunities for educating men about how to more actively support their partner in preventing future unintended pregnancies. Group education sessions for men whose wives were undergoing an abortion proved popular and allowed for discussion of myths and misconceptions about FP methods and on plans for future contraceptive use. "Postabortion vasectomy" services were offered to interested men at some of the health facilities conducting abortions. Another component of the programme targeted men accompanying their wives during prenatal visit and was designed to help couples adopt postpartum practices that promote family health.

A recent study in South Africa on men's low utilization of VCT has led to new strategies to promote this service among men. EngenderHealth's Men as Partners (MAP) programme is using existing community-based educational workshops to promote VCT with men. These interactive educational sessions explore a range of VCT-related issues including men's fears of HIV testing, issues around serodiscordancy, living healthily with HIV, antiretroviral treatment, and PMTCT. The MAP programme is also mobilizing peer educators to play an active role in encouraging men to test for HIV and utilize mobile VCT services offered in their community. Community campaigns have reinforced these efforts with slogans such as "Be courageous, get tested," "My girlfriend's status is not my status, so I get tested," and "Show your strength, know your HIV status."

Sources: Pile, et al. 1999. & Levack, 2004.

MC will provide a platform for more comprehensive male health services. Taking advantage of men's presence at a health facility for MC will allow providers to engage men in discussions about their broader health needs through provision of information and counseling in areas such as HIV risks, safer sex and contraception, including good condom instructions, and to provide other health services (or effective referrals to such services) such as VCT and STI prevention and treatment. Additionally, MC services will provide opportunities to talk with men about playing constructive roles in promoting gender equity, decreasing gender-based violence, and ensuring good health in their families and communities.

11. Going to scale

Going to scale can be defined as making quality services broadly and routinely available in a sustainable manner. Pilot projects in demonstration sites provide insights into how the innovation will work and be accepted, and also provide evidence that the innovation is safe and effective in that country. Pilot projects tend, however, to have a high level of focus on quality and a limited scope. They often take place in sites such as teaching hospitals or model clinics – optimal rather than typical sites. When new services are introduced in more typical sites, challenges not encountered in pilot sites, such as shortages of staff and resources, may arise. Pilot projects also receive funding and resources that simply cannot be replicated in typical service-delivery settings.

Box 17. Registering unique equipment & supplies

NSV requires two specialized instruments – a ringed clamp and dissecting forceps. In Mexico, despite IMSS's well thought-out introduction strategy (see box #3), the process for budgeting and procurement of the surgical instruments was overlooked. They were not registered to be included on the basic medical equipment list, they were not included in the budget, and no local or regional sources of the instruments was identified. For years, most service sites continued to use the original instruments that had been donated as part of EngenderHealth's USAID-supported project. Since the instruments were not included in the normal IMSS supply chain, it became difficult to replace the instruments or purchase them for newly trained sites once USAID support was phased out.

Source: Cisek and Juarez, 2003.

If new practices are to be sustainable, the commodities necessary for expanded services will eventually need to be available easily, locally and through standard channels. Box #17 describes a country example where adequate attention was not paid to this issue. For services to go to scale, training must not rely only on special courses, which can be expensive and hard to maintain. Successfully taking an innovation to scale means that ongoing mechanisms remain in place for improving staff performance, such as preservice training, on-the-job training, and supportive supervision. Staff taking on a new area of work need institutional support. Political support is key, as policies often need to be changed in order for a new service to go to scale. Public awareness is a final challenge in taking pilot projects to scale. Even when a needed service is introduced, people may not use it because, for example, they are unaware that the service is available, they are uninterested because of myth and misconceptions or lack of perceived benefit, they fear they will be treated poorly, or they believe that services are low quality.

Box number 18 below presents an example of successful scale-up of PAC services in Ghana.

Box 18. Expanding PAC nationally through the reproductive health programme in Ghana

Postabortion care (PAC) services were successfully scaled up in Ghana by integrating PAC into the national RH programme. In 1992, PAC was included in preservice training for physicians and was subsequently incorporated into the national RH standards. Then, in 1998, as part of the national safe motherhood and RH programme, PAC was added to training in lifesaving skills, FP, and other RH. National PAC guidelines were developed that included several important strategies: using existing regional teams to provide supportive supervision and monitoring; increasing access through both the public and private sectors; and planning for sustainability of services. In addition, midwives were approved to provide PAC services, greatly expanding access for women in rural areas. Factors contributing to the success of scale up included providing systematic training with good follow-up and supervision, training a wide range of providers, incorporating PAC in RH guidelines and standards, ensuring ongoing and sustainable supplies of MVA equipment, and getting buy-in and participation from important stakeholders, ranging from the MOH to NGOs to grassroots and community groups.

EngenderHealth and Ipas, 2001.

Conclusion

Careful introduction of MC for HIV prevention will avoid many of the pitfalls experienced over the past several decades by FP and other RH service programmes as they have introduced new technologies. Many mistakes were made and likewise many lessons have been learned about how to effectively introduce new technologies in settings with limited resources. There is no need to repeat the mistakes nor to relearn the lessons as MC is introduced.

It will be critical as MC introduction efforts get under way to keep in mind that it is more than just the innovation. Successful introduction will require a systems approach that takes into consideration not only MC itself, but issues related to the potential users, the capacities of the service delivery system, and the other prevention approaches and technologies currently available, all within the context of the broader sociocultural, economic and political context in the setting into which MC is being introduced. One off activities, such as clinical skills training or developing educational materials, will not be enough; such focused approaches have not led to successful introduction of FP/RH technologies, and are not likely to be successful for introduction of MC either. Programmes will need to be designed to introduce MC in a broader prevention context, without losing sight of the importance of other risk reduction options, especially condom promotion and provision. Counseling, for example, will not only need to ensure that decisions are well informed, but will also need to ensure that men understand that MC does not provide complete protection and that other risk reduction approaches continue to be necessary.

The public sector provides most clinic-based services in resource poor settings; in general, this sector is most accessible to the largest number of people. Unfortunately, the public sector is often the hardest to work with (relative to the private and not-for-profit sectors) and the most difficult in which to effect change. Nevertheless, given the important role that the public sector plays in provision of health services in general, and most likely will play in MC services, it is critical that to invest in public sector programmes and find effective ways to work with – and not around – the public sector.

Sustained, long-term efforts will be critical to successful introduction of MC. Clinic-based services such as MC require ongoing resources and long-term efforts. There is a need for real continuity in terms of funding and in terms of approach if significant impact is to be made. It is critical to look beyond a short-term focus and to come to grips with the need for a more long-term commitment if MC is to be provided safely and effectively, if MC services are to be accessible to the greatest number of people, if MC is to be sustainable in the long run and if, in the end, MC is to be an effective HIV prevention approach that contributes on a large scale to stemming the HIV pandemic.

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