The new WHO recommendations on HIV and infant feeding – bridging the gap between training, learning and doing

The seven Key Recommendations on Infant Feeding are the prime focus of the new World Health Organization (WHO) guidelines on infant feeding for HIV-positive women.[1] The recommendations are listed below and then discussed.

The recommendations

Recommendation 1: Ensuring that mothers receive the care they need

High-quality evidence supports the 2009 WHO recommendations on the use of antiretrovirals (ARVs) therapeutically or prophylactically in prevention of mother-to-child transmission (PMTCT) programmes, using one of two options:

- triple therapy for the mother during pregnancy and the breastfeeding period
- zidovudine (AZT) prophylaxis for the mother during pregnancy, followed by daily nevirapine for the infant from birth until 1 week after cessation of breastfeeding.

These have been shown to reduce the mother's viral load so that the risk of transmission through breastmilk is much reduced.

Recommendation 2: Which breastfeeding practices and for how long?

Six months' exclusive breastfeeding is recommended for HIV-infected mothers, who should also receive ARV for treatment or prophylaxis during pregnancy. Breastfeeding may continue for up to 12 months while complementary foods are added to the infant's diet. ARV prophylaxis for as long as breastfeeding continues avoids the risks and difficulties of providing a safe diet in the absence of breastfeeding. High-quality evidence from systematic reviews supports this recommendation.[2]

Recommendation 3: When mothers decide to stop breastfeeding

As abrupt cessation of breastfeeding may impact adversely on the infant, breastfeeding cessation must be gradual within a 1-month period. ARV prophylaxis to the mother and infant must continue for 1 week after complete cessation of breastfeeding.

Recommendations 4 and 5: What to feed infants when mothers choose to not breastfeed, and the conditions needed to formula feed safely

HIV-infected mothers should only choose to not breastfeed if their infants will consistently receive adequate and safe replacement feeds and complementary foods from 6 months of age onwards.

Commercial infant formula as a replacement feeding method is only advised if the AFASS criteria (**a**ffordable, **f**easible, **a**cceptable, **s**ustainable and **s**afe) are met. The following environmental conditions are required for safe formula feeding:

- safe water and sanitation are assured at the household level and in the community
- the mother or other caregiver can reliably provide sufficient infant formula milk to support normal growth and development of the infant
- the mother or caregiver can prepare it cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition
- the family is supportive of this practice
- the mother or caregiver can access health care that offers comprehensive child health services.

Recommendation 6: Heat-treated, expressed breastmilk

The heat-treating method of inactivating virus in breastmilk represents an interim feeding strategy for HIV-infected mothers, particularly in the following circumstances:

- when the infant is unable to breastfeed due to neonatal complications, low birth weight or illnesses
- when the mother is unable to breastfeed due to a temporary breast problem such as mastitis.

Recommendation 7: When the infant is HIV infected

For infants known to be HIV infected, exclusive breastfeeding for the first 6 months of life and continued breastfeeding up to 2 years of age or beyond are recommended.

Value of counselling services

Counsellors are available at all facilities in many provinces in South Africa and are integral to PMTCT programmes. They can address issues pertaining to maternal guilt and fear of transmitting HIV to the baby by providing accurate information to assist patients in making informed decisions. Supportive postnatal counselling for early detection of postnatal depression promotes improved infant feeding outcomes. Strategic placement of counsellors in antenatal clinic (ANC) services, labour wards and postnatal wards and at primary health care (PHC) clinics ensures that women are offered counselling and support at all points of care.

Counsellors are also in an ideal position to offer infant feeding education to patients. Yet inadequate training on infant feeding guidelines, AFASS criteria and the new WHO recommendations[1] impacts on the quality of counselling they can confidently offer. Disclosure to partners and family and the fear of discrimination are not adequately attended to by counselling services. This is due to inadequate one-on-one counselling and insufficient time and opportunities to discuss personal issues with health care workers (HCWs).

As far as timing is concerned, training of HCWs and counsellors on new guidelines should ideally take place before the guidelines are implemented. Reinforced education and infant feeding messaging may increase exclusive breastfeeding uptake,[2-4] and establishment of exclusive breastfeeding peer support groups may reduce the risk of mixed feeding.

Improving communication between trainers/educators and trainees: going from theory to practice

Transmitting appropriate advice and improving the quality of health care workers

There have been difficulties in translating the guidelines of the WHO's policies on infant feeding for HIV-positive women to the recipients of these messages. Anecdotal evidence suggests that health professionals in the field have often failed to grasp the essentials of these guidelines, and have been unable to transmit them to pregnant women. This is an age-old dilemma

of medical education,[5-11] starkly illuminated by the specific issue of counsellors providing clear advice so as to make easier choices for HIV-positive mothers facing the decision whether to breastfeed or give formula to their babies.

The following two levels must be considered: the learning process and understanding of key issues by the health worker providing counselling on the one hand, and the information absorbed by the HIV-positive woman on the other.

Making learning, training and implementation of the Breastfeeding Guidelines an unbroken and continuous process illustrates the wider context of introducing health professionals to better ways of learning, practising, conveying their knowledge and experience to other HCWs, understanding scientific methods through research, and finally linking training to their work outcomes.[6,7,9-14] Failures in this process contribute to the poor delivery of services in general, and poor counselling in particular, despite adequate resources.[6,12] It is generally agreed that flawed health systems are responsible for many of these problems, and one of the key elements is the productivity of health workers.[14-16]

In South Africa we not only require more HCWs and better facilities but also need to improve the output of each health worker and every clinic. Successful communication of knowledge to recipients of training should be a major goal. The direct effects of training could be measured by real gains in biomedical health outcomes (such as infant mortality and PMTCT) and the indirect outcomes by process indicators (for example, competence in infant feeding counselling; adherence to their own and their babies' antiretroviral treatment by breastfeeding mothers).

Linking training with work

The aim should be to move away from didactic teaching into an integrated model of combining knowledge directly and immediately with practice at PHC clinics and in the community.[5,6,8-10,12] These are the two critical sites for improving the quality of the health delivery system. Theoretical knowledge offered by experts on a range of clinically orientated and health services-related problems can form a continuous stream of learning from books to clinics and homes. The learning process can be enhanced by the creation of clinic teams, comprising trainees from health education institutions and different categories of employed clinic staff such as senior nurses, medical managers, pharmacists and counsellors, as shown in medical and surgical models.[17-19]

The conventional education and training of medical doctors and nurses has been widely criticised on pedagogic and practical effectiveness grounds. Their many years of education and training often bear little relationship to the practical work they perform. Recognition of this discordance between training and practice has led to the creation of alternative education and training systems.[7,9,10] The goals of medical and nursing education should be closely linked to addressing the massive deficiencies in health services delivery that are crippling the country. The aim is to establish a seamless fabric of knowledge and its practical applications, of theory and training, with specific biomedical and social outcomes resulting from overcoming barriers to health delivery.[11,14,20-22] Because conventional methods of teaching have often failed to promote learning and improve practice (e.g. clinical skills in medicine, practical life skills in basic education), alternatives such as outcomes-based education, which aims at matching knowledge with end-points or outcomes,[8] or the establishment in medical school curricula of 'parallel tracks' to the conventional training methods, have been attempted in developed and developing countries. Recent reviews and experience have found both positive and negative outcomes.[6,7,9,10]

A qualitative evaluation of the 'PALSA Plus' nurse training programme for management of HIV/AIDS and adult lung disease documented training methods, perceptions and the value of training; the programme also compared training approaches.[23] In contrast to conventional centralised training, ongoing on-site training of PHC nurses in the PALSA Plus programme enhanced nurses' experiences, provided support for their work, emotional support, and managerial reviews for infrastructure and staffing, and facilitated experiential learning. A national Ugandan survey of training needs assessment for ARV rollout staff concluded that 51% of midwives were trained on initiating patients on ARVs and only 23% on monitoring follow-up.[24] Seventy-seven per cent of midwives reported that their overall knowledge of ARVs was lower than good. This situation highlights the need for training initiatives to support task shifting in efforts to meet service demands, Millennium Development Goals and National Strategic Plan goals.

Why are counselling messages misunderstood?

Contextual factors for effective counselling

An evaluation of challenges within public sector PMTCT programmes in implementing infant feeding guidelines in accordance with the WHO recommendations set out above has to be contextualised within the overall chronically inadequate PMTCT services and poor quality of care.[15-17]

Health care workers' knowledge of and attitudes towards infant feeding practices and availability of support structures for recommended feeding are embedded in their own experiences and influenced by multiple factors in the delivery of services. Effective counselling and learning between health care staff and pregnant women cannot take place if the clinic is itself dysfunctional. Accessibility to care according to current standards is influenced by clinic resources, clinic layout, booking systems, patient flow plans, testing methods, linkage and referral systems, postnatal follow-up, HCW training and community engagement.

Individual factors promoting effective counselling

Results of a South African case study on human resource requirements for PHC care[24] demonstrated an absolute shortage of staff and inequitable staff deployment between facilities, resulting in poor service quality and efficiency. Extended working hours to meet service demands in rural areas would require an increase in relevant categories of PHC clinic staff.

While the National Strategic Plan recognises that increased personnel are required to strengthen services and highlights task-shifting as one solution to severe shortages in skilled HCWs, inflexible regulations and policies, and regulatory barriers, hinder task-shifting efforts.

The dignity and self-worth of counsellors/nurses have to be respected if they are to be expected to discharge their duties satisfactorily. This is often not the case in many settings in the country. Poor staff morale is attributable to high work volumes, lack of recognition and support from supervisors, and poor service planning. Inadequate training on PMTCT and infant feeding guidelines leads to a lack of confidence in the effects of their counselling. Furthermore, a lack of psychosocial staff support programmes at all levels of care aggravates the problem of effective communication with pregnant women, especially where HCWs themselves are directly affected by HIV.

Access to care and effective counselling

Poor access to care derives from both a lack of clinics and inefficient organisation of clinic opening times and booking systems, with missed opportunities for counselling and participation in PMTCT programmes and subsequent delays in testing, ARV initiation and provision of infant feeding education. In the case of younger mothers educational and career development factors influence outcomes when no or inadequate information on infant feeding is provided. Inadequate consultation and communication additionally promote patient fallacies regarding HIV.

Our experiences at a district hospital have demonstrated that by placing a HCW to triage patients, patients received HIV counselling and testing and started ARV prophylaxis before their first obstetric consultation; a sufficient number of follow-up visits became available for infant feeding education, partner involvement and integration of other aspects of maternal neonatal child and women health. Weekend and after-hours antenatal services may encourage adherence and increase male partner involvement; this has been proved to impact positively on breastfeeding outcomes.

Staff rotation impacts on the process of developing a trusting relationship between HCWs and other categories of medical and ancillary staff and compromises confidentiality. A complete lack of collegial relationships and support structures within the PMTCT system (e.g. lack of infant feeding support groups for breastfeeding HIV-positive mothers) creates barriers to acceptance of education and health messages from staff.

Integration and referral systems (ANC, tuberculosis, antiretroviral therapy initiation points, PHC clinics for postnatal follow-up) need to be strengthened, as this may improve training and work efficiency, including counselling.

Communication and information to prepare women for new guidelines on infant feeding

The new guidelines on PMTCT have allowed a shift of focus from the *risk of transmission of HIV to the baby,* to the fact that maternal ARV in pregnancy and ARV prophylaxis to the baby increase the likelihood of *safe breastfeeding for healthy infant survival.*

Counselling and information on infant feeding and HIV should include the community and its institutions more widely. Expansion of community involvement to intensify prevention efforts is urgent. Inclusion and training of community-based organisations, religious groups, schools, traditional healers and traditional birth attendants on PMTCT will increase acceptability of exclusive breastfeeding while addressing stigma and fears in pregnant women. Mass media messaging relating to PMTCT is inadequate, and more regular messaging on prevention programmes, breastfeeding and infant follow-up are required. Inclusion of PMTCT messaging in the school life sciences curricula will benefit young women and their infants.

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