Investigating high mother-to-child HIV transmission despite free antiretroviral availability

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Background

Bwindi Community Hospital is in SW Uganda, where HIV prevalence is approximately 6%.
A PMTCT programme was initiated in November 2006. Over the next 3 years, 5550 pregnant women tested for HIV; 4.8% were positive.

Mother-to-child HIV transmission rates remained high at over 13%, despite hospital and outreach HIV clinics 5 days/week offering free point-of-care testing, free ART and integrated PMTCT clinics (following pre-2009 WHO PMTCT guidelines).

Aim

To consider reasons for poor PMTCT and interventions for improvement.

Methods

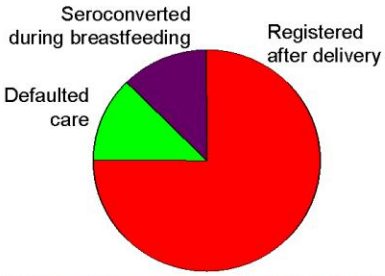
Three PMTCT audits from 01/11/06 - 01/05/10 were retrospectively reviewed, looking at staff, system and patient variables which affect the success of PMTCT.

Results

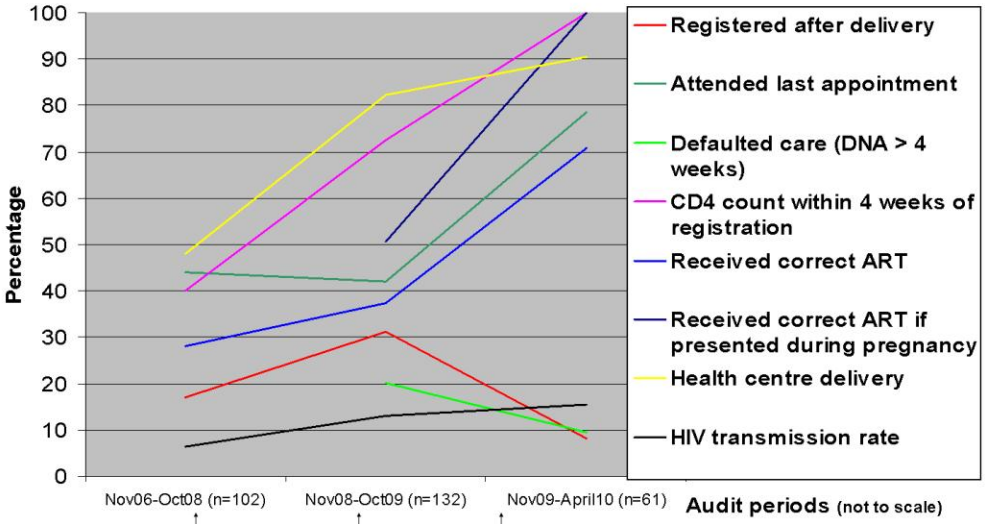
Antenatal clinic (ANC) **offering and acceptance of HIV tests**, and subsequent **PMTCT registration rates** were consistently over 90%. **ART adherence rates (>95%)** were consistently over 75%.

Other variables are shown opposite:

Breakdown of the MTCT cases from Nov 08 – April 10 (n=16)



Line graph to show audit outcomes over time, with an interventions timeline below



2008
'Waiting mothers' hostel built

May 2009
- Mobile CD4 machine
- New PMTCT nurse education programme
- PMTCT support group

Nov / Dec 2009
- Extra PMTCT clinic to coincide with hospital ANC
- PMTCT defaulter system
- Simpler ART guidelines

Ongoing
- Community education through village & radio education programs
- Traditional midwife links including education and meetings
- Improved systems management of ARV stock

Interventions according to date initiated and colour-coded to match the audit outcome being targeted

Conclusions

The main factor limiting PMTCT efficacy is **late registration to care**, when HIV transmission has already occurred. Presentation tends to be at routine baby health clinics or when the baby is unwell.

Other weaknesses were: **numbers defaulting from care**, **missed appointments** (and therefore missed replacement ART), **poor ART prescribing**, **late CD4 testing** and **home births**.
All these improved as multiple interventions targeting health workers, health systems and communities were implemented, although causation cannot be implied.

MTCT HIV transmission did not improve over the same time period, but MTCT rates are calculated at discharge (final DNA PCR at 18/12, unless positive earlier), and there will be a lag. Recent data, from November 11 - April 12, shows an MTCT rate of 3.2% (1/31).

HIV positive pregnant women not registering with PMTCT whilst pregnant are either:
1. Unaware of positive status. Not attended ANC, declined testing or moved into area after delivery.
2. Aware of status, but not accessing PMTCT care.

Local reasons for either of these situations include: stigma, lack of PMTCT awareness, woman/family preference for traditional pregnancy care, women moving frequently (married to soldiers), lack of money for transport. Similar barriers also affect adherence to appointments and to ART.

Summary

There are multiple barriers to PMTCT other than ART availability and PMTCT programmes must seek to address them all.