Title: Identifying gaps like lack of diagnostic results, poor ART access and then implementing changes to improve the quality of prevention of mother-to-child transmission (PMTCT) program interventions using randomised chart extraction and review at Swartruggens Hospital in North West province, South Africa

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Issues: To measure facility performance, a baseline randomised chart extraction and review was conducted in July 2009 using medical records of thirty five HIV-positive pregnant women enrolled in a prevention of mother-to-child transmission of HIV (PMTCT) program who had delivered at Swartruggens Hospital in the North West Province of South Africa between January and June 2009. An Excel-based tool was used to measure key indicators of quality of care (e.g., diagnostic test result, antiretroviral (ARV) prophylaxis and/or treatment initiation). Out of 35 client records reviewed, no women (0%) had a baseline WHO clinical staging assessment; only 20% had received a baseline CD4 count test result, 89% received ARV prophylaxis,46% of eligible women received antiretroviral Therapy (ART) and 69% of HIV-exposed infants received ARV prophylaxis post-delivery. The gaps identified through this performance measurement informed the implementation of Quality Improvement activities.

Description: Quality improvement (QI) strategies to address the gaps found in this assessment were initiated in July 2009 by EGPAF in partnership with the South Africa Department of Health (DOH). QI strategies used included process mapping to identify process gaps in the PMTCT program e.g. process of enrolment, counselling; treatment initiation; monitoring and evaluation etc. EGPAF conducted a training of 10 nurses from the hospital and its four feeder clinics on QI methods (e.g. system analysis, gap identification, implementation of rapid improvement cycles) and WHO clinical staging. Additionally, each facility formed a QI team, initiated improvement cycles for identified gaps, and improved documentation. DOH staff conducted planned monthly review meetings between hospital and feeder clinics and developed a checklist for nurses to assess patient charts. EGPAF mentored and coached health-care workers at the facility and its feeder clinics on improvement cycles and provided technical assistance to help facilities address challenges like WHO clinical staging, ART initiation, data reporting and understanding the data elements.

Lessons learned: A July 2010 randomised chart extraction evaluation of 38 charts at Swartruggens Hospital showed that 63% of women had a baseline WHO clinical staging assessment (up from 0%); the percentage of women receiving baseline CD4 count test results improved from 20% to 95%, women receiving ARV prophylaxis increased from 89% to 100%, and eligible women who received ART improved from 46% to 84%. Receipt of ARV prophylaxis among HIV-exposed infants post-delivery increased from 69% to 100%. The use of QI strategies rectified gaps in quality by enabling more pregnant women to be clinically staged and receive CD4 test results; more women and infants accessed ARV prophylaxis. Additionally, the referral

processes between feeder clinics and the hospital improved. Randomised chart extraction enabled the identification of HIV care delivery gaps and highlighted areas where improvements were needed. The improvements were noted after three months of implementing changes and weekly mentorship which took four hours every week.

Next steps: Chart review sessions should be followed by training of facility staff, site mentorship, and use of QI methods. Program implementers should advocate for chart review sessions at all facilities to monitor improvements, service gaps, and consistency of care.