



Data Driven Management to Improve Maternal Health

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Perspective

- Significant gaps and challenges exist in coverage, quality and equity
- Knowledge of effective technical solutions provides the potential to reduce these gaps
- Effectiveness in implementing these solutions varies due to a range of factors and often is low
- Iterative improvements with real-time data driving program decisions are critical to achieving optimal success

Coverage Gaps in RMNCH

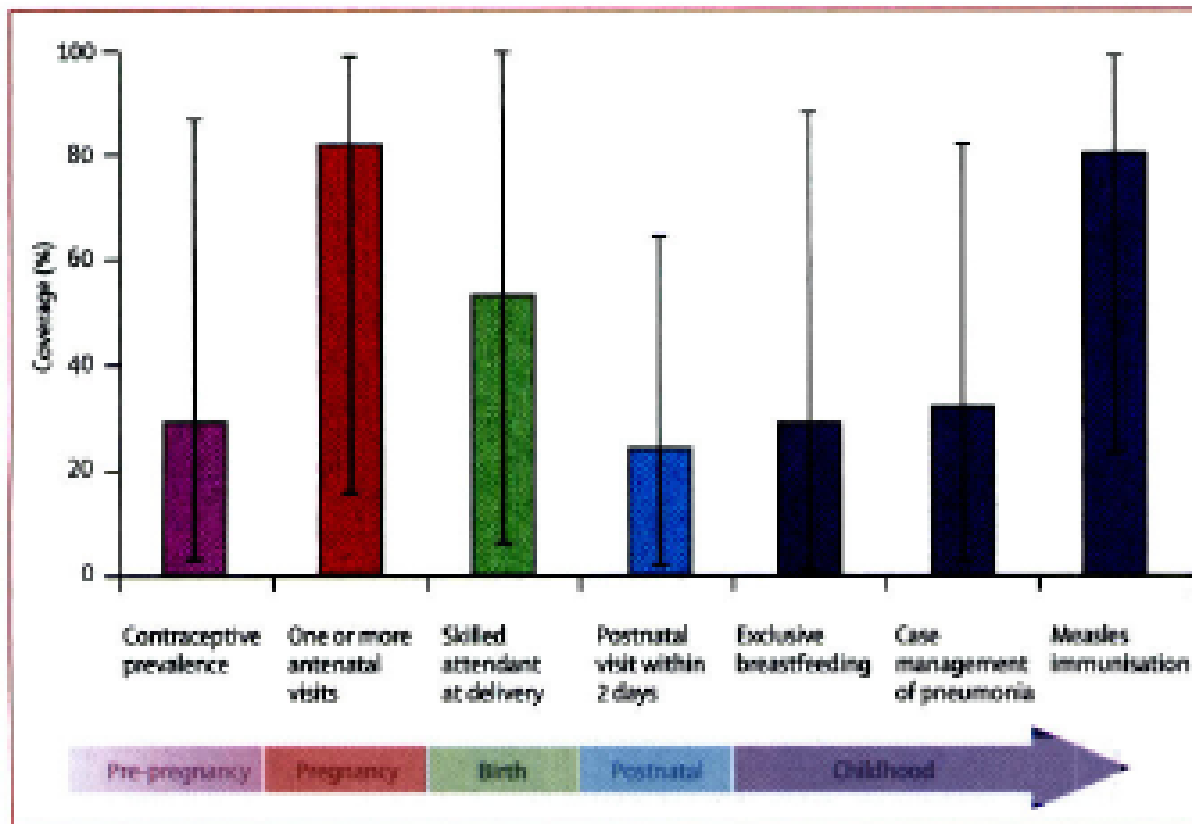
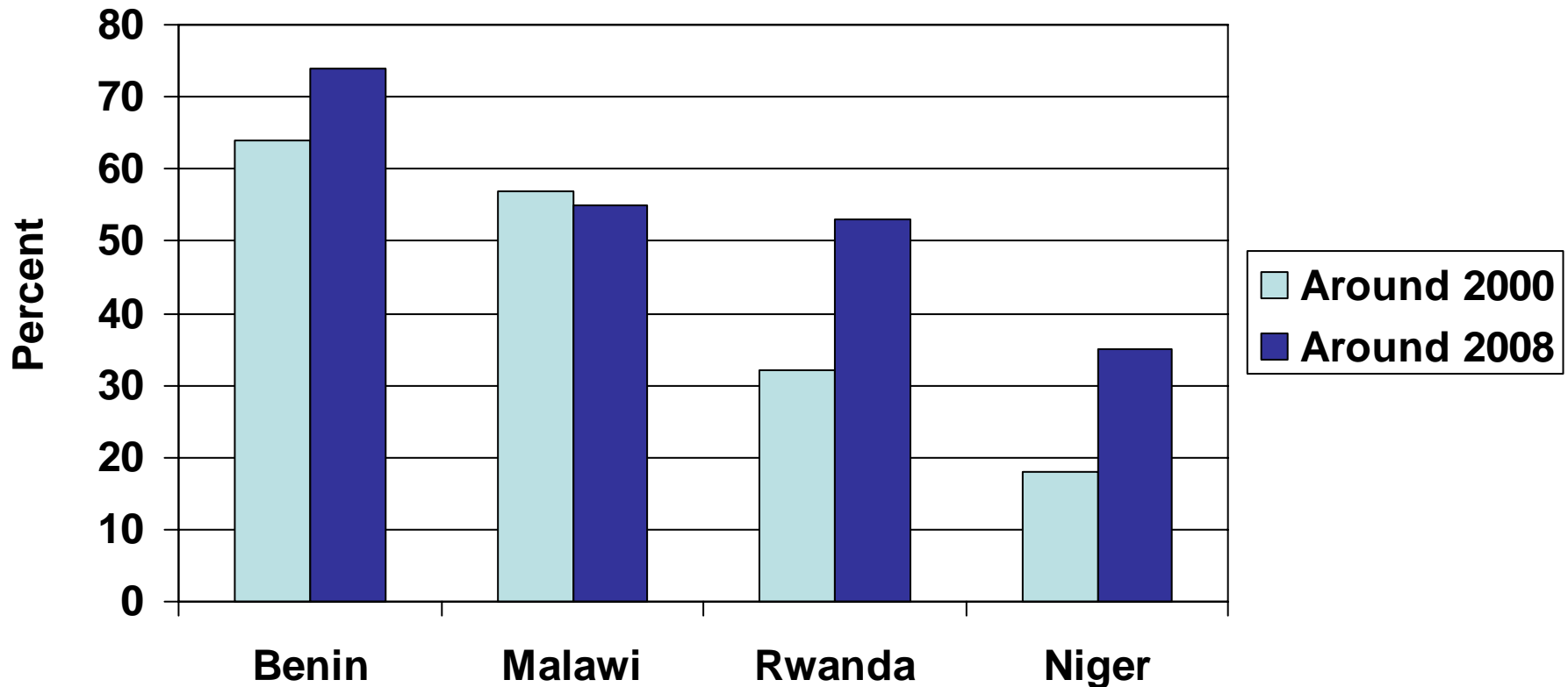


Figure 3: Coverage estimates for interventions across the continuum of care in the 58 priority countries (2000-06)

“Progress on interventions that require behavioral and social change, such as early initiation of breastfeeding and complementary feeding was mixed and often insufficient to achieve the MDGs”

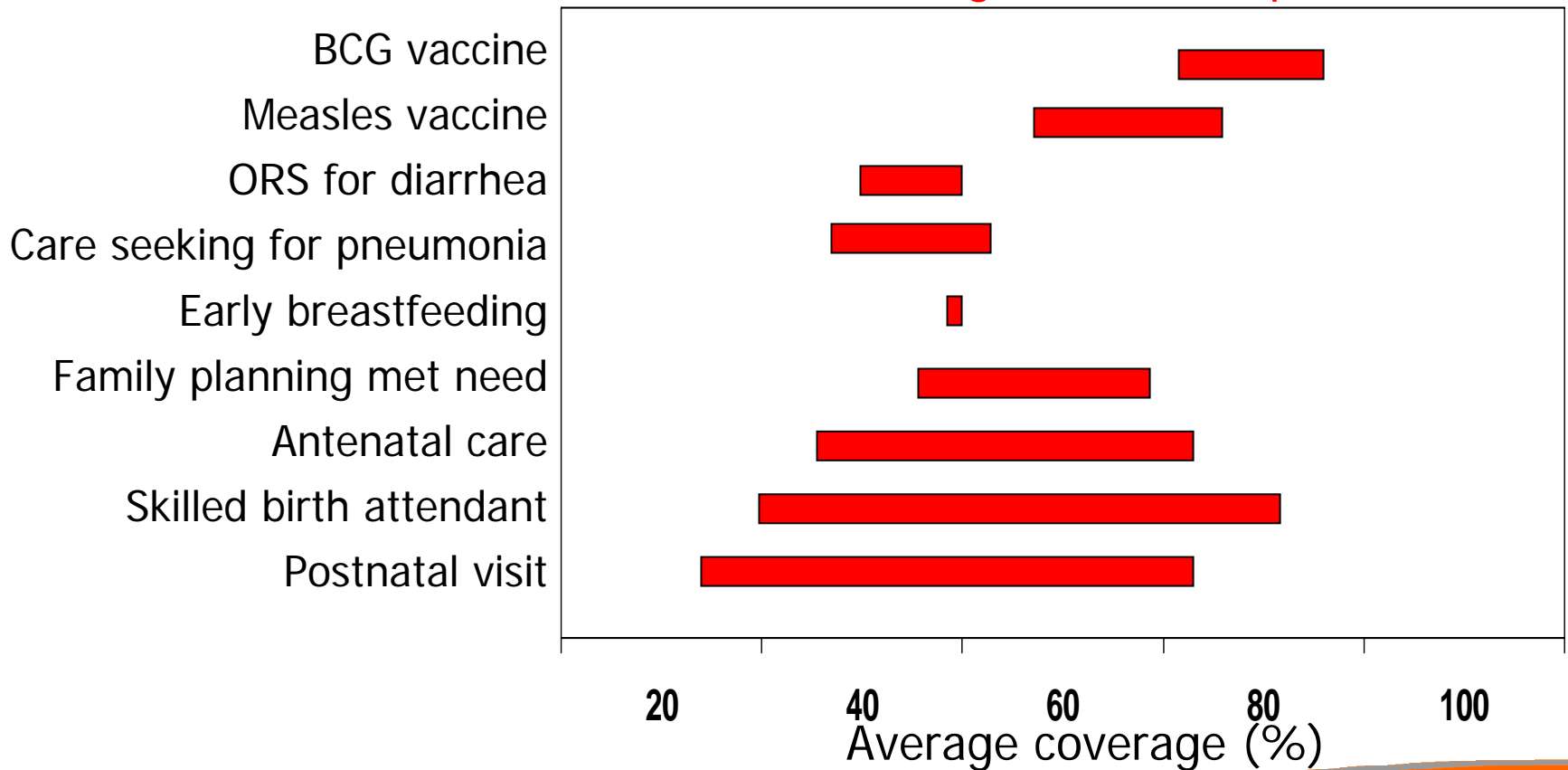
Coverage of Live Births Attended by a Skilled Healthcare Worker



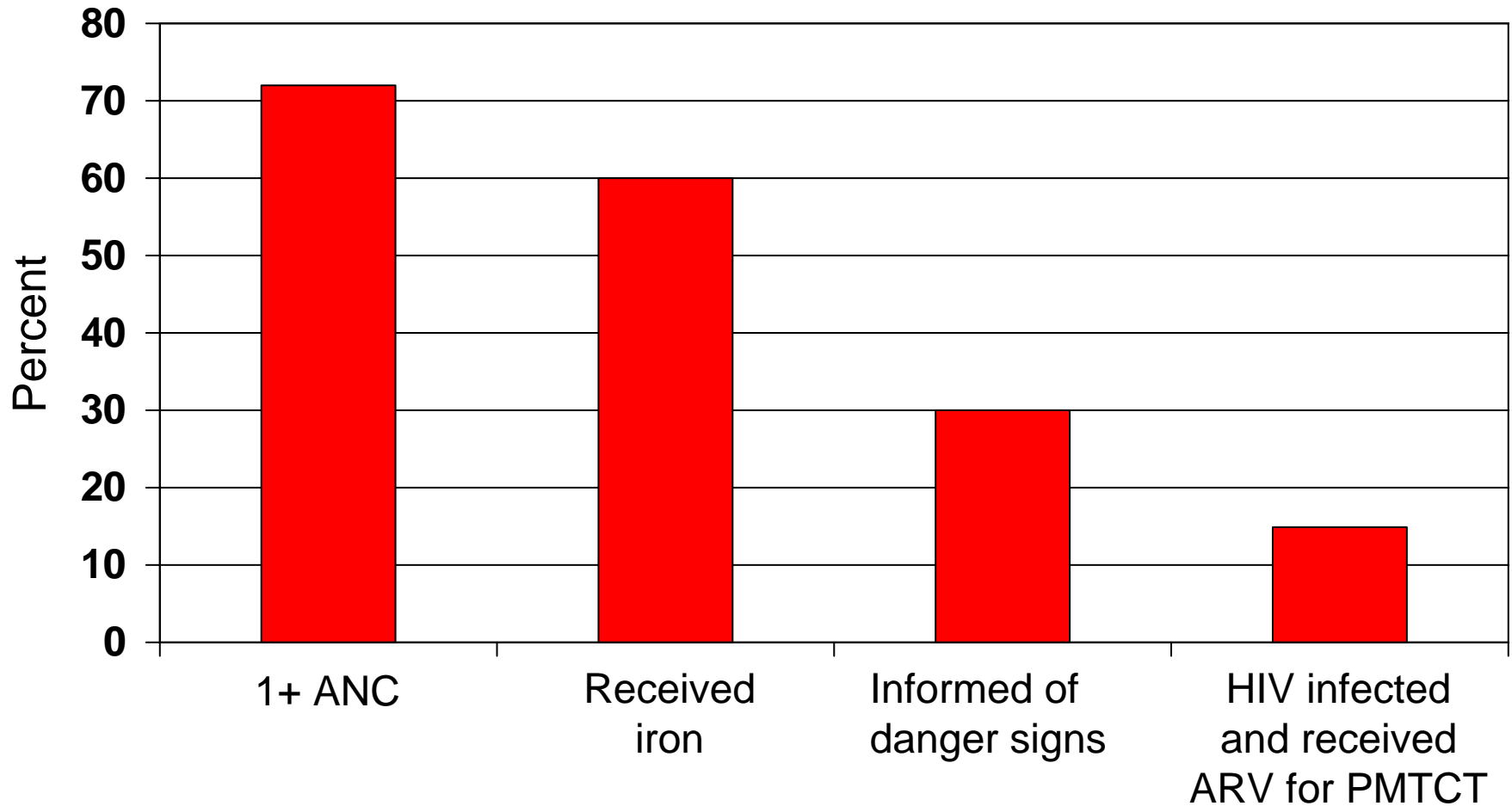
Disparities in Family Health Services

From DHS data in 38 MDG countdown countries

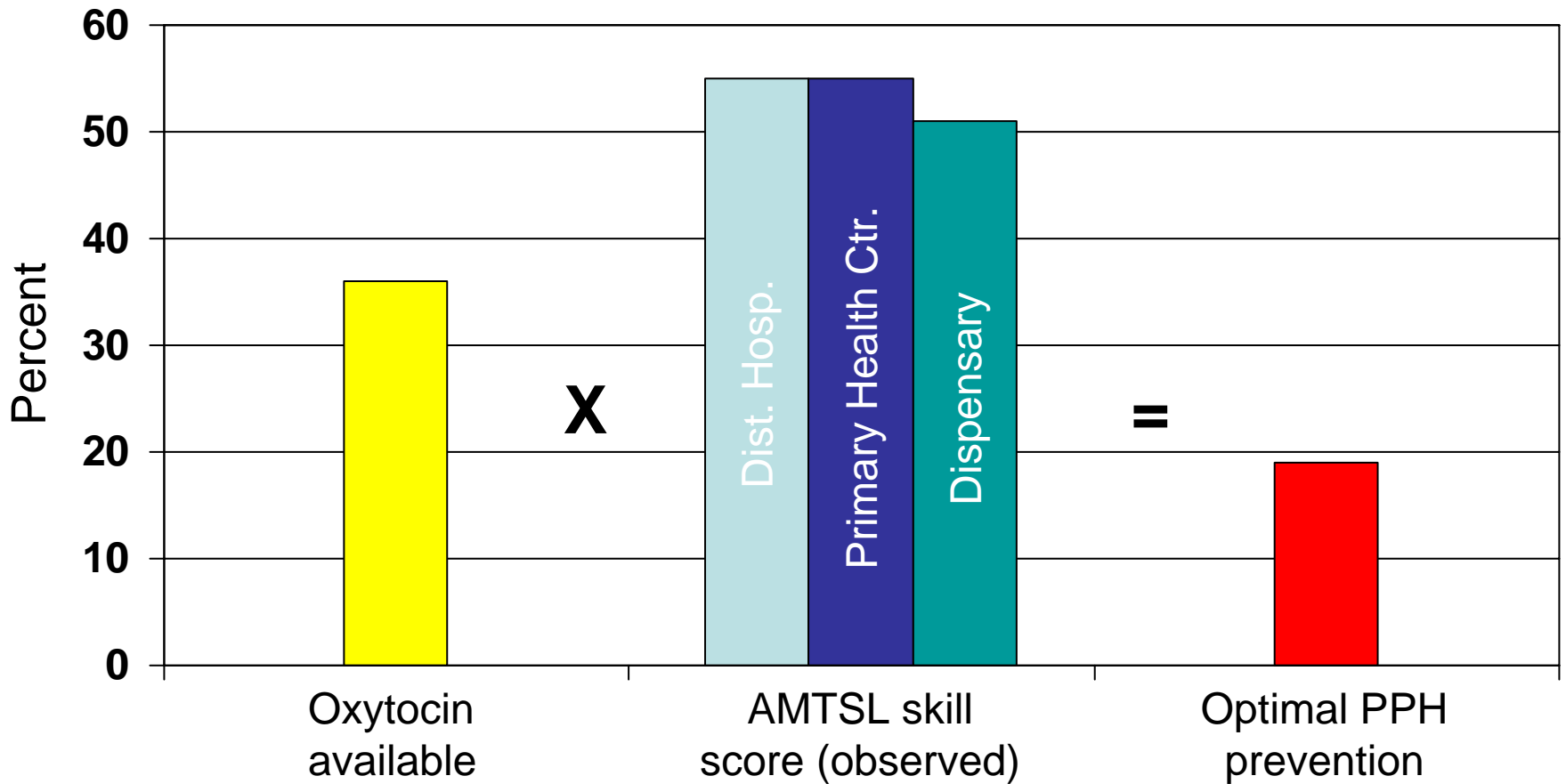
Bars represent range from lowest to highest wealth quintile



Quality Gap in Antenatal Care Sub-Saharan Africa

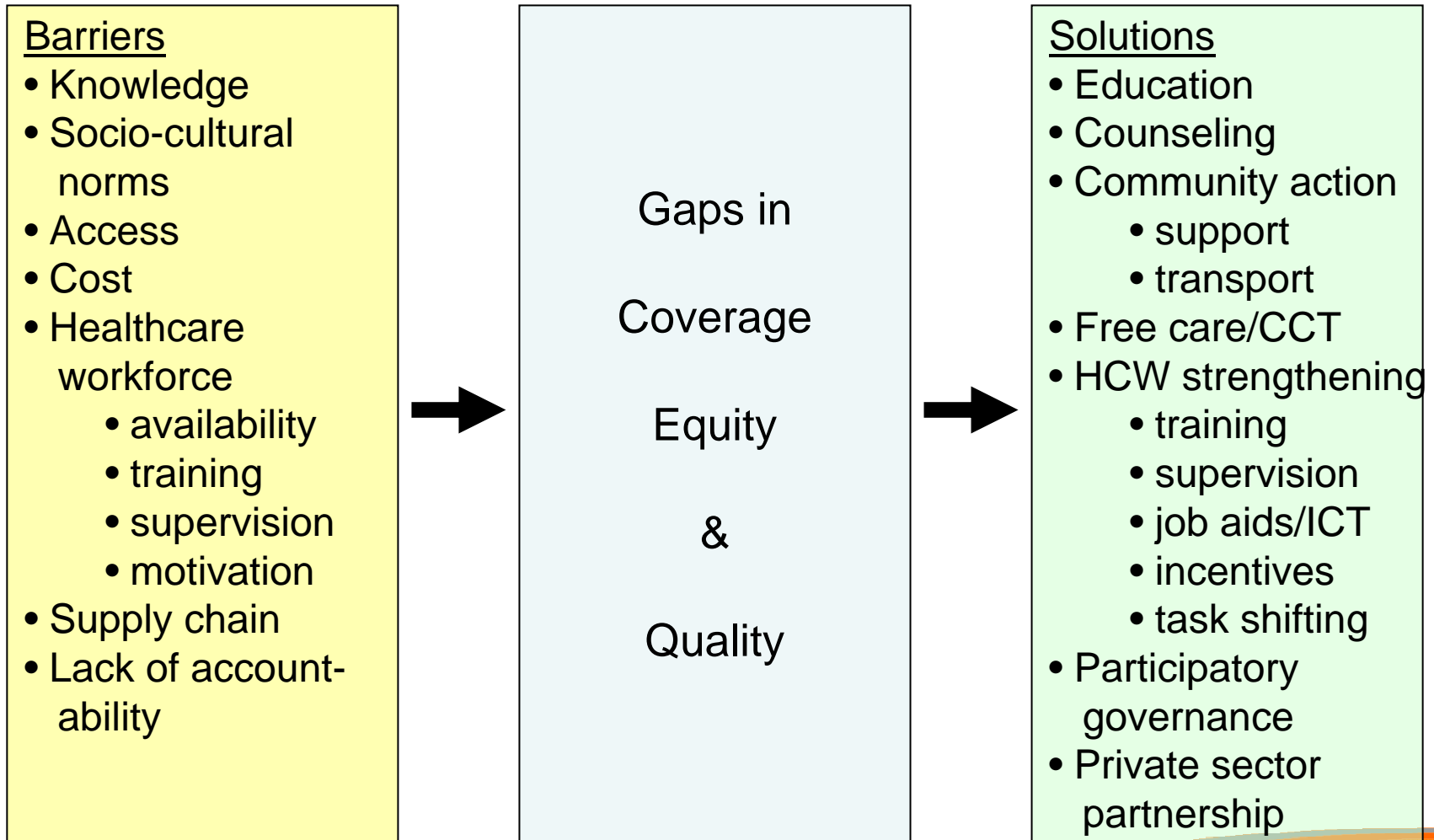


Post Partum Hemorrhage (PPH) Prevention, Tanzania



Source: Tanzania MoHSW, 2010

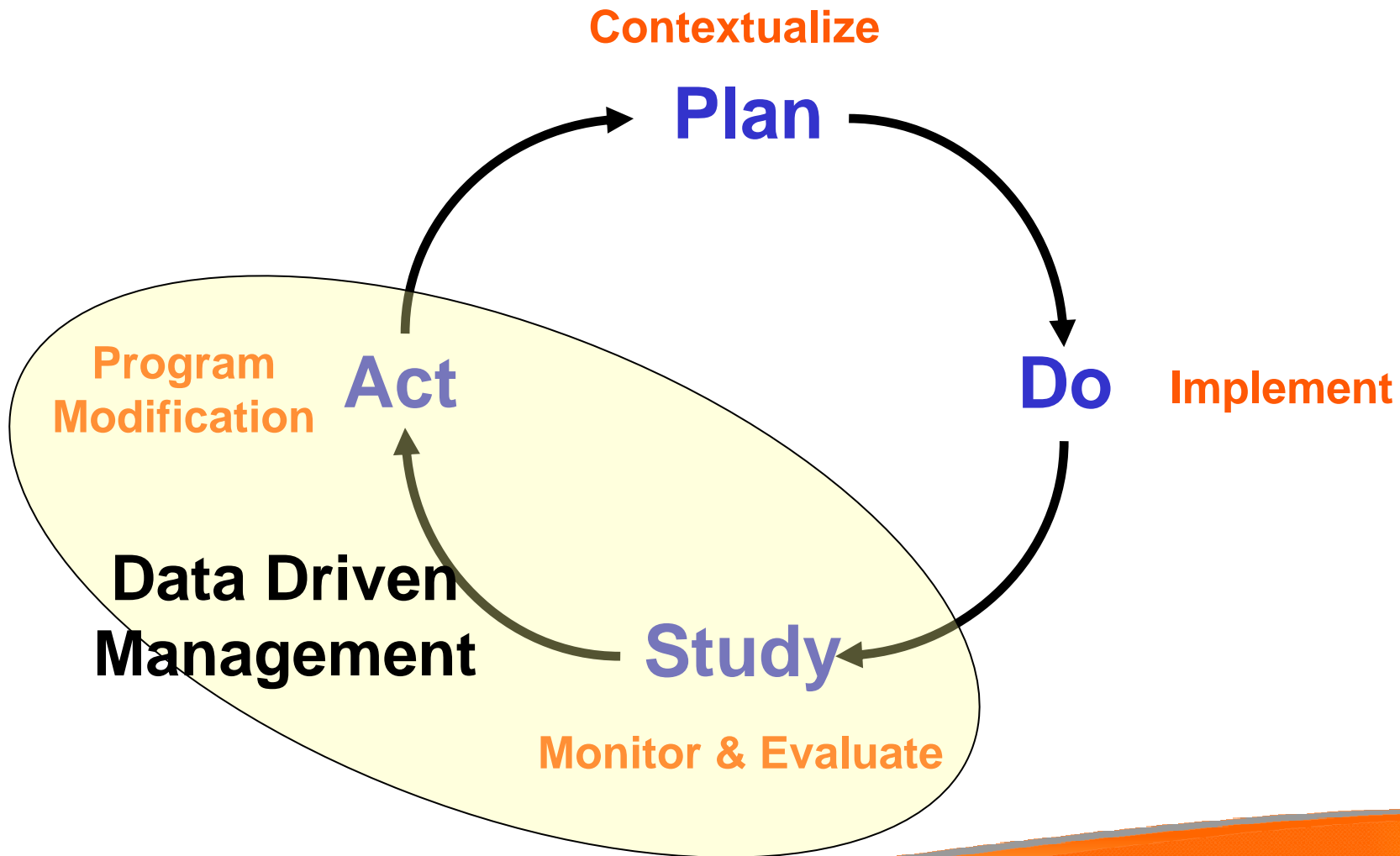
From Barriers to Solutions



The Case for Iterative Improvement

- Why effectiveness varies
 - Solutions may not address all the barriers relevant to the context
 - Solutions often are ineffectively or not uniformly implemented
 - People and norms are resistant to change
- Thus, no intervention is likely to work optimally the first time

The Quality Improvement Cycle



Real-Time Data for Management Decisions

- Information technology
 - Electronic medical records - longitudinal individually identified data
 - Analyze to assess gaps in coverage, quality and equity
 - Can generate reminders of when services are due and support supervision and feedback
- Integrated continuous surveys
 - Ongoing independent DHS-like surveys – families, facility assessment (supplies, HCW practices), exit interviews
 - Analyze by 3-month rolling averages to generate trend data



South Africa Confidential Enquiries into Maternal Deaths

- Approach
 - Audits of reported maternal deaths since 1997
 - Analysis reports site, obstetric cause (direct & indirect), and avoidable factors (patient, administrative & HCW related)
 - Recommendations indicators & targets, and approach to implementation
- Results – proportion of deaths with avoidable factors, missed opportunities and substandard care, 2005-07

Patient oriented	46%
Administrative	30%
HCW related	38%
Resuscitation	23%

South Africa Confidential Enquiries into Maternal Deaths (2)

Avoidable factors, missed opportunities and sub-standard care	
Patient oriented factors	<ul style="list-style-type: none">• Lack of ANC• Delay in seeking care• Unsafe abortion
Administrative factors	<ul style="list-style-type: none">• Lack of access to facilities• Lack of trained personnel• Lack of blood for transfusion
HCW related factors	<ul style="list-style-type: none">• Problems with diagnosis• Wrong level of care/no referral• Sub-standard case management

<http://www.doh.gov.za/docs/reports/2007/savingmothers.pdf>

Data Driven Management: Case Study - Avahan Program, India

- Problem identification
 - Based on the number of initial visits, if guidelines were followed, there should be ~4,000 quarterly follow-up visits
 - However, clinic records showed only ~1,900 visits
- Analysis
 - Data showed 10 of 41 clinics had less than $\frac{1}{4}$ follow-up visits
 - Further analysis by local NGO partners found stigmatization by doctors and long travel time to clinic to be problems
- Solution
 - Community committees oversee clinics and monitor data
 - Satellite and mobile clinics supplement static facilities

Quality Improvement (QI) Approaches

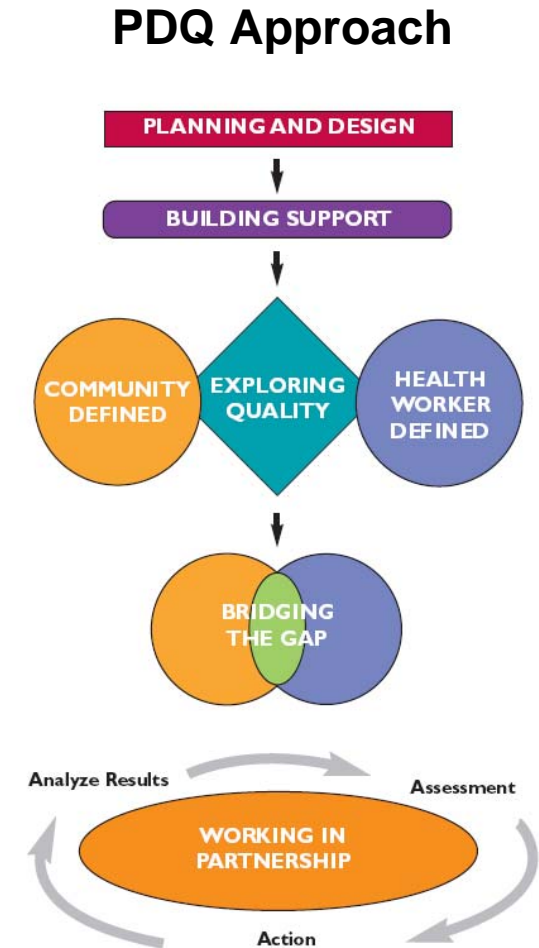
- The pursuit of continuous performance improvement using a systematic approach
 - Includes examination of processes in service delivery, operations research, teamwork and participatory management techniques
- Significant experience in low & middle income countries shows this approach effective as a program component
 - Successful approaches often concurrently address provider, patient and system interventions; and establish standards or guidelines with continuous measurement & feedback on progress
- In Malawi, the MaiKhanda program is using QI to improve maternal health outcomes in 3 districts

Leatherman, Int J Qual in Healthcare 2010; Kayongo, Int J Gynecol Obstet 2006
Berwick, BMJ 2004



Participatory Approaches

- Partnership Defined Quality (PDQ)
- Community Score Cards
- Health Facility Operations and Management Committees (Nepal)



CSC: http://www.pgexchange.org/index.php?option=com_content&view=article&id=143&Itemid=137

PDQ: <http://www.phishare.org/documents/Save/2265/>

Data Driven Management (DDM), QI and Implementation Science

- Link with implementation science
 - Optimal approaches to apply DDM & QI most effectively can be further explored; particularly for community engagement in the process
 - DDM & QI can be applied to increase the effectiveness of other innovative strategies being implemented and assessed
- Link with maternal health quality
 - Capacity building of MoH and local partners to use DDM & QI establishes a foundation for ongoing improvement and greater effectiveness and impact