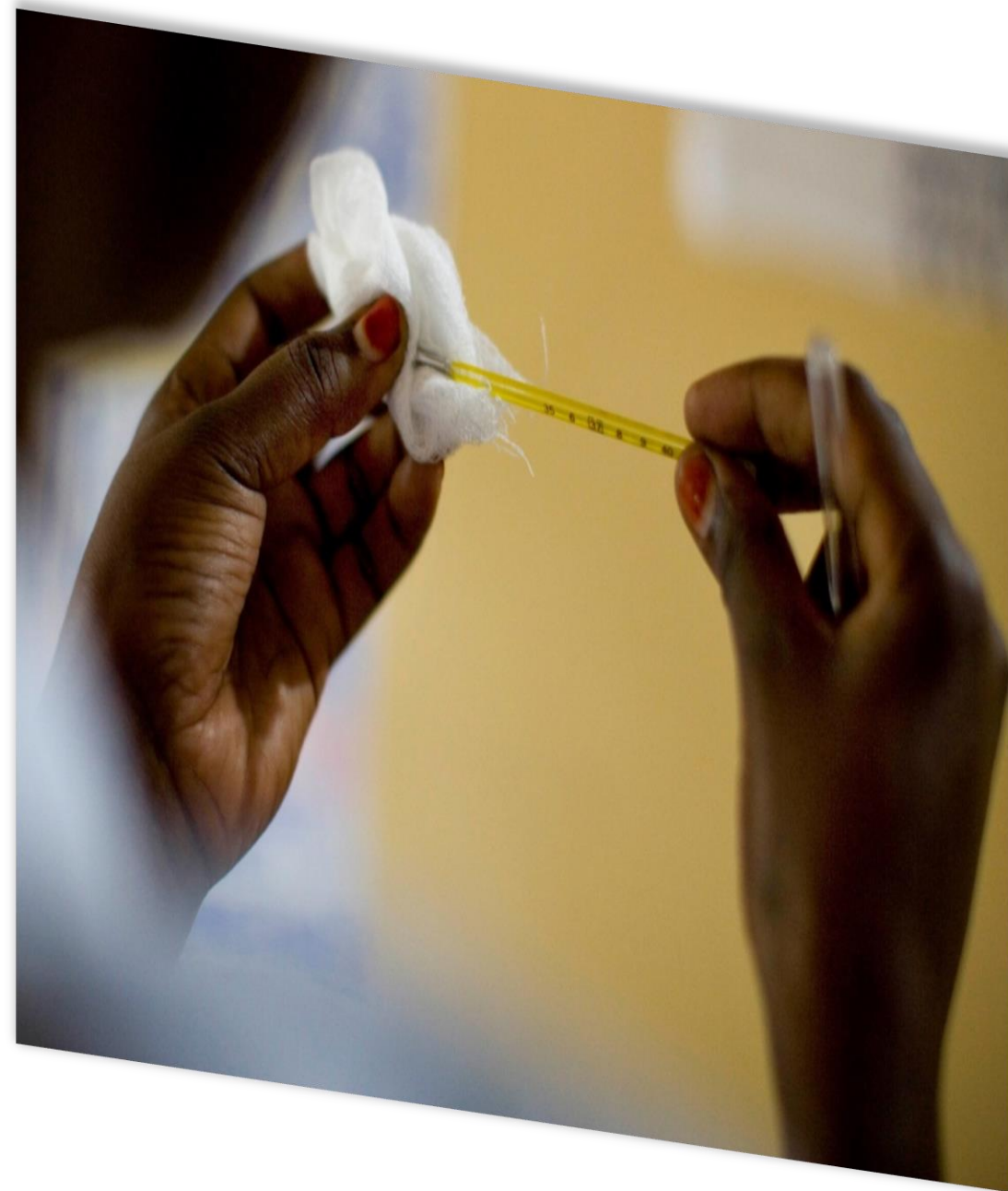# Flashpoint 7:
Infection Prevention and Management

John E. Varallo, MD, MPH, FACOG
Senior Technical Advisor
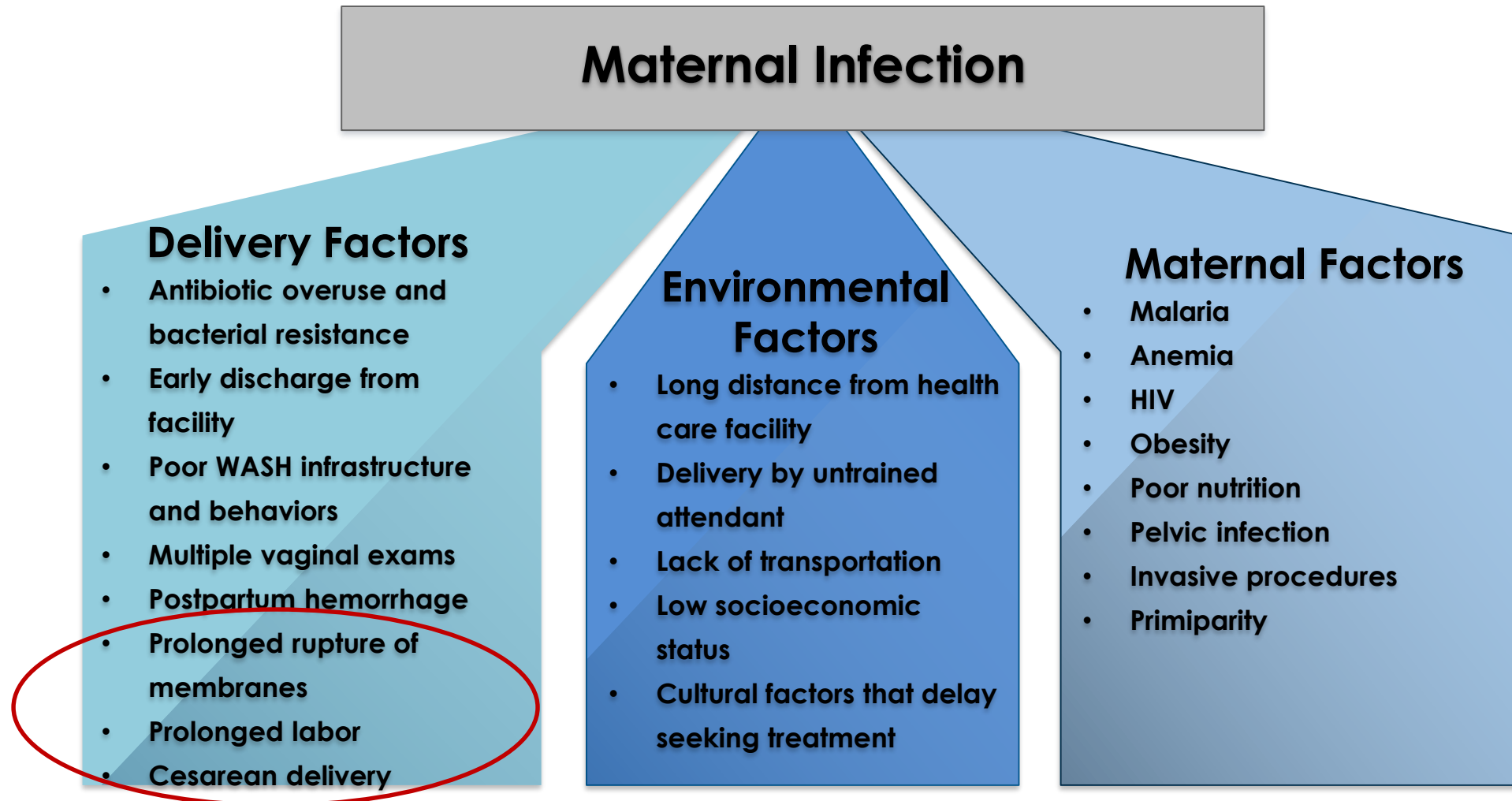**Jhpiego**

Cesarean Section Safety and Quality in Low Resource Settings
27 – 28 July 2017, Boston
Harvard School of Public Health

What are some risk factors for maternal sepsis?

Factors Influencing Occurrence of Maternal Sepsis

Maternal Infection

Delivery Factors
- Antibiotic overuse and bacterial resistance
- Early discharge from facility
- Poor WASH infrastructure and behaviors
- Multiple vaginal exams
- Postpartum hemorrhage
- Prolonged rupture of membranes
- Prolonged labor
- Cesarean delivery

Environmental Factors
- Long distance from health care facility
- Delivery by untrained attendant
- Lack of transportation
- Low socioeconomic status
- Cultural factors that delay seeking treatment

Maternal Factors
- Malaria
- Anemia
- HIV
- Obesity
- Poor nutrition
- Pelvic infection
- Invasive procedures
- Primiparity

Changing Landscape of Childbirth

Skilled providers and facility infrastructures have not kept pace

Facility births increasing

C-S increasingly common (18.6%)

Poor facility IP

IP guidelines outdated

Inappropriate Abx prophylaxis

Surgical technique; tissue oxygenation

Post-op care/monitoring

Increased numbers and rates of Post C-S infections, and M/M

Opportunities for Improvement on Maternal Infection

- **Better labor care**
- **Safe Cesarean Birth Practices***
  - Appropriate use of prophylactic antibiotics
  - Proper skin preparation technique
  - Vaginal cleansing with povidone-iodine immediately prior to cesarean section
  - Adequate tissue oxygenation
  - Proper surgical techniques
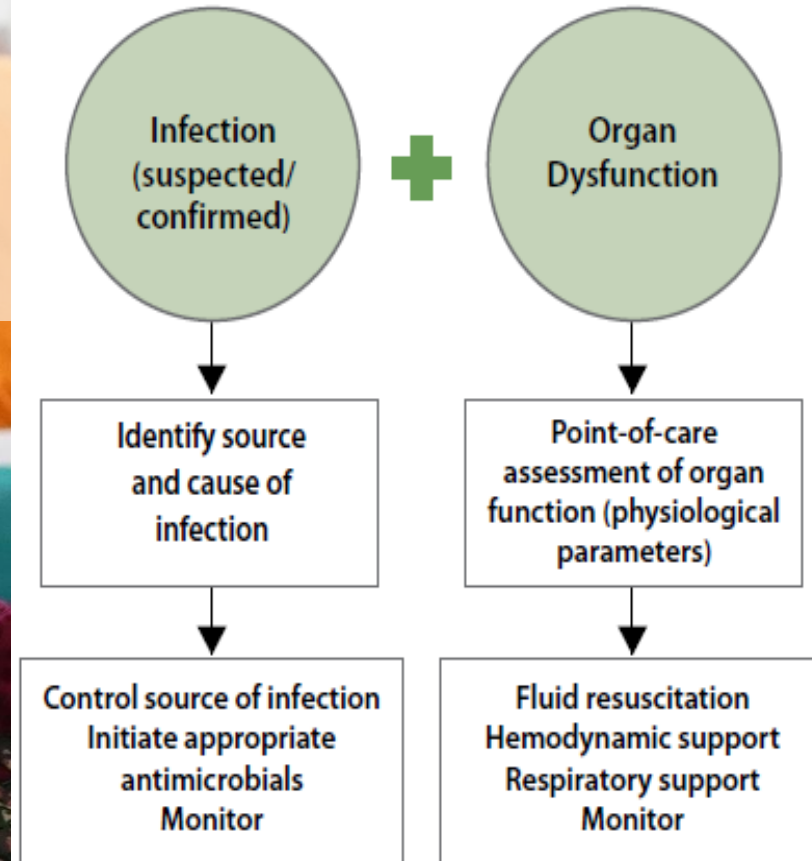 - Proper infection prevention (e.g., instrument processing and storage)

Safer Cesarean Births in Tanzania Project

Safe Surgery 2020

Jhpiego
an affiliate of Johns Hopkins University
innovating to save lives

USAID
FROM THE AMERICAN PEOPLE

Maternal and Child Survival Program

Opportunities for Improvement on Maternal Infection

- Post-operative care and monitoring
- Stratification of discharge
- Modified obstetric early warning score; UK Red Flag Sepsis
- New WHO definition of Maternal Sepsis

Infection + Organ Dysfunction = Maternal Sepsis

Infection (suspected/confirmed) ➕ Organ Dysfunction

Infection (suspected/confirmed) → Identify source and cause of infection → Control source of infection / Initiate appropriate antimicrobials / Monitor

Organ Dysfunction → Point-of-care assessment of organ function (physiological parameters) → Fluid resuscitation / Hemodynamic support / Respiratory support / Monitor

Say, LANCET 2014

Thank you