PRE-EMPT

improving pre-eclampsia/eclampsia care across the continuum

a place of mind
UBC
CHILD & FAMILY RESEARCH INSTITUTE
St George's University of London

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

Pre-eclampsia defined

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Definition (classical)**
  - **Hypertension**
    - **sBP ≥140mmHg and/or dBP ≥90mmHg**
  - **Significant proteinuria**
    - **≥300mg protein/24 hours**
    - **≥30mg protein/mmol creatinine on spot urinary protein:creatinine ratio**
    - **≥++ dipstick proteinuria**

- **This paradigm does not fully recognise the systemic nature of pre-eclampsia**

Pre-eclampsia redefined

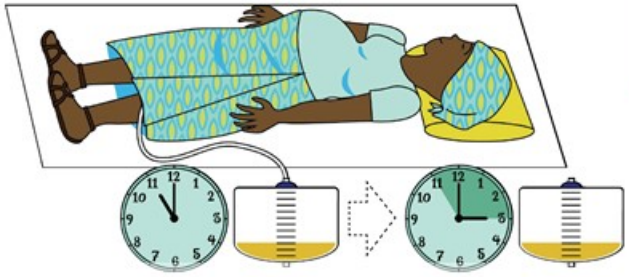
pre-eclampsia is more than hypertension & proteinuria

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

proteinuria

hypertension

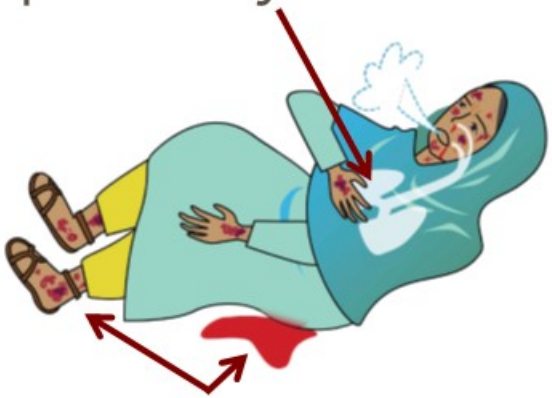
pre-eclampsia



acute renal failure

stroke

pulmonary oedema



DIC/abruption

eclampsia

PRE-EMPT overview

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Five objectives**
  - Prevention
  - Monitoring
  - Treatment
  - Global Pregnancy CoLaboratory
  - Knowledge translation

Prevention

the Calcium And Pre-eclampsia trial

PI: Justus Hofmeyr

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

Calcium And Pregnancy (CAP) Trial

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Rationale**
  - In diet-deficient (calcium <600mg/d) women, calcium supplementation (≥1000mg/d) in 2nd half of pregnancy decreases the incidence of pre-eclampsia
    - i.e., proteinuric GH (RR 0.68 [95% CI 0.49, 0.94])
  - Is the reduction in pre-eclampsia an epiphenomenon of decreasing BP by 3-5mmHg?
  - Might calcium mask risks (e.g., HELLP)?
  - Might earlier (preconceptual & early pregnancy) calcium have greater effect?

A new review

low-dose calcium and pre-eclampsia prevention

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Data collection and analysis**
  - Randomised and quasi-randomised trials of low-dose calcium (<1g /day), with/without other supplements.

- **Main results**
  - Pre-eclampsia reduced consistently (9 trials, n=2234, RR 0·38 [0·28-0·52])

- **Conclusions**
  - Limited data consistent with reducing the risk of pre-eclampsia & have implications for current WHO guidelines and their global implementation

Hofmeyr *et al. BJOG* 2014

Calcium And Pregnancy (CAP) Trial

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Trial design**
  - Placebo-controlled RCT
- **Population**
  - South Africa, Zimbabwe, & Argentina
  - Women who have previously experienced severe pre-eclampsia or eclampsia (± perinatal loss), who are planning another pregnancy
- **Enrolment (before pregnancy) until 20wk GA**
  - Intervention: Calcium supplementation (500mg/d)
  - Control: Placebo
- **Both arms to receive Ca2+ from 20^{+0}wk**
- **Outcomes**
  - Primary: pre-eclampsia (proteinuric GH)
  - Secondary

Calcium And Pregnancy (CAP) Trial

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

ARTICLE IN PRESS

Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health xxx (2015) xxx–xxx

Contents lists available at ScienceDirect

Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health

journal homepage: www.elsevier.com/locate/preghy

Original Article

The effect of calcium supplementation on blood pressure in non-pregnant women with previous pre-eclampsia: An exploratory, randomized placebo controlled study

G.J. Hofmeyr [a,b], A.H. Seuc [c], A.P. Betrán [c], T.D. Purnat [d], A. Ciganda [e], S.P. Munjanja [f], S. Manyame [f], M. Singata [g], S. Fawcus [h,i], K. Frank [j], D.R. Hall [k], G. Cormick [e,*], J.M. Roberts [l], E.F. Bergel [e], S.K. Drebit [m], P. Von Dadelszen [m], J.M. Belizan [e], on behalf of the Calcium and Pre-eclampsia Study Group

	Calcium			Placebo			Difference	
	N	Mean	SD	*N*	Mean	SD	MD	95% CI
With severe pre-eclampsia in previous pregnancy								
Week after randomization	105	12.4	1.2	112	12.5	1.5		
Systolic BP (mmHg)	105	−6	14.7	112	−2.8	15.6	3.2	−0.9–7.3
Diastolic BP (mmHg)	105	−2.6	10.9	112	0.8	11.3	3.4*	0.4–6.4
Without severe pre-eclampsia in previous pregnancy								
Week after randomization	76	12.4	1.4	74	12.6	1.8		
Systolic BP (mmHg)	76	−1.4	14.3	74	−2.4	12.4	−1.1	−5.4–3.3
Diastolic BP (mmHg)	76	1.7	12.2	74	−0.6	11.4	−2.3	−6.1–1.5

* Statistically significant.

Monitoring

the miniPIERS model: development & validation

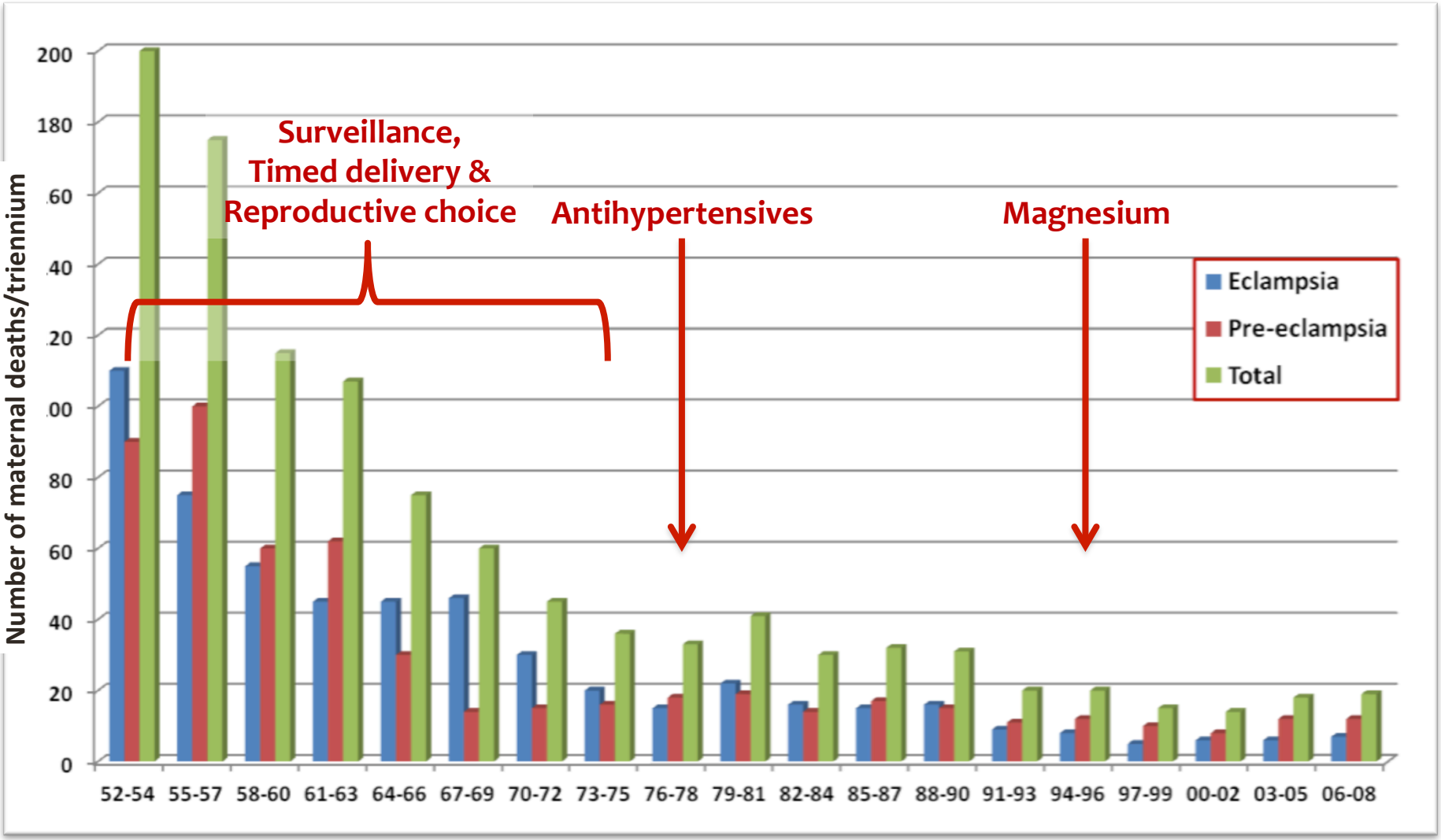
PI: Peter von Dadelszen

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

Maternal death from pre-eclampsia

by diagnosis – UK; 1952 – 2008

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment



Data from CEMD ,UK

PIERS combined adverse maternal outcome

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

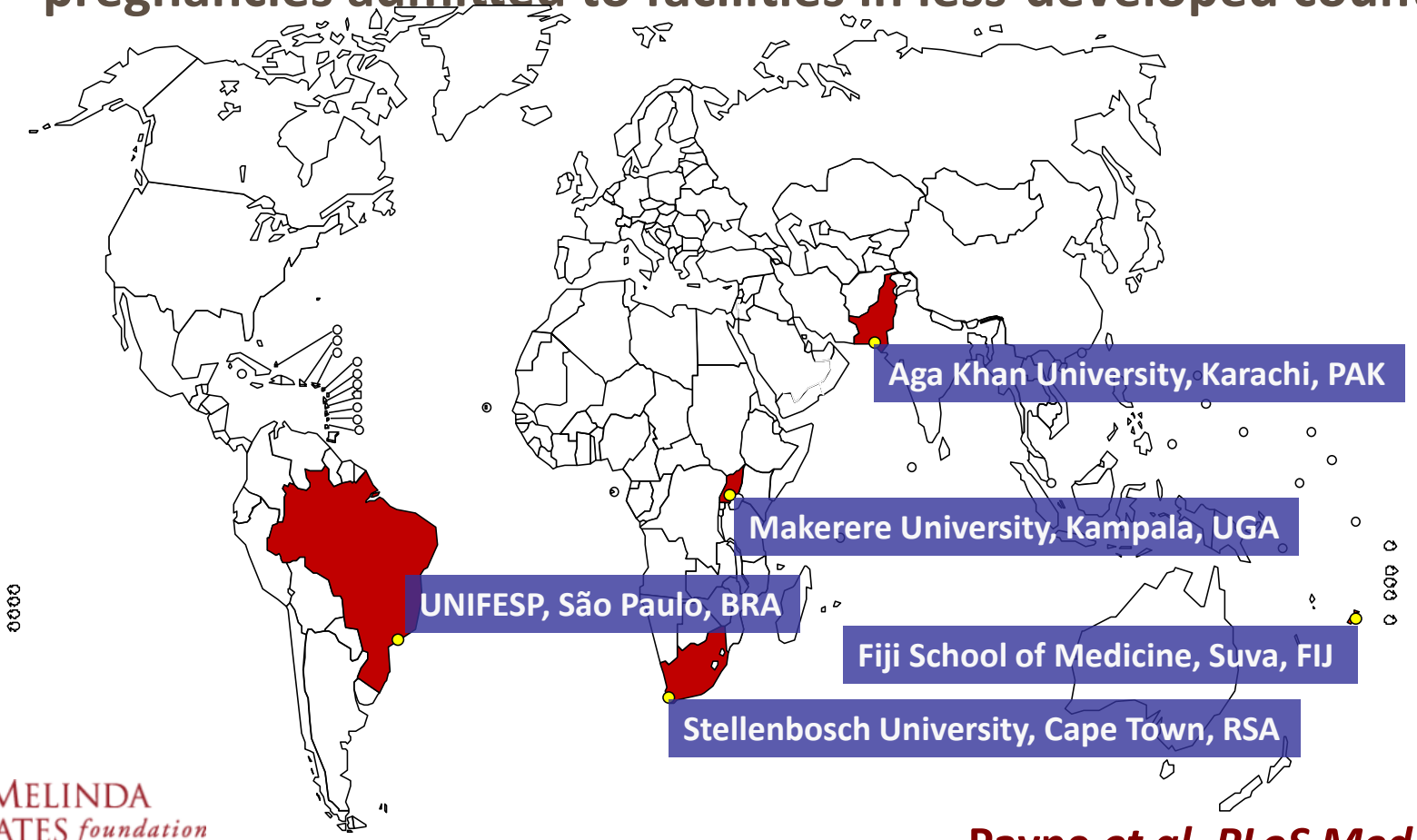
One or more of maternal morbidity or mortality:
Maternal death
Eclampsia (≥1)
Glasgow coma score <13
CVA/RIND/TIA
Cortical blindness/retinal detachment/PRES
Positive inotropic support
Infusion of a 3rd parenteral antihypertensive
Myocardial ischaemia/infarction
SpO_2 <90%; ≥50% FiO_2 for >1hr; pulmonary oedema
Intubation (other than for C/S)
Transfusion of any blood product
Platelets <$50x10^9$/L with no transfusion
Hepatic dysfunction
Hepatic haematoma/rupture
Acute renal insufficiency (no prior renal disease)
Acute renal failure (prior renal disease)
Placental abruption
Other (ascites/Bell's palsy)

miniPIERS

study design

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Study design**
  - **miniPIERS recruited 2081 women with HDP-complicated pregnancies admitted to facilities in less-developed countries**



BILL & MELINDA GATES foundation

Payne *et al. PLoS Med* 2014

miniPIERS model

development & validation with bootstrapping

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **AUC ROC = 0.77 [95% CI 0.73, 0.81]**

- **Includes**
  - **Parity (0, ≥1), gestational age, maternal chest pain/dyspnoea, maternal headache/visual disturbances, maternal abdominal pain with bleeding, sBP, and dipstick proteinuria**

- **Dipstick proteinuria not a necessary component - included for face validity**
  - **Highly predictive of perinatal mortality**
    - **4+: OR = 7.1 [95% CI 3.3, 15.5]**

Payne *et al. PLoS Med* 2014

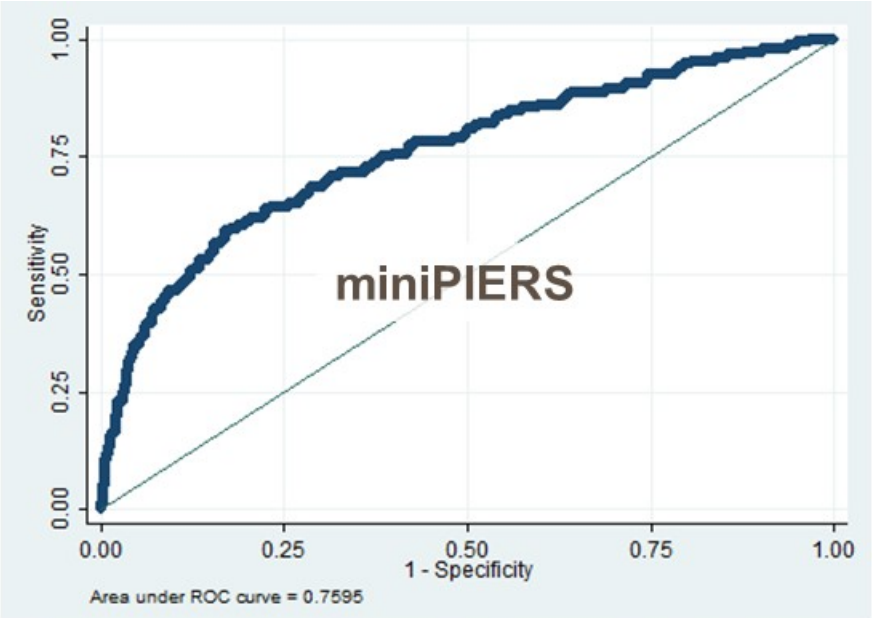
miniPIERS model + SpO2

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

SAVING LIVES AT BIRTH:
A GRAND CHALLENGE FOR DEVELOPMENT

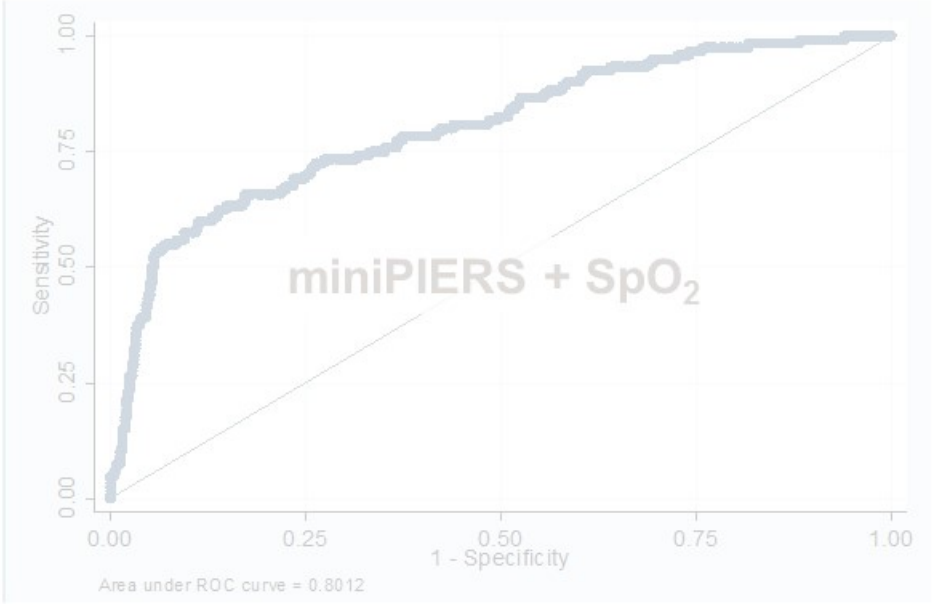
miniPIERS model + SpO_2

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment



[AUC ROC 0.77 (95% CI 0.74, 0.80)]

- High-risk group defined using a predicted probability ≥25%
- Identify 65% of women with adverse outcomes



[AUC ROC 0.80 (95% CI 0.76, 0.85)]

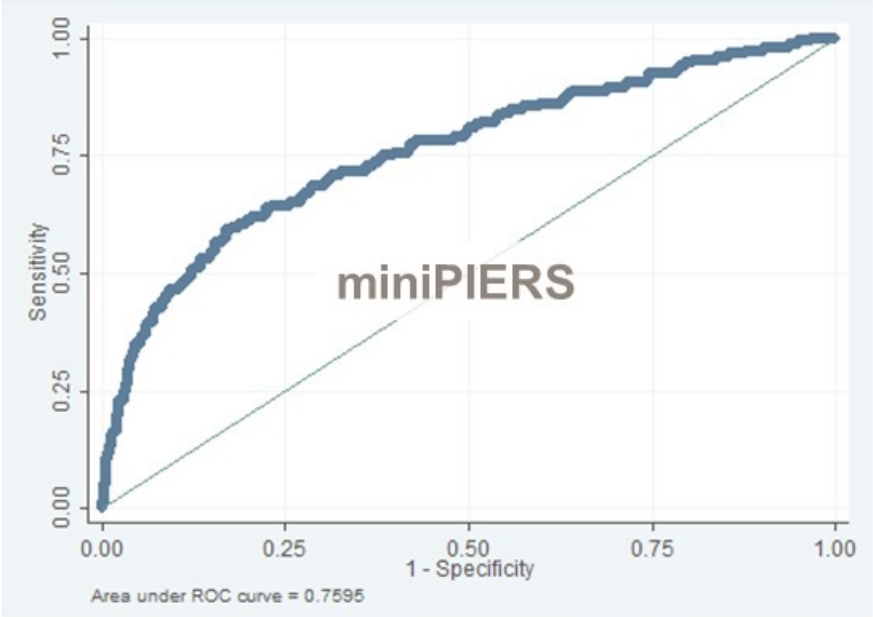
- High-risk group defined using a predicted probability ≥25%
- Identify 85% of women with adverse outcomes

BILL & MELINDA GATES foundation

Payne *et al. PLoS Med* 2014

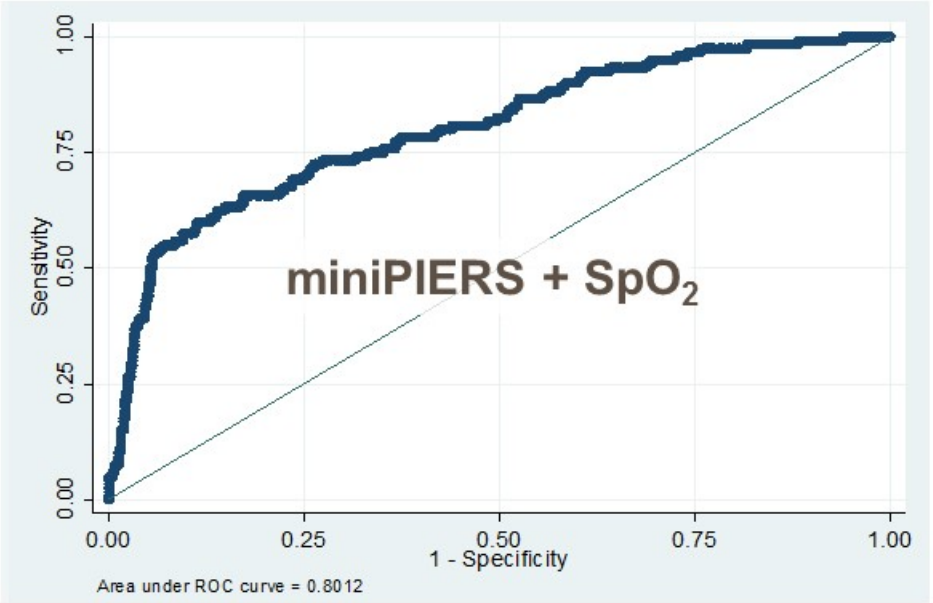
miniPIERS model + SpO_2

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment



[AUC ROC 0.77 (95% CI 0.74, 0.80)]

- High-risk group defined using a predicted probability ≥25%
- Identify 65% of women with adverse outcomes



[AUC ROC 0.80 (95% CI 0.76, 0.85)]

- High-risk group defined using a predicted probability ≥25%
- Identify 85% of women with adverse outcomes

BILL & MELINDA GATES foundation

Payne *et al. PLoS Med* 2014

SAVING LIVES AT BIRTH: A GRAND CHALLENGE FOR DEVELOPMENT

Payne *et al. JOGC* 2015

PIERS on the Move

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

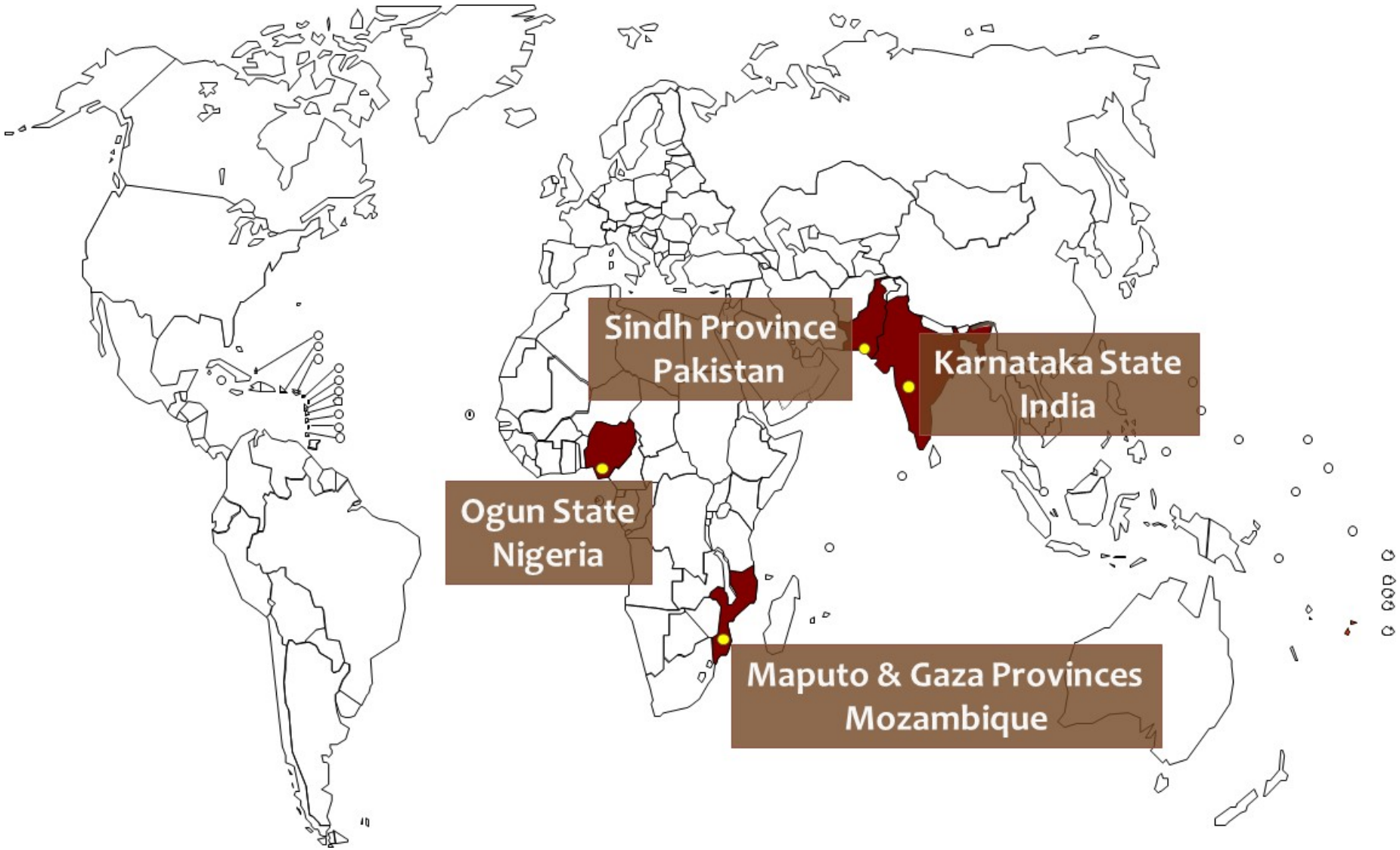
Dunsmuir *et al. IEEE J Biomed Health Inform* 2014

Treatment

the Community-Level Interventions in Pregnancy (CLIP) trials

PI: Peter von Dadelszen

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment



PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

CLIP FEASIBILITY STUDIES

PIs: Rahat Qureshi & Peter von Dadelszen

CLIP Feasibility Studies

methods

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Multiple methods of data collection employed to explore feasibility of the CLIP Trial**
  - Focus Group Discussions
  - In Depth Interviews
  - Document Review
  - Participatory Observation
  - Facility Assessment
  - Self-Administered Questionnaires
  - Community Surveillance

CLIP Feasibility Studies

publications

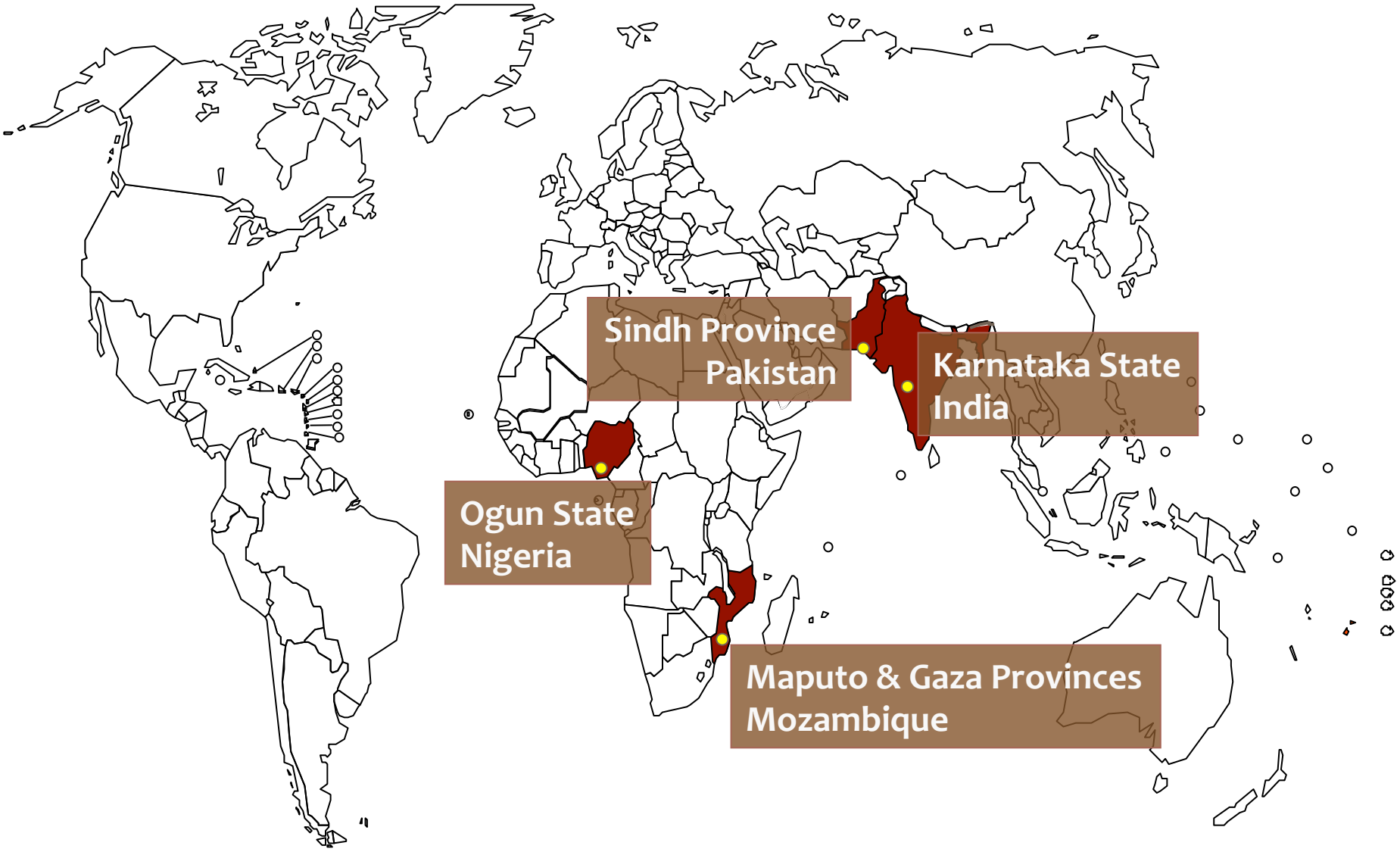
PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Three supplements to *BMC Reproductive Health***
  - **December 2015**
    - **Mixed-methodology for assessing the feasibility of Community Level Interventions for Pre-eclampsia in South Asian and African contexts**
    - **Community perceptions of pre-eclampsia (all four countries)**
    - **Health care seeking behaviours for obstetric care (all four countries)**
  - **Women Deliver 2016**
    - **Human resource constraints and the prospect of task-shifting (all four countries)**
    - **Community health worker knowledge and management of pre-eclampsia (all four countries)**
    - **The influence of relationships on maternal well-being in Mozambique**
    - **The spatial epidemiology of maternal deaths in Gaza and Maputo provinces, Mozambique**
    - **Personal relationships, social capital and resilience in Southern Mozambique**
  - **RCOG World Congress 2016**
    - **Estimates of pre-eclampsia, maternal and perinatal mortality: results from the Community Level Interventions for Pre-eclampsia (CLIP) baseline surveys (all four countries)**

CLIP sites

≈87,000 pregnant women

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment



App-guided CLIP triggers to initiate community interventions

OVERCOMING THE 3 DELAYS

- miniPIERS p ≥25% ----------▶ Triage/Transport/Treatment
- sBP ≥160 ----------▶ Triage/Transport/Treatment
- eclampsia ----------▶ Triage/Transport/Treatment
- pv bleeding (presumed abruption) ----------▶ Triage/Transport/Treatment
- ++++ proteinuria ----------▶ Triage/Transport/Treatment
- absent fetal movements ≥12h ----------▶ Triage/Transport/Treatment

facility capacity enhancement
CME/CPD
M&M reviews

community engagement & cHCP education

home-based
(± transfer to PHC)
or PHC-based assessment & initial management

urgent transport (<4h)
(if: miniPIERS p ≥25%, sBP ≥160, stroke, coma, eclampsia, pv bleeding, ++++ protein, absent FM ≥12h)

non-urgent transport (<24h)
(if: miniPIERS p <25%, sBP 140-159mmHg, <++ +++ protein)

CEmOC facility for definitive care
ongoing BP control
ongoing $MgSO_4$
delivery – IOL vs C/S
newborn care

App-guided CLIP package of care (≥1 trigger)

750mg methyldopa po	(only if sBP ≥160; not repeated in PHC)
10g $MgSO_4$ im	(if sBP ≥160, eclampsia, miniPIERS p ≥25%, pv bleeding + sBP≥140; not repeated in PHC)
urgent transport	(if sBP ≥160, eclampsia, coma, stroke, miniPIERS p ≥25%, pv bleeding, ++++ protein, no FM ≥12h)

App-guided CLIP triggers to initiate community interventions

OVERCOMING THE 3 DELAYS

miniPIERS n >25% ----------▶ Triage/Transport/Treatment

facility capacity enhancement

CME/CPD

M&M reviews

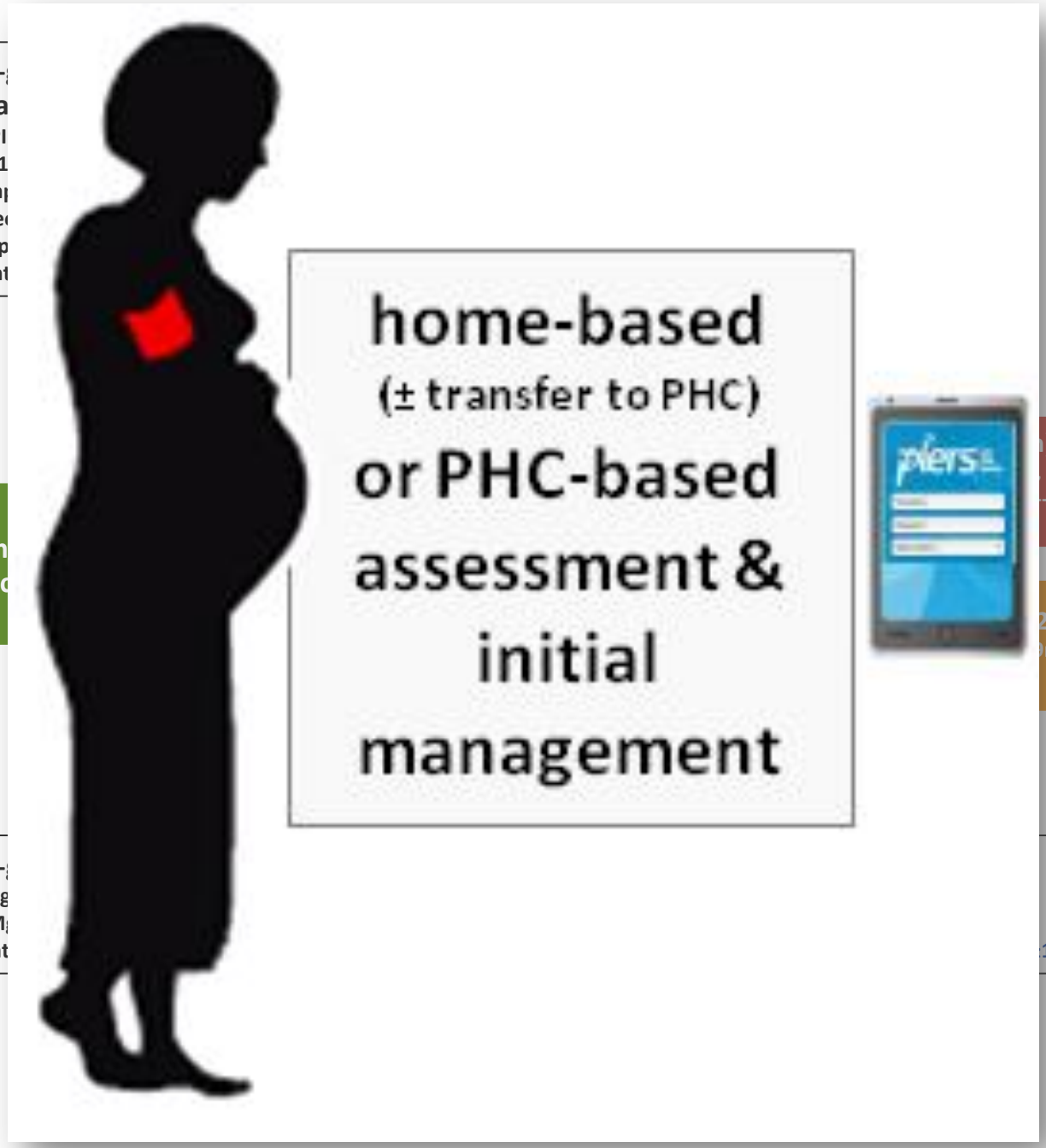
CEmOC facility for definitive care

ongoing BP control

ongoing $MgSO_4$

delivery – IOL vs C/S

newborn care



facility capacity enhancement
CME/CPD
M&M reviews

CEmOC facility for definitive care
ongoing BP control
ongoing $MgSO_4$
delivery – IOL vs C/S
newborn care

App-guided CLIP triggers to initiate community interventions

OVERCOMING THE 3 DELAYS

- miniPIERS p ≥25% ----------▶ Triage/Transport/Treatment
- sBP ≥160 ----------▶ Triage/Transport/Treatment
- eclampsia ----------▶ Triage/Transport/Treatment
- pv bleeding (presumed abruption) ----------▶ Triage/Transport/Treatment
- ++++ proteinuria ----------▶ Triage/Transport/Treatment
- absent fetal movements ≥12h ----------▶ Triage/Transport/Treatment

home-based
(± transfer to PHC)
or PHC-based assessment & initial management

facility capacity enhancement
CME/CPD
M&M reviews

CEmOC facility for definitive care
ongoing BP control
ongoing $MgSO_4$
delivery – IOL vs C/S
newborn care

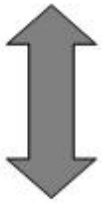
App-guided CLIP triggers to initiate community interventions

OVERCOMING THE 3 DELAYS

miniPIERS p ≥25%	Triage/Transport/Treatment
sBP ≥160	Triage/Transport/Treatment
eclampsia	Triage/Transport/Treatment
pv bleeding (presumed abruption)	Triage/Transport/Treatment
++++ proteinuria	Triage/Transport/Treatment
absent fetal movements >12h	Triage/Transport/Treatment

facility capacity enhancement

home-based
(± transfer to PHC)
or PHC-based assessment & initial management



App-guided CLIP package of care (≥1 trigger)

750mg methyldopa po	(only if sBP ≥160; not repeated in PHC)
10g $MgSO_4$ im	(if sBP ≥160, eclampsia, miniPIERS p ≥25%, pv bleeding + sBP≥140; not repeated in PHC)
urgent transport	(if sBP ≥160, eclampsia, coma, stroke, miniPIERS p ≥25%, pv bleeding, ++++ protein, no FM ≥12h)

App-guided CLIP triggers to initiate community interventions

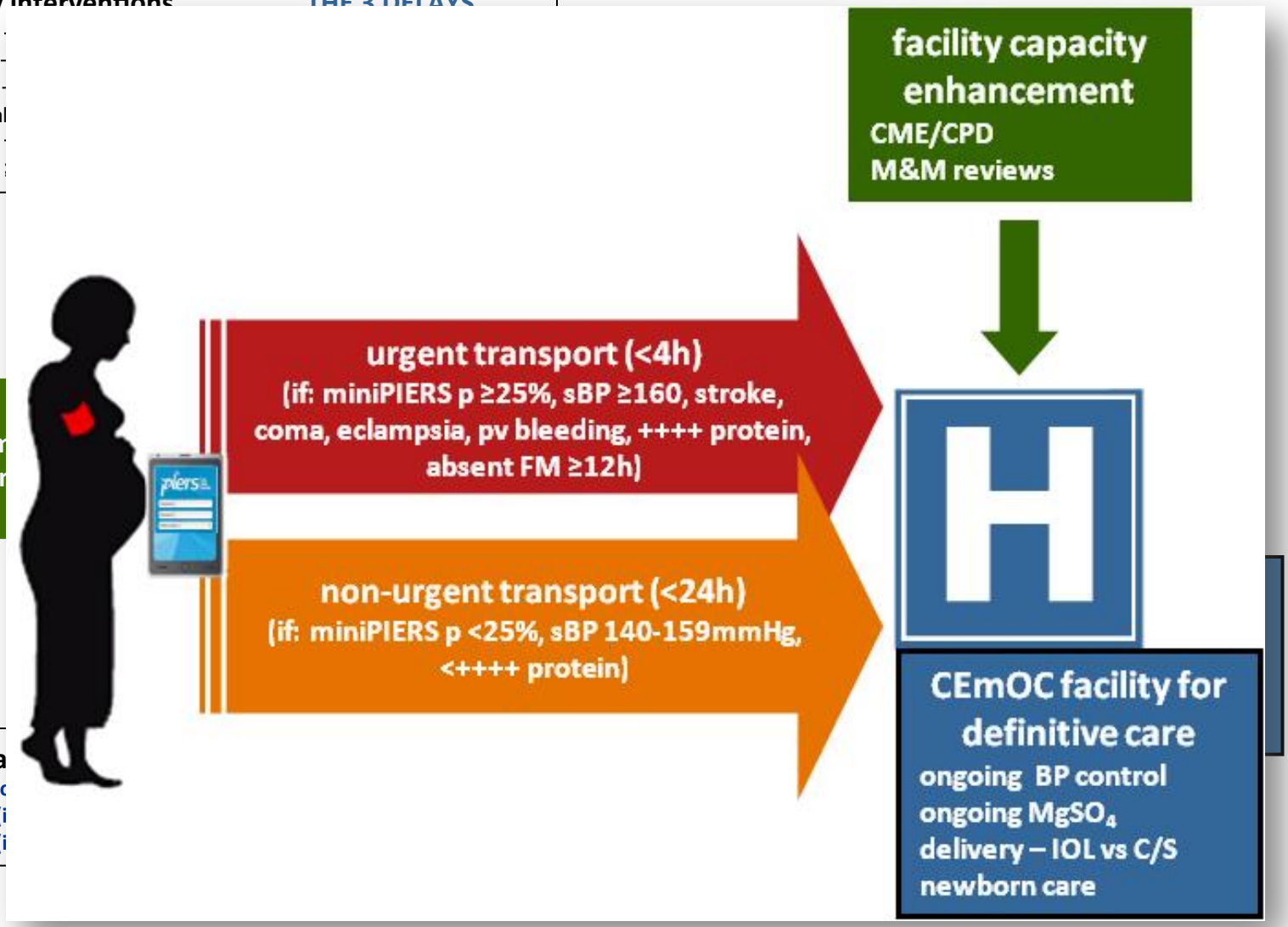
OVERCOMING THE 3 DELAYS

- miniPIERS p ≥25%
- sBP ≥160
- eclampsia
- pv bleeding (presumed al
- ++++ proteinuria
- absent fetal movements

community engagem & cHCP educatio

App-guided CLIP pa

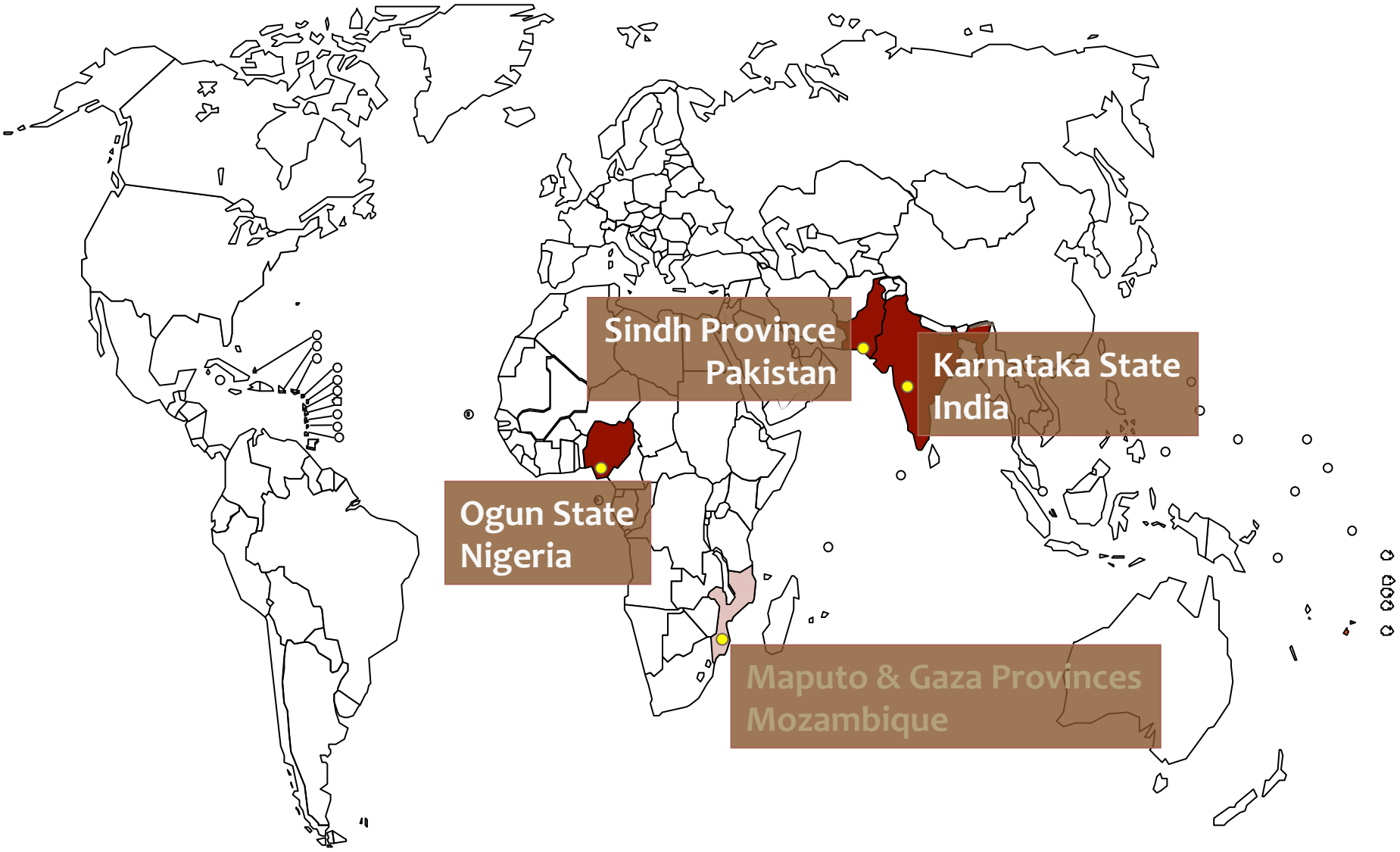
- 750mg methyldopa po (c
- 10g $MgSO_4$ im (i
- urgent transport (i



CLIP sites – pilot trials

≈17,000 pregnant women

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment



CLIP pilot trial

interim data

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Nigeria**
  - 10,320 women enrolled
  - 3248 women visited
  - 5% incidence HDP
  - 121/163 (74%) referrals immediately accepted

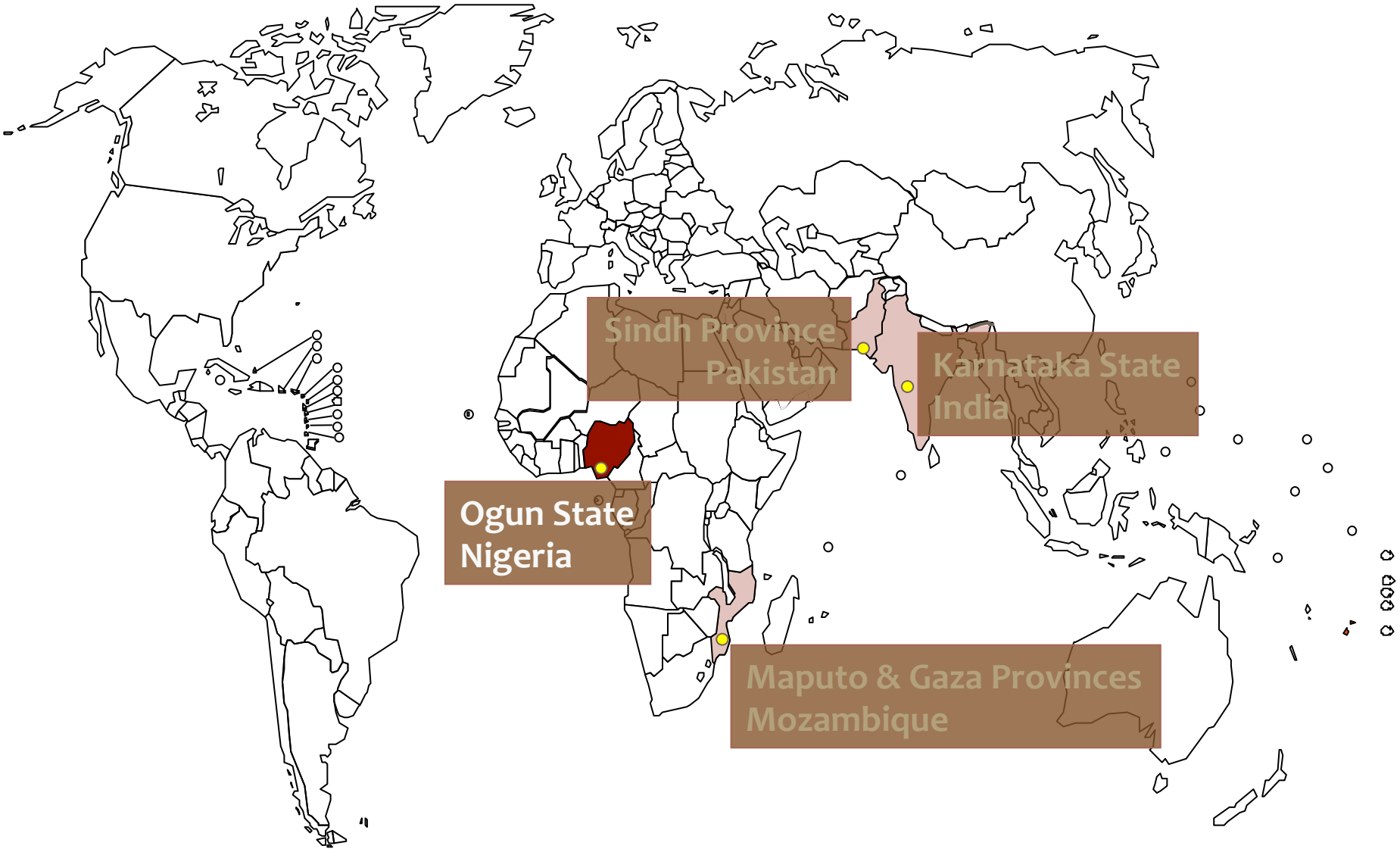
- **Pakistan**
  - 4356 women enrolled
  - 1653 women visited
  - 7.7% incidence HDP
  - 82/127 (65%) referrals immediately accepted

- **India**
  - 2209 women enrolled
  - 964 women visited
  - 4.9% incidence HDP
  - 33/47 (70%) referrals immediately accepted

CLIP site – CRADLE device

≈87,000 pregnant women

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

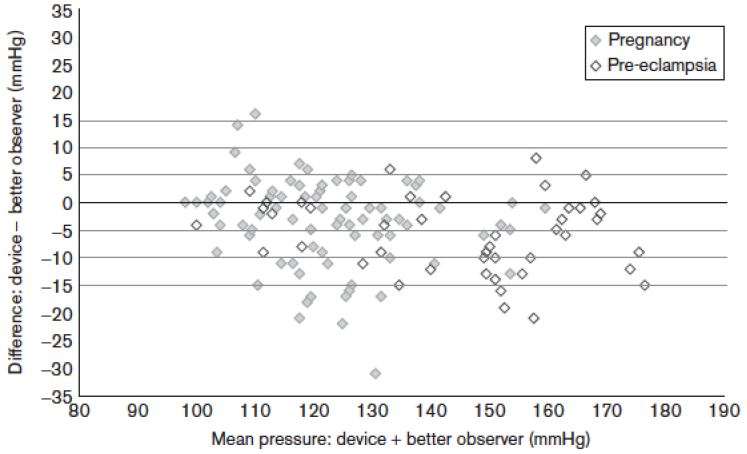


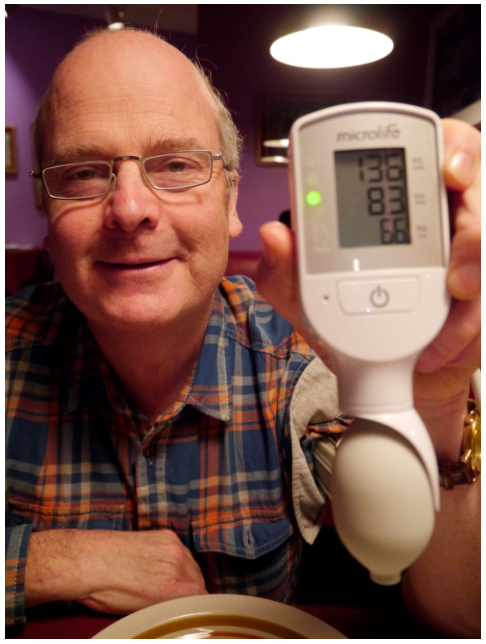
Additional diagnostic performance

Nigeria

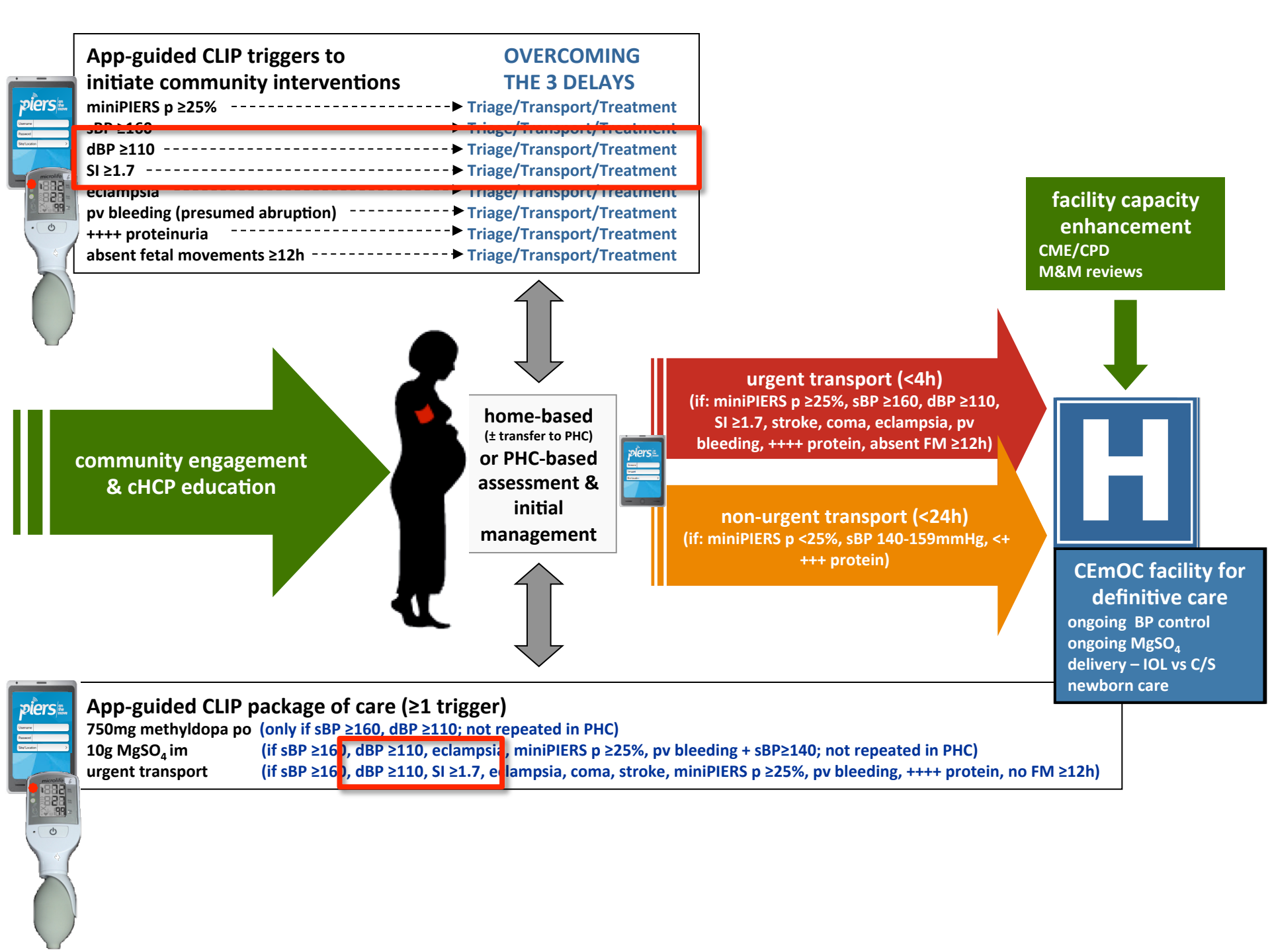
PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Microlife**
  - **CRADLE BP device**





Nathan *et al. Blood Press Monit* 2015


App-guided CLIP triggers to initiate community interventions
OVERCOMING THE 3 DELAYS
miniPIERS p ≥25% ▶ Triage/Transport/Treatment
sBP ≥160 ▶ Triage/Transport/Treatment
dBP ≥110 ▶ Triage/Transport/Treatment
SI ≥1.7 ▶ Triage/Transport/Treatment
eclampsia ▶ Triage/Transport/Treatment
pv bleeding (presumed abruption) ▶ Triage/Transport/Treatment
++++ proteinuria ▶ Triage/Transport/Treatment
absent fetal movements ≥12h ▶ Triage/Transport/Treatment
facility capacity enhancement
CME/CPD
M&M reviews
community engagement & cHCP education
home-based (± transfer to PHC) or PHC-based assessment & initial management
urgent transport (<4h)
(if: miniPIERS p ≥25%, sBP ≥160, dBP ≥110, SI ≥1.7, stroke, coma, eclampsia, pv bleeding, ++++ protein, absent FM ≥12h)
non-urgent transport (<24h)
(if: miniPIERS p <25%, sBP 140-159mmHg, <++ +++ protein)
CEmOC facility for definitive care
ongoing BP control
ongoing MgSO4
delivery – IOL vs C/S
newborn care
App-guided CLIP package of care (≥1 trigger)
750mg methyldopa po (only if sBP ≥160, dBP ≥110; not repeated in PHC)
10g MgSO4 im (if sBP ≥160, dBP ≥110, eclampsia, miniPIERS p ≥25%, pv bleeding + sBP≥140; not repeated in PHC)
urgent transport (if sBP ≥160, dBP ≥110, SI ≥1.7, eclampsia, coma, stroke, miniPIERS p ≥25%, pv bleeding, ++++ protein, no FM ≥12h)

Additional diagnostic performance

Mozambique & Pakistan

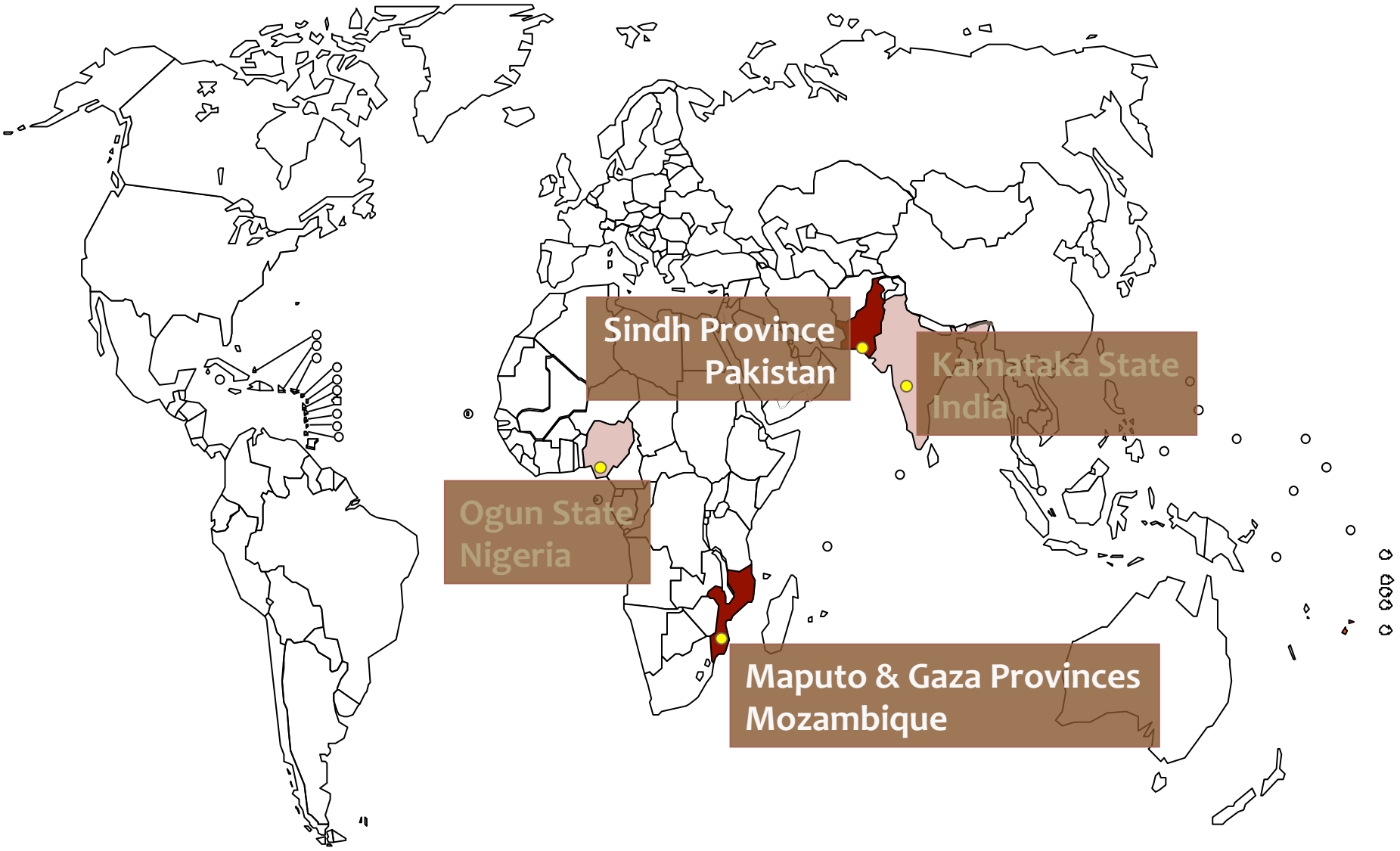
PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

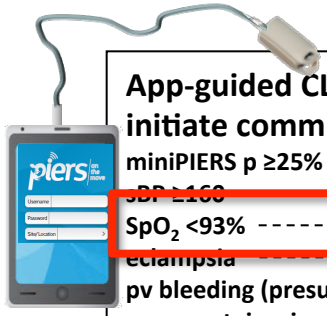
- LionsGate Technologies
  - Phone oximeter® through AudioOx® port
    - Adds SpO_2 to miniPIERS
    - Crowd-funded through the Sensor Project (http://www.thesensorproject.org/)

CLIP sites - oximetry

≈87,000 pregnant women

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment





App-guided CLIP triggers to initiate community interventions

OVERCOMING THE 3 DELAYS

- miniPIERS p ≥25% ⟶ Triage/Transport/Treatment
- sBP ≥160 ⟶ Triage/Transport/Treatment
- SpO_2 <93% ⟶ Triage/Transport/Treatment
- eclampsia ⟶ Triage/Transport/Treatment
- pv bleeding (presumed abruption) ⟶ Triage/Transport/Treatment
- ++++ proteinuria ⟶ Triage/Transport/Treatment
- absent fetal movements ≥12h ⟶ Triage/Transport/Treatment

facility capacity enhancement
CME/CPD
M&M reviews

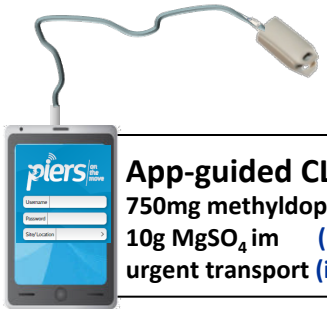
community engagement & cHCP education

home-based (± transfer to PHC) **or PHC-based assessment & initial management**

urgent transport (<4h)
(if: miniPIERS p ≥25%, sBP ≥160, SpO_2 <93%, stroke, coma, eclampsia, pv bleeding, ++++ protein, absent FM ≥12h)

non-urgent transport (<24h)
(if: miniPIERS p <25%, sBP 140-159mmHg, <++ +++ protein)

CEmOC facility for definitive care
ongoing BP control
ongoing $MgSO_4$
delivery – IOL vs C/S
newborn care



App-guided CLIP package of care (≥1 trigger)

750mg methyldopa po (if sBP ≥160; not repeated in PHC)
10g $MgSO_4$ im (if sBP ≥160, eclampsia, miniPIERS p ≥25%, pv bleeding + sBP≥140; not repeated in PHC)
urgent transport (if sBP ≥160, SpO_2 <93%, eclampsia, coma, stroke, miniPIERS p ≥25%, pv bleeding, ++++ protein, no FM ≥12h)

CLIP

1° outcome

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Maternal death ("maternal death rate")**
  - deaths during pregnancy or ≤42d of pregnancy (or last contact day if contact not maintained to 42d) /1,000 identified pregnancies
- **Maternal morbidity**
  - one/more life-threatening complications of pregnancy during pregnancy or ≤42d of pregnancy (or last contact day if contact not maintained to 42d) /1,000 identified pregnancies
- **Perinatal & late neonatal death ("perinatal death rate")**
  - IUFD [$\geq 20^{+0}$ and/or ≥500g], early neonatal mortality [d0-6 of postnatal life] and late neonatal mortality [d7-28 of postnatal life]/1,000 identified pregnancies
- **Neonatal morbidity**
  - non-lethal events of seizure and coma during d0-28 of postanatal life /1,000 identified pregnancies

CLIP definitive trial

updates

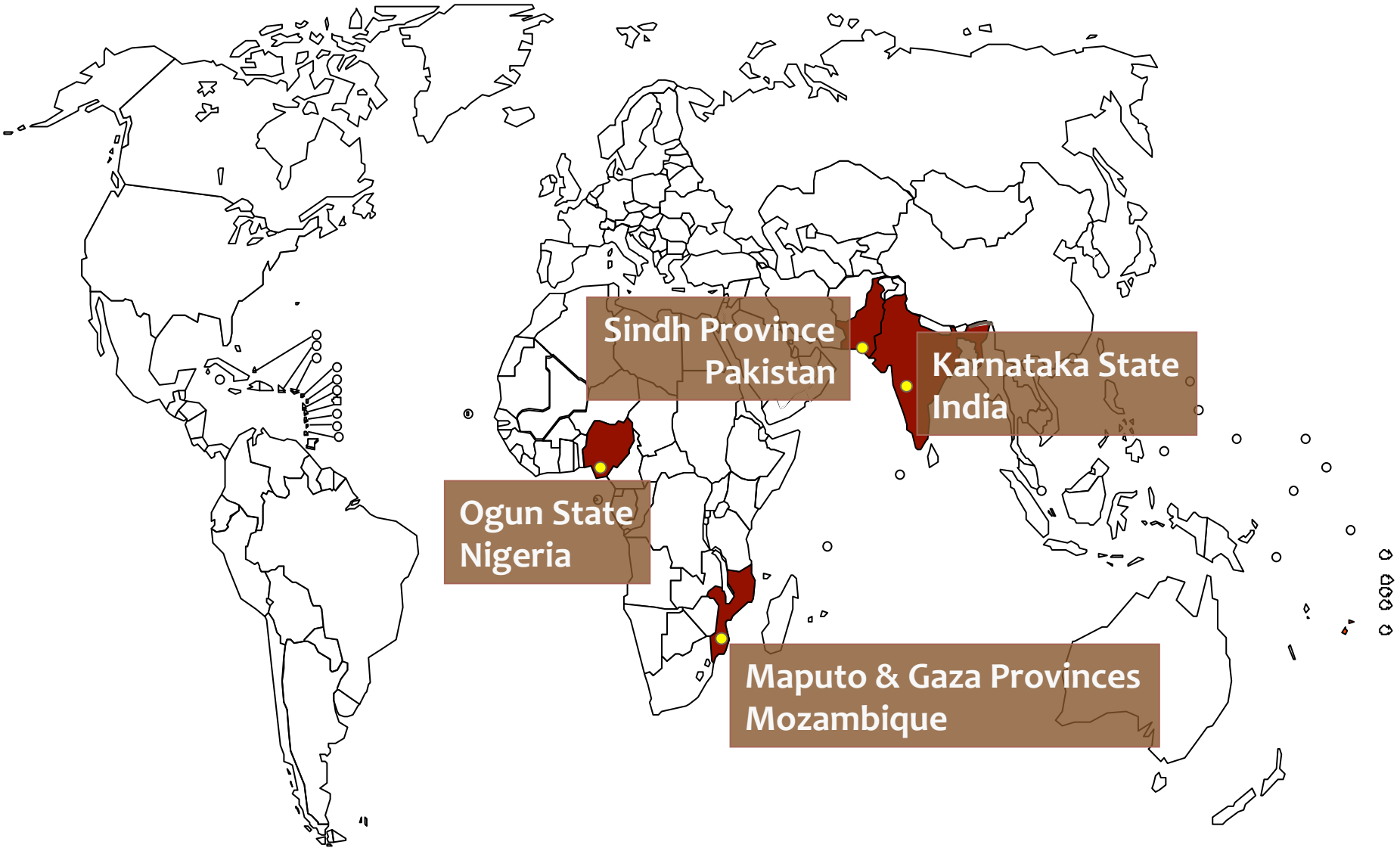
PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Nigeria**
  - Start date: 15 March 2015
- **Mozambique**
  - Start date: 1 April 2015 (pending $MgSO_4$ sourcing)
- **Pakistan**
  - Start date: 18 January 2015
- **India**
  - Start date: 1 November 2014

IPD meta-analysis

≈87,000 pregnant women

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment



Treatment

the Gynuity Health Projects Oral Antihypertensive trial

PI: Hillary Bracken

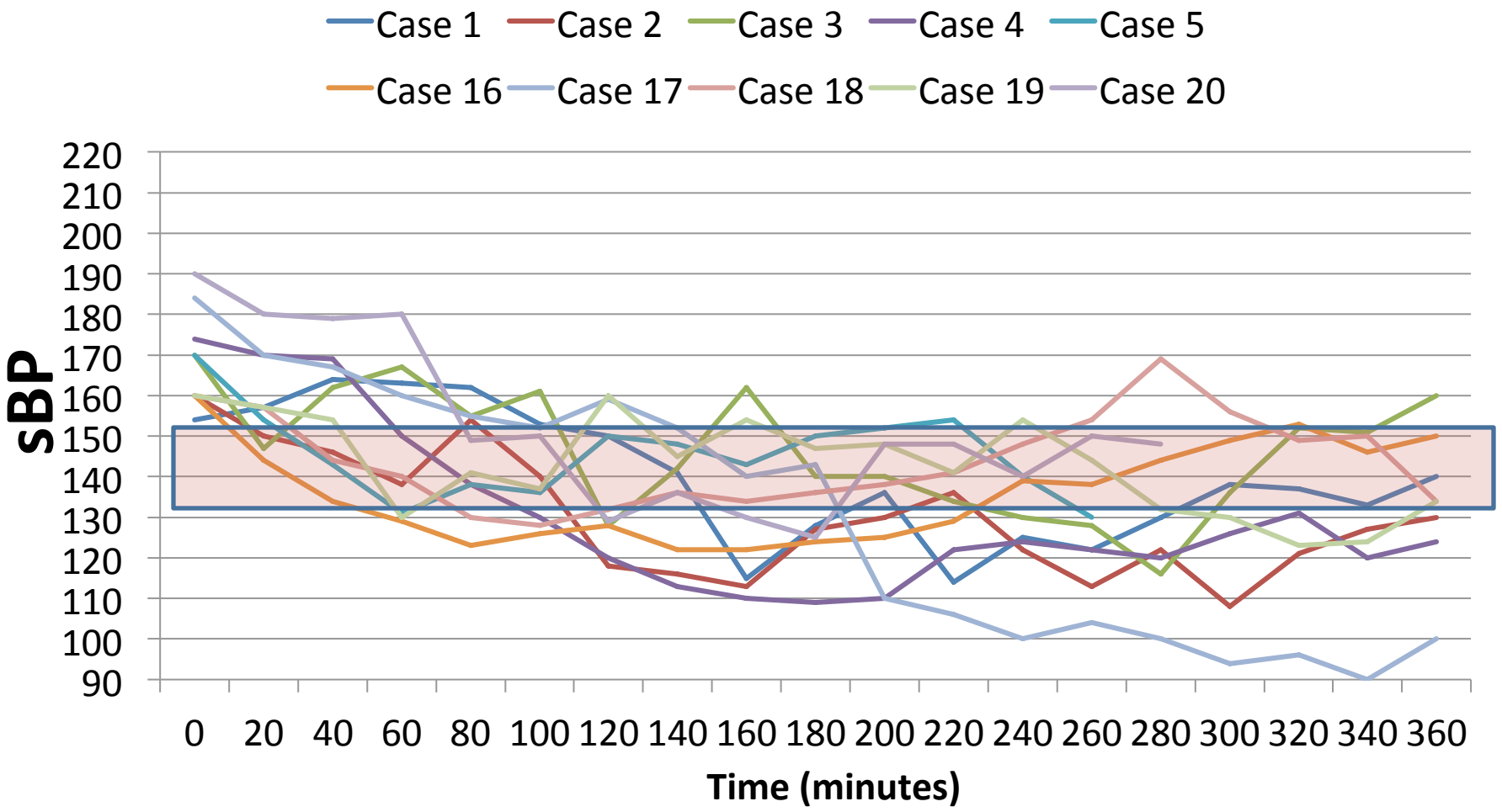
PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

Gynuity HP oral antihypertensive trial

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Site**
  - Nagpur, India
- **Individual patient open-label RCT for women with severe pregnancy hypertension**
- **Pilot phase (dose finding) & Definitive phase**
  - Comparing:
    - Oral nifedipine (10mg)
    - Oral labetalol (200mg)
    - Oral methyldopa (1000mg)
- **1^{o} outcome**
  - BP within the target range at 6h without an adverse outcome

Nifedipine (sBP)

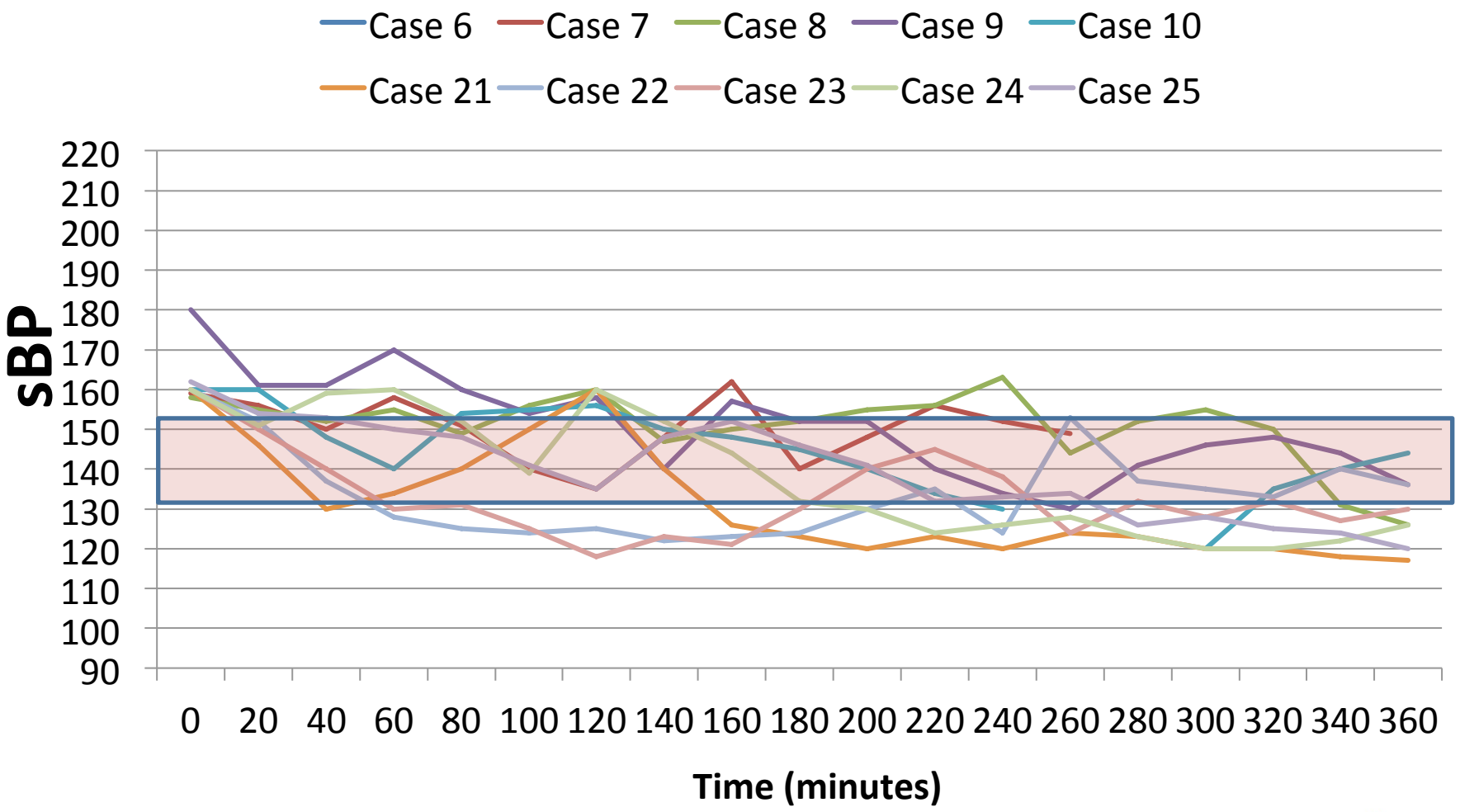


*Note: Case 2 received a second additional antihypertensive

Treatment goal (130-150 mmHg systolic)

Gynuity HEALTH PROJECTS

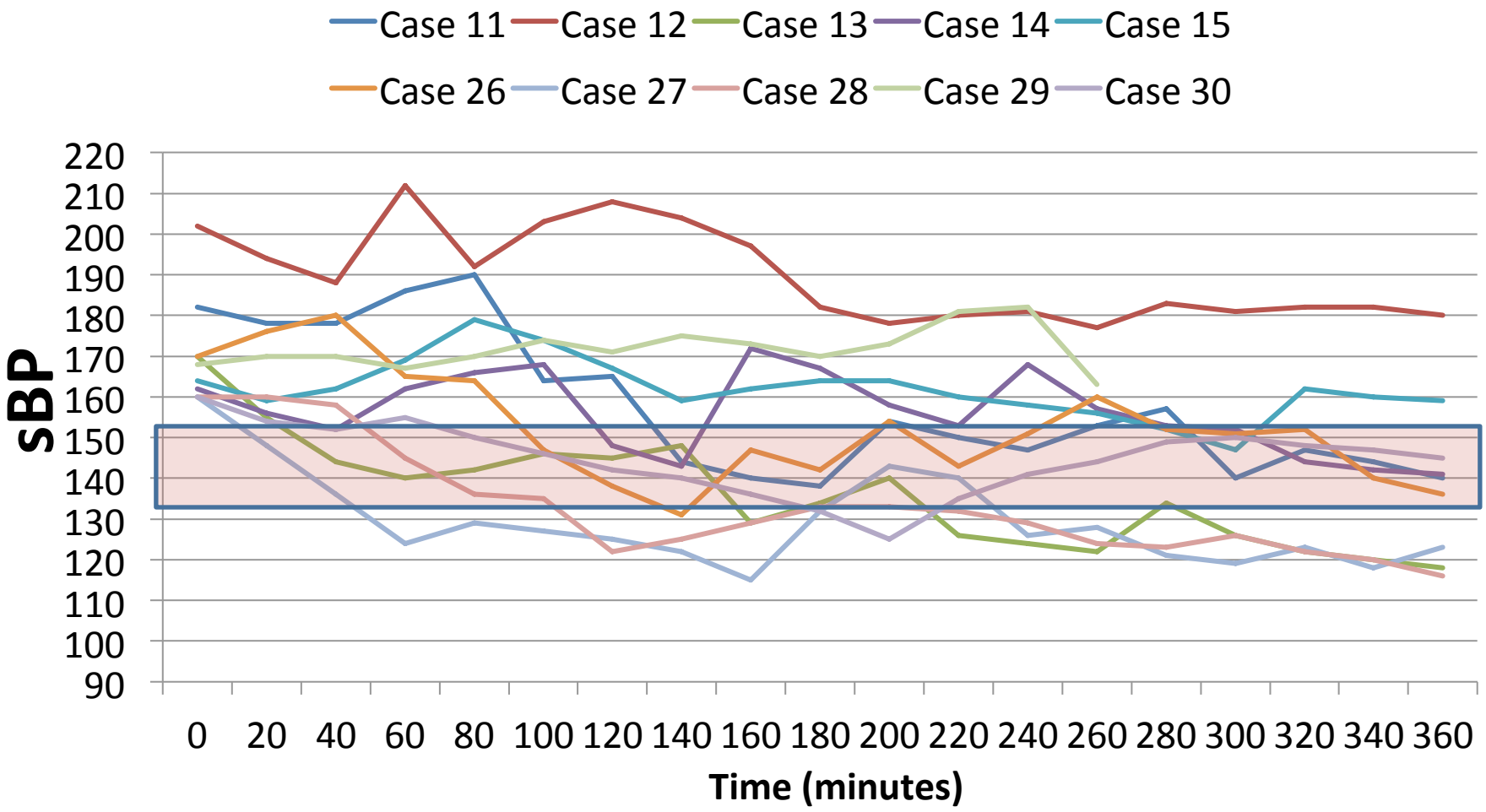
Labetalol (sBP)



Treatment goal (130-150 mmHg systolic)

Gynuity HEALTH PROJECTS

Methyldopa (sBP)



*Note: 5 cases (# 12, 14, 15, 29, 26) received a second additional antihypertensive

Treatment goal (130-150 mmHg systolic)

Gynuity HEALTH PROJECTS

Gynuity HP oral antihypertensive trial

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Definitive trial – approvals granted in January 2015**
  - **Drug Controller General of India**
  - **ICMR**
- **Recruitment to start this month**
- **Target recruitment: 671 women**
  - **nifedipine: 298 women**
  - **labetalol: 298 women**
  - **methyldopa: 75 women**
- **1^{o} outcome**
  - **Successful outcome will be considered blood pressure that reaches the target (defined as sBP 130-150mmHg and dBP 80-100 mmHg) at 6h without an adverse outcome**
    - **Adverse outcomes include:**
      - **Hypotension (sBP <120mmHg and/or dBP <70mmHg and fetal compromise)**
      - **Caesarean section for fetal distress**
      - **Severe headache**
      - **Severe headache requiring discontinuation of drug**
      - **Eclampsia**

Global Pregnancy Collaboration

PI: Jim Roberts

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

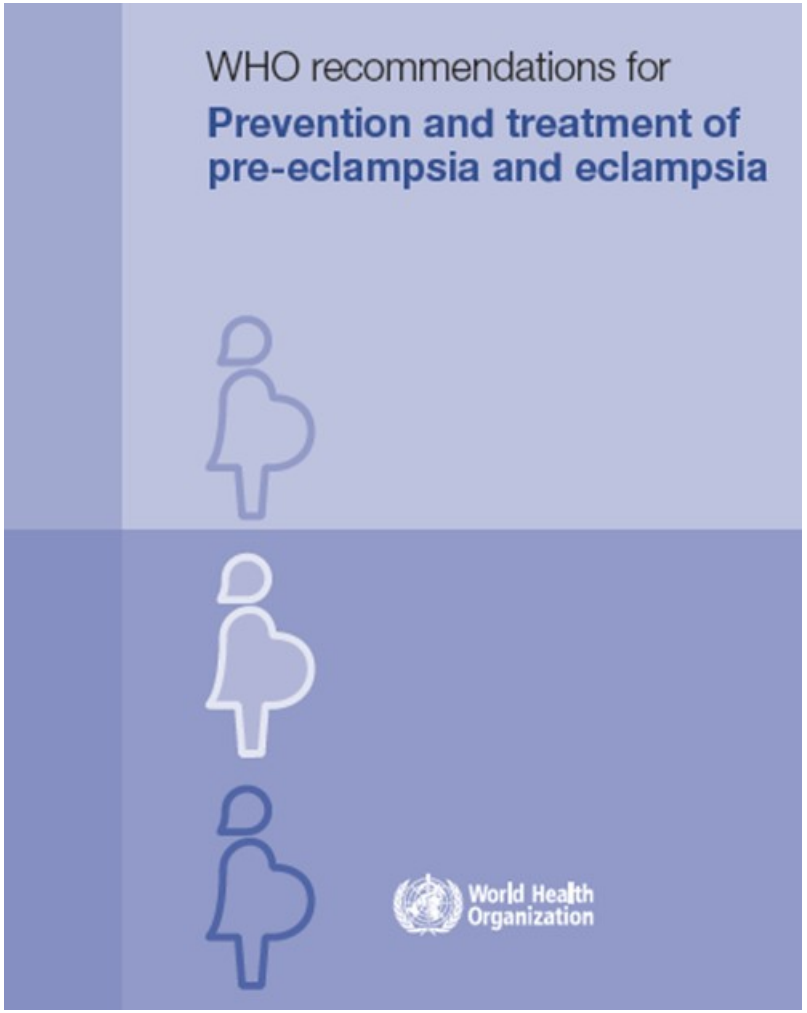
- **A consortium of 35 academic groups to advance the understanding and to improve care of pre-eclampsia and other adverse pregnancy outcomes**
  - **Risk assessment**
  - **Prevention**
  - **Inform appropriate research strategies**
- **Approach used extensively in cancer and cardiovascular research**
  - **Bring together groups with data and biological samples**
  - **Pool resources**
  - **Allows questions to be answered that could be done in no other way**
- **More from Jim later …**

Knowledge translation

PI: Matthews Mathai

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

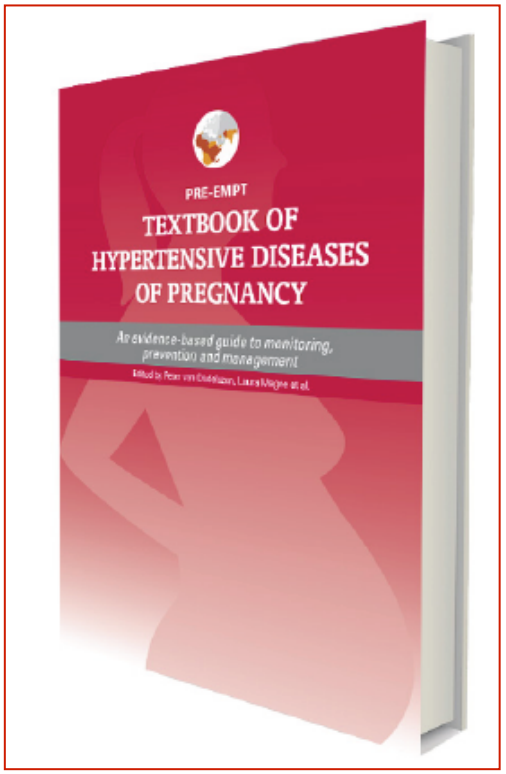
- **WHO recommendations**
  - **Published 2011**
- **Preeclampsia Foundation**
  - **CEO, Eleni Tsigas**
  - **Support the Foundation's mandate, particularly outreach to women, families and clinicians in LMICs**



GLOWM – HDP textbook

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

- **Use 2014 SOGC HDP guidelines as basis for GLOWM textbook**
  - Adapted from PPH textbook approach
  - Broaden recommendations for LMICs
  - Add content to increase LMIC relevance
  - Use CLIP set of images
  - CLIP wallchart will be produced by Sapiens/GLOWM – and modified for the textbook if found useful
  - Include material from other recent evidence-based guidelines
    - WHO, NICE, ACOG, NVOG
  - Free to purchasers in LMICs

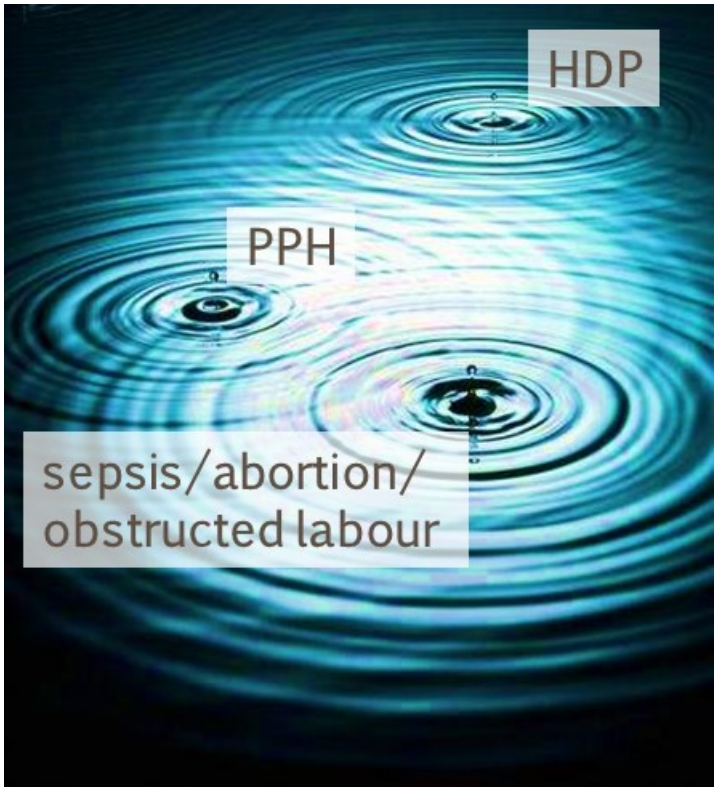


Long-term goals

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

That the component studies of the PRE-EMPT initiative, and their follow-up activities, prove effective, and reduce the burden of

- **Life-ending**
- **Life-altering (e.g., stroke)**
- **Life-threatening (e.g., sepsis)**



complications that make the HDP, and the hypotensive disorders of pregnancy, so important

Acknowledgements

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment

CHILD & FAMILY RESEARCH INSTITUTE

BILL & MELINDA GATES foundation

World Health Organization

SAVING LIVES AT BIRTH: A GRAND CHALLENGE FOR DEVELOPMENT

Grand Challenges Canada™
Grands Défis Canada™

CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

PRE-EMPT
Pre-eclampsia and eclampsia monitoring, prevention & treatment