Roles for mobile technology and self-management in strengthening autonomy in abortion care

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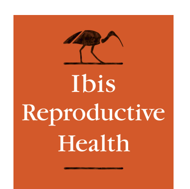
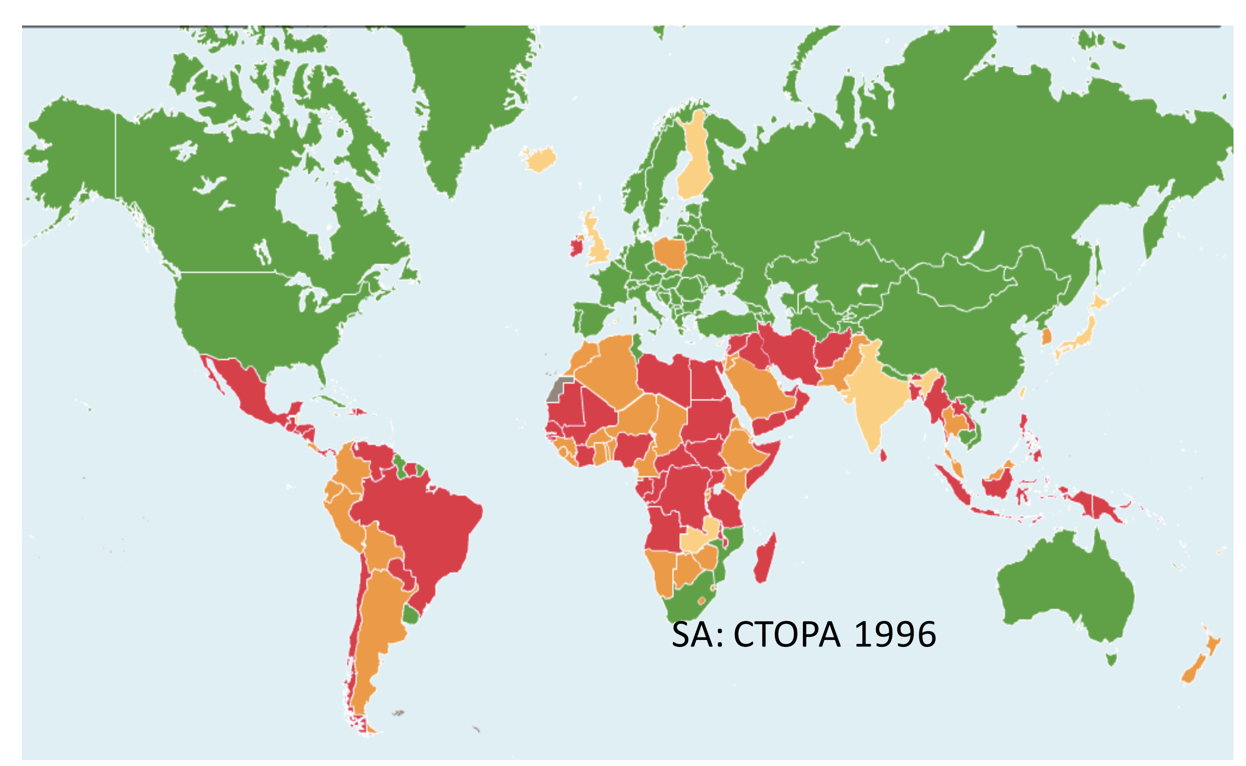


Reproductive rights and abortion laws @ 2016

United Nations General Comment No. 22 (2016) on the Right to Sexual and Reproductive Health:

States are required to to adopt measures to:

- Liberalize restrictive abortion laws
- Guarantee access to safe abortion services



UN E/C.12/GC/22. 4 March 2016

CRR: http://worldabortionlaws.com/map/ Accessed 12 Sep2016

Common barriers to access where abortion is legal

- Scarcity of trained and willing providers
- Scarce facilities concentrated in urban centers
- Over-medicalization of procedures – multiple visits, ultrasound examinations
- Lack of information and support systems esp. for poorer, hard to reach women

- Shortages of health care professionals will worsen in coming years esp. in LMICs - task sharing components of abortion care (WHO,2015)

Task sharing medical abortion: self-management (WHO 2015)

	Self
Medical abortion in the first trimester	No recommendation for overall task – recommendations for specific components as below
Self-assessing eligibility	R ✓
Managing the mifepristone and misoprostol medication without direct supervision of a health-care provider	✓
Self-assessing completeness of the abortion process	✓
Self-administering injectable contraception	✓

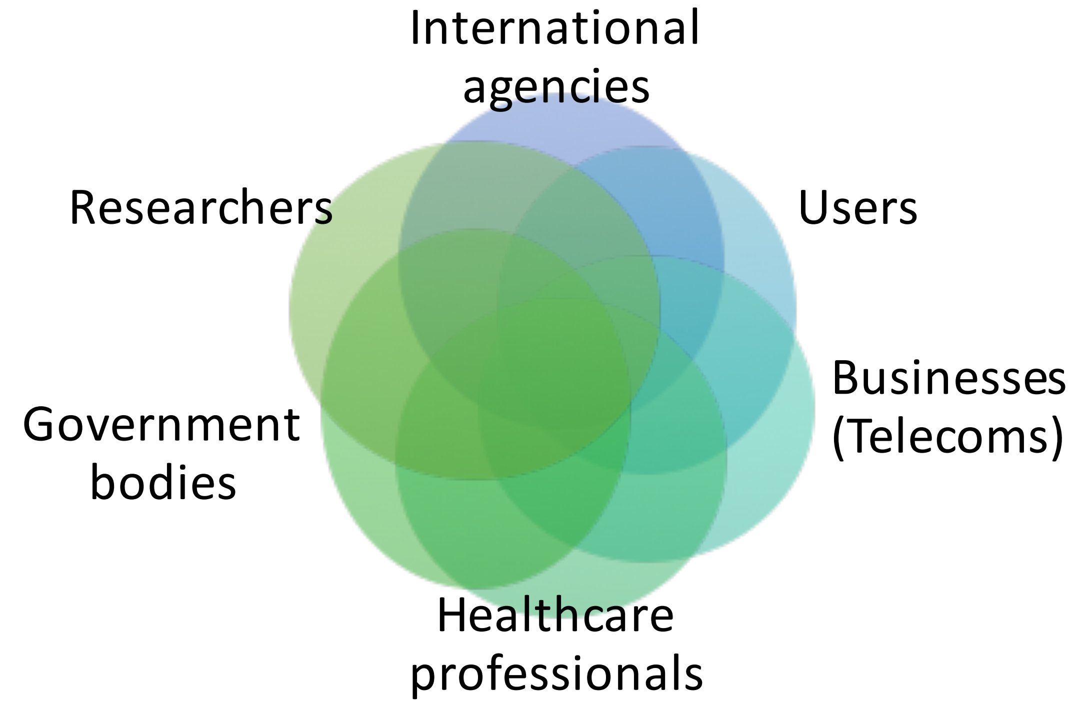
Recommended in specific circumstances	✓	• Where women have accurate source of information • Where women have access to a HCP if needed • Where mifepristone and misoprostol are used • Using pregnancy tests and checklists

WHO: Health worker roles in providing safe abortion care and post-abortion contraception. 2015

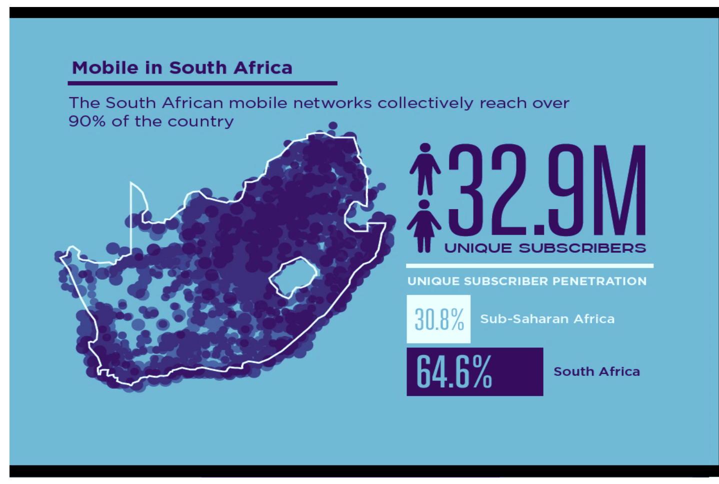
Mobile technology and health: the role payers

mHealth: The use of mobile technology to support medical and public healthcare practice

Challenges: coordination between role players whose cultures, objectives and traditions are different



Feasibility of mHealth in the South African setting:
The reach of mHealth



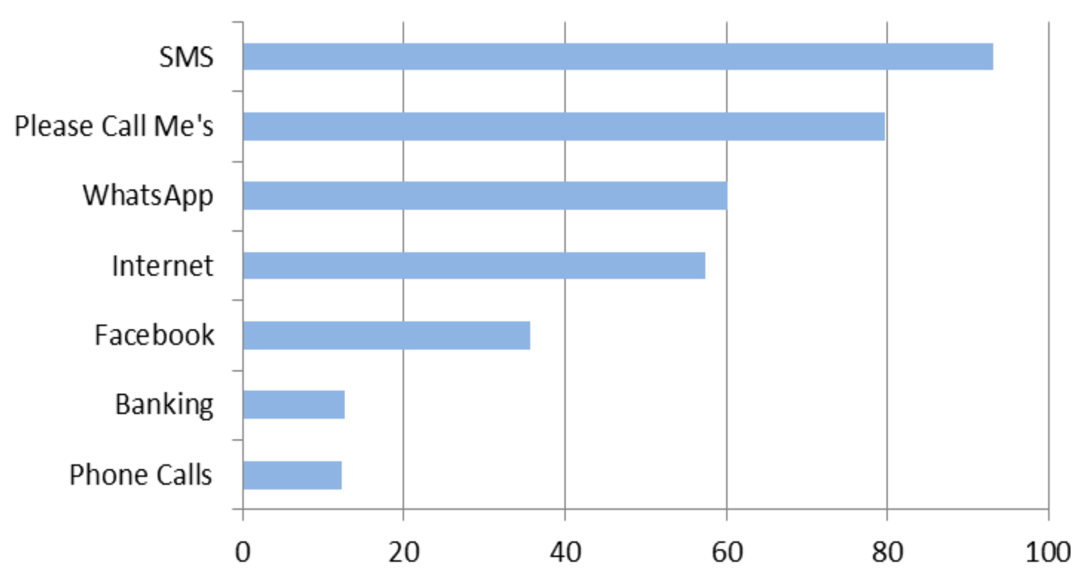
Source: GSMA mhealth: mhealth feasibility South Africa 2014

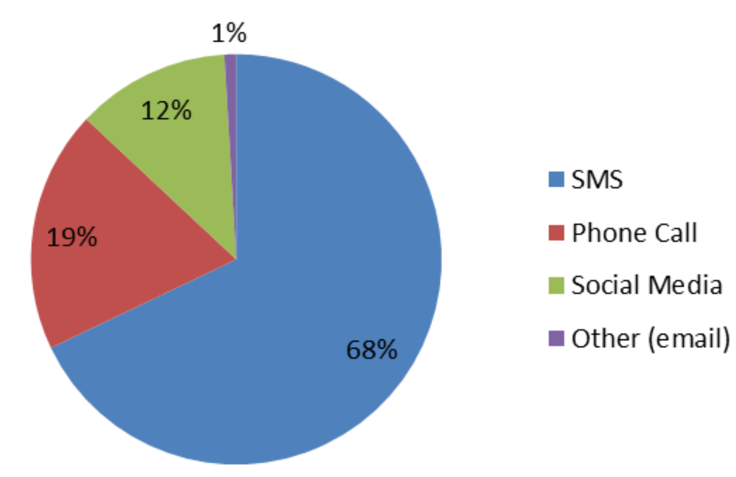
2014: Survey of urban low-income suburb near Cape Town (clinic attendees)

- 89% own a phone
- 49% have smart phone operability
- 75% don't share their phone

Khayelitsha mobile health phone use survey. MSF, 2014

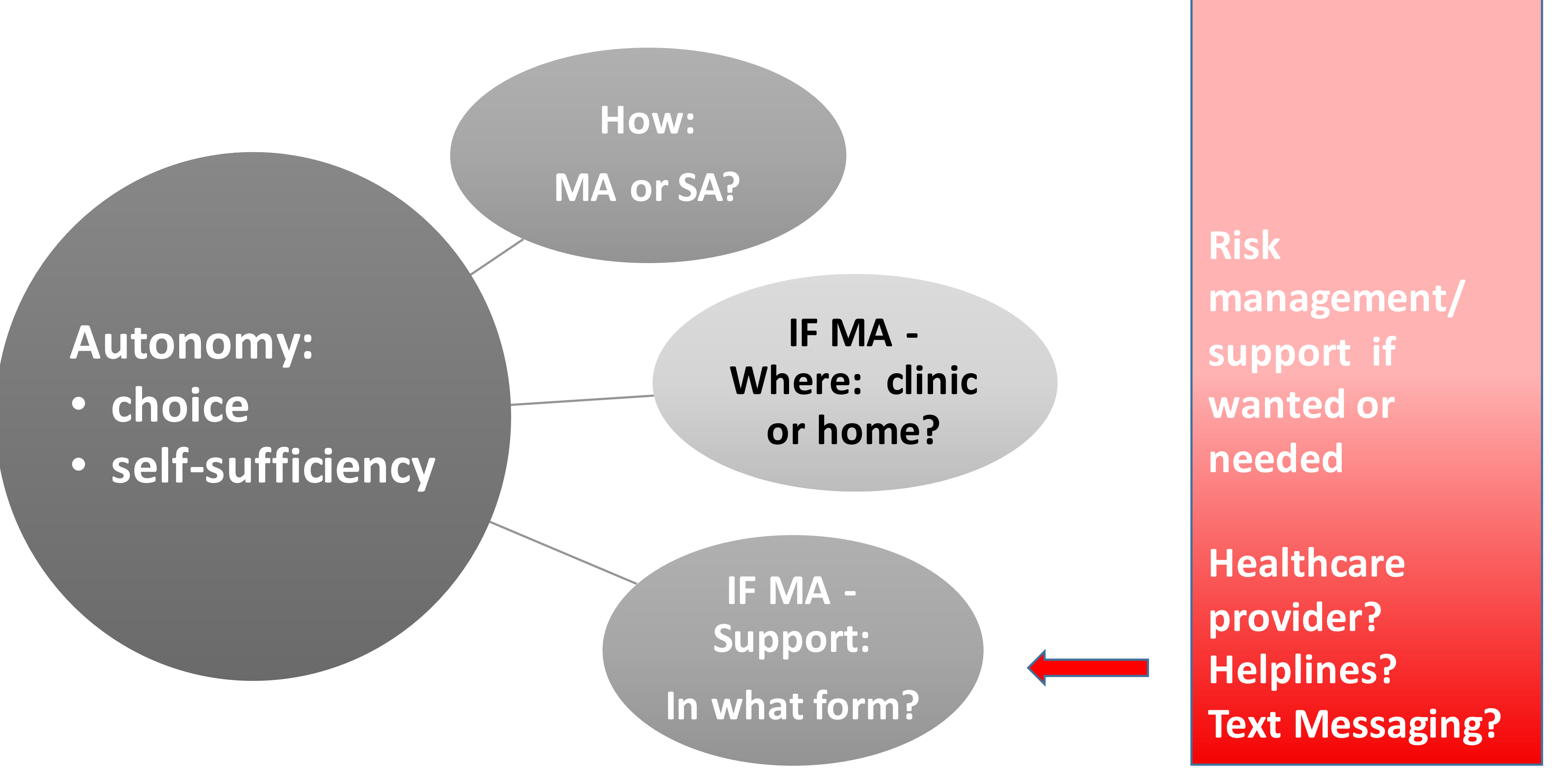
mHealth in the South African setting: phone usage and preferred modality for health information (clinic attendees)





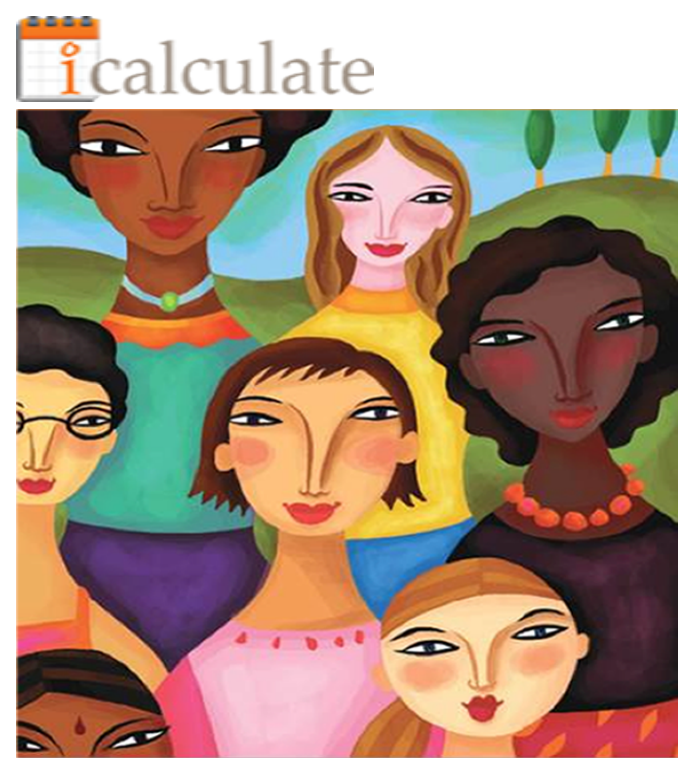
Khayelitsha mobile health phone use survey. MSF, 2014

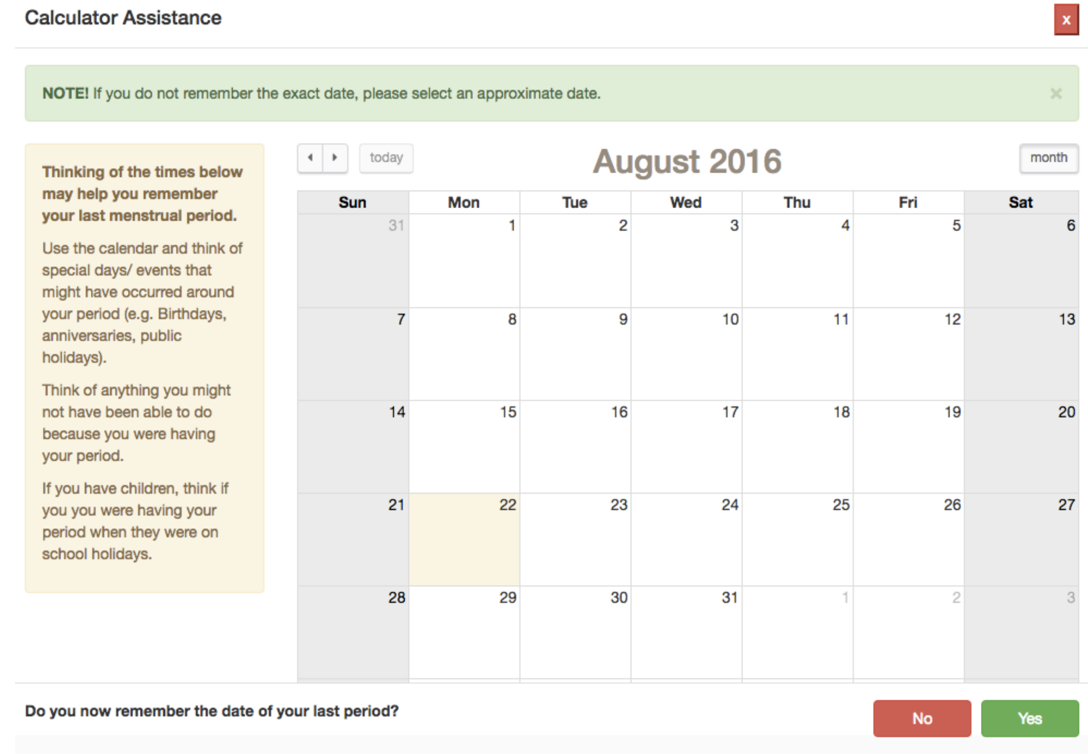
Autonomy in safe abortion care



mHealth for abortion: self-assessing eligibility

i calculate study: Explored acceptability & usability of online website to self-assess eligibility for MA (gestational age calculator + prompts + questions)





Self-assessing eligibility: i calculate study

Main findings:

- Mostly accurate recall of LMP, but some extreme outliers
- Calendar prompts were helpful for 43% of those uncertain about LMP date
- Most (91%) found calculator easy to use
- Most (94%) thought website could be helpful when considering abortion

2. mHealth for abortion: SMS support while self-managing MA without provider support

Day 13

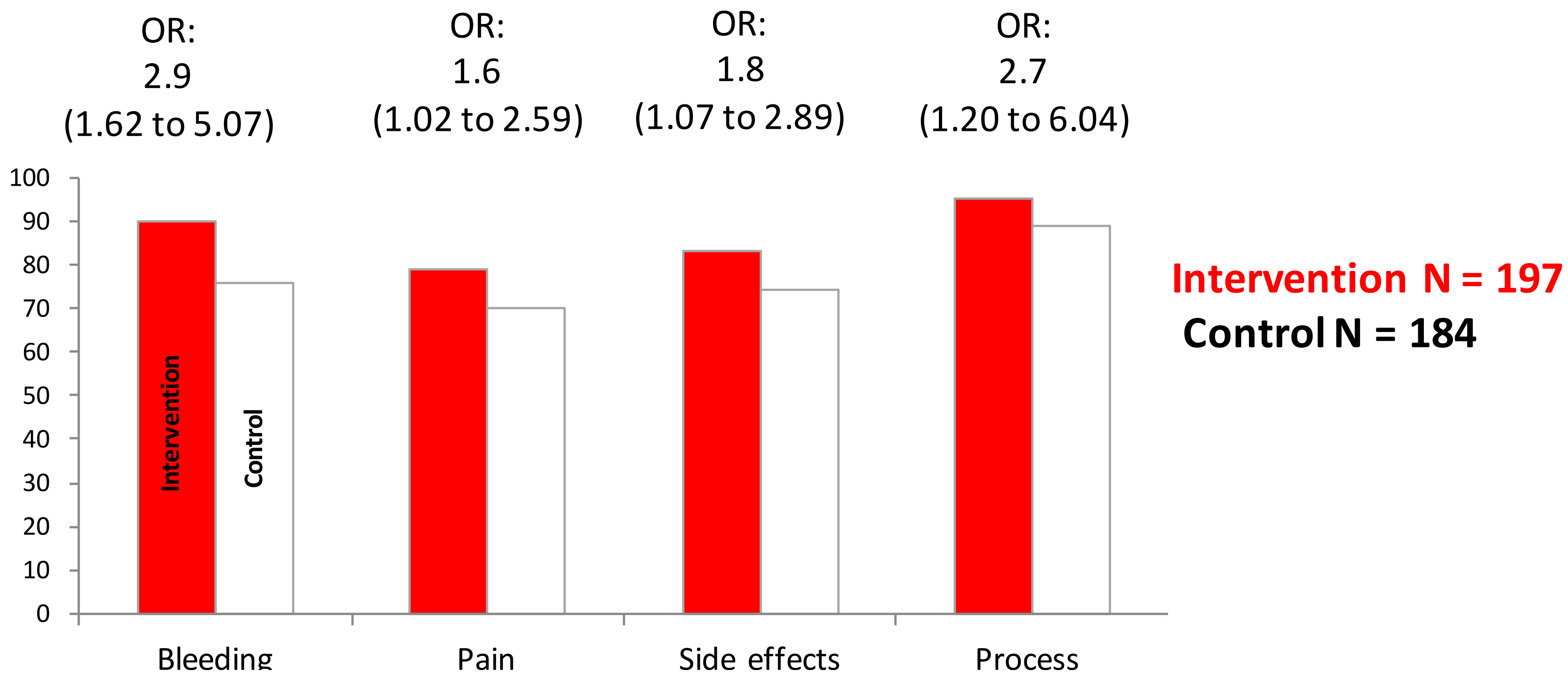
Hi hope you're good. You may still be spotting (a bit of bleeding or brown bits). If you're bleeding like a normal period or more, tell your clinic provider about this

- South Africa (2011/12, 2014/15) RCTs
  13 timed, automated SMSs sent over 2 weeks
  reminders about process, S&S of complications
  -mostly very well liked
- Indonesia (2014) IDIs – in favour of smart phone app for information on safe abortion and reminders
- Cambodia (2014/15) RCT - 80% in favour of SMS for support, reminders and self-assessment

Constant et al Contraception 2014, Gerdts et al APHA 2014, Gerdts et al (in prep)

SMS support (SA; 2011/2012 RCT) Outcomes at follow-up clinic visit

% of women very well prepared for:



SMS support feedback (SA; 2014/2015 2011/2012)

- **4%:** SMS failure rate
- **96%:** SMSs were helpful/very helpful in managing MA at home
- **25%:** Had concern about phone privacy

2014/2015

"comforted & calmed me & they also kept me alerted"
(27 yr. old, no prior MA, 1 child, unemployed)

"they help me to calm down, had no one to talk to"
(33 yr. old, 1 prior MA, 2 children, unemployed)

2011/2012

"I always knew what is going to happen so that kept me going because if it was not for the SMSs I would have come back after 2 days. So they helped me a lot because I didn't even call the clinic. They were my hope."

"Sometimes the SMSs comforted me. I felt the SMSs understood what I was going through. Felt like a friend

Other settings: use of mobile and information & communication technology in strengthening autonomy in abortion care

Remote follow-up using phone calls/text messages to women's mobile phones. UK (RU OK?, 2014) RCT: most prefer phone FU

Remote provision and follow-up using telemedicine
(provision of MA at a distance using ICT)

Direct to patient –

- WOW - online consultation and helpline if needed
- Canada, Australia – local screening, remote consultation, drugs/prescription mailed
- To be researched in US

Iowa model (US) - local screening, remote consultation, drugs provided at clinic
Grossman D et al. Obstetrics and Gynecology. 2011

3. Self-assessing completeness of abortion outcome (supported by mHealth)

Background

2011: Symptom history alone unreliable to detect ongoing pregnancy

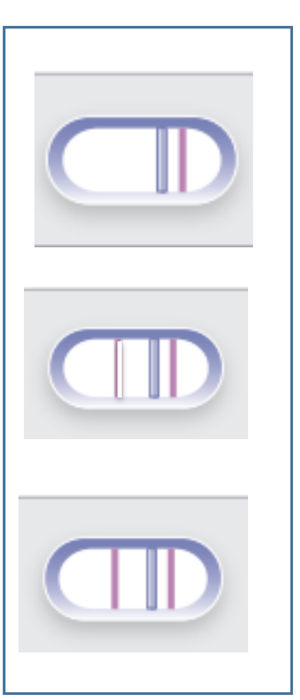
2012 – 2016: US, Vietnam, Moldova, Tunisia – Multi-level urine pregnancy test: some difficulties with interpretation of test - interpretation? repeated test

2012 – 2015: Europe, UK, India: Low-sensitivity urine pregnancy test: Simple test, but occasional false negative results, one-off test

2014-2016: South African study using new ***check*ToP**® Low sensitivity urine pregnancy test (LSUPT) Rapid test, detects ≥ 1000mIU/mL hCG in urine

Study rationale

Some difficulties identified in earlier studies with respect to the multi-level and low-sensitivity urine pregnancy tests



Study Questions:

- Can/Will women attending public sector primary level abortion facilities in South Africa use the test correctly (storage, steps, timing)?
- Can women interpret the test results (faint lines?)
- Do women want to self-assess or return to clinic?

Study aim

To evaluate accuracy of **self-assessment** of medical abortion using the ***check*ToP® low–sensitivity pregnancy test (LSUPT)**, combined with a checklist and phone text messages.

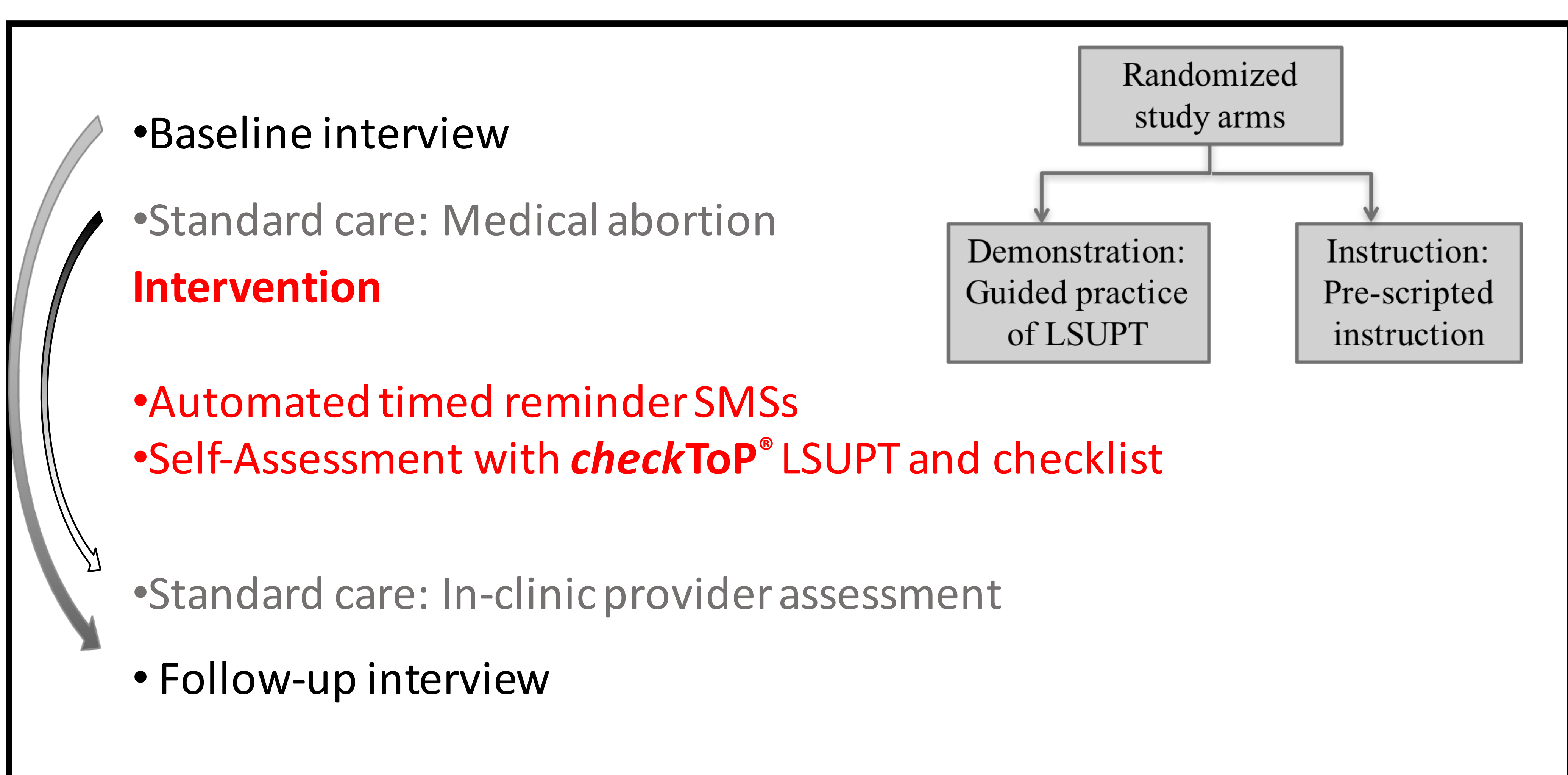
Materials and methods

- A non-inferiority RCT in 6 public sector primary level abortion clinics, SA.
- Study arms: Guided **demonstration** vs. **instruction-only** on LSUPT
- Inferiority margin set at **6%.**

- Primary outcome: Accurate assessment of medical abortion outcome.
  Incomplete MA: requiring additional medical or surgical intervention.

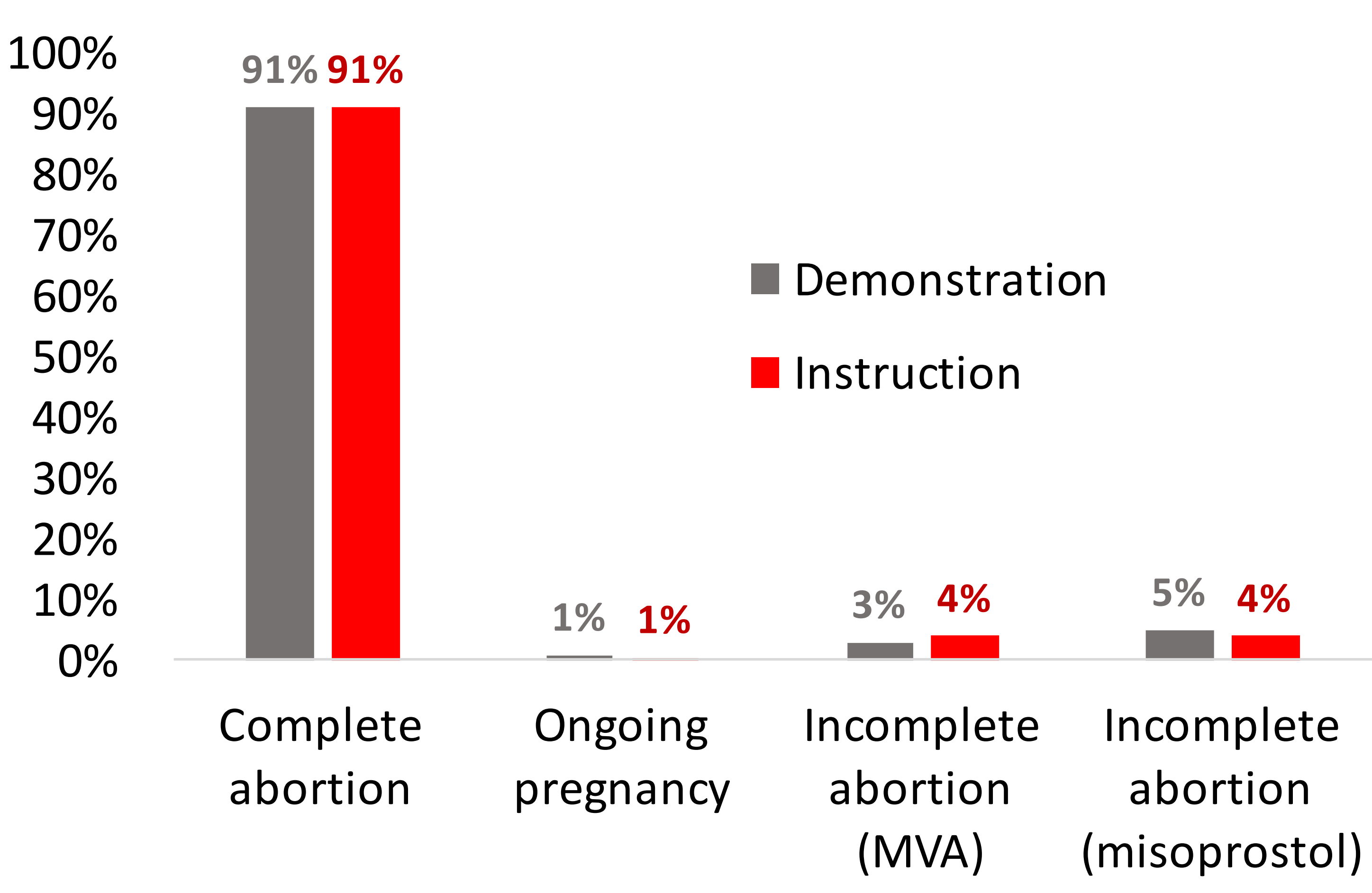
- Eligibility criteria: 18+ years, confirmed intra-uterine pregnancy up to 63 days, willing to receive abortion-related text messages on their phone.

Study methods: procedures



Results: In-clinic provider assessment at 2 wk. follow up:

Demonstration vs Instruction-only



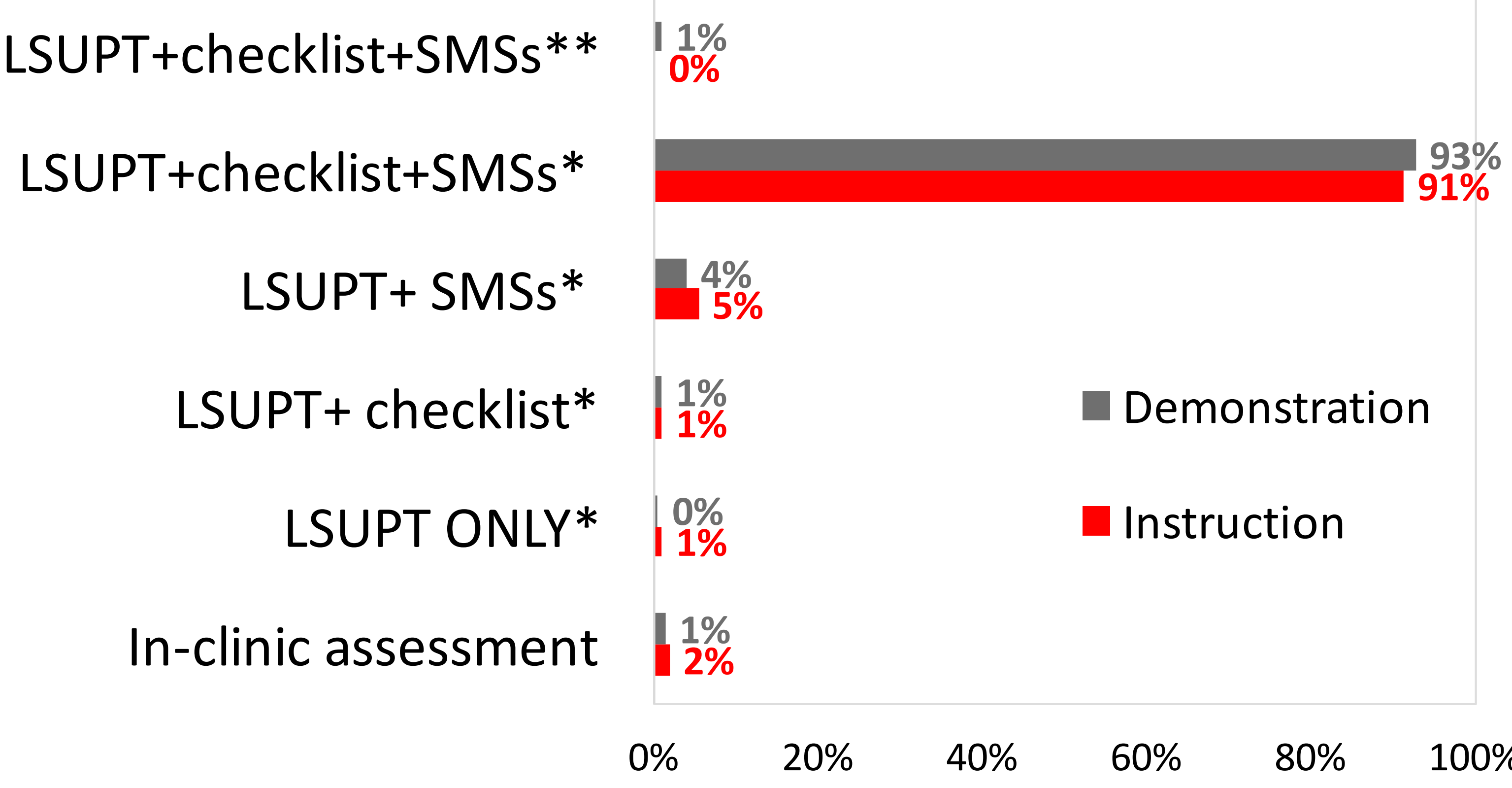
Results: Primary Outcome: Accurate self-assessment of MA outcome

Demonstration	88% 95%CI: 83%-92%
Instruction	85% 95%CI: 80%-90%
Risk difference †	-2.5% 95% CI: -9% to 4%

1 ongoing pregnancy not identified by LSUPT in demonstration group

Results: Preferred method of follow-up

Demonstration vs Instruction-only



*And visit the clinic if I need to ** And call the clinic if I need to

Conclusions and recommendations

- ✓ Non-Inferiority of **instruction** compared to **demonstration** is inconclusive. **Simulated demonstration** can be recommended

- ✓ **Careful counselling** is needed to ensure no ongoing pregnancies are missed.

- ✓ Women's choice for assessment of medical abortion is the **LSUPT+checklist+SMSs**

- ✓ **SMSs** are an alternative effective way of supporting women and managing risk in case of complications or of ongoing pregnancy

What now?

- Engagement with SRH NGOs on implementing mhealth programs ✓✓
- Iterative improvement of SMSs as support and risk management plan ✓
- Alignment with country mhealth strategy for scale-up
- Stakeholder engagement to extend MA beyond 63 days in public sector
- Stakeholder engagement to approve implementation of LSUPT in public sector

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THANK YOU

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