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

FIAPAC. October 2016, Portugal.

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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 adopt measures to:

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

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Self</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medical abortion in the first trimester</strong></td>
<td>No recommendation for overall task – recommendations for specific components as below</td>
</tr>
<tr>
<td>Self-assessing eligibility</td>
<td><img src="mdi_check" alt="Recommended" /></td>
</tr>
<tr>
<td>Managing the mifepristone and misoprostol medication without direct supervision of a healthcare provider</td>
<td><img src="mdi_check" alt="Recommended" /></td>
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<tr>
<td>Self-assessing completeness of the abortion process</td>
<td><img src="mdi_check" alt="Recommended" /></td>
</tr>
<tr>
<td><strong>Self-administering injectable contraception</strong></td>
<td><img src="mdi_check" alt="Recommended" /></td>
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**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

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

Source: GSMA mhealth: mhealth feasibility South Africa 2014

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

Autonomy:
• choice
• self-sufficiency

How: MA or SA?

IF MA - Where: clinic or home?

IF MA - Support: In what form?

Risk management/support if wanted or needed

Healthcare provider? Helplines? Text Messaging?
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

- 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

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.

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

% of women very well prepared for:

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
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<tbody>
<tr>
<td>Bleeding</td>
<td>90</td>
<td>70</td>
</tr>
<tr>
<td>Pain</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>Side effects</td>
<td>90</td>
<td>70</td>
</tr>
<tr>
<td>Process</td>
<td>90</td>
<td>70</td>
</tr>
</tbody>
</table>

OR: 2.9 (1.62 to 5.07)
OR: 1.6 (1.02 to 2.59)
OR: 1.8 (1.07 to 2.89)
OR: 2.7 (1.20 to 6.04)

Intervention N = 197
Control N = 184
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.

“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)

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

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

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

Background

**2011:** Symptom history alone unreliable to detect ongoing pregnancy


**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 checkToP® 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 checkToP® 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

- Baseline interview
- Standard care: Medical abortion

Intervention

- Automated timed reminder SMSs
- Self-Assessment with checkToP® LSUPT and checklist

- Standard care: In-clinic provider assessment
- Follow-up interview
Results: In-clinic provider assessment at 2 wk. follow up: Demonstration vs Instruction-only

- Complete abortion: 91% Demonstration, 91% Instruction
- Ongoing pregnancy: 1% Demonstration, 1% Instruction
- Incomplete abortion (MVA): 3% Demonstration, 4% Instruction
- Incomplete abortion (misoprostol): 5% Demonstration, 4% Instruction
Results: Primary Outcome: Accurate self-assessment of MA outcome

<table>
<thead>
<tr>
<th>Demonstration</th>
<th>88%</th>
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<tbody>
<tr>
<td></td>
<td>95%CI: 83%-92%</td>
</tr>
<tr>
<td>Instruction</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>95%CI: 80%-90%</td>
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</tbody>
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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

<table>
<thead>
<tr>
<th>Method</th>
<th>Demonstration</th>
<th>Instruction</th>
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<tbody>
<tr>
<td>LSUPT+checklist+SMSs**</td>
<td></td>
<td>93%</td>
</tr>
<tr>
<td>LSUPT+checklist+SMSs*</td>
<td></td>
<td>91%</td>
</tr>
<tr>
<td>LSUPT+ SMSs*</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>LSUPT+ checklist*</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>LSUPT ONLY*</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>In-clinic assessment</td>
<td>1%</td>
<td>2%</td>
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*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

- Acknowledgements: Exelgyn, fieldworkers, participants
- Funding: SAAF, WHO, IPAS

THANK YOU
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