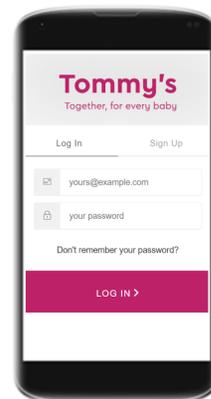# Evaluating the implementation of Tommy's Clinical Decision Tool, a device for reducing inequity in maternity care

Jenny Carter[1], Jane Sandall[1], on behalf of Tommy's National Centre for Maternity Improvement
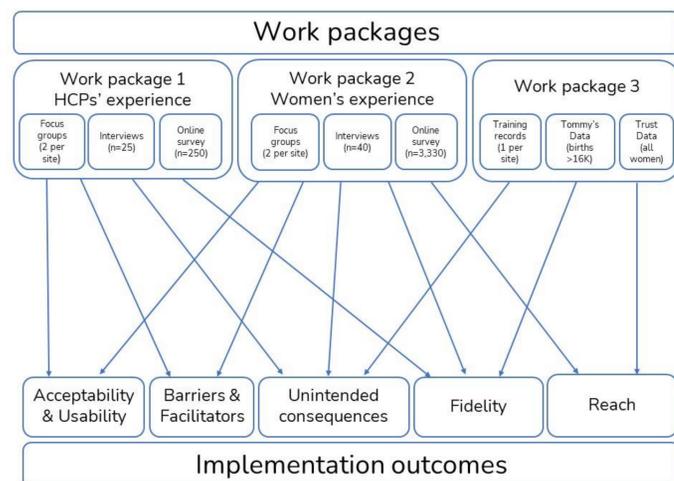
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1. BACKGROUND

- Poor perinatal outcomes are more common in those living in areas of social deprivation and from ethnic minority groups[1].

- Causes may be due to variation in care. To address this, Tommy's National Centre for Maternity Improvement developed the Tommy's Clinical Decision Tool (Tommy's App).

- This web-based tool assesses risk of preterm birth and placental dysfunction, which can lead to stillbirth, much more accurately than current methods, and recommends best evidence-based care pathways.

- A women's interface provides access to these assessments and care pathways, and sources of reliable information.

- This study is evaluating implementation of the App in five early-adopter hospitals, to inform wider scale-up[2].

2. METHODS

Figure 1: Work packages and their relationship to implementation outcomes.

- Participants: women (target, n=3,300) and healthcare professionals (target, n=250).

- Data collection methods: interviews, focus groups and online surveys.

- Data analysis: thematic framework analysis and appropriate statistical methods (e.g. Chi square, t-test, regression).

- Implementation strategy and analysis informed by NASSS (Non-adoption or Abandonment of technology by individuals and difficulties achieving Scale-up, Spread and Sustainability) framework[3] [Figure 2].

Figure 2: NASSS Framework [3].

5. ACKNOWLEDGEMENTS

With thanks to the women and health professionals who took part in this study. Also to the RCOG Women's Voices Partnership and members of the Community of Practice, who have contributed to the development and success of this programme.

3. FINDINGS

Challenges
Solutions

Ensuring women registered on the app are representative of those booked for maternity care

- Early findings suggest the most vulnerable women are under-represented.

- Some women find it difficult or do not wish to engage with health services.

- We introduced a facility that allows HCP to register women on their behalf during consultation.

Figure 3: Implementation outcomes.

REACH
- Vulnerable women under-represented
- HCP registration

ACCEPTABILITY
- Trust in algorithms
- Trust in information

USABILITY
- Easy to use
- Easy to navigate
- Web application vs mobile app

UNINTENDED CONSEQUENCES
- Personalised risk assessment can be more scary.

FIDELITY
- Local adaptation
- Alignment with Trust guidelines
- Implementation toolkit

BARRIERS
- COVID pandemic
- Staff shortages
- Internet access
- Unclear purpose for women

FACILITATORS
- Strong leadership
- Detailed planning
- Flexible training
- Support network

Technological issues

- Ensure URL not blocked by firewall.
- Icon/link to website on MIS and staff devices.
- Healthcare professional access to adequate devices.
- Internet access all areas.
- Clear pathways for support.

Service preparedness for change

- Top level leadership – impetus, trust.
- Implementation plan – what needs to be done, when and by whom.
- Governance issues – who needs to approve, how and when.
- Adaptations to service delivery, e.g. PAPP-A results for women declining anomaly screening, midwife PGD for aspirin.

Staff preparedness for change

- Top level leadership – impetus, trust.
- Local named champions – impetus, awareness, training and support.
- Establish a plan and timetable for training.
- Flexible training: face to face, virtual, recordings, allocated time.
- Implementation toolkit – accessible and easy to navigate.
- Monthly Newsletter – hot topics, FAQs.

4. CONCLUSIONS

- This implementation evaluation is an ongoing process which informs development of Tommy's App and its implementation strategy.
- The App has the potential to make providing "the right care at the right time" easier, personalising risk-assessment and care according to best evidence.
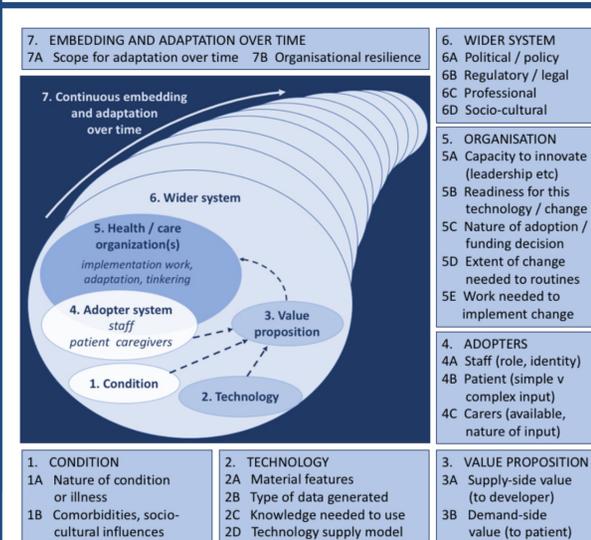
6. REFERENCES

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2. Carter et al., "The Tommy's Clinical Decision Tool, a device for reducing the clinical impact of placental dysfunction and preterm birth: protocol for a mixed-methods early implementation evaluation study." BMC Pregnancy and Childbirth. 2022. [in press]
3. Greenhalgh et. al., "Beyond adoption: a new framework for theorizing and evaluating nonadoption, abandonment, and challenges to the scale-up, spread, and sustainability of health and care technologies." Journal of Medical Internet Research. 2017 Nov 1;19(11):e8775.