UNIVERSITY OF OXFORD

NUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES

KING'S College LONDON

Self-monitoring of blood pressure in pregnancy: a national roll-out in the context of a pandemic

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SMBP in pregnancy?

A national roll-out in the context of a pandemic

Key questions for the evaluation

- How have maternity units implemented SMBP in pregnancy outside of a randomised trial during the COVID-19 pandemic?
- What are the potential advantages and disadvantages for women and their healthcare professionals?

Method

- Online survey between Dec 2020-Jan 2021
- 127 maternity providers in England provided with free BP monitors by NHSEI
- Implementation of SMBP since March 2020

45 (35%) providers responded

- Online survey distributed via maternity units and social media platforms of women between Dec 2020 - Jan 2021
- Currently pregnant or had a baby since March 2020
- Experiences with SMBP

166 women responded

Considerable proportion of maternity units commenced an SMBP service from March 2020

- Most (78%) units did not regularly provide BP monitors to pregnant women prior to March 2020
- All units increased their provision of BP monitors to pregnant women from March 2020
- Predominantly (93%) used for *additional* BP monitoring rather than as a replacement for routine contact

Supply of monitors predominantly from NHSEI

- Between 0 – 265 BP monitors supplied per maternity unit (since March 2020)
- 90% of maternity units used BP monitors provided by NHSEI
- 2 units obtained BP monitors but had not yet started a service
- Most women (86%) self-monitoring because a healthcare professional asked them to
- Some maternity units obtaining BP monitors from elsewhere (in addition to NHSEI provision)

Roll-out echoed guidance from the Royal College of Obstetricians and Gynaecologists (RCOG)

- Units most commonly (89%) providing BP monitors to those developing high BP after 20 weeks
- 78% provided BP monitors to women who developed high BP before 20 weeks

- Almost all (98%) provided written information to women alongside monitor:
  - BP monitoring instructions (96%)
  - BP thresholds (93%)
  - BP monitor loan agreement (84%)

Overall maternity units and women were *positive about its use*

Maternity units valued reducing face-to-face contacts (80%)

- convenience for women
- reduced footfall in hospital->reduced COVID-19 risk
- potential cost-saving

Women valued:

- more control/ independence/ insight into own BP (54%)
- convenience (37%)
- feeling that home BP better measure of "true" BP (24%)

Safety and confidence:

- 96% of women felt safe undertaking SMBP
- 78% felt more confident with SMBP
- 25% found SMBP made them more anxious

More challenges for maternity units than for women

- Key challenges for **maternity units** included:
  - Supply, storage, management and return of BP monitors (44%)
  - Service set-up (20%)
  - Managing follow-up / patient care pathway (20%)
  - Embedding within the existing service / identifying eligible women (18%)

- Almost half of **women** felt there were **no negative aspects** of SMBP. Negative aspects included:
  - 53% uncertain about their BP and appropriate follow-up
  - 21% of women had issues relating to the BP monitor, cuffs and/or telemonitoring application

Ongoing sustainability of BP monitor supply appears challenging without development or investment

- 78% of maternity units are planning to reuse the BP monitors
- Return rates of BP monitors averaged around 40% (ranging 0 to 100%)
- BP monitors predominantly returned during the postnatal period (89%)

Mixed feelings by maternity units regarding future potential

It has been a good addition. However, a lot of difficulty chasing women to return them and have called women for up to 5 months after they have given birth and still not received the monitors.

I believe it is a really useful tool for both patients and clinicians and should be part of normal practice moving forwards

This project has kickstarted the recognition of the possibilities and also highlighted the willingness of women to take responsibility for their own BP, however this provides additional (unresourced) contacts.

Sadly there wasn't the hoped uptake of this service and therefore it did not have the impact we expected in reducing attendance

Strengths and limitations of this study

Strengths

✓ Timely

✓ Adds evidence to current understanding about SMBP in pregnancy

Limitations

☒ Relatively small size and self-selected sample of pregnant women

☒ Surveys took place during the second wave of the COVID-19 pandemic when the NHS was under considerable pressure, making data collection challenging

☒ This evaluation does not include data on clinical or cost effectiveness of SMBP, or large-scale safety data in pregnancy

Conclusions

- A considerable proportion of maternity units in England have commenced a SMBP service since March 2020 to provide additional monitoring in pregnancy
- Overall maternity providers and women were positive about its use
- Challenges were noted around supply, storage, management and return of BP monitors, initially getting the service off the ground and embedding it within the existing service and managing follow-up

Next steps

- The BUMP Trials will provide **data on the clinical and cost-effectiveness and safety** of SMBP later in 2021
- **Need for BP monitor return systems or alternative strategies** (i.e. provision of BP monitor beyond pregnancy) to improve sustainability
- **Need for further research** into appropriate care pathways for different cohorts, the potential for self-management (i.e. additional actions over and above BP monitoring) and the benefits of SMBP during the postnatal period
- **Consideration for the longer-term role of SMBP in pregnancy** in light of forthcoming trial results, strategies for BP monitor provision as well as potential service reconfigurations post-pandemic

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