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# Supporting blood pressure measurement prior to online prescription of the combined oral contraceptive

Paula Baraitser <sup>1</sup>, Hannah McCulloch <sup>1</sup>, Zainab Shather,<sup>1</sup> Caroline J Free<sup>2</sup>

<sup>1</sup>SH:24 CIC, London, UK

<sup>2</sup>Department of Population Health, London School of Hygiene and Tropical Medicine, London, UK

## Correspondence to

Dr Paula Baraitser, SH:24 CIC, London, UK; paula\_baraitser@mac.com

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Online sexual health tests and contraception may improve access to sexual health care.<sup>1,2</sup> Online services offer the benefits of increased convenience and control but also require additional responsibilities and resources (time, skills, information) from users<sup>3</sup> with associated health risks and benefits. In this editorial we think through strategies to support these new user responsibilities and minimise health risks, using the example of self-reported blood pressure (BP) prior to a prescription of the combined oral contraceptive (COC).

International guidelines specify that a BP check is required prior to a prescription of the COC.<sup>4</sup> Ethinylestradiol stimulates an increase in hepatic protein production including angiotensinogen with slightly reduced renal blood flow and small BP increases that are clinically significant in 2% of users. BP is therefore monitored before first prescription of the pill and then annually, and the COC is contraindicated if BP is consistently above 140/90 mmHg.<sup>4</sup>

In face-to-face services, BP is collected and recorded by clinicians prior to prescribing, usually as a single measurement with repeat readings taken if the first reading is high.<sup>5</sup> BP is highly variable and errors taking BP are common.<sup>6</sup> Large variations in BP measured in office settings in clinical trials and primary care suggest limitations to the accuracy of measurements taken in this way.<sup>7,8</sup>

The UK Faculty of Sexual and Reproductive Healthcare (FSRH) recommends that remote and online prescribing is suitable for COCs based on a recent, self-reported BP measurement.<sup>9</sup> BP measurement may be obtained from general practitioners, pharmacies or using home BP machines. Ownership of BP machines in the UK is increasingly common among populations with hypertension, mostly older people and

pregnant women, and self-measurement of BP is both feasible and more accurate than measurements taken during clinic visits.<sup>8</sup> Many pharmacies offer BP checks without charge, and primary care consultation rates among young women are high, for example, 42 033/10 000 person-years among women aged 16–24 years,<sup>10</sup> giving multiple opportunities for BP measurement.

Research with users of online contraceptive services report that most (90.51%, 296/327) obtain BP readings in a clinically appropriate way, for example, a reading taken with a BP home monitor or at a clinical location by someone with appropriate technical skill, within 12 months prior to ordering. Ninety-three percent of users felt confident about reporting their BP to online services.<sup>11</sup>

Clinicians may inform users that their BP is normal, but may not provide the numerical reading. In a large, online contraceptive service ([www.sh24.org.uk](http://www.sh24.org.uk)) women were asked to report a numerical BP reading, where possible, as well as where and when it was taken. Those who could not report a numerical reading were asked to report whether they were told whether it was normal. Of 2224 COC orders created between 22 June 2020 and 9 August 2020, 1171 (53%) women provided a numerical BP measurement and 1053 (47%) could not provide a value. Of those who could not provide a numerical value, 95% were able to give details of where and when their BP had last been measured, and 71% were able to report that it was normal (SH:24, routinely collected data, 2020).

Reporting a normal BP measurement is a gateway to accessing the COC. In situations where users feel under pressure because, for example, they are running out of pills then there may be incentives to provide inaccurate



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readings. The study cited found that self-reported BP was a poor predictor of researcher-measured BP but that self-reported body mass index (BMI) was a good predictor of researcher-measured BMI.<sup>11</sup> One possible interpretation of this finding is that people are used to reporting height and weight but need a little more help to measure and interpret their BP. We cannot think of a reason why they would knowingly report one type of measurement inaccurately but not the other.

Services providing online prescriptions for sexual health products are required to adapt strategies used in clinics, acknowledge the responsibilities taken on by users, and generate an enabling environment to facilitate self care. This process reminds us of the limitations of current clinical practice and the challenges of online provision. On this basis we suggest some possible innovations and hope to stimulate informed debate on this issue.

Possible innovations in face-to-face care:

- ▶ Build self-monitoring skills by engaging users in the process of measurement, explaining the meaning and significance of BP checks and providing testing stations in waiting areas.
- ▶ Consider the role of home BP monitoring for COC prescriptions in clinics and referral for ambulatory monitoring in those with high BP diagnosed in clinic.

Possible innovations in online services:

- ▶ Provide accessible information on how to obtain and interpret a BP reading and the consequences of taking the COC with high BP.
- ▶ Create and promote opportunities for interaction with clinicians for support with BP measurement or reporting.
- ▶ Accept a report of a normal BP measurement (without numerical values) with a credible explanation of where and when it was taken for a 3-month supply of the COC. This could be supported with system reminders and information to prompt users to obtain a numerical measurement before their next order.
- ▶ Advise women using online services to measure their BP using a home monitor where they have access to one and to consider purchasing one if not.
- ▶ Offer proactive follow-up where there is evidence of poor understanding of BP, for example, reporting of a clinically impossible reading.

We would like to engage the contraceptive service provision community in a discussion of these issues and would welcome responses to the thinking set out here and further research into this issue.

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SH:24 where all innovation is the subject of research to ensure that learning is shared widely. SH:24 is a 'not-for-profit' organisation that provides health services to the National Health Service, and sharing learning through innovation and research is one of the principles of the organisation.

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#### ORCID iDs

Paula Baraitser <http://orcid.org/0000-0002-3354-6494>

Hannah McCulloch <http://orcid.org/0000-0001-5006-967X>

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