

The Fetal Dopplers Bill is based on limited evidence about pregnant women's use of the device



A Bill currently before Parliament to regulate the sale and use of foetal Dopplers is based on limited evidence about their potential dangers, argues [Aimee Middlemiss](#). She draws on her own research to explain why that is, and calls for policy to be based on better evidence on how pregnant women use Dopplers at home.

Foetal Doppler technology, used in midwifery and obstetrics to assess the presence and rate of a foetal heartbeat, is now commercially available in the UK for use by pregnant women in the home. A pregnant woman can buy a Doppler for £20 online, and many circulate second-hand, lent, and borrowed between family and friends. If she has never witnessed the midwife's 'listening in', she can look it up on YouTube, where advocates of the devices demonstrate the correct use and placement of the transducer wand.

Calls for regulation

Elsewhere on the internet, however, there is a more critical stance on home Dopplers, exemplified by the [KicksCount campaign](#) to ban their sale. This campaign has resulted in the [Fetal Dopplers \(Regulation\) Bill](#), scheduled for a second reading in June 2018, which would restrict the sale and use of Dopplers to medical professionals after a review of their impact on maternal health and the occurrence of stillbirths. For the pregnant woman, already caught in a web of rules about how she should behave in pregnancy, there is confusion and anxiety about the use of the technology. Alongside these legislative proposals for a ban on domestic use, Doppler use as a tool for assessing foetal presence is routinely modelled to pregnant women by midwives at antenatal appointments and during labour, demonstrating its potential medical value. Yet [NICE guidelines](#) for antenatal care claim Doppler listening is 'unlikely to have any predictive value' and should not be offered by midwives.

How pregnant women actually use Dopplers

Meanwhile, women in my 2017 qualitative study in Cornwall were using Dopplers mainly in the first two trimesters of pregnancy to allay anxiety after previous miscarriage or threatened miscarriage, to simply establish the continued life of their foetus. For example, eight of the 15 women in the study had experienced previous miscarriages, ectopic pregnancies, or 'missed' miscarriages. Six others had vaginal bleeding and pain during pregnancy, pregnancy-related health conditions which increased the potential for foetal loss, or no sensation of foetal movement. They sought evidence using Dopplers for the continuation of their pregnancy, and therefore the possibility of their longed-for baby, but did not expect that hearing the heartbeat early in pregnancy would predict outcome at 40 weeks.

Instead, it allowed them to manage the long months of anxiety they perceived as precarious. Later in pregnancy, they relied on foetal movement where possible, sometimes combined with the Doppler. In addition, women were not using the Dopplers to check foetal wellbeing in terms of heart *rate*, but simply checked that the foetus was still alive. They did not use the Dopplers as a substitute for medical care, but felt that access to medical care was limited, and this pushed them towards Doppler use because they felt responsible for foetal outcome. These details of women's actual use of foetal Dopplers in domestic settings need to be taken into consideration when legislation is proposed in this area.

Limited evidence of harm

The KicksCount campaign to ban Dopplers is based around the possibility of false reassurance if a pregnant woman believes she has heard a foetal heartbeat but has made a mistake. This scenario is drawn from a [single case study in the BMJ in 2009](#) where a woman *may* have mistaken her own heartbeat for the foetal heartbeat at 38 weeks of pregnancy and where the baby was stillborn. However, the article has some serious limitations. Firstly, the authors conflate foetal Dopplers with all commercially available foetal heartbeat monitors (for example, amplifiers which attach to smartphones). They do not specify which type was used in the case they report.

My research on women's experiences with domestic foetal heart listening found that there were no difficulties in finding the foetal heartbeat with a genuine Doppler, with distinct heartbeats heard as early as nine weeks by some women. A concern with not clearly distinguishing between foetal Dopplers and the less effective forms of technology claiming to allow foetal heartbeat listening is that, if the sale and use of Dopplers is restricted by the proposed legislation, women may be pushed towards the less effective commercial technologies, such as smartphone apps, with a potential impact on foetal survival if used in late pregnancy. The use of technology for health and family safety monitoring is well-established in modern parenting practices and this needs to be taken into account when considering the behaviour of pregnant women. Using ineffective technologies in late pregnancy might actually inadvertently threaten more stillbirth.

Overdrawn conclusions

The BMJ authors themselves also note that it is possible that the fetal death in their reported case may have been unavoidable, and that there is poor evidence for using foetal movement as an indicator of foetal wellbeing. However, they still conclude that the use of foetal heart monitors poses safety risks to both pregnant women *and* their foetuses. The generalization to *all* pregnant women and *all* foetuses is overdrawn. For example, there can be no risk of inaccurate Doppler use on fetuses under 24 weeks' gestation, since medical interventions stemming from lack of foetal movement or poor foetal heartbeat will not be carried out at this point before viability. Therefore, the proposed legislation on restricting Doppler sale and use, which draws on the BMJ article, needs to differentiate between Doppler use on viable and non-viable fetuses.

Since my research findings suggest that women are using Dopplers *before* fetal movement, which broadly coincides with viability, this is highly relevant. As one participant in the study, anxious after two miscarriages, stated:

It was almost like I was pregnancy testing up to when I could start the Doppler, and I used the Doppler until I could feel the baby.

In addition, it is unclear why the BMJ authors conclude that domestic Doppler use poses risks to the safety of *all* pregnant women, since it would not affect the great majority whose pregnancies ended in live birth, and for those whose pregnancies did not, the threat would be to the foetus, not the pregnant woman. This confusion is reflected in the proposed legislation, in its focus on assessing threats to *maternal* health from foetal Doppler use.

Evidence from women's lives

More evidence is urgently needed on what women actually use Dopplers for, how, and in what context. Pregnancy is not just a health issue, to be controlled by medical professionals, but also a personal, family event based in the home. Not considering domestic practices and pregnant women's motivations, and precipitously legislating to regulate foetal Dopplers might miss benefits of Doppler use, and risks overstating the dangers of the technology in pregnant women's hands.

Note: The above draws on the author's unpublished research for the MRes Science and Technology Studies at the University of Exeter. It was funded by a scholarship from the Economic and Social Research Council.

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