

Management of Hypertension in pregnancy following Badgernet electronic notes implementation

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Introduction

Hypertensive disorders during pregnancy remains one of the leading causes of maternal morbidity and mortality in the UK and worldwide. In 2019, the National Institute of Health and Care Excellence (NICE) updated their guideline for the management of hypertension in pregnancy with the aim to lower the treatment threshold for hypertension in pregnancy and thereby reduce unfavourable outcomes for both mother and baby.

Aim

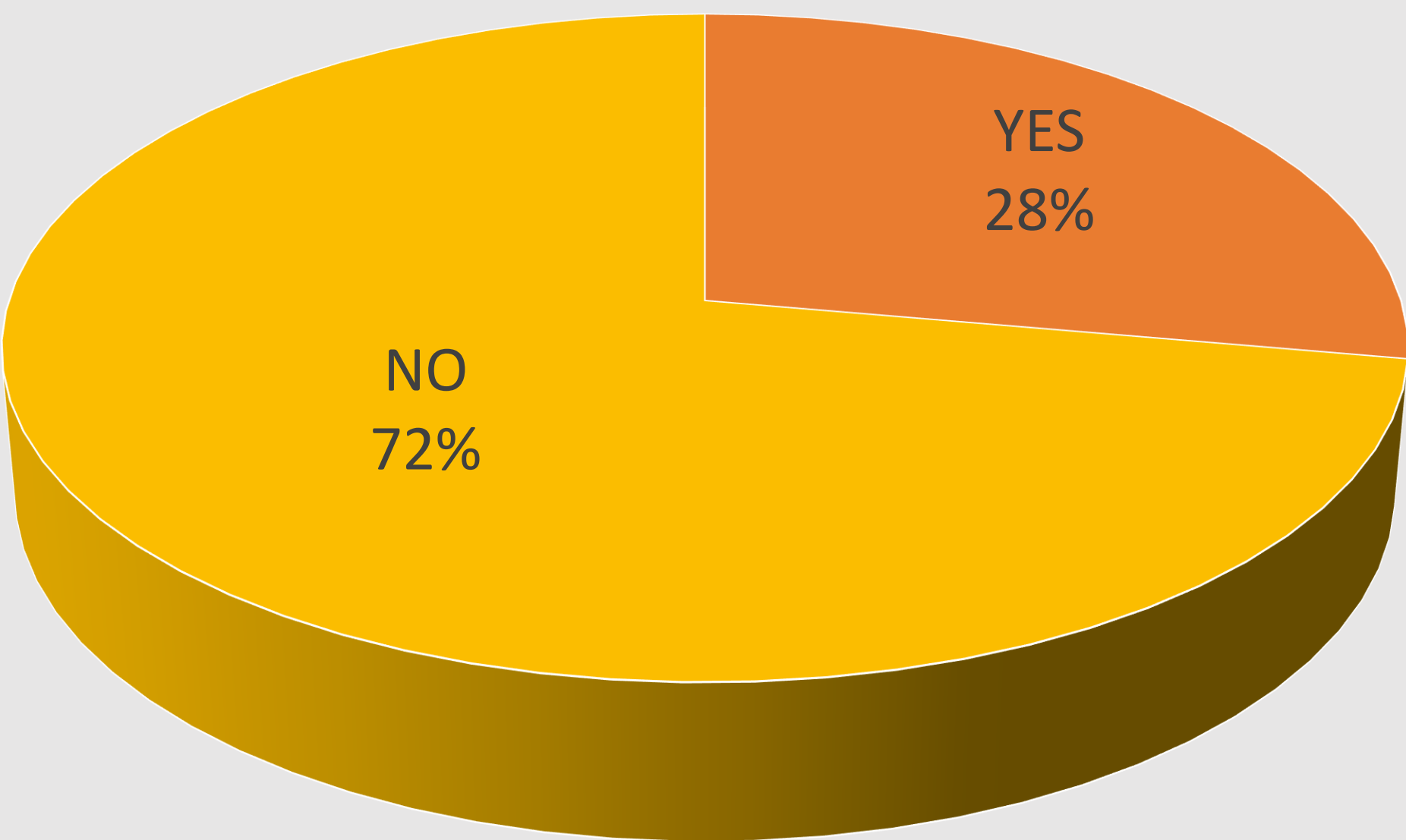
To review the management of hypertension in pregnant women who deliver in Mid Yorkshire Hospitals Trust (MYHT) against the new guidelines by the NICE. The primary objective was to identify areas of improvement or concerns in management and appropriate escalation when women are identified as high risk for developing hypertension in pregnancy.

Methods

51 women with essential hypertension, pregnancy induced hypertension (PIH) or pre-eclampsia who delivered between 5/5/2020 and 28/8/2020 in MYHT were retrospectively identified from Badgernet electronic maternity database.

Results

In the group audited, 21 women had PIH, 17 had pre-eclampsia and 13 had essential hypertension. 96.1% women were appropriately counselled for aspirin and urine PCRs were sent for all women where indicated. All women found to have a raised blood pressure were reviewed by the obstetric team. Appropriate blood tests were sent for 98% of women and 85% of women with hypertension in pregnancy had regular antenatal blood pressure monitoring in line with MYHT guidance in accordance with new NICE Guidelines.



Accuracy of Badgernet Risk alert

Delivery plans were documented for all women and postnatal plans were documented for 92.3% of women. The risk alert on Badgernet was inaccurate for 27.5% of women, the largest error being women with PIH having an alert for either essential hypertension or pre-eclampsia instead.

Conclusions

Overall, women with hypertension in pregnancy at MYHT were managed in accordance with NICE guidelines. We have found that data collection was much easier from an electronic database as compared to paper-based notes. However, inaccuracies in entries resulted in inaccurate statistics being reported. A likely reason for this was failure to contemporaneously update the risk factors when women develop hypertension late in pregnancy or progress from essential or PIH to pre-eclampsia. Staff education and feedback to Badgernet were recommended. As a result, clinical staff were reminded on how to change or add alerts on Badgernet with a simulation during the presentation.

A literature review of audits evaluating the value and benefits of other medical electronic notes revealed some key merits and flaws in electronic notes as stated below.

MERITS

- Patient data organised and easily referenced
- Accessible from Hospital and in community
- Fewer costs from storage of paper notes
- Environmentally friendly

FLAWS

- Cybersecurity issues
- Frequent updates required
- Time spent on training new staff
- Increased initial acquisition and regular maintenance costs

Discussion

Badgernet training for all staff needs to be more robust covering different possible scenarios. It is not an intuitive system at present and more training is required for optimal implementation in the future.



Electronic note systems such as Badgernet can only function as well as we choose to use it. To ensure these systems are fit for purpose, relevant and efficient, there needs to be a constant cycle of auditing of its different components to effect continuous improvement and evolution.

End users should test the systems and forms being used regularly and make adjustments, as we have in this audit, to ultimately improve on safety and care for women. Through continuous education and working closely with staff members such as the Digital Midwife (Badgernet), we have the power to mould these systems to work hand in hand, specific to each trust. A system that cannot evolve with its end users will eventually become obsolete.