# Improving sex-specific risk stratification for women in the Rapid Access Chest Pain Clinic

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## Introduction

- Hypertensive pregnancy disorders (HPD) affect 5-10% pregnancies worldwide.
- Pre-eclampsia is associated with a 4-fold increase in future incident heart failure and 2-fold increased risk of coronary artery disease (CAD), stroke and cardiovascular death.
- 30% of pre-eclamptic women have evidence of CAD by the age of 50.
- The 2024 ESC hypertension guidelines recommend that a history of pregnancy complications are sex-specific modifiers that should be considered to up-classify individuals with elevated BP and borderline increased 10-year CVD risk (5% to <10%) using scoring criteria such as SCORE2.
- QRISK3 algorithm now incorporates pre-eclampsia as a risk factor, providing more accurate 10-year risk calculation.

## Aims

- **Primary aim:** To improve the risk stratification for women with a history of HPD being reviewed in the Rapid Access Chest Pain Clinic (RACPC) at St Thomas' Hospital
- **Secondary aim:** to improve hypertension follow up for women post birth with HPD

## Methods

- The notes from 60 consecutive female patients assessed in the RACPC between October and December 2024 were reviewed.
- The following metrics were captured: age, history of CAD, presence of traditional risk factors (hypertension, hypercholesterolaemia, diabetes, smoking history, family history), mention of pregnancy history, mention of menopause history and use of HRT
- Contemporaneous HbA1c, total cholesterol and blood pressure were also noted

## Initial Results

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|---|---|
| **Age (years)** | 57.7 |
| **Known CAD, n (%)** | 4 (6.7) |
| **History of HTN, n (%)** | 34 (56.7) |
| **History of hypercholesterolaemia, n (%)** | 35 (58.3) |
| **History of diabetes/pre-diabetes, n (%)** | 19 (31.7) |
| **Current smoker, n (%); ex-smoker, n (%)** | 6 (10); 10 (16.7) |
| **Family history of CAD, n (%)** | 26 (43.3) |
| **Mention of menopause, n (%)** | 0 (0) |
| **Mention of pregnancy history, n (%)** | 1 (1.7) |
| **Mention of HRT, n (%)** | 4 ( 6.7) |

## Outcomes

- Only 1/60 (1/7%) of patients were questioned about HPD, on initial consultation.
- The RACPC proforma has now altered to include the routine questioning about HPD, in line with the new QRISK3 recommendations.
- The follow-up data is currently being collected, however, it has had immediate utility in improving clinician awareness of sex-specific risk factors and improved counselling about risk.
- GPs will now be provided with QRISK3 scores as standard from RACPC, to enable appropriate further management of cardiovascular risk in primary care.
- I am also working with Maternal Cardiologist to improve follow up post delivery, of women with HPD, to ensure appropriate counselling of future risk and blood pressure control.

## Conclusion

- Incorporating pregnancy-related risk factors into the RACPC assessment process represents a simple yet impactful step toward improving cardiovascular risk stratification for women using new guidance.
- Future work includes developing appropriate follow-up post delivery for women with HPD, further research and widespread adoption of this protocol.