



## Background

- Miscarriage is the most common complication of early pregnancy
- Economic impacts on paid and unpaid work remain under-measured with validated instruments
- No prior study has systematically assessed productivity losses using confirmed clinical outcomes
- This study uses pilot data from the UK Graded Model of Care

## Secondary Results

- Mean societal HCA cost per 4-week window: £578 at 6 weeks, £554 at 3 months, £506 at 6 months and £585 at 12 months.
- 44–48% of women incurred any productivity cost across waves
- Paid-work losses = 95–96% of the societal total
- Hours lost: absenteeism 19–22 hrs vs presenteeism 2.4–2.8 hrs per period.

## Design

- Prospective cohort, Birmingham Women's & Children's NHS Foundation Trust
- n = 203 women with clinically confirmed miscarriage (<14 weeks gestation)
- Enrolled Nov 2023 – Feb 2024; assessed at 6 weeks, 3, 6, and 12 months
- Productivity measured with the IPCQ (absenteeism, presenteeism, unpaid work)
- Human capital approach, valued in 2024 GBP
- Two-way fixed effects (TWFE) models stratified by number of prior miscarriages (1, 2, ≥3)

## Results

- ≥3 miscarriages: significantly higher probability of absence at all waves ( $\beta = 0.36\text{--}0.42$ ,  $p < 0.02$ )
- ≥3 miscarriages: consistently more likely to report less unpaid work ( $\beta = 0.23\text{--}0.34$ ,  $p < 0.02$ )
- 2-miscarriage group: smaller, less precisely estimated effects

## Main Results

- Miscarriage causes sustained societal productivity costs of £506–£585 per 4-week period
- ~95% of costs from paid-work absenteeism (19–22 lost hours per 4 weeks)
- ~Half of women incurred any cost; among those who did, conditional mean exceeded £1,100
- Women with ≥3 miscarriages show persistently worse outcomes at 3–12 months

## Implications

- Support formal miscarriage leave policies in the workplace
- Design graded return-to-work programmes after pregnancy loss
- Target psychological and occupational support for recurrent miscarriage (≥3)
- Productivity cost estimates provide key inputs for cost-effectiveness analyses of miscarriage interventions
- Annual productivity burden comparable to depression and chronic pain.

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