British HIV Association
BHIVA
20th Annual Conference

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Third Joint Conference

of the
British HIV Association (BHIVA)
with the
British Association for Sexual Health and HIV (BASHH)

1–4 April 2014

Arena and Convention Centre · Liverpool

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National Study of HIV in Pregnancy and Childhood

NSHPC

Variation in mode of delivery for HIV-positive women in UK and Irish hospitals, 2008-2013

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Background

- Anecdotal reports from the UK suggest that some women believe they are less likely to be offered vaginal delivery at some hospitals than at others

- The French perinatal cohort found that women with a viral load (VL) <400 copies/ml delivering in Paris hospitals were significantly more likely to have a vaginal delivery than women delivering elsewhere (Briand et al, 2013)

Background

Guidelines for mode of delivery

- Pre-cART era: CS was found to significantly decrease the risk of MTCT
- Since 2005 BHIVA pregnancy management guidelines have included planned vaginal delivery for HIV-positive women in UK with suppressed VL at term as an **option**
- 2012 BHIVA guidelines **recommend** vaginal delivery in women with suppressed VL
- International guidelines differ:

  European: Vaginal delivery with varying VL thresholds (<50,<400)

  US: Vaginal delivery if VL<1000copies/ml

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Aim

To investigate the variation in mode of delivery for pregnant women living with HIV (UK and Irish units)

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Comprehensive observational surveillance in UK and Ireland since 1990

Complementary reporting schemes

- Paediatric reports, clinics and **BPSU orange card**
- Obstetric reports, **RCOG approved scheme**

No interventions, no enrolment, surveillance only

Substantial feedback to clinicians and HIV networks maximises coverage and case ascertainment (>95%)

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Methods

NSHPC maternity units
(currently 227)

INCLUDED

All 38 units with ≥50 deliveries reported to NSHPC in **2008-2013** (n=4250):

- 21 units 50-99 deliveries ('small')
- 17 units ≥100 deliveries ('large')

EXCLUDED

189 units reported <50 deliveries to NSHPC since 2008

These units contribute less than half of all reports to NSHPC

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Methods

Mode of delivery classified as:

- Vaginal delivery, emergency caesarean and elective caesarean

Logistic regression was used to assess whether variation in vaginal delivery rates related to:

- Caseload (number of deliveries: 50-99, 100-149 v ≥150)
- Region (by strategic health authority)
- Pre-term delivery (<37 weeks)
- Delivery year
- Viral load closest to delivery

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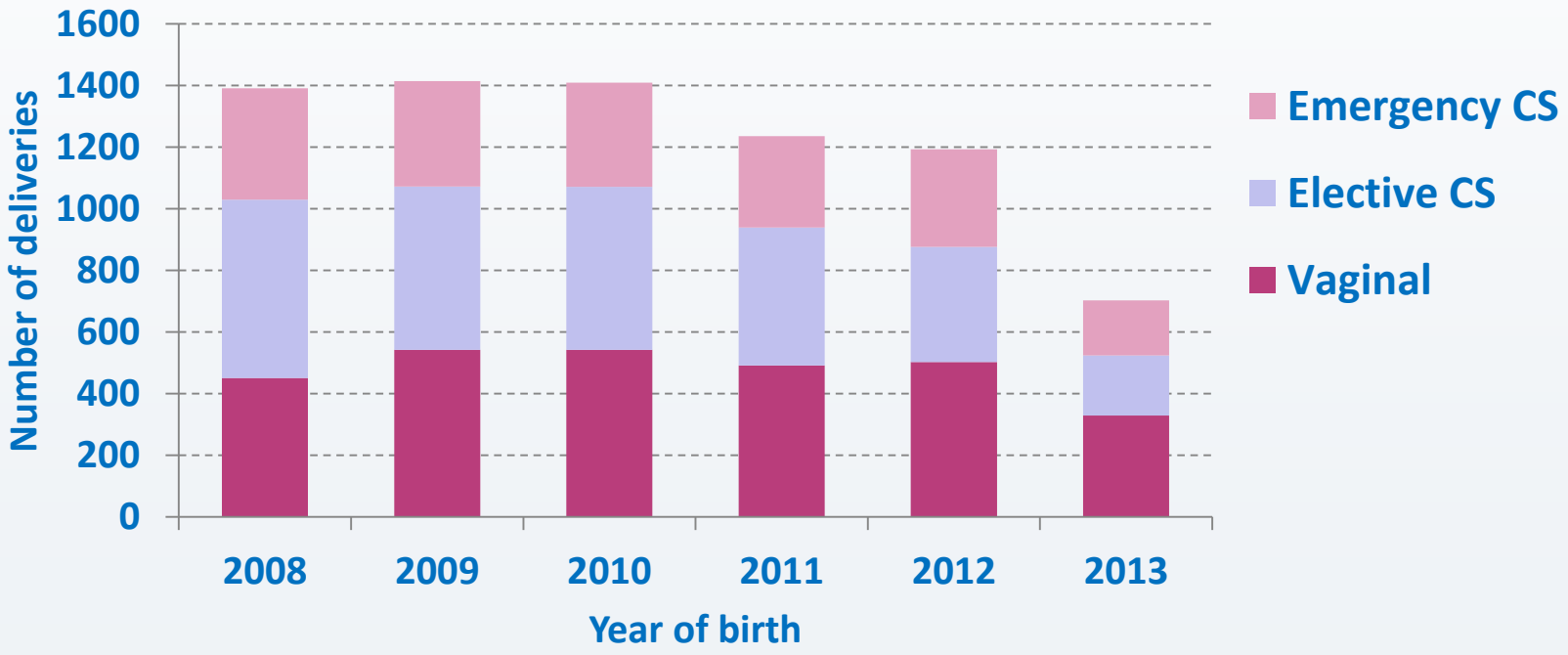
Results

In the UK & Ireland (all units) vaginal delivery increased by over 40% from 32% in 2008 to 46% in 2013 ($p<0.001$), whilst emergency CS rates remained stable ($p=0.79$)

Mode of delivery by year of birth 2008-2013* (n=7360)



*All pregnancies reported to NSHPC by end December 2013, data for 2013 incomplete

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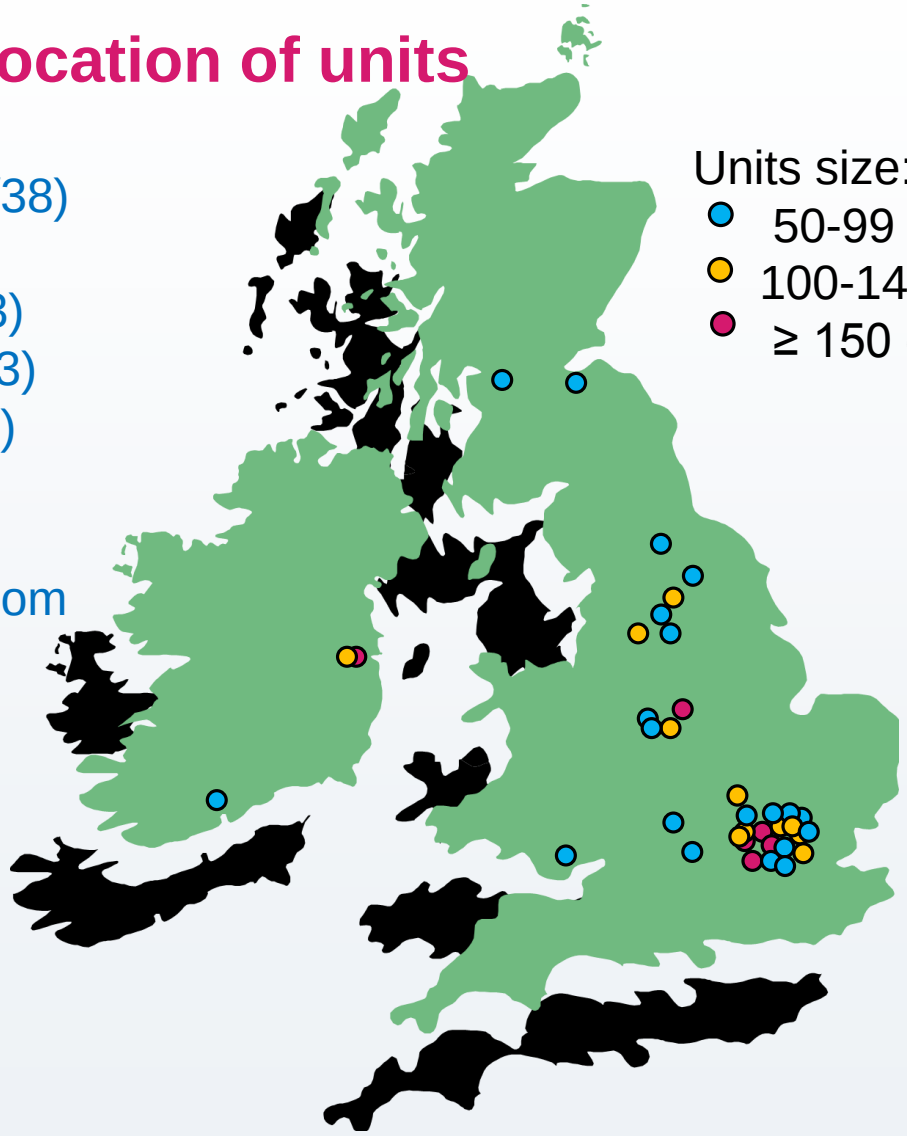
Results

Geographical location of units

- Half of units (19/38) from London
- East Midlands (3)
- West Midlands (3)
- South Central (3)
- North West (3)
- Scotland (3)
- Remainder (4) from Ireland & Wales



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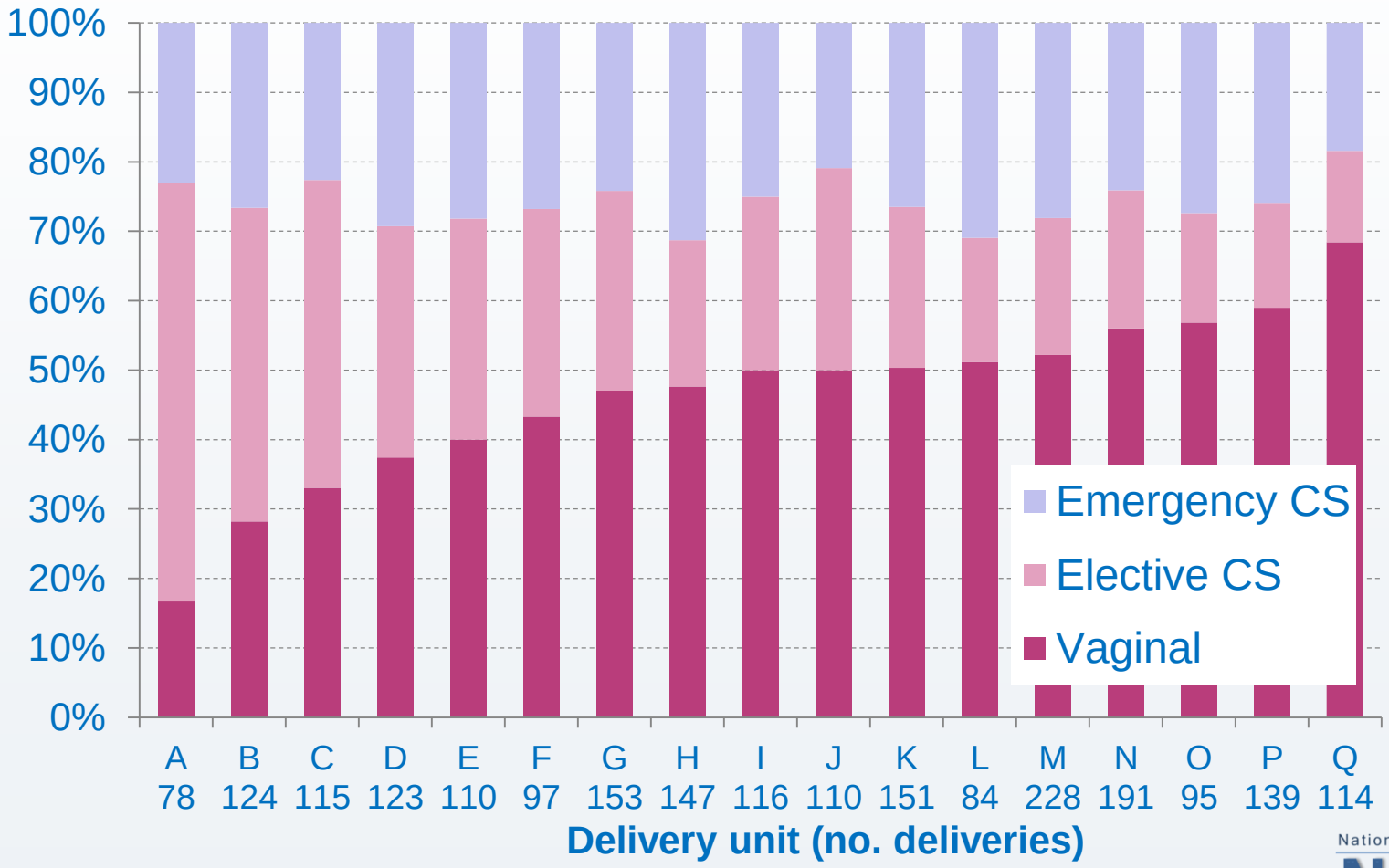
Results

Mode of delivery by unit 2008-2013 (17 ‘large’ units)



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Results

Variation in mode of delivery

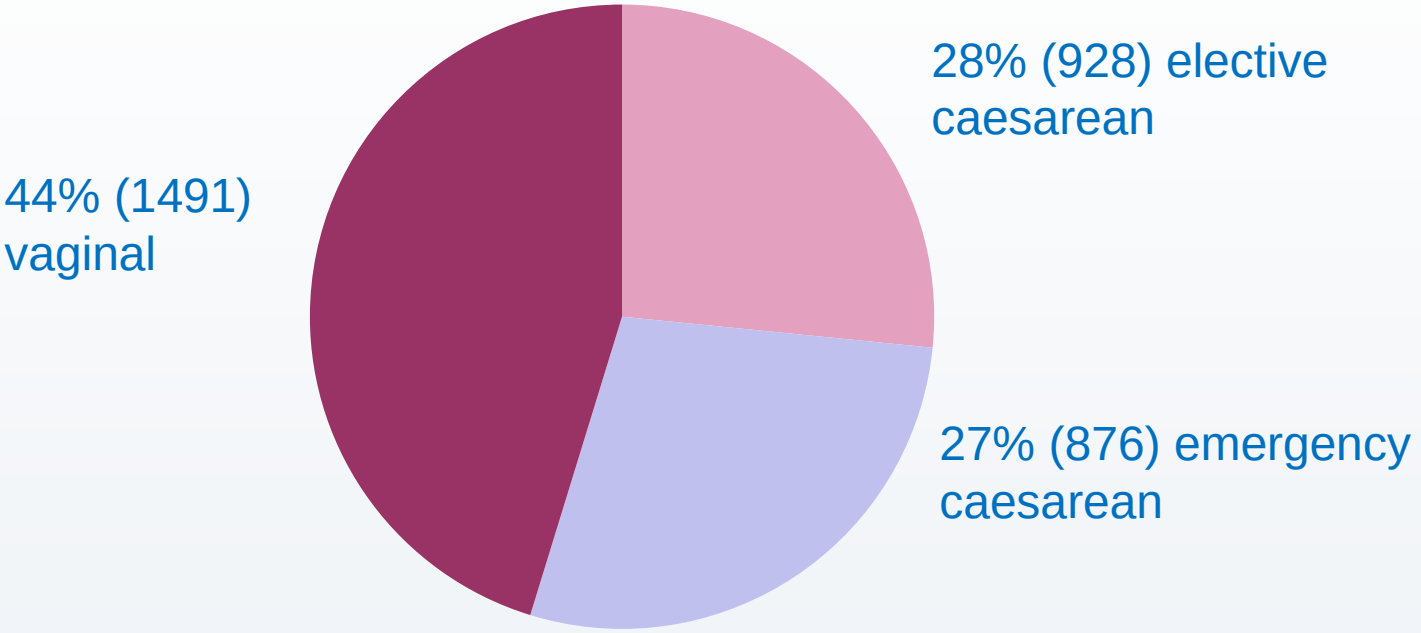
Deliveries reported from 17 ‘large’ units (2704/4250):

- Proportion of vaginal deliveries varied between units ($p<0.001$) but no difference in emergency CS rates ($p=0.57$)

- Similar pattern in deliveries reported from 21 ‘small’ units (1546/4250)

Results

Women with suppressed virus (<50 copies/ml)



Significant variation in VD between units remained (p<0.001)

- Median 46% (IQR 40%,50%)
- Ranged from 17% (13/78) to 68% (78/114)

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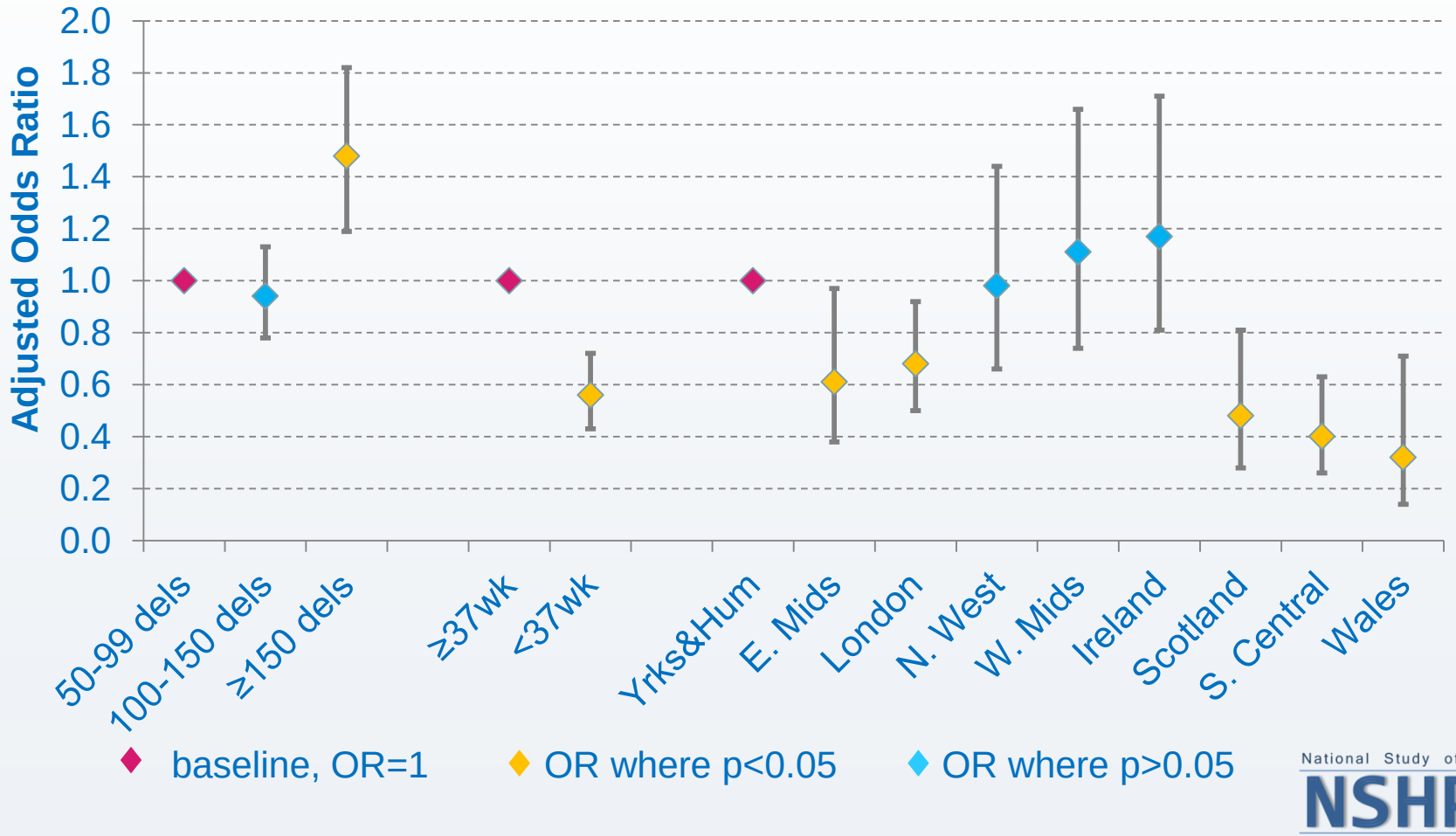
Results

Predictors of vaginal delivery among 38 units with ≥50 deliveries in women with a suppressed viral load



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Results

Summary of findings: units with ≥ 50 deliveries

- Variation in mode of delivery was explained by caseload, region, gestation

- Caseload had the greatest effect on outcome:

  Women delivering at units with ≥150 deliveries significantly more likely to have a vaginal delivery, Adj OR 1.48 (95% CI 1.19, 1.42)

- Similar findings when excluding ‘small’ units (with 50-99 deliveries)

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Conclusions

- There appears to be wide variation in practice with respect to mode of delivery between units and regions, including among women with suppressed virus
- This could reflect local policy differences or potential differences in case mix
- Further analysis:
  - Investigation into indication for CS (medical/obstetric)
  - Analysis including smaller units (<50 deliveries)
  - Exploration of changes over time
  - Comparison with non-HIV population

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Current team

- **Principal Investigator:** Pat Tookey
- **Administrative Assistants:** Icina Shakes (HPA), Kate Francis (various)
- **Researchers:** Angela Jackson (HPA), Helen Peters (NSC), Laura Byrne (MRC Clinical Research Fellowship)
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Any views expressed are those of the speaker and not necessarily those of the funders

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