

Breastfeeding – an effective public health intervention?



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PHINS 2013

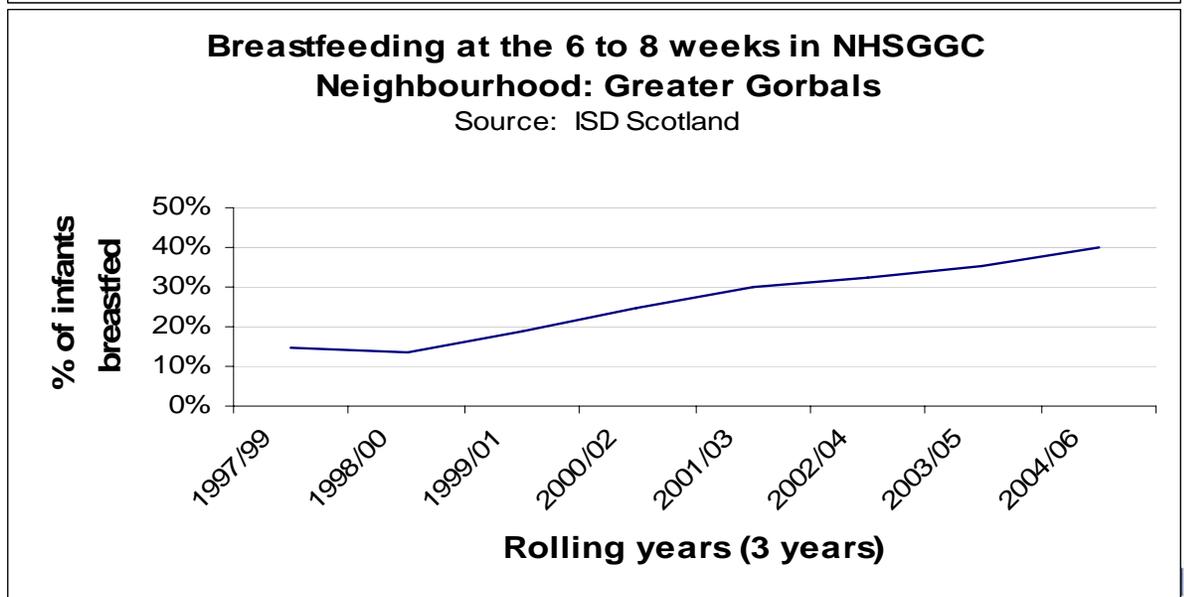
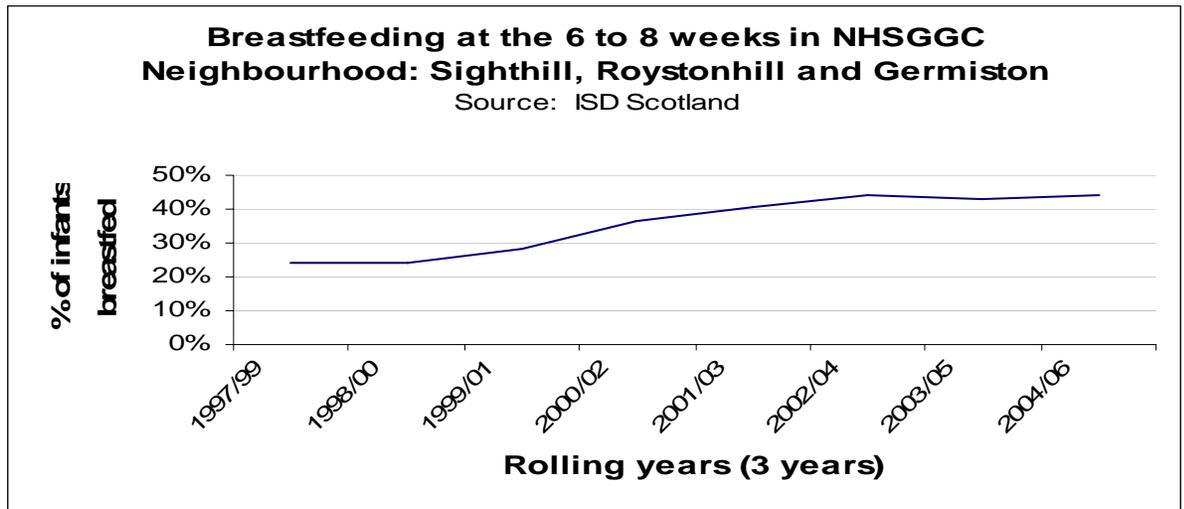
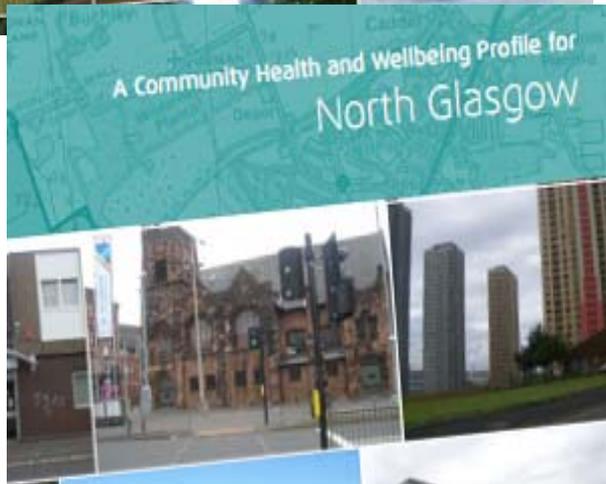
Acknowledgements

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- GCPH Breastfeeding Advisory Group
- GCPH/ISD colleagues

Outline of Presentation

- Background
- Overview of GCPH Breastfeeding Study
 - *Why study infant feeding in Scotland?*
 - *What was the study about?*
 - *How was it conducted?*
 - *What did it show?*
 - *What more can we do?*

GCPH Breastfeeding Project



Objectives

Phase 1

- To explain increased breastfeeding rates observed in selected NHSGGC neighbourhoods between 1997 and 2009
- To investigate new ways of analysing breastfeeding trends across Scotland using linked data

Phase 2

- To explore NHSGGC 'hospital effect'
- To explore the impact of infant feeding type on weight gain and illness in early childhood
- To conduct an economic assessment of child morbidity by mode of infant feeding

Linked datasets

- Vital registration records (births/deaths)
- Maternity records
- Infant (neonatal) records
- Child health surveillance records
- Childhood morbidity
 - GP consultations
 - Hospital admissions

Overview of linked schemes

Predictor Variables



Outcome Variables

Geography

(NHS Board, Neighbourhood)



Parental background

(maternal/paternal age, socioeconomic status, smoker)



Pregnancy/Maternity

(mode of delivery, gestation)



Infant characteristics

(gender, neonatal stay, birth weight)



Infant feeding – duration

(Feeding at the 6 to 8 weeks)



NRS



SMR02



CHSP-PS



SBR/SMR11



SSBID



SMR01



GP (PTI)



Infant weight gain
(overweight and obesity)

Infant morbidity
(Hospital admissions)

Infant morbidity
(GP consultations)

SMR 01: Scottish Morbidity Records of hospital admissions; PTI: Practice Team Information – sample of Scottish population ; Child Health Surveillance – Pre-School schemes – 21 -24 month review, 39 – 42 month review, Pre-school and Primary 1 reviews

National Records of Scotland – Registered births; SMR02 – Maternal hospital records ; CHSP-PS - Child Health Surveillance (pre-school); SBR/SMR11 - Scottish Birth Record/Neonatal and infant health; SSBID - Scottish Still Birth and Infant Death Records

What factors **increase** the chances of breastfeeding?

- Older mother (**teenage mother**)
- Parents of Non-British background (**British**)
- Residence in less deprived area (**most deprived**)
- Residence in a large town/rural (**urban**)
- Female infant (**male**)
- First time mother (**multiparous mother**)
- Longer stay in hospital (**less than 2 days**)
- Baby friendly hospital (**non-baby friendly hospital**)

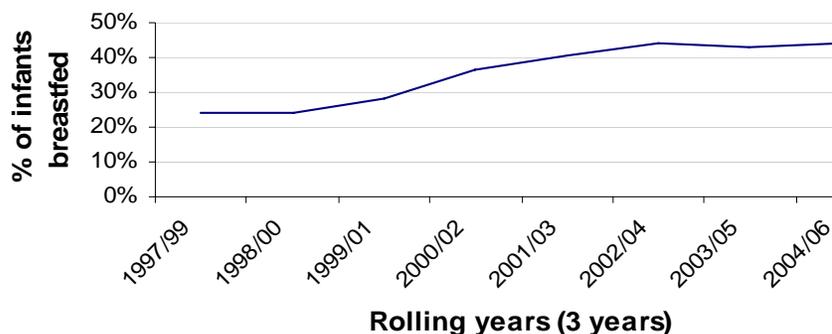
What factors decrease the likelihood of breastfeeding?

- Cohabiting or single/separated parents (**married**)
- Lower socioeconomic status (**Higher/managerial**)
- Multiple births (**singleton**)
- Smoker (**Non-smoker**)
- Caesarean section (**Normal/spontaneous delivery**)
- Neonatal admission (**Not admitted**)
- Preterm birth (**normal gestation**)

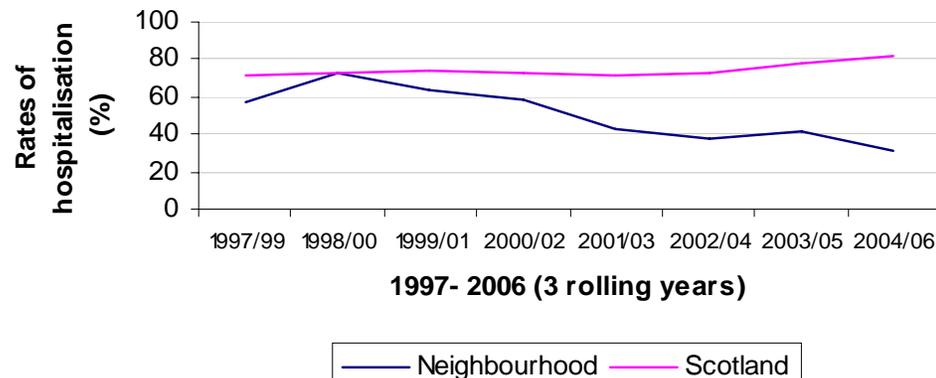
GCPH Project Neighbourhoods

Breastfeeding at the 6 to 8 weeks in NHSGGC Neighbourhood: Sighthill, Roystonhill and Germiston

Source: ISD Scotland

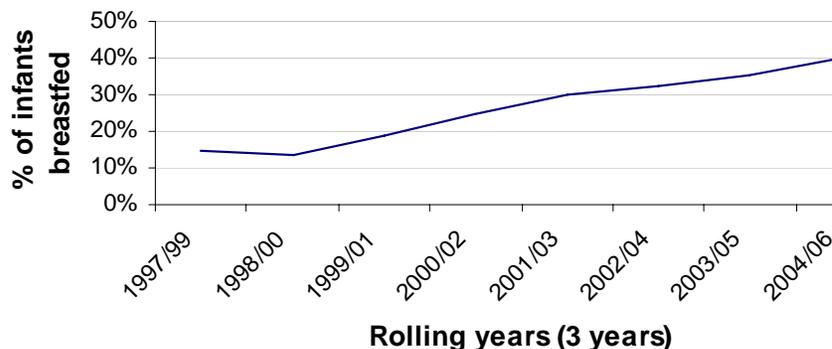


Hospitalisations for infections within the first year of birth in NHSGGC Neighbourhood: Sighthill, Roystonhill & Germiston

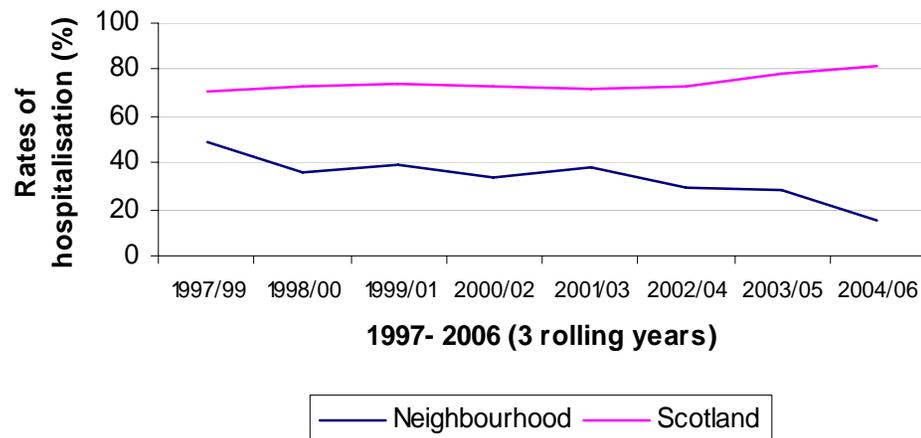


Breastfeeding at the 6 to 8 weeks in NHSGGC Neighbourhood: Greater Gorbals

Source: ISD Scotland



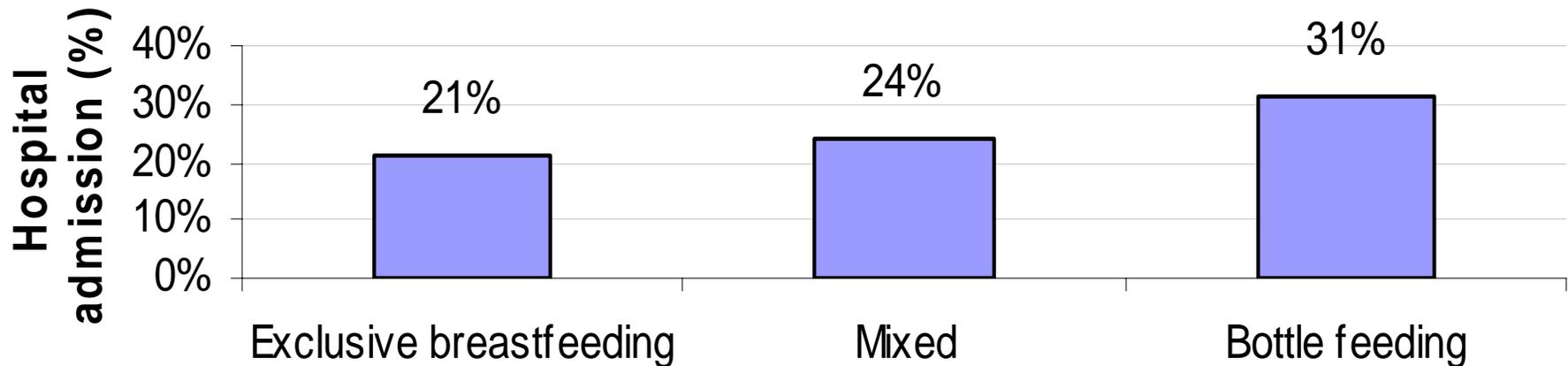
Hospitalisations for infections within the first year of birth in NHSGGC Neighbourhood: Greater Gorbals



Childhood admissions (1997 – 2009)

Rate of hospital admission and infant feeding at the 6 to 8 week review

Source: ISD Scotland linked extract/SMR01



Mode of infant feeding at the 6 to 8 weeks

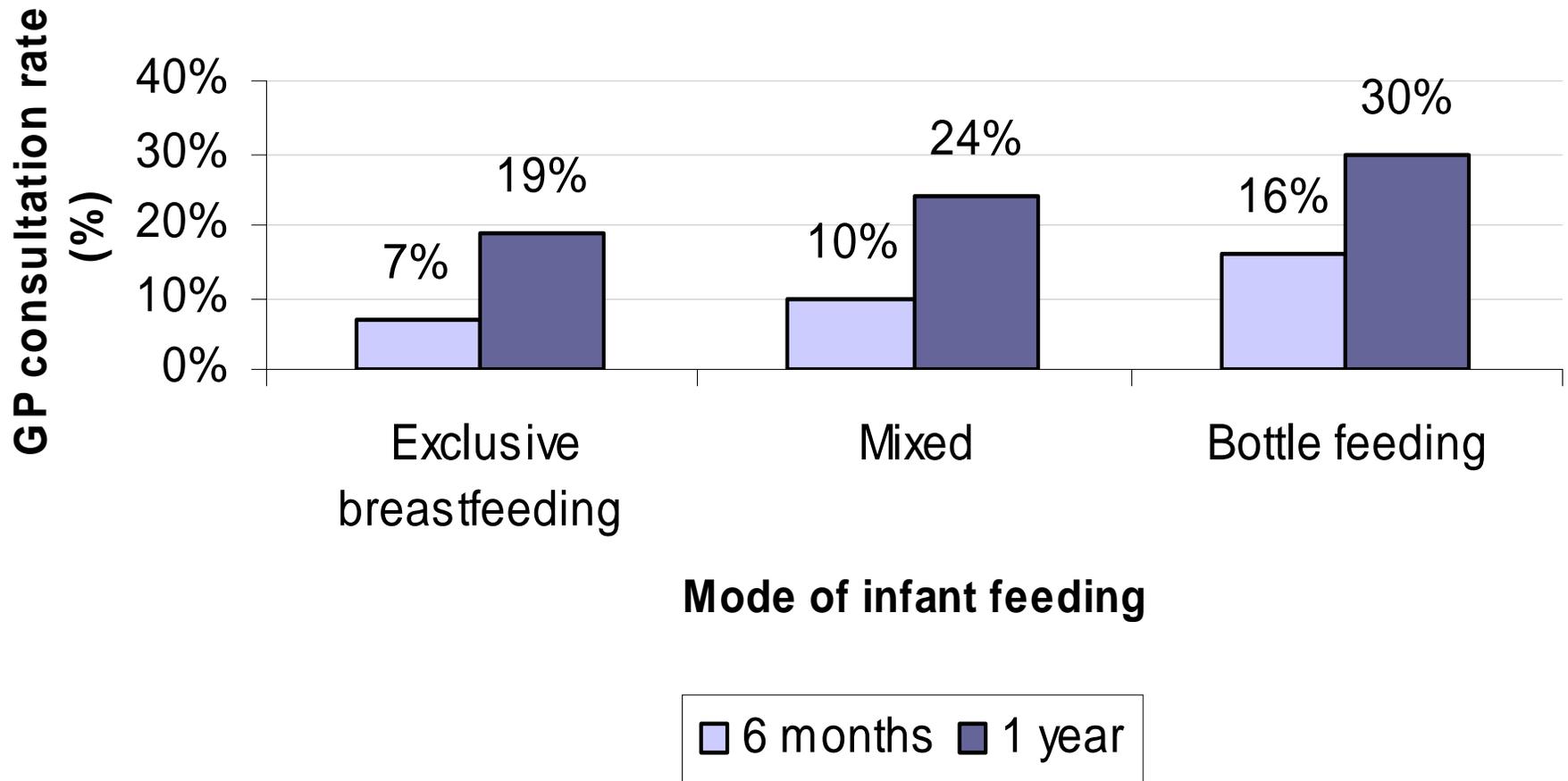
Infant feeding and hospitalisation

Main diagnoses at hospital admission	Mixed feeding Relative Hazard Ratio (95% CI)	Bottle feeding Relative Hazard Ratio (95% CI)	PAF
Gastrointestinal infections	1.13 (1.07-1.19)	1.31 (1.26-1.35)	18%

Infant feeding and GP consultations

GP consultations for common childhood illnesses

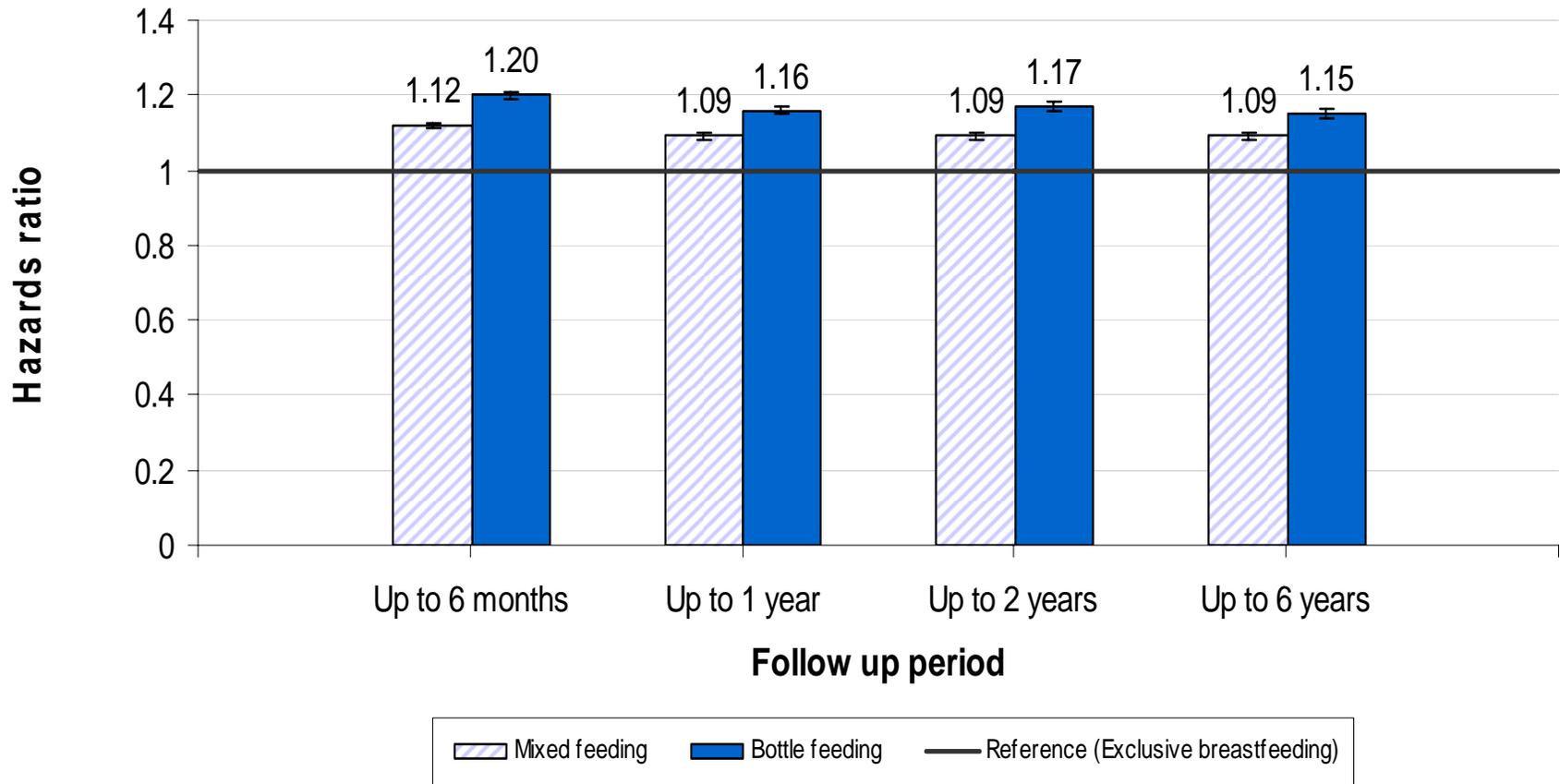
Source: ISD Scotland linked extract/PTI



Infant feeding and GP consultations

GP consultations for common childhood ailments and infant feeding at the 6 to 8 week review 2003 - 2009

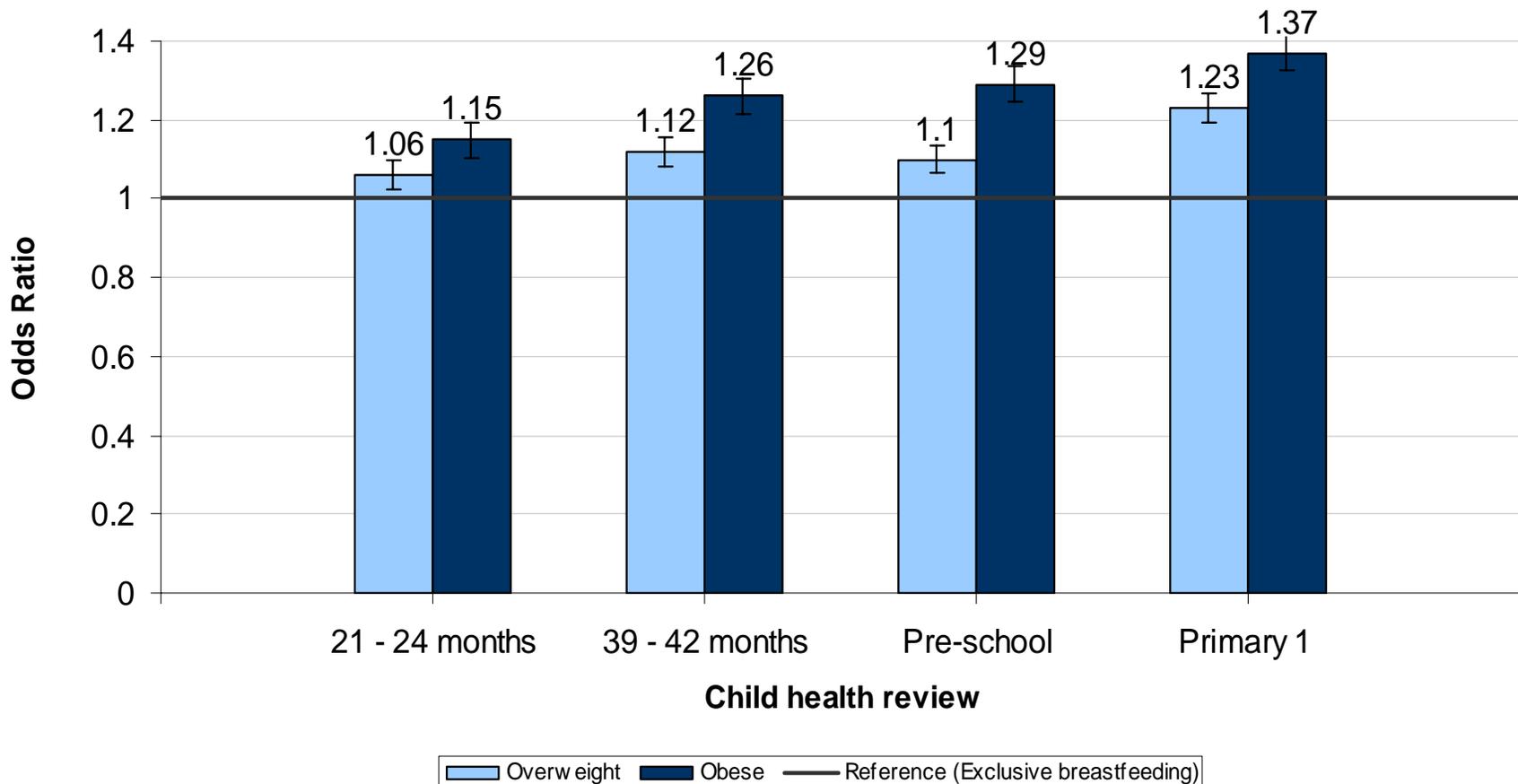
Source: ISD Scotland linked extract, PTI, CHSP-PS



Infant feeding and healthy weight

Chances of being overweight and obesity amongst bottle fed infants compared to exclusively breastfed infants at 6 to 8 week review
(birth cohort 1997 - 2009)

Source: ISD Scotland linked extract, NRS, CHSP-PS



Breast milk – a public health imperative?

*‘If a new vaccine became available that could prevent 1 million or more child deaths and that was moreover cheap, safe, administered orally, and required no cold chain, it would become an immediate public health imperative. Breastfeeding can do all this and more, but it requires its own “**warm chain**” of support...’ (Lancet, 1994)*

What would be part of a ‘warm chain?’

- Mother and father knowledge/attitude
- Supportive networks
- Skilled health care workers
- Maternity practices
- Maternity leave policy
- Health policy
- Neonatal care

So what is the Scottish context?

- Breastfeeding etc. (Scotland) Act 2005
- Baby friendly initiative – 81% of all babies born in baby friendly hospitals
- Policy documents: ‘Equally well’, ‘Maternal and Infant Nutrition framework’, ‘Early Years framework’
- Support for disadvantaged mothers through the Healthy Start scheme

..and what has changed?

- More Scottish mothers informed on the benefits of breastfeeding
- More mothers confident to breastfeed in public
- Increased public awareness of breastfeeding
- Increased initiation (but shorter duration)
- Increased 'mixed' feeding
- **but** this has not shifted the 'bottlefeeding culture' – not since 1990

Changing the question?

**Why do mothers ‘give up’
or not start at all?**

**What structures are there
to make exclusive
breastfeeding a
sustainable choice?**

What more can we do?

- Postnatal maternity home care support (*Dutch system - characterised by home births/short hospital stay*)
 - Trained home carer to support family for up to 8 hours/day for 8 days after delivery
 - Cares for mother and new born child
 - Provides infant health education to family
 - Recognises 'distress' in mother and baby and informs GP or midwife
 - Performs household tasks (optional)

What more can we do?

Belarus (18 weeks)

100% paid leave

Poland (16 – 18 weeks)

100% paid leave

France (16 – 26 weeks)

100% paid leave

Netherlands (16 weeks)

100% paid leave

**UK (14 -18 weeks: 6
weeks – 90% paid
leave, flat rate after)**

Denmark (18 weeks)

100% paid leave

Germany (14 weeks)

100% paid leave

Norway (18 weeks)

100% paid leave

Spain (16 weeks)

100% paid leave

What more can we do?

- The Women, Infant and Child (WIC) special supplemental nutrition program (US) provides federal grants to states for supplemental foods, health care referrals and nutrition education for low income women, postpartum women and children up to the age of 5 at nutritional risk.
 - *Californian example (increased incentives for breastfeeding women with staff training/policy changes – AJPH, 2012)*

Summary

- There is substantial evidence that in Scotland exclusive breastfeeding for longer can make a difference
- We however need a ‘warm’ chain to make the ‘breastfeeding culture’ in Scotland a reality
- What will the public health response be?

Thank you!