Niamh at 9 months

Niamh at 3 years

Niamh at 5 years

Early complimentary feeding introduction in the Republic of Ireland

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TRINITY COLLEGE DUBLIN

Introduction

- **Timing of solids in infants diet is key**
  - Developmental and growth reasons
  - Short term; allergies, food intolerances, coeliac disease
  - Long term effects on health
- **Risk of overweight, obesity, chronic diseases**
- **WHO: 6 months exclusive breastfeeding**
- **ESPGHAN complementary feeding**
  - <17 weeks and no later than 26 weeks
  - FSAI adheres to this recommendation

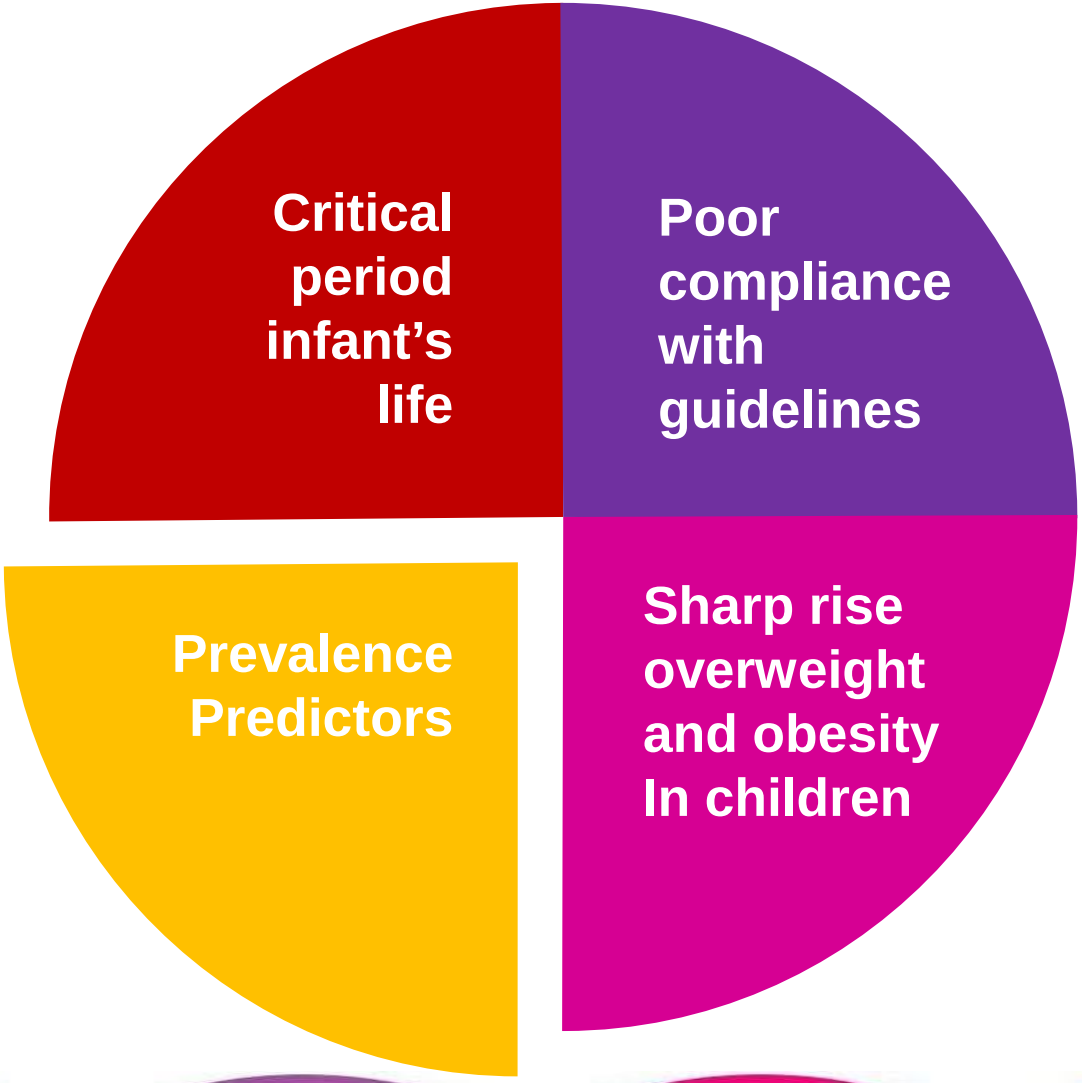
Introduction

- **Previous studies - 75% of infants introduced to complimentary feeding before 17 weeks**
  - 22.6% of these being introduced prematurely by 12 weeks (Tarrant et al.,2010)

- **This poor compliance coincides with a sharp increase in overweight and obesity**

- **25% of three year olds either overweight or obese**

Objectives


Critical period infant's life
Poor compliance with guidelines
Prevalence Predictors
Sharp rise overweight and obesity In children

Sample Design

- Evidence from the GUI infant cohort wave 1
- Born between Dec 07 and May 08
- Random sample from Child Benefit Register
- 11,134 (69% response rate)
- Parents interviewed when child 9 months of age
- Data weighted to be nationally representative

Variables

- **Following ESPGHAN's guidelines**
  - Binary dependent variable was created
  - <17 weeks for early complimentary feeding
  - ≥17 weeks for acceptable introduction of complimentary feeding
- **Independent variables grouped into 5 areas**
  - Biological, Psychosocial, Demographic
  - Behavioural, Health & Social determinants
- **Selected from literature and other predictors and confounding variables available in the database**

Statistical Analysis

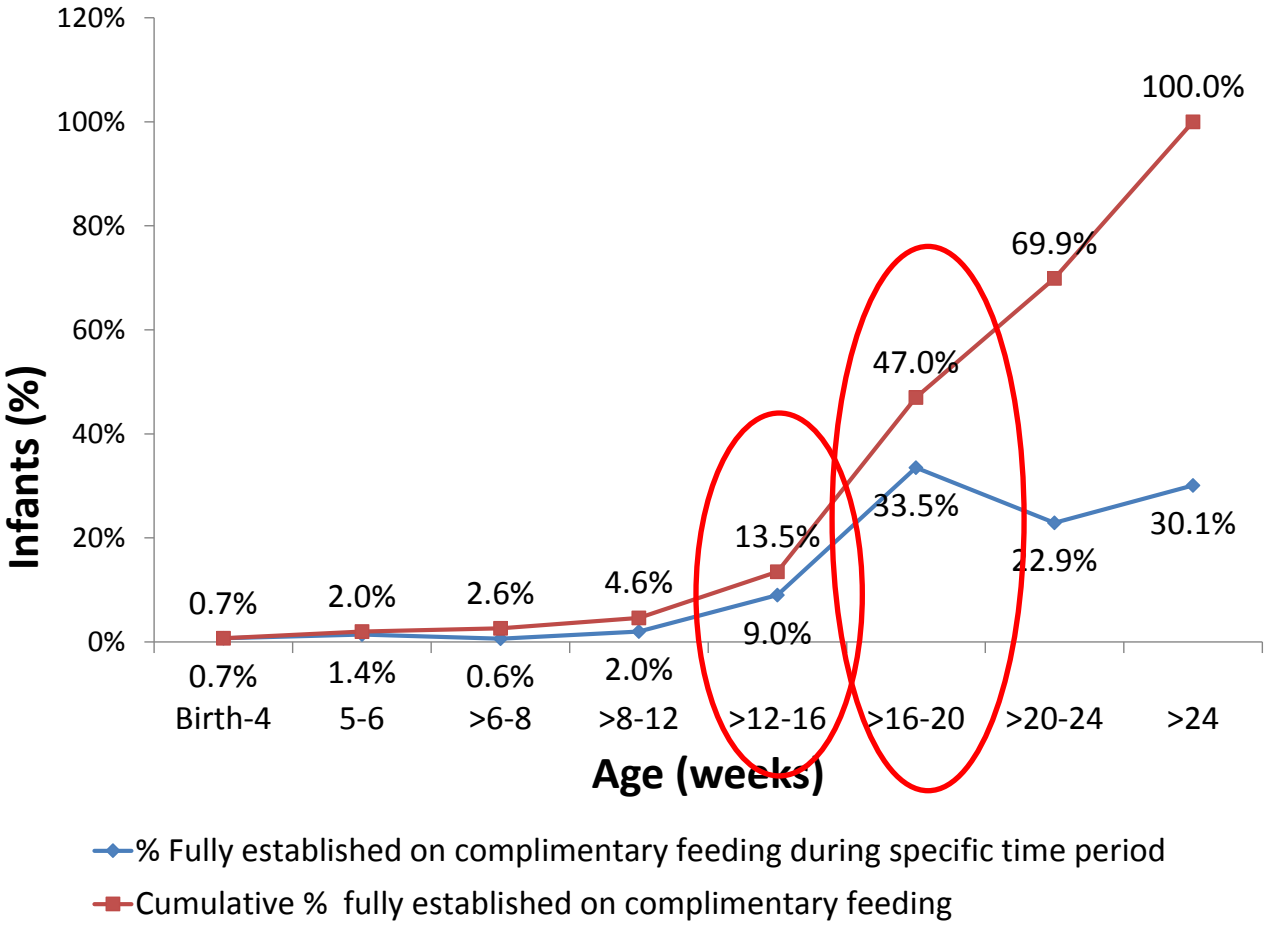
- **Statistical Package for the Social Sciences (SPSS V.19) was used for all statistical analysis**
- **Statistical analysis**
  - Descriptive statistics
  - Bivariate analysis ($\chi 2$ test)
  - Multivariate analysis (binary logistic regression)

Multivariate Analysis

24 independent variables included in analysis

- Infant parity & marital status
- Breastfeeding initiation and formula feeding introduction
- Contact with grandparents
- Help from family and friends
- Type of antenatal care
- Primary caregiver age, education, ethnicity and BMI
- Primary caregiver depression score
- Primary caregiver smoking status
- Infant waking up at night time
- Having a medical card or private insurance
- SES

Results (prevalence)



Prevalence

- Prevalence is probably an underestimation
- Inappropriate infant feeding practices taking place
- Early introduction to solids associated with increased risk of being overweight or obese
- 3 years of age: those introduced to complimentary feeding later less likely to be overweight or obese

Fully adjusted model

Demographic

- **Mother**
  - Age
  - Education
  - Ethnicity
  - Household social class

Biological

- Infant's gender
- Maternal BMI

Behavioural

- Smoking status
- Folate prior pregnancy
- Formula feeding start

Social

- Marital status
- Minder option

Health care

- Number of visits to GP since birth

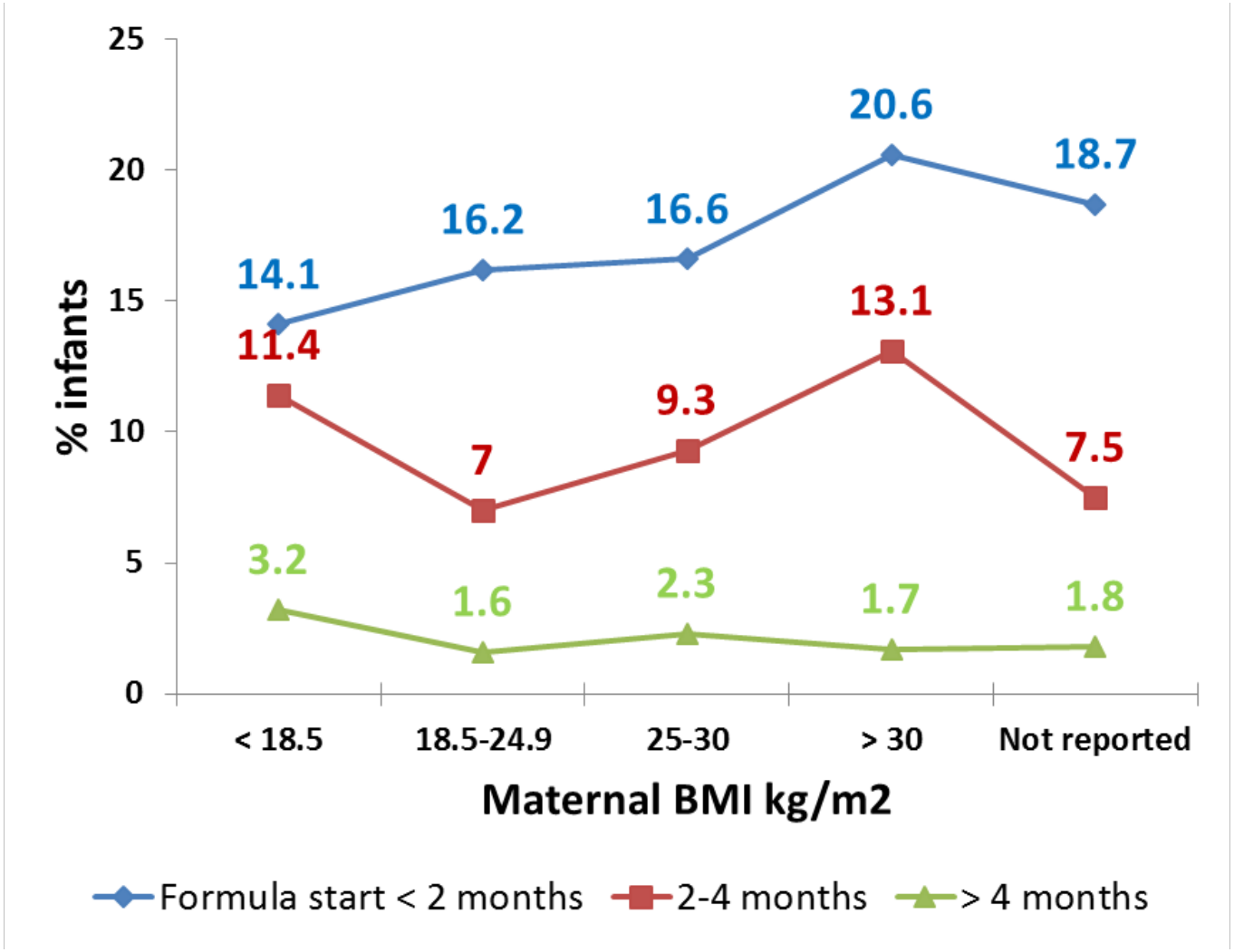
Demographic Factors

Characteristic		Odds Ratio	95% CI	
			Upper	Lower
Maternal Education	No formal	1		
	Secondary Level	0.937	0.694	1.266
	Third Level	0.777	0.562	1.076
Household Social Class	Professional	1		
	Unskilled	1.78	1.179	2.688

BMI & Formula Milk

Characteristic		Odds Ratio	95% Confidence Interval	
			Lower	Upper
Maternal BMI	Normal Weight	1		
	Overweight	1.154	1.006	1.322
	Obese	1.379	1.18	1.613
FF* start	<2 months	1		
	2-4 months	0.607	0.473	0.779
	>4 months	0.116	0.072	0.186

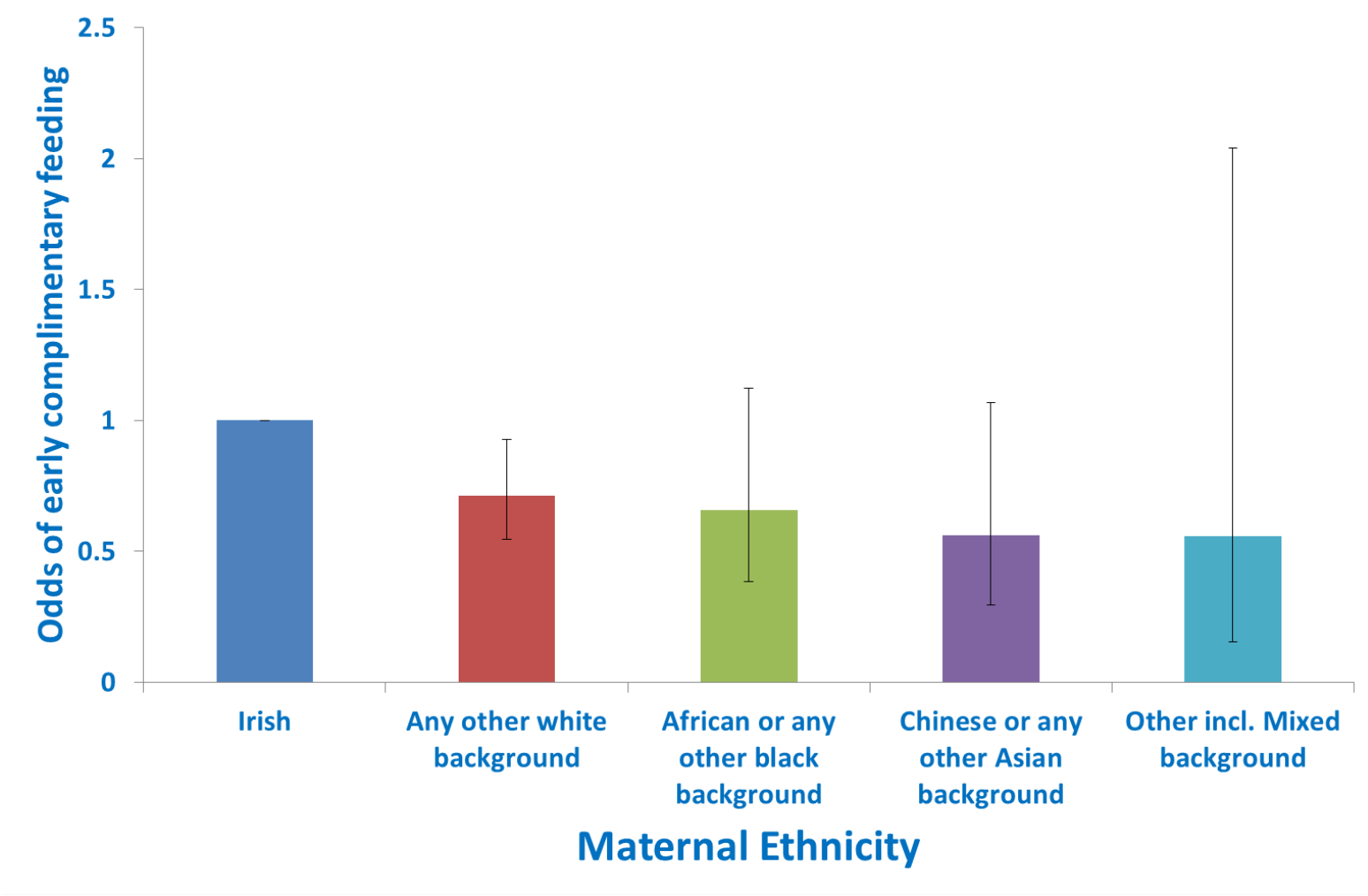
BMI & Formula Milk



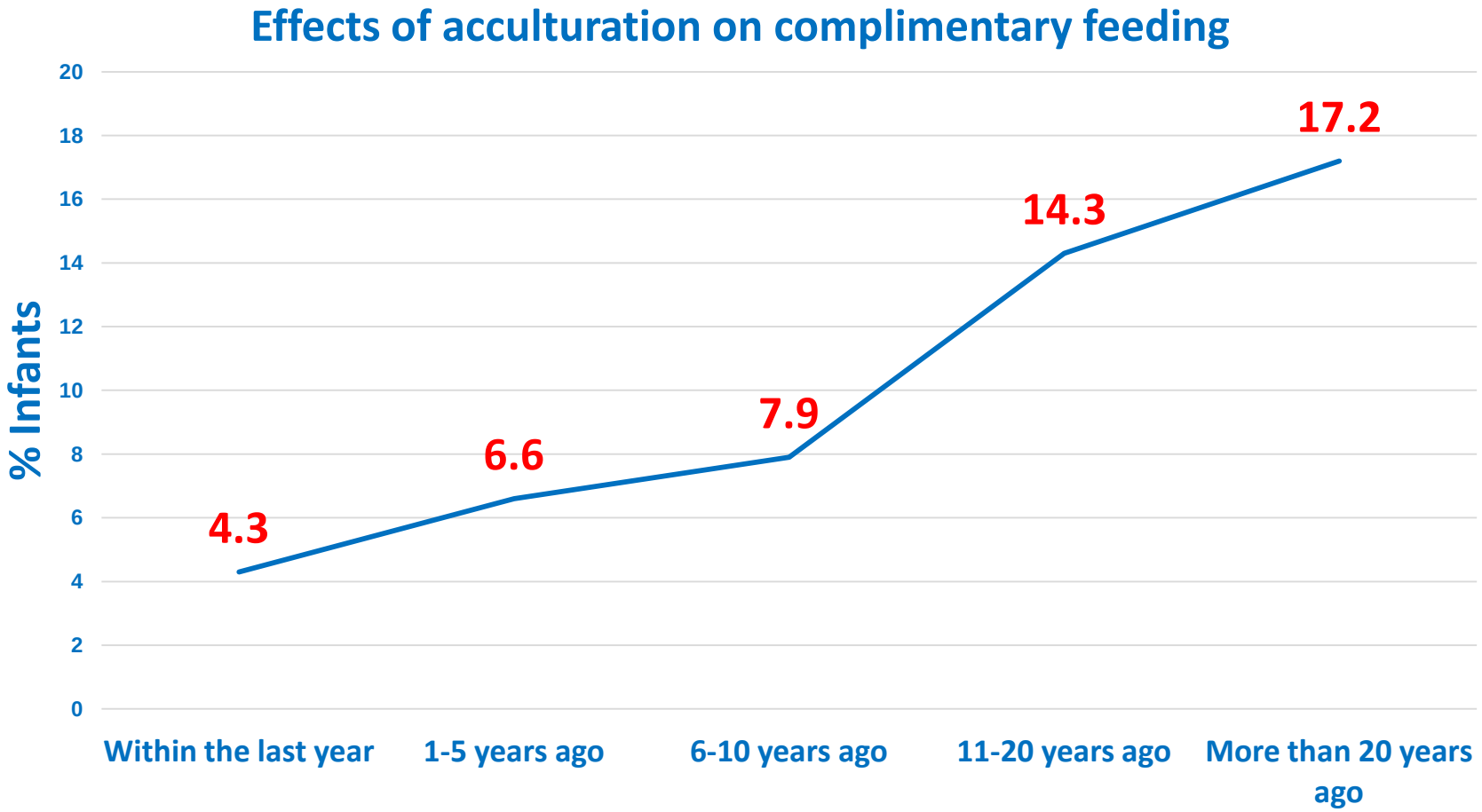
BMI & Formula Milk

- **Maternal BMI is potentially a confounder in the relationship between FFI and early complimentary feeding**
- **Overweight and obese women have been found to be at higher risk of early breastfeeding termination**
- **Biological factors play a role in the initiation of breastfeeding among this population group**

Ethnicity


Odds of early complimentary feeding
2.5
2
1.5
1
0.5
0
Irish
Any other white background
African or any other black background
Chinese or any other Asian background
Other incl. Mixed background
Maternal Ethnicity

Ethnicity


Effects of acculturation on complimentary feeding
% Infants
20
18
16
14
12
10
8
6
4
2
0
4.3
6.6
7.9
14.3
17.2
Within the last year
1-5 years ago
6-10 years ago
11-20 years ago
More than 20 years ago

Conclusion I

- **Inappropriate infant feeding in the ROI**
- **Antenatal education on infant feeding with particular focus on younger less educated parents**
- **Complimentary feeding process cannot be studied in isolation from the type of milk feeding early in life**
- **Promotion of breastfeeding to near 6 months**

Conclusion II

- Further exploring of the relationship between timing of FFI and early complimentary feeding is needed
- The promotion of a healthy weight among women in their reproductive years is desirable
- Further exploration of social factors; influence of relatives and healthcare staff

Growing Up in Ireland
National Longitudinal Study of Children

Q&A

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