

Niamh at 9 months



Niamh at 3 years



Niamh at 5 years



Health, Eligibility and the Utilisation of GP Services

Richard Layte, Anne Nolan
ESRI, TCD



Introduction

- **User fees influence healthcare use**
 - 1970s/1980s RAND HIE
- **Why are inequities in access to health care a particular concern for children?**
 - Demonstrated causal links between insurance, utilisation and child health (Currie and Gruber, 1996; Currie *et al* 2008; Lin (2009)
 - In turn, causal links between child health and later life outcomes (Case et al., 2005)
- **Complex system of public healthcare entitlements in Ireland**
 - Little or no evidence on effect on utilisation among children



Public healthcare eligibility

- **Irish system of eligibility for free public health care is unusual (in comparison with other European countries)**
 - Particularly for GP services
 - Important role of private health insurance (PHI) in financing hospital (and increasingly, GP) care
 - Major reform envisaged as part of current Programme for Government
 - Budget 2014 announcement



Primary care user fees

	GP User Fee	Prescription User Fee
Full medical card	free	€2.50 per item (€25 limit per family per month)
GP visit card	free	full cost up to €144 per family per month
PHI with GP cover	full cost at point of use, with full or partial reimbursement by PHI	full cost up to €144 per family per month
PHI without GP cover	full cost at point of use	full cost up to €144 per family per month
No cover	full cost at point of use	full cost up to €144 per family per month

Notes:

50c per item prescription charge introduced in October 2010; increased to €1.50 per item from January 2013 and to €2.50 from December 2013

€144 deductible increased from €132 in January 2013



Motivation

- **Large body of research has analysed the impact of this system on GP visiting patterns among *adults* in Ireland**
- **System is becoming more complex**
- **Recent research has analysed this issue using cross-sectional (wave 1) data from GUI**
 - Layte and Nolan (2013)
- **Availability of wave 2 of Infant Cohort allows us to extend this analysis to begin to consider the *causal* impact of eligibility on GP visiting**



Research questions

- **How has eligibility for free GP care changed between wave 1 and wave 2 of the Infant Cohort?**
- **What is the impact of gaining a full medical or GP visit card, i.e., removing GP user fees, on GP visiting?**
- **What is the impact of losing a full medical or GP visit card, i.e., introducing GP user fees, on GP visiting?**



Data

- **GUI Infant Cohort**
 - At wave 1: 11,134 children (average age 9 months)
 - Surveyed between September 2008 and April 2009
 - Sampling frame was Child Benefit Register

 - At wave 2: 9,793 children (average age 3 years)
 - Surveyed between January 2011 and August 2011
 - Response rate of 88 per cent
- **Comprehensive set of information on child demographic, socio-economic and health status characteristics, as well as parental and household characteristics**

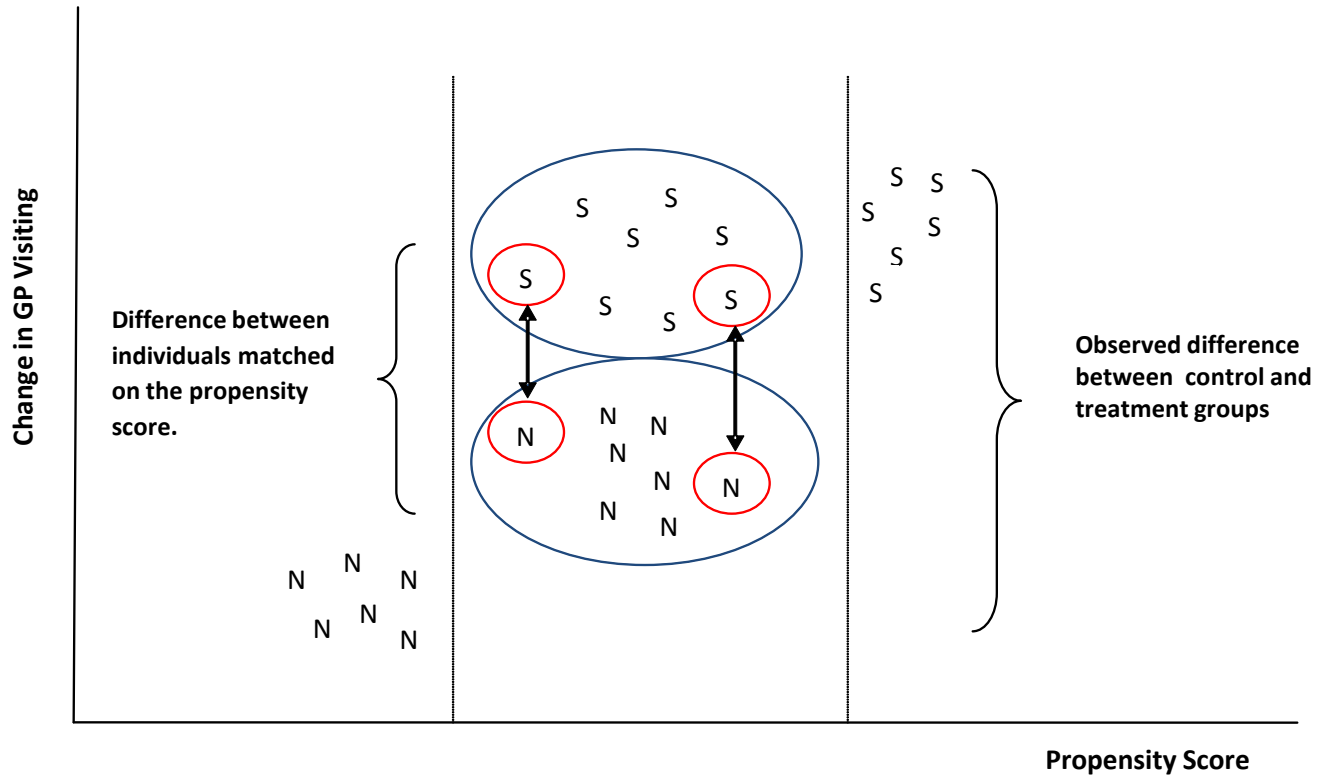


Methods

- **Objective is to analyse the impact of a treatment (i.e., change in eligibility) on an outcome (change in GP visiting)**
- **Use propensity score matching methods**
- **Method compares the outcomes of treated and control observations that are matched in terms of observable characteristics**
 - Matched on basis of propensity score (derived from probit model of probability of treatment)



Propensity Score Matching





Definitions

- **Two transitions examined**
- **Gaining a full medical or GP visit card**

	Wave 1	Wave 2
Control	Private	Private
Treatment	Private	Public

- **Losing a full medical or GP visit card**

	Wave 1	Wave 2
Control	Public	Public
Treatment	Public	Private

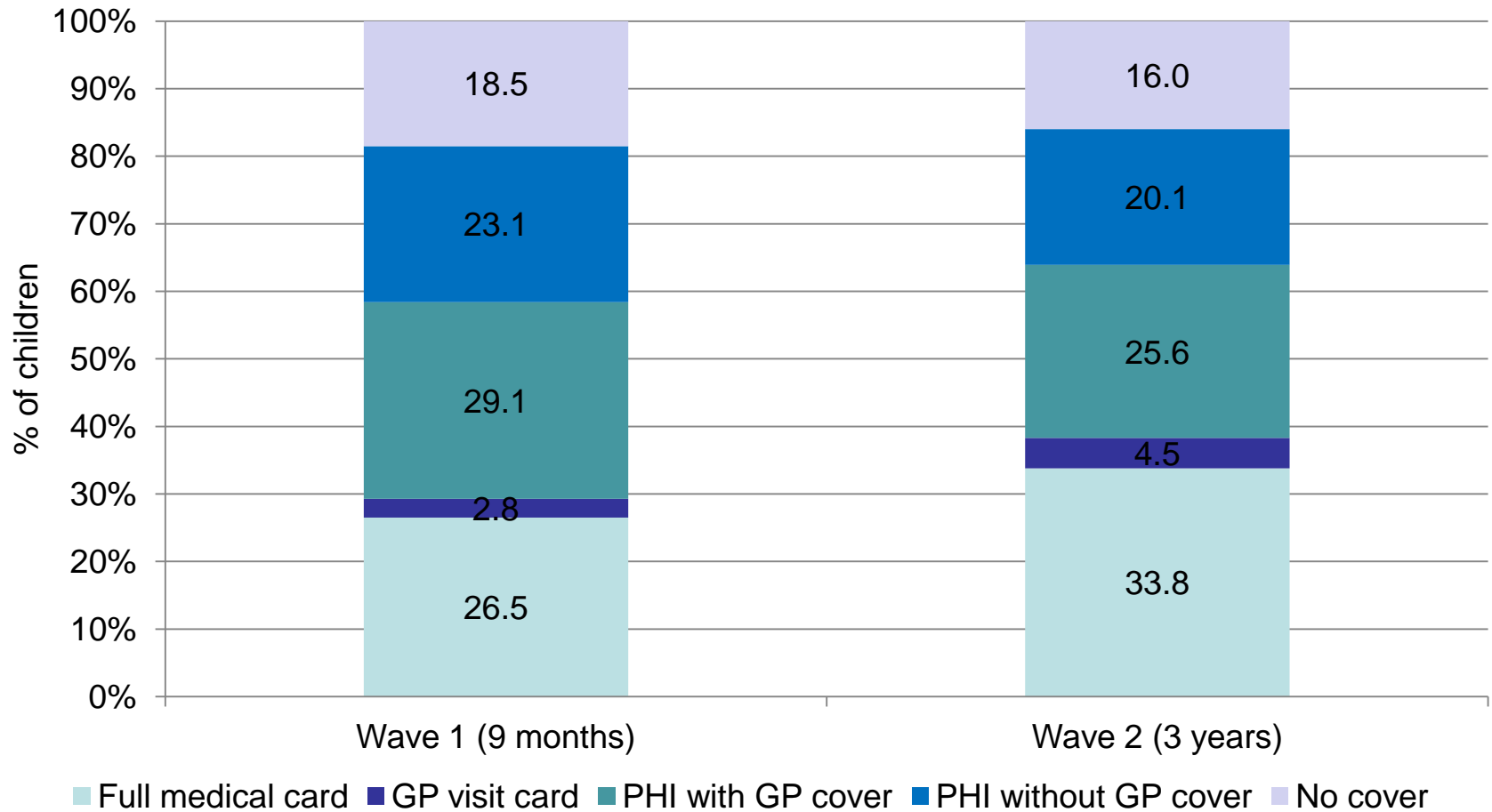


Variables

- **Outcome Variable**
 - Change in number of GP visits between wave 1 and wave 2
- **Control Variables (to estimate propensity score):**
 - Child: sex; number of siblings; health
 - Pregnancy/birth: birth weight; gestation; smoking; breastfeeding
 - Mother: age; education; health; employment; ethnicity
 - Household: equivalised income; childcare arrangements; lone parent
 - Measured at wave 1

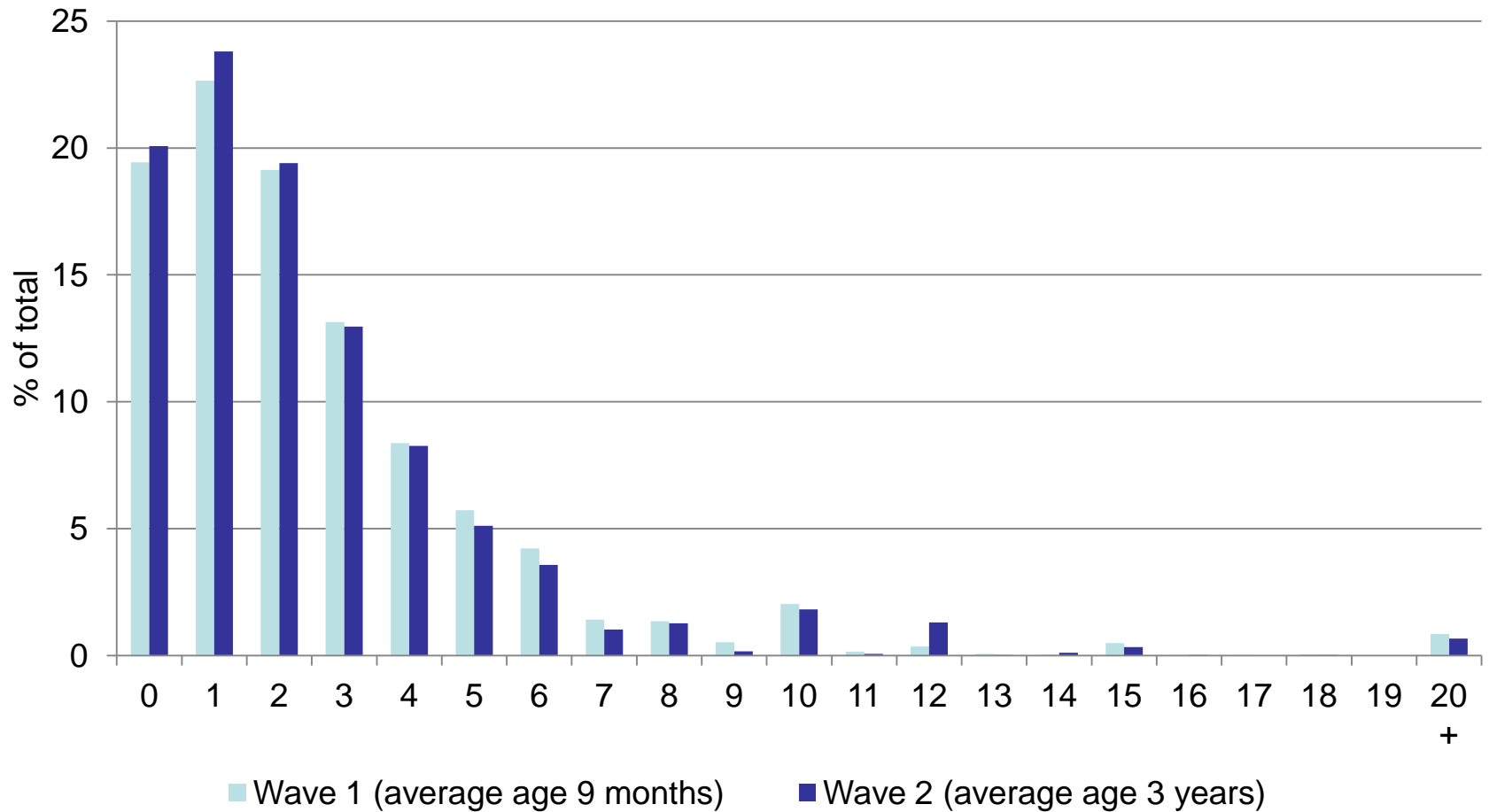


Public healthcare eligibility





GP visits





Summary statistics

- **Gaining a full medical or GP visit card**

	Wave 1	Wave 2	Outcome
Control	2.5	2.1	-0.3
Treatment	2.4	2.8	0.4

- **Losing a full medical or GP visit card**

	Wave 1	Wave 2	Outcome
Control	3.2	3.1	-0.1
Treatment	2.9	2.7	-0.2



PSM estimates

	Gaining a medical card	Losing a medical card
Nearest neighbour	0.550 (0.129) ^{***}	0.145 (0.476)
Nearest neighbour, calliper	0.566 (0.166) ^{***}	0.113 (0.563)
Kernel	0.550 (0.129) ^{***}	0.145 (0.476)
N	6,443	2,443
N Control	5,429	2,183
N Treatment	1,014	260



Summary

- **Gaining a medical card:**
 - Leads to a significant increase of 0.6 GP visits
 - Equates to approximately 25 per cent increase in GP visiting
 - Increase is even greater if focus just on those gaining a full medical card (increase of 0.8 GP visits)
- **Losing a medical card**
 - Leads to no significant change in GP visiting
 - Due to small number of treatment observations?
 - Still no significant change if focus just on those losing a full medical card



Discussion

- **Irish system of eligibility for free GP care is unusual internationally**
 - Initial evidence that this system has *causal* effects on utilisation
 - Consistent with international evidence that user fees have significant effects on utilisation
- **Caveat:**
 - Results based on just two waves of data (small n for some transitions)
- **Key question for future research using longitudinal data:**
 - Do user fees discourage healthcare use, and impact on health and other outcomes?