

# Families & Health: Lessons From the Swedish Parental Leave System

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- Much of the discussion about health care policy focuses on individual patients, hospitals, or aggregate outcomes at various levels of geography
- This framing leaves out the **role of the family** in determining health and well-being, and how other public programs that support families interact with the health care system
- I will focus on the role of public policy in improving the health of new parents and their children
  - Specifically, the role of **paid family leave**, drawing on lessons learned from Sweden

# Most Parents of Young Children Juggle Work and Family Responsibilities

- In 2018, **71.5 percent** of US mothers and **93.5 percent** of US fathers with children under 18 participated in the labor force
  - For US mothers of infants under 1, LFP rate is **58 percent**
- **Paid Family Leave (PFL)**: provides workers with time off work with (partial) wage replacement to care for their newborn or adopted children (as well as for severely ill family members)
- Typically motivated as a tool for promoting career continuity and reducing gender inequality
  - Evidence on these impacts is mixed; PFL is not a “silver bullet” for solving gender issues  
(Olivetti & Petrongolo, 2017; Rossin-Slater, 2018)
- Evidence on the health benefits of PFL is more consistent across many studies and contexts (Rossin-Slater & Uniat, 2019; Rossin-Slater & Stearns, 2020)

# Current Policy Landscape in the U.S. vs. Canada & Europe

- **U.S.:** one of two countries in the world with no statutory paid maternity leave policy at the federal level; and the only OECD country without a paid parental leave program
  - Family and Medical Leave Act of 1993: 12 weeks of unpaid job-protected leave;  $\approx 60\%$  of private sector workers eligible
  - State-level PFL: 8 states (CA, NJ, RI, NY, WA, OR, MA, CT) and DC; 4-12 weeks
  - Employer-provided PFL: only **14 percent** of private sector workers have access to PFL from their employers
- **Europe and Canada:** 2 months to 3.5 years, 70-100 percent of wages replaced (at least for part of the duration)

- Over the last few decades, growing movement around the world to encourage fathers to take parental leave
  - Earmarked paternity leave (“Daddy Months” or “Daddy Quotas”) in Sweden, Canada, Norway, Germany, Spain, Iceland
- Motivated by desire to promote father-child bonding and gender equity in the household and labor market
  - Evidence on the impacts on these outcomes is mixed  
(see, e.g.: Duvander & Johansson, 2012, 2014, 2015; Ekberg et al., 2013; Rege & Solli, 2013; Cools et al., 2015; Dahl et al., 2014, 2016; Patnaik, 2016; Schober, 2014; Bünning, 2015; Luna & Farré, 2017; Olafsson & Steingrimsdottir, 2019)
- Less is known about the health impacts of fathers taking leave, especially on maternal health

- Health issues in the postpartum period are widespread
  - Over one quarter of women report substantial pain in various parts of their bodies during the first postpartum year (Cheng et al., 2006)
  - More than 1 out of every 100 new mothers are readmitted to the hospital within 30 days after childbirth (Clapp et al., 2017)
  - About 1 in 9 women have symptoms of postpartum depression (CDC, 2017)
  - U.S. maternal mortality rate: 26 deaths per 100,000 live births; has increased over last 25 years (Kassebaum et al., 2016)
- Policy discussions often focus on the role of the healthcare system; less attention paid to mother's postpartum environment at home

*“What’s important to understand is that most maternal deaths happen after women have the baby and the fundamental failure is not unsafe medical care but lack of adequate social support...a lot of the risks around childbirth happen after the baby is born during that vulnerable time when you’re trying to care for an infant while also taking care of your household and doing all the things we expect of moms.”*

– **Dr. Neel Shah (Harvard Medical School)**

Source: <https://www.pbs.org/newshour/show/whats-behind-americas-rising-maternal-mortality-rate>

## “When Dad Can Stay Home: Fathers’ Workplace Flexibility and Maternal Health” (with Petra Persson)

- Exploit a 2012 Swedish reform that increased fathers’ flexibility in using paid leave benefits on an intermittent basis during the first year post-childbirth
- Study fathers’ leave take-up and maternal postpartum physical and mental health with a Regression Discontinuity Difference-in-Differences (RD-DD) design
  - RD: Eligibility based on child’s exact date of birth
  - Diff: Nets out seasonal differences in births (Buckles & Hungerman, 2008; Currie & Schwandt, 2013)



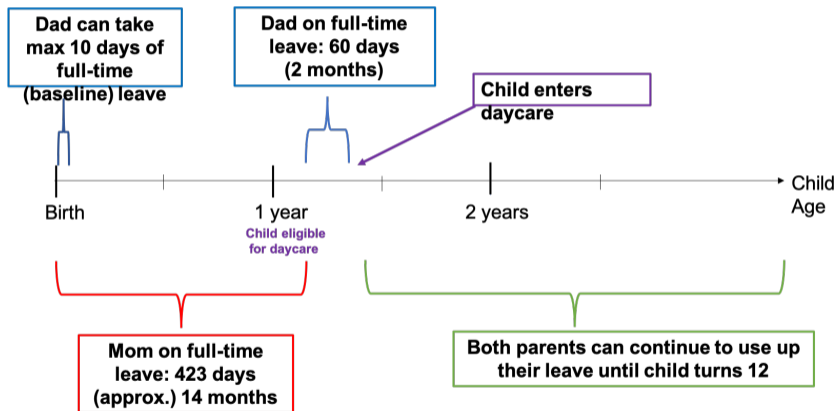
# Parental Leave System in Sweden

- Gender-neutral paid parental leave since 1974
- Since early 2000s: 16 months of job-protected leave
  - 13 months with 78 percent of wages replaced up to a ceiling; 3 months with flat-rate benefit
  - Can be taken in multiple spells
- Leave assigned at the household level; in practice, vast majority taken by mothers
- Three “Daddy Month” reforms (1995, 2002, 2016)
  - Each earmarked one month of household parental leave to each parent (cannot be transferred between parents)
  - Fathers **cannot** use earmarked leave at the same time as mothers

# Restrictions on Simultaneous Leave Use

- Until 2012, fathers entitled to only 10 days of paid “baseline” paternity leave that can be taken *while mothers are on leave* (to be used within 60 days after childbirth)
- Beyond these days, parents could only be on leave at the same time part-time while also working part-time
  - Total amount of leave benefits cannot exceed equivalent of full-time job
- Since virtually all mothers are on full-time leave in the months following childbirth, this rule effectively restricted fathers’ ability to use paid leave in order to stay home with the mother
  - If both parents stay home on a given day, one has to forego paid leave benefits for that day

# How New Parents Allocate Leave: The Case of the Median Household, First Births in 2008-2011



# “Double Days” Reform in 2012

- **January 1, 2012:** Both parents allowed to take full-time paid leave at the same time for up to 30 days during the child’s first year of life
  - Note: this is *in addition to* the 10 days of “baseline” leave
- No other changes to parental leave system (total leave duration, wage replacement rate, amount of earmarked leave left unchanged)
- Given pre-reform leave use pattern, the reform effectively increased fathers’ flexibility to use paid leave, on an intermittent basis, during the postpartum period

# Data: Multiple Swedish Administrative Databases

- 1 Birth records data for 2000-2016 with information on pregnancy and delivery
- 2 Parental leave claims for 1993-2016
  - For each leave spell: the exact start and end dates, and type of compensation
- 3 Inpatient records for 1987-2016 with exact dates and diagnosis codes
- 4 Outpatient records for *specialist* visits for 2001-2016 with exact dates and diagnosis codes
  - Excludes visits to primary care providers (e.g. routine postpartum check-ups)
- 5 Prescription drug claims for 2005-2017 with exact dates and drug codes
- 6 Demographic information on parents, annual through 2016

# Empirical Design: RD-DD Around the “Double Days” Reform

Reform sample: First births in Oct-Dec 2011 vs. Jan-Mar 2012

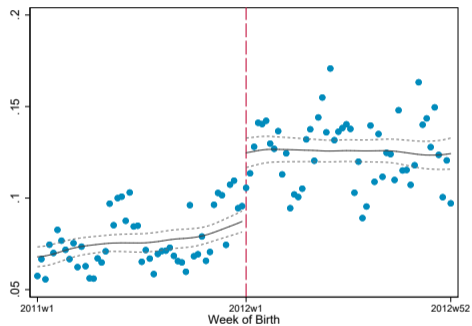
Non-reform sample: First births in Oct-Dec 2008, 2009, 2010 vs. Jan-Mar 2009, 2010, 2011

$$y_{idp} = \alpha + \beta_1 \mathbf{1}[d \geq c] + \beta_2 R_i \times \mathbf{1}[d \geq c] \\ + f(d - c) + \mathbf{1}[d \geq c] \times f(d - c) + \mathbf{x}'_i \boldsymbol{\kappa} + \boldsymbol{\theta}_p + \varepsilon_{idp} \quad (1)$$

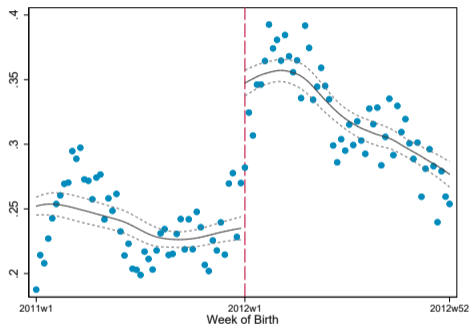
$d$  = day of year (Oct 1 - Mar 31);  $p$  = each October-March period;  $c$  = January 1;  $R_i$  = reform sample dummy

$x_i$  = vector of family characteristics measured in the year before birth: maternal and paternal earnings, indicators for each parent's age groups (<20, 20-24, 25-34, 35+), indicators for each parent's education levels (high school or less, some college, university degree or more), an indicator for the parents being married, indicators for each parent being foreign-born, indicator for child being male

# Effect of 2012 “Double Days” Reform on Paternity Leave Take-Up



Any Post-Baseline Leave in Days 1-60



Any Post-Baseline Leave in Days 1-180

● Note: 80% of dads take >0 days of baseline paternity leave

# Results: Effects of “Double Days” Reform on Paternity Leave Take-Up

	Any Post-Baseline (Days 1-60)	Any Post-Baseline (Days 1-180)	Tot # Days (Days 1-180)
<b>A. All first births</b>			
Reform × Birth Jan-Mar	0.0388*** [0.00470]	0.0594*** [0.00705]	1.887** [0.825]
Dep. var mean	0.0783	0.244	31.43
N	82558	82558	82558
<b>B. Mothers with medical history</b>			
Reform × Birth Jan-Mar	0.0487*** [0.00933]	0.0664*** [0.0132]	1.112 [1.647]
Dep. var mean	0.0971	0.260	34.52
N	23935	23935	23935



# Results: Effects of “Double Days” Reform on Maternal Postpartum Health, Inpatient/Outpatient Data

	Any	Diagnosis Categories		
		Childbirth Comp.	Mental	External/Counseling
<b>A. All first births</b>				
Reform × Birth Jan-Mar	-0.00764 [0.00779]	<b>-0.0148***</b> <b>[0.00507]</b>	0.00310 [0.00223]	0.000829 [0.00149]
Dep. var mean	0.366	0.103	0.0182	0.00900
N	82558	82558	82558	82558
<b>B. Mothers with medical history</b>				
Reform × Birth Jan-Mar	-0.0171 [0.0147]	<b>-0.0343***</b> <b>[0.0101]</b>	0.00604 [0.00664]	0.00105 [0.00300]
Dep. var mean	0.461	0.128	0.0516	0.0127
N	23935	23935	23935	23935

# Results: Effects of “Double Days” Reform on Emergency, Planned, or Unplanned Visits

	Visit Type				
	Emergency Room	Planned Inpatient	Unplanned Inpatient	Planned Outpatient	Unplanned Outpatient
<b>A. All first births</b>					
Reform × Birth Jan-Mar	-0.0000170 [0.00243]	-0.00157 [0.00138]	0.00315 [0.00342]	-0.00376 [0.00715]	<b>-0.0117**</b> <b>[0.00585]</b>
Dep. var mean	0.0210	0.00681	0.0423	0.259	0.154
N	82558	82558	82558	82558	82558
<b>B. Mothers with medical history</b>					
Reform × Birth Jan-Mar	-0.00119 [0.00519]	-0.00258 [0.00306]	0.00293 [0.00722]	0.000133 [0.0140]	<b>-0.0396***</b> <b>[0.0117]</b>
Dep. var mean	0.0293	0.0109	0.0583	0.343	0.200
N	23935	23935	23935	23935	23935

# Results: Effects of “Double Days” Reform on Maternal Postpartum Health, Prescription Drug Data

	Any Anti-Anxiety	Any Anti-Depressant	Any Painkiller	Any Antibiotic
<b>A. All first births</b>				
Reform × Birth Jan-Mar	<b>-0.00290*</b> [0.00176]	0.000669 [0.00299]	-0.00461 [0.00445]	<b>-0.0193***</b> [0.00602]
Dep. var mean	0.0112	0.0338	0.0831	0.170
N	82558	82558	82558	82558
<b>B. Mothers with medical history</b>				
Reform × Birth Jan-Mar	<b>-0.00863*</b> [0.00486]	0.000661 [0.00906]	-0.00322 [0.00965]	<b>-0.0301**</b> [0.0120]
Dep. var mean	0.0274	0.102	0.123	0.213
N	23935	23935	23935	23935

# Do Fathers Take Leave on Days When Mothers Need Medical Care?

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## Dad Leave During Mom Medical Care

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### A. All first births

Reform × Birth Jan-Mar	0.00436 [0.00344]
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Dep. var mean	0.0420
N	82558

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### B. Mothers with medical history

Reform × Birth Jan-Mar	0.0159** [0.00751]
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Dep. var mean	0.0618
N	23935

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- The “Double Days” reform significantly increased the likelihood of father presence in the home shortly after childbirth
  - ↑ in paternity leave use in first two and six months after childbirth by 3.9 pp (50%) and 6.0 pp (24%), respectively
  - Effects strongest in families where mothers have pre-birth medical histories
- The option for fathers to stay home improves maternal postpartum health
  - ↓ in incidence of inpatient and specialist outpatient visits for childbirth-related complications by 1.5pp (14%); decline driven by **unplanned** visits
  - ↓ in incidence of antibiotic drug prescriptions by 1.9pp (11%) and anti-anxiety drug prescriptions by 0.3pp (26%)

- Our results provide new insights about the roles of family leave policy and the home environment more generally in affecting maternal postpartum health
- Large maternal health benefit stemming from a small increase in the average number of leave days taken by fathers suggests workplace flexibility policies can be highly cost-effective
  - Leverage families' private information about when it is most beneficial to stay home relative to the cost of missed time at work
- While discussions about lack of workplace flexibility and paid family leave often focus on direct career costs to mothers, our findings suggest that mothers also bear an **indirect health cost** when their partners cannot flexibly take leave
- **More broadly: emphasizes the importance of public policy for families for influencing health outcomes in a critical period of life**