ONLINE APPENDIX

Manuscript Title: When Dad Can Stay Home: Fathers' Workplace Flexibility and Maternal Health

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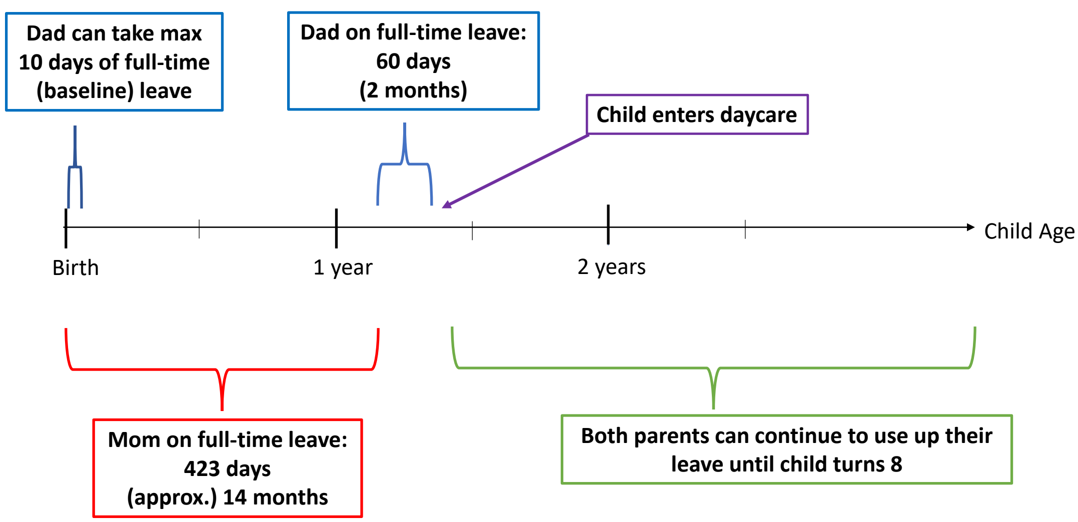
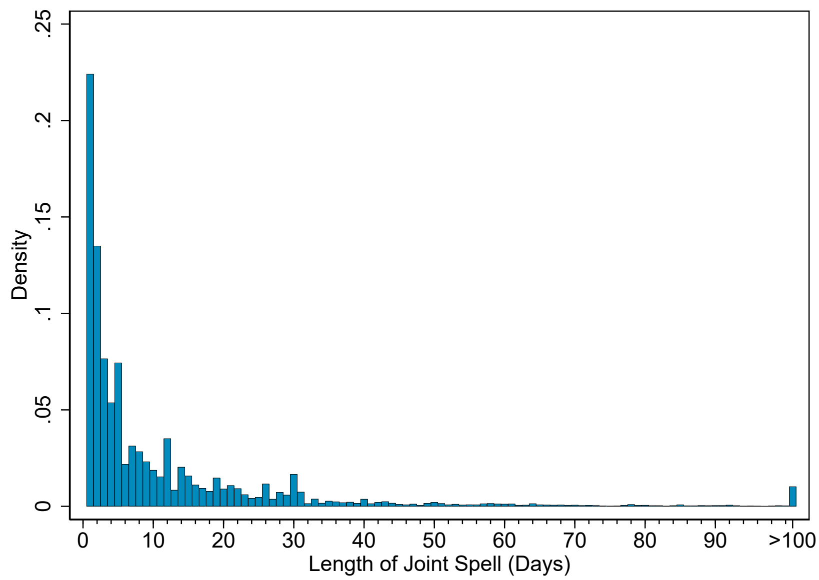
A Additional Results

Figure A1: How Parents Allocate Leave: The Case of the Median Household, 2008-2011



The figure represents how the median family in Sweden allocates leave between parents, using data on parents of firstborn singleton children born in 2008-2011. The number of days on full-time leave for each parent (423 days for mothers and 60 days for fathers) are the medians of the two respective distributions in the data.

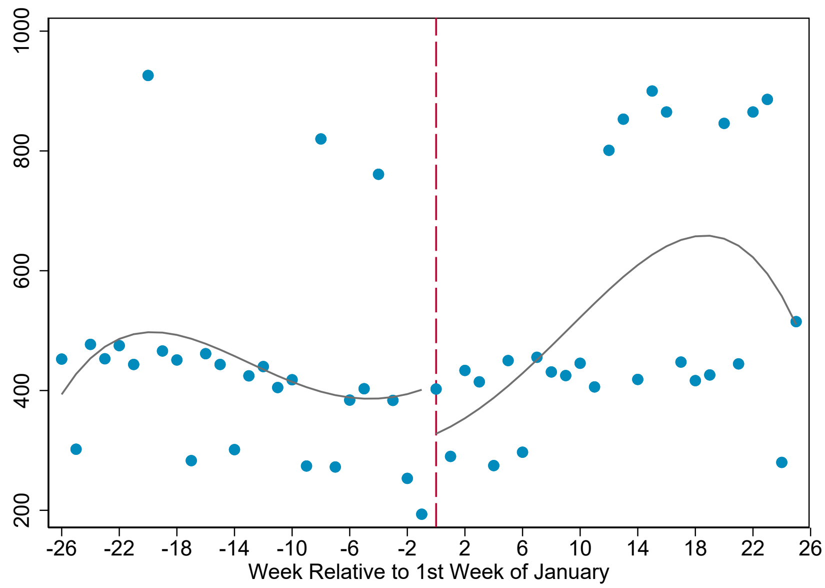
Figure A2: Distribution of Joint Leave Length, Parents of Firstborn Children Born in Jan-Mar 2012



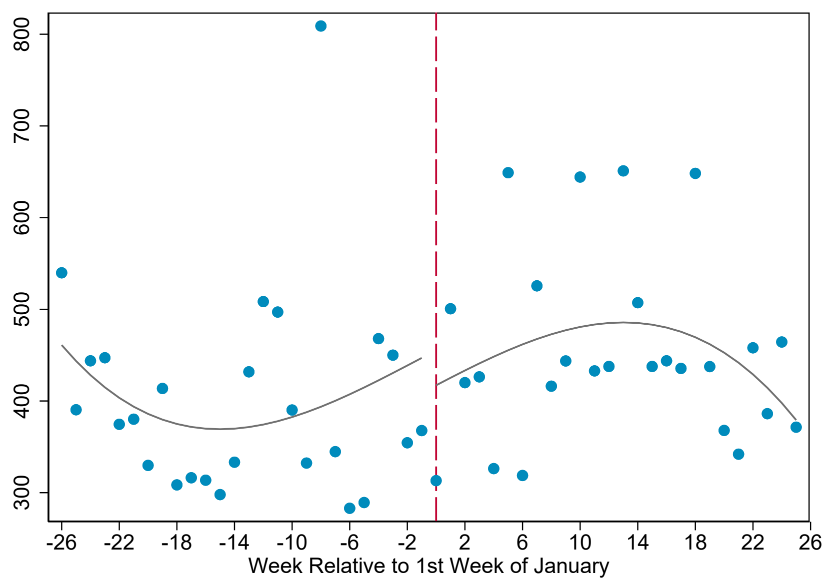
Notes: The figure uses data on all spells of joint leave (i.e., any spell in which one or more days of leave overlap between the two parents, regardless of it is full- or part-time leave, paid or unpaid) in the first year after childbirth. The sample includes parents of firstborn children born in January to March 2012. The figure shows the distribution of the length of these spells.

Figure A3: Number of Births by Birth Month in Reform and Non-Reform Samples

(a) Reform Sample

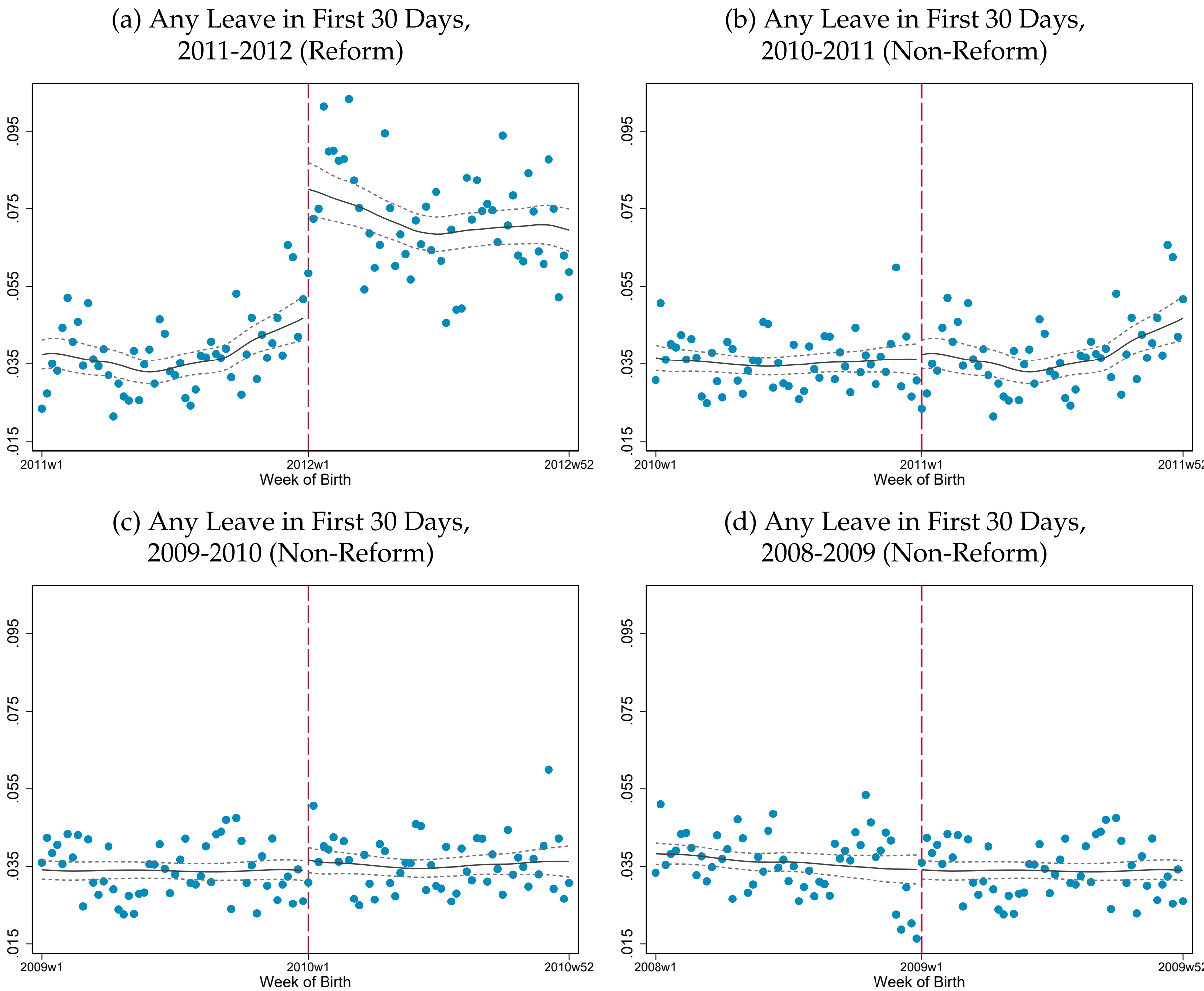


(b) Non-Reform Sample



Notes: The sample includes all firstborn singleton children born in 2008-2012 with information on exact date of birth (see footnote 29 for details on how we obtain exact dates of birth). Sub-figure (a) plots the total number of births by birth week in the reform sample with a 6-month bandwidth (July 2011 - June 2012). Sub-figure (b) plots the average of the total number of births by birth week across all years in the non-reform sample with the same bandwidth (July 2008 - June 2011). The fitted lines are predicted from 4th order polynomial models. We follow Lee and Lemieux (2010) by selecting the model with the smallest Akaike Information Criterion (AIC) value.

Figure A4: Fathers' Post-Baseline Leave Use in the First 30 Days Post-Childbirth by Week of Childbirth



(a) Any Leave in First 30 Days, 2011-2012 (Reform)

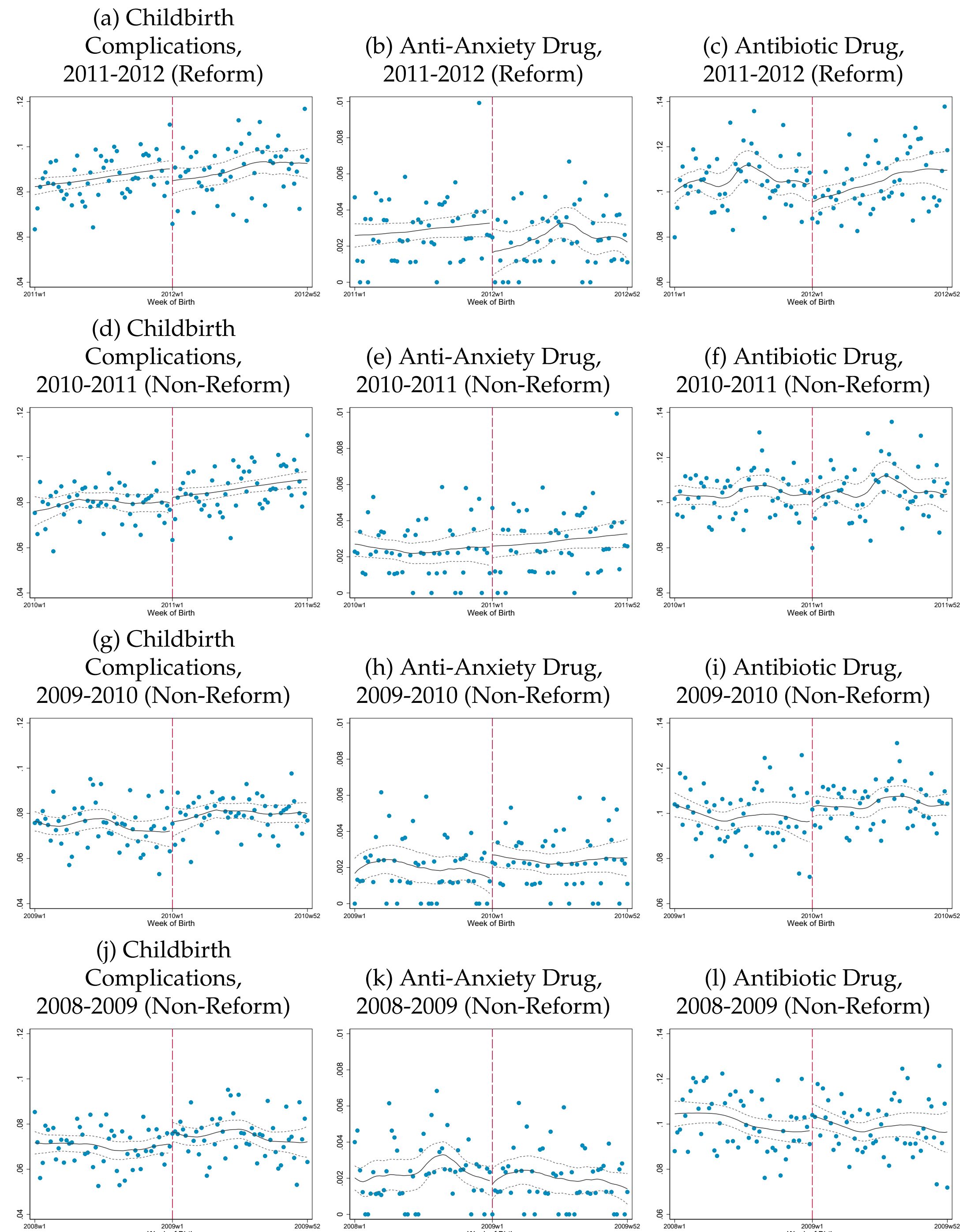
(b) Any Leave in First 30 Days, 2010-2011 (Non-Reform)

(c) Any Leave in First 30 Days, 2009-2010 (Non-Reform)

(d) Any Leave in First 30 Days, 2008-2009 (Non-Reform)

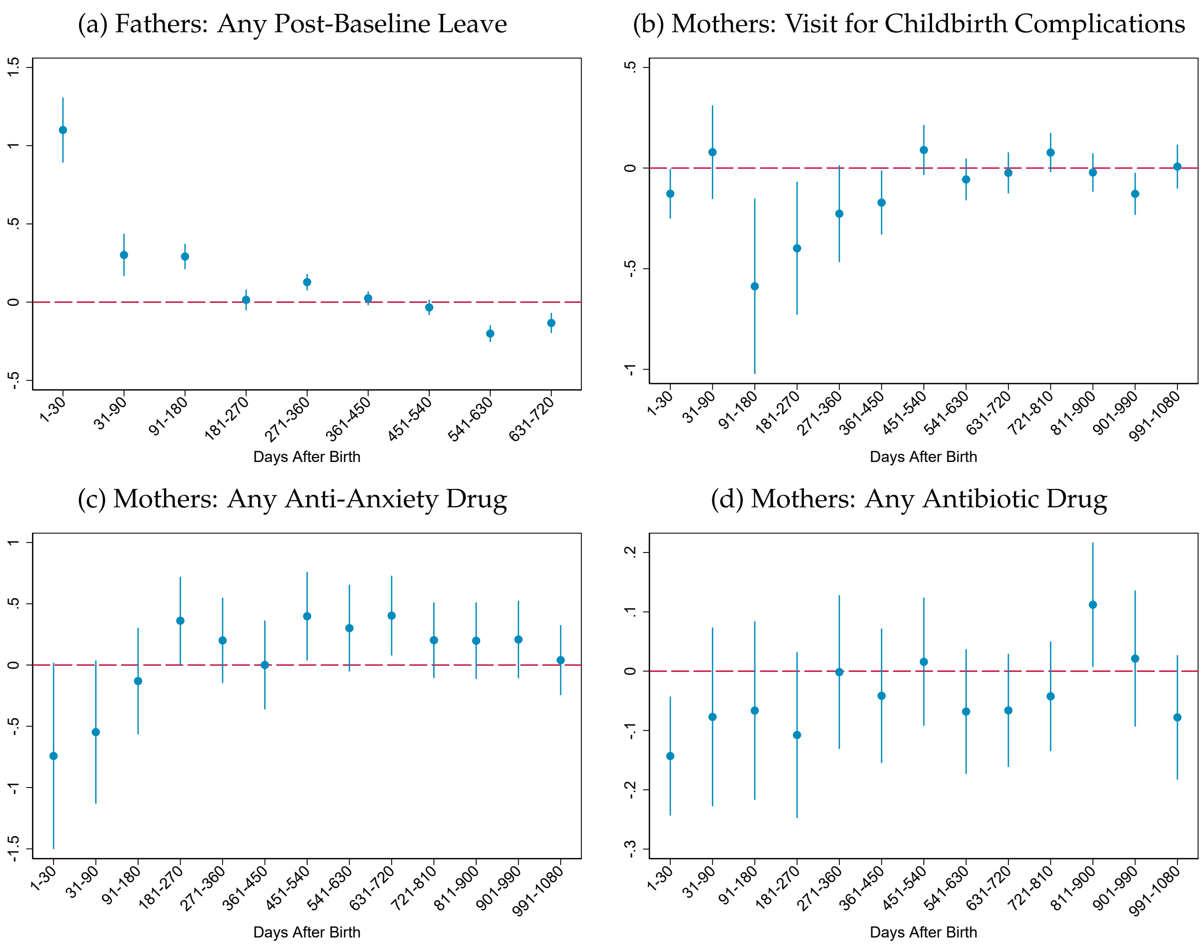
Notes: The sample includes all firstborn singleton children born in 2008-2012 with information on exact date of birth (see footnote 29 for details on how we obtain exact dates of birth). The figures display the share of fathers who use any post-baseline leave in the first 30 days after childbirth by the child's birth week. Sub-figure (a) uses the reform period (2011-2012 births), while the remainder of the sub-figures use non-reform periods. The first week of January is denoted with vertical red dashed lines in every sub-figure. The fitted curves and 95% confidence intervals are predicted from local linear polynomial models on each side of the cut-off.

Figure A5: Maternal Health Outcomes in First 30 Days Post-Childbirth by Week of Childbirth



Notes: The sample includes all firstborn singleton children born in 2008-2012 with information on exact date of birth (see footnote 29 for details on how we obtain exact dates of birth). The figures display means of maternal health outcomes by the child's birth week. All outcomes are measured in the first 30 days post-childbirth. Sub-figures (a)–(c) use the reform period (2011-2012 births), while the remainder of the sub-figures use non-reform periods. The first week of January is denoted with vertical red dashed lines in every sub-figure. The fitted curves and 95% confidence intervals are predicted from local linear polynomial models on each side of the cut-off. See Appendix C for more details on the exact ICD and ATC codes for outcomes.

Figure A6: Effects of 2012 "Double Days" Reform on Paternity Leave and Maternal Health Outcomes Over a Longer Term



Notes: The figures plot the treatment coefficients divided by the dependent variable means (i.e., the magnitudes can be interpreted as percent changes relative to the sample means) and 95% confidence intervals from the "Share Days Eligible" models that use outcomes measured in the periods since childbirth denoted on the $x-$axis of each graph. The outcomes are listed in the sub-figure headings. See Appendix C for more details on the exact ICD and ATC codes for outcomes. See notes under Tables 1 and 2 for more details about the analysis sample and specifications.

Table A1: Parental Sick Leave Use: Jan-Mar 2011 vs. Jan-Mar 2012 Births

	Jan-Mar 2011	Jan-Mar 2012	P-value
A. Fathers			
Days of Sick Leave	2.707	2.652	0.845
Any Sick Leave	0.045	0.044	0.553
B. Mothers			
Days of Sick Leave	6.185	6.626	0.129
Any Sick Leave	0.202	0.206	0.488
Observations	11345	11491	

Notes: This table reports the means of the annual number of sick leave days and the share of parents who use any sick leave for parents of firstborn singleton children born in January-March 2011 and January-March 2012. Panel A presents the statistics for fathers, while Panel B for mothers. The last column reports the *p*-values from testing the differences between the values in the previous two columns.

Table A2: The 20 Most Common Maternal Inpatient Diagnoses in First 30 Days Post-Childbirth

Diagnosis	ICD-10 Code	Share
Puerperal sepsis	O85	0.216
Infections of Breast Associated With Childbirth	O91	0.112
Other Puerperal Infections	O86	0.107
Postpartum Care and Examination	Z39	0.106
Single Spontaneous Delivery	O80	0.064
Complications of the Puerperium, Not Elsewhere Classified	O90	0.061
Other Disorders of Breast and Lactation Associated With Childbirth	O92	0.059
Other Maternal Diseases Classifiable Elsewhere but Complicating Pregnancy, Childbirth and the Puerperium	O99	0.050
Postpartum Haemorrhage	O72	0.044
Retained Placenta and Membranes, Without Haemorrhage	O73	0.022
Cholelithiasis	K80	0.020
Single Delivery by Caesarean Section	O82	0.019
Other Surgical Follow-up Care	Z48	0.019
Pre-eclampsia	O14	0.018
Complications of Anaesthesia During Labour and Delivery	O74	0.017
Abdominal and Pelvic Pain	R10	0.016
Persons Encountering Health Services in Other Circumstances	Z76	0.013
Single Delivery by Forceps and Vacuum Extractor	O81	0.011
Complications of Procedures, Not Elsewhere Classified	T81	0.008
Supervision of High-risk Pregnancy	K35	0.008

Notes: This table reports the share of all maternal inpatient visits in the first 30 days post-childbirth with different diagnosis codes, for the top 20 conditions. It uses our main analysis sample of all firstborn singleton children born in 2008-2011 with information on exact date of birth (see footnote 29 for details on how we obtain exact dates of birth).

Table A3: The 20 Most Common Maternal Specialist Outpatient Diagnoses in First 30 Days Post-Childbirth

Diagnosis	ICD-10 Code	Share
Postpartum Care and Examination	Z39	0.220
Infections of Breast Associated With Childbirth	O91	0.106
Complications of the Puerperium, Not Elsewhere Classified	O90	0.102
Other Puerperal Infections	O86	0.098
General Examination and Investigation of Persons Without Complaint and Reported Diagnosis	Z00	0.075
Puerperal Sepsis	O85	0.073
Follow-up Examination After Treatment for Conditions Other Than Malignant Neoplasms	Z09	0.054
Abdominal and Pelvic Pain	R10	0.042
Other Special Examinations and Investigations of Persons Without Complaint or Reported Diagnosis	Z01	0.031
Pre-eclampsia	O14	0.030
Persons Encountering Health Services for Other Counselling and Medical Advice, Not Elsewhere Classified	Z71	0.027
Postpartum Haemorrhage	O72	0.020
Other Disorders of Breast and Lactation Associated With Childbirth	O92	0.020
Special Screening Examination for Other Diseases and Disorders	Z13	0.017
Medical Observation and Evaluation for Suspected Diseases and Conditions, Ruled Out	Z03	0.017
Other Maternal Diseases Classifiable Elsewhere but Complicating Pregnancy, Childbirth and the Puerperium	O99	0.013
Complications of Procedures, Not Elsewhere Classified	T81	0.012
Unspecified Maternal Hypertension	O16	0.012
Gestational [pregnancy-induced] Hypertension	O13	0.011
Other Disorders of Urinary System	N39	0.011

Notes: This table reports the share of all maternal specialist outpatient visits in the first 30 days post-childbirth with different diagnosis codes, for the top 20 conditions. It uses our main analysis sample of all firstborn singleton children born in 2008-2011 with information on exact date of birth (see footnote 29 for details on how we obtain exact dates of birth).

Table A4: The 20 Most Common Maternal Prescription Drug Claims in First 30 Days Post-Childbirth

Prescription	ATC Code	Share
Antibacterials for Systemic Use	J01	0.248
Analgesics (Painkillers)	N02	0.147
Antinflammatory and Antirheumatic Products	M01	0.139
Antithrombotic Agents	B01	0.075
Pituitary and Hypothalamic Hormones and Analogues	H01	0.059
Antiprotozoals	P01	0.053
Drugs for Constipation	A06	0.041
Beta Blocking Agents	C07	0.032
Vasoprotectives	C05	0.027
Other Gynecologicals	G02	0.023
Thyroid Therapy	H03	0.022
Antihistamines for Systemic Use	R06	0.021
Psychoanaleptics	N06	0.021
Psycholeptics	N05	0.018
Antianemic Preparations	B03	0.014
Corticosteroids, Dermatological Preparations	D07	0.013
Drugs for Obstructive Airway Diseases	R03	0.013
Antimycotics for Systemic Use	J02	0.009
Calcium Channel Blockers	C08	0.008
Anesthetics	N01	0.008

Notes: This table reports the share of all maternal prescription drug claims in the first 30 days post-childbirth with different ATC codes, for the top 20 categories. It uses our main analysis sample of all firstborn singleton children born in 2008-2011 with information on exact date of birth (see footnote 29 for details on how we obtain exact dates of birth).

Table A5: McCrary Test Using Different Polynomials in Week of Birth

	1^{st}	2^{nd}	3^{rd}	4^{th}	5^{th}	6^{th}
Reform $\times$ Birth Jan-June	35.82	35.82	35.82	35.82	35.82	35.82
	(60.95)	(60.55)	(60.17)	(59.45)	(59.61)	(59.84)
Reform	36.65	36.65	36.65	36.65	36.65	36.65
	(43.10)	(42.81)	(42.54)	(42.04)	(42.15)	(42.32)
Dummy for Birth Jan-June	1.224	1.224	-78.48	-78.48	-41.57	-41.57
	(68.18)	(67.72)	(85.82)	(84.80)	(100.3)	(100.7)
Observations	104	104	104	104	104	104
AIC	1349.6	1349.1	1348.8	1347.2	1348.7	1350.4

Notes: Each column reports coefficients from separate regressions. The data are collapsed into week-of-birth bins, with the outcome being the total number of firstborn singleton births. The reform sample includes births in July 2011 - June 2012, while the non-reform sample includes births in July 2008 - June 2011. We report results from models that use 1st through 6th order polynomials in the running variable, which is the week of birth normalized relative to the first week of January in each year. We report the Akaike Information Criterion (AIC) values in the bottom row. Robust standard errors in brackets.
Significance levels: * p<0.1 ** p<0.05 *** p<0.01

Table A6: The 2012 "Double Days" Reform and Parental Characteristics

	(1) M. Low Ed	(2) F. Low Ed	(3) M. F-born	(4) F. F-born	(5) M. Age	(6) F. Age	(7) M. Inc	(8) F. Inc
A. Share Days Eligible in Days 1-30 Post-Birth								
Share Days Eligible in Days 1-30 Post-Birth	-0.000408	0.00459	-0.000832	-0.00386	-0.0997	-0.0571	4694.1*	4289.3
	[0.00837]	[0.00834]	[0.00694]	[0.00700]	[0.0863]	[0.106]	[2584.3]	[4932.5]
Romano-Wolf p	{0.990}	{0.970}	{0.990}	{0.970}	{0.832}	{0.970}	{0.366}	{0.941}
Dep. var mean	0.448	0.571	0.215	0.218	28.82	31.89	204917.5	271989.0
Indiv. obs.	85902	85902	85902	85902	85902	85902	84205	83874
				F-Statistic: 1.12 P-value: 0.35				
B. RD-DD Drop December Births								
Reform x Birth Jan - Mar	-0.00526	0.00140	0.00114	-0.00483	-0.0994	-0.0793	5373.4**	8399.7**
	[0.00872]	[0.00869]	[0.00723]	[0.00730]	[0.0901]	[0.111]	[2711.8]	[3626.1]
Romano-Wolf p	{0.921}	{0.980}	{0.980}	{0.921}	{0.713}	{0.921}	{0.267}	{0.158}
Dep. var mean	0.448	0.568	0.213	0.216	28.91	31.98	205993.4	274132.6
Indiv. obs.	72354	72354	72354	72354	72354	72354	71253	70794
				F-Statistic: 1.68 P-value: 0.10				

Notes: Each column reports coefficients from separate regressions. The dependent variables are the following parental characteristics measured in the year before the child's birth: indicators for the mother having a low education level, the father having a low education level, the mother being foreign-born, the father being foreign-born, the mother's age in years, the father's age in years, the mother's income (1000s of SEK), and the father's income (1000s of SEK). In Panel A, the reported coefficients are from the "Share Days Eligible" model, excluding the controls for parental characteristics. In Panel B, the reported coefficients are from the "doughnut" RD-DD model (which excludes December births), excluding the controls for parental characteristics. See notes under Tables 1 and 2 for more details about the analysis sample and specifications. Robust standard errors are in brackets, while p-values from implementing the Romano-Wolf multiple hypothesis correction are in curvy brackets. In the bottom row, we report the F-statistic and associated p-value from a joint test of significance of all the coefficients using a seemingly unrelated regression model.
Significance levels: * $p<0.1$ ** $p<0.05$ *** $p<0.01$

Table A7: The 2012 "Double Days" Reform, Birth Outcomes, and Maternal Pre-Birth Medical History Indicators

	Birth Outcomes								Maternal Pre-Birth Medical Hist			
	(1) Bweight	(2) LBW	(3) Gest.	(4) Preterm	(5) Apgar<7	(6) SGA	(7) Induced	(8) C-section	(9) Inp	(10) Outp	(11) Drug	(12 An
A. Share Days Eligible in Days 1-30 Post-Birth												
Share Days Eligible in Days 1-30 Post-Birth	7.531	-0.00292	0.00761	0.00110	-0.00329	-0.00350	-0.00398	-0.00447	-0.00540	0.00777*	0.00502	-0.000
	[9.267]	[0.00329]	[0.0314]	[0.00390]	[0.00394]	[0.00300]	[0.00608]	[0.00643]	[0.00643]	[0.00469]	[0.00611]	[0.00
Romano-Wolf p	{0.980}	{0.980}	{0.980}	{0.980}	{0.980}	{0.881}	{0.980}	{0.980}	{0.980}	{0.644}	{0.980}	{0.98
Dep. var mean	3448.5	0.0398	39.85	0.0584	0.0585	0.0317	0.141	0.181	0.165	0.0749	0.144	0.28
Indiv. obs.	85804	85902	85902	85902	85902	85902	85902	85902	84593	84593	84593	845
F-Statistic: .71 P-value: 0.74												
B. RD-DD Drop December Births												
Reform x Birth Jan - Mar	5.105	-0.00170	0.00903	0.000708	-0.000809	-0.00159	-0.00173	-0.00539	-0.00155	0.00829*	0.00505	0.00
	[9.622]	[0.00340]	[0.0326]	[0.00406]	[0.00405]	[0.00309]	[0.00631]	[0.00671]	[0.00664]	[0.00487]	[0.00636]	[0.00
Romano-Wolf p	{1.000}	{1.000}	{1.000}	{1.000}	{1.000}	{1.000}	{1.000}	{0.990}	{1.000}	{0.545}	{0.990}	{1.0
Dep. var mean	3449.9	0.0397	39.85	0.0578	0.0579	0.0315	0.140	0.181	0.165	0.0750	0.145	0.28
Indiv. obs.	72285	72354	72354	72354	72354	72354	72354	72354	71249	71249	71249	712
F-Statistic: .41 P-value: 0.96												

Notes: Each column reports coefficients from separate regressions. The dependent variables include the following birth outcomes: birth weight (in grams), indicator for low-birth-weight (<2,500g), gestation length (in weeks), indicator for preterm birth (<37 weeks), indicator for Apgar score <7, indicator for small-for-gestational-age, indicator for induction of labor, and indicator for delivery by cesarean section. In the last four columns we use as the dependent variables the following maternal pre-birth medical history indicators: any inpatient visit in the 24 months before childbirth, any specialist outpatient visit for mental health reasons in the 60 months before childbirth, any anti-anxiety or anti-depressant prescription drug in the 36 months before childbirth, as well as an indicator for any of these three conditions holding (i.e., our indicator for the mother having a pre-birth medical history). In Panel A, the reported coefficients are from the "Share Days Eligible" model, excluding the controls for parental characteristics. In Panel B, the reported coefficients are from the "doughnut" RD-DD model (which excludes December births), excluding the controls for parental characteristics. See notes under Tables 1 and 2 for more details about the analysis sample and specifications. Robust standard errors are in brackets, while p-values from implementing the Romano-Wolf multiple hypothesis correction are in curvy brackets. In the bottom row, we report the *F*-statistic and associated *p*-value from a joint test of significance of all the coefficients using a seemingly unrelated regression model.
Significance levels: * p<0.1 ** p<0.05 *** p<0.01

Table A8: Heterogeneity in Effects of "Double Days" Reform on Paternity Leave Take-Up by Grandparent Proximity

	(1) Any Post-Baseline (Days 1-30)	(2) Tot Num Days (Days 1-30)
A. Grandparent Present		
Share Days Eligible in Days 1-30 Post-Birth	0.0413***	0.333***
	[0.00432]	[0.0458]
Romano-Wolf p	{0.010}	{0.010}
Dep. var mean	0.0441	0.375
N	65244	65244
RD-DD Drop December Births		
Reform x Birth Jan - Mar	0.0461***	0.377***
	[0.00443]	[0.0471]
Romano-Wolf p	{0.010}	{0.010}
Dep. var mean	0.0456	0.390
N	55158	55158
B. No Grandparent Present		
Share Days Eligible in Days 1-30 Post-Birth	0.0324***	0.264***
	[0.00789]	[0.0936]
Romano-Wolf p	{0.010}	{0.010}
Dep. var mean	0.0401	0.377
N	17314	17314
RD-DD Drop December Births		
Reform x Birth Jan - Mar	0.0329***	0.253***
	[0.00815]	[0.0979]
Romano-Wolf p	{0.010}	{0.020}
Dep. var mean	0.0413	0.392
N	14795	14795

Notes: Each coefficient is from a separate regression. See notes under Table 2 for more information about the outcomes and specifications. Panel A limits the sample to families in which at least one grandparent aged 74 years or less resides in the same county as the child, while Panel B limits the sample to families in which no grandparent aged 74 years or less resides in the same county as the child.
Significance levels: * $p<0.1$ ** $p<0.05$ *** $p<0.01$

Table A9: Heterogeneity in Effects of "Double Days" Reform on Maternal Health Outcomes in Inpatient and Outpatient Data by Grandparent Proximity

	Any	Diagnosis Categories		
		Childbirth Comp.	Mental	External/Counseling
A. Grandparent Present				
Share Days Eligible in Days 1-30 Post-Birth	-0.00617	-0.00807	-0.000148	-0.00178***
	[0.00758]	[0.00540]	[0.00146]	[0.000638]
Romano-Wolf p	{0.663}	{0.356}	{0.901}	{0.050}
Dep. var mean	0.183	0.0777	0.00515	0.00116
N	65244	65244	65244	65244
RD-DD Drop December Births				
Reform x Birth Jan - Mar	-0.00893	-0.0120**	0.000696	-0.00144**
	[0.00791]	[0.00563]	[0.00148]	[0.000636]
Romano-Wolf p	{0.485}	{0.119}	{0.693}	{0.119}
Dep. var mean	0.183	0.0784	0.00519	0.00109
N	55158	55158	55158	55158
B. No Grandparent Present				
Share Days Eligible in Days 1-30 Post-Birth	-0.0265*	-0.0163	0.00233	0.000202
	[0.0151]	[0.0109]	[0.00234]	[0.00143]
Romano-Wolf p	{0.267}	{0.416}	{0.564}	{0.851}
Dep. var mean	0.194	0.0882	0.00404	0.00156
N	17314	17314	17314	17314
RD-DD Drop December Births				
Reform x Birth Jan - Mar	-0.0270*	-0.0167	0.00269	-0.000402
	[0.0156]	[0.0113]	[0.00244]	[0.00150]
Romano-Wolf p	{0.287}	{0.386}	{0.406}	{0.782}
Dep. var mean	0.192	0.0863	0.00412	0.00155
N	14795	14795	14795	14795

Notes: Each coefficient is from a separate regression. See notes under Table 3 for more information about the outcomes and specifications. Panel A limits the sample to families in which at least one grandparent aged 74 years or less resides in the same county as the child, while Panel B limits the sample to families in which no grandparent aged 74 years or less resides in the same county as the child.
Significance levels: * $p<0.1$ ** $p<0.05$ *** $p<0.01$

Table A10: Heterogeneity in Effects of "Double Days" Reform on Maternal Health Outcomes in Prescription Drug Data by Grandparent Proximity

	Any Drug	Any Anti-Anxiety	Any Anti-Depressant	Any Painkiller	Any Antibiotic
A. Grandparent Present					
Share Days Eligible in Days 1-30 Post-Birth	-0.0130**	-0.00634	-0.00205*	-0.00155	-0.00422
	[0.00579]	[0.00809]	[0.00106]	[0.00188]	[0.00433]
Romano-Wolf p	{0.109}	{0.723}	{0.218}	{0.723}	{0.723}
Dep. var mean	0.0987	0.229	0.00259	0.00924	0.0542
N	65244	65244	65244	65244	65244
RD-DD Drop December Births					
Reform x Birth Jan - Mar	-0.0188***	-0.0122	-0.00171	-0.00147	-0.00413
	[0.00608]	[0.00848]	[0.00109]	[0.00198]	[0.00454]
Romano-Wolf p	{0.020}	{0.307}	{0.277}	{0.455}	{0.455}
Dep. var mean	0.0991	0.230	0.00268	0.00952	0.0547
N	55158	55158	55158	55158	55158
B. No Grandparent Present					
Share Days Eligible in Days 1-30 Post-Birth	-0.0206*	-0.0176	-0.000369	0.00117	-0.00266
	[0.0117]	[0.0163]	[0.00155]	[0.00278]	[0.00977]
Romano-Wolf p	{0.267}	{0.644}	{0.960}	{0.941}	{0.960}
Dep. var mean	0.111	0.246	0.00167	0.00595	0.0723
N	17314	17314	17314	17314	17314
RD-DD Drop December Births					
Reform x Birth Jan - Mar	-0.0178	-0.0129	-0.000411	0.00193	-0.00119
	[0.0121]	[0.0169]	[0.00167]	[0.00284]	[0.0101]
Romano-Wolf p	{0.574}	{0.891}	{0.950}	{0.901}	{0.950}
Dep. var mean	0.108	0.245	0.00169	0.00588	0.0720
N	14795	14795	14795	14795	14795

Notes: Each coefficient is from a separate regression. See notes under Table 4 for more information about the outcomes and specifications. Panel A limits the sample to families in which at least one grandparent aged 74 years or less resides in the same county as the child, while Panel B limits the sample to families in which no grandparent aged 74 years or less resides in the same county as the child.
Significance levels: * $p<0.1$ ** $p<0.05$ *** $p<0.01$

Table A11: Policies Regarding Simultaneous Parental Leave in Other Countries

Country	Leave Allocation	Simultaneous
Wealthiest OECD Countries		
Luxembourg	20 (compulsory) weeks paid maternity leave; 10 days paid paternity leave; at least 4 months paid parental leave, individual entitlement	Y
Ireland	42 weeks partially-paid maternity leave; 2 (consecutive) weeks paid paternity leave; 26 weeks unpaid parental leave	Y
Switzerland	14 (8 compulsory) weeks paid maternity leave; 2 weeks paid paternity leave	Y
United States	Paid individual leave entitlement in 10 states and D.C.	-
The Netherlands	16 (10 compulsory) weeks paid maternity leave; 6 weeks paid paternity leave; 26 weeks unpaid parental leave, individual entitlement	Y
Austria	16 (compulsory) weeks paid maternity leave; one month paid paternity leave; 2 years partially-paid parental leave, family entitlement	N
Australia	12 months partially-paid, transferable parental leave, individual entitlement	N
Germany	14 (8 compulsory) weeks paid maternity leave; 3 years partially-paid parental leave, individual entitlement	Y
Belgium	15 (10 compulsory) weeks paid maternity leave; 15 working days paid paternity leave; 4 months partially-paid parental leave, individual entitlement	Y
Canada (excl. Québec)	At least 16 weeks partially-paid maternity leave; 35 weeks partially-paid parental leave, family entitlement, with additional 5 weeks if both parents take some leave	Y
Scandinavia		
Sweden	13 months wage-replaced parental leave, family entitlement, one month leave earmarked for each parent	Y
Denmark	18 (2 compulsory) weeks paid maternity leave; 2 weeks paid paternity leave; 32 weeks parental leave, individual entitlement, with 32 weeks of leave cash benefit per child	Y
Finland	105 working days (2 weeks compulsory) paid maternity leave; 54 (up to 18 simultaneous) working days of paternity leave; 158 working days paid parental leave, family entitlement	N
Norway	46 weeks paid parental leave: 15 weeks earmarked for mothers, 15 weeks for fathers, remaining is family entitlement	N
Iceland	6 months paid parental leave, individual entitlement, with 6 weeks transferable to partner	Y

Country	Leave Allocation	Simultaneous
Most-Populated Countries		
China	98 days paid maternity leave; paternity leave varies by province	Y
India	26 weeks paid maternity leave; no national paternity leave policy[a]	-
Indonesia	12 weeks paid maternity leave; 2 days paid paternity leave[b]	Y
Pakistan	180 days paid maternity leave; 30 days paid paternity leave[c]	Y
Nigeria	12 weeks paid maternity leave; no national paternity leave policy[d]	Y
Brazil	120 days paid maternity leave; 5 (consecutive) days paid paternity leave	Y
Bangladesh	8 (compulsory) weeks paid maternity leave, no national paternity leave policy[e]	-
Russia	140 days paid maternity leave; 36 months (18 months partially-paid) parental leave, family entitlement	N
Mexico	12 (compulsory) weeks paid maternity leave; 5 days paid paternity leave	Y
Japan	14 (6 compulsory) weeks paid maternity leave; 12 months partially-paid parental leave, individual entitlement, with additional 2 months if both parents take some leave	Y

Notes: This table reports information about the length of paid maternity and paternity leave available in different countries, as well as whether taking leave at the same time is allowed for parents (in the last column labeled "Simultaneous"). We present information for the top 10 OECD countries in terms of per-capita GDP, all countries in Scandinavia, and the top 10 countries by population size. Unless otherwise noted, information on parental leave polices by country from the International Network on Leave Policies and Research (International Network on Leave Policies and Research, 2023).

[a] https://pib.gov.in/newsite/PrintRelease.aspx?relid=148712

[b] https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/projectdocumentation/wcms_182439.pdf

[c] https://www.senate.gov.pk/uploads/documents/1580369887_449.pdf

[d] https://www.unicef.cn/en/csr/nigeria

[e] https://www.ilo.org/dyn/travail/travmain.sectionReport1?p_lang=en&p_structure=3&p_year=2011&p_start=1&p_increment=10&p_sc_id=2000&p_countries=BD&p_countries=BR&p_print=Y

B A Model of Household Parental Leave Use

We develop a framework of parental leave use that describes how parents divide a household's allocation of parental leave days, taking into account the labor market costs as well as the household benefits of the presence of each parent. We start from a set-up that mimics Sweden's parental leave system before the introduction of "Double Days," and then examine how this reform alters the allocation of parental leave and household wellbeing.

B.1 General Notation

Consider a household consisting of a child, mom m, and dad d. Let t denote discrete time (in days), with childbirth at $t = 0$. Time is divided into two intervals, before and after publicly-provided childcare becomes available.[51] Specifically, there exists some $\bar{t} > 0$, such that:

- For $t < \bar{t}$, public childcare is not available. We refer to these days as "core" days.
- For $t \geq \bar{t}$, public childcare is generally available, except on some days (e.g., school holidays). We refer to days without childcare during this period as "miscellaneous" days.

The total number of parental leave days available to the family is $T > \bar{t}$. The total number of core and miscellaneous days exceeds T.[52]

Let $B_p(t)$ and $C_p(t)$ denote the benefit and cost of a leave day taken (alone) by parent $p \in \{m, d\}$, respectively, on a day before childcare is available (i.e., during a core day $t < \bar{t}$). The corresponding benefit and cost of taking leave on a miscellaneous day during $t \geq \bar{t}$ is given by $b_p(t)$ and $c_p(t)$, respectively.[53] Let the value of parental leave be strictly positive, $B_p - C_p > 0$ and $b_p - c_p > 0$, on days without childcare; and negative otherwise.

[51] Children are eligible for publicly-provided childcare at age 1. In practice, most childcare slots open up in August (when all children are "shifted" one year forward). Thus, many children do not gain access to a desired childcare slot until August in the year after they turn one year old.

[52] Consistent with this conjecture, parents generally exhaust their leave days. (Recall that parental leave can be claimed until the child turns 8 years old; thus, the period $t \geq \bar{t}$ essentially lasts until the child's eighth birthday.)

[53] These benefits and costs pertain to those subjectively "perceived" by the family. To the extent that they differ from the true benefits and costs (i.e., their perceptions may be wrong), it is the perceived benefits and costs that matter for our analysis because they drive parental leave choices.

B.2 Assumptions

We assume that household decisions are efficient, and (for simplicity) abstract away from discounting.[54] The general household problem of choosing an allocation of leave days among the large set of permissible ones is complex and dynamic. To obtain specific predictions for how parents divide the leave, we need to impose more structure. We make four parsimonious assumptions about the benefits and costs of parental leave. They are not meant to reflect the reality of all families, but simply to be plausible for the "typical" family in our data.

The first two assumptions concern the benefits of parental leave. We define the difference between the benefit of the mom and the benefit of the dad taking leave on core and miscellaneous days, respectively, as: $\Delta_B(t) \equiv B_m(t) - B_d(t)$ and $\Delta_b(t) \equiv b_m(t) - b_d(t)$.

Assumption 1 (Early care)**.** *$B_p(t)$ is strictly decreasing and converges to $b_p(t) = b_p > 0$.*

Intuitively, the benefit of parental care is the largest immediately after childbirth, and then gradually falls to b_p, the benefit of a miscellaneous day.

Assumption 2 (Maternal advantage)**.** *$\Delta_B(t)$ is positive, strictly decreasing, and converges to $\Delta_b(t) = \Delta_b \geq 0$.*

The relative advantage of the mother staying home being decreasing over time is consistent with, for example, the fact that breastfeeding is usually concentrated in the beginning of a child's life.

The next two assumptions concern the costs of parental leave. Let $C_p(t) \equiv (1-\alpha)w_p + \kappa(\tau_p)$, where w_p is the (constant) current wage, α is the wage replacement rate, $\kappa(\tau_p)$ is a future career cost, and τ_p is total number of core leave days taken by parent p (up to t). By contrast, assume that leave taken on miscellaneous days does not have any long-term career consequences, i.e., $c_p(t) \equiv (1-\alpha)w_p$.

Assumption 3 (Parental income difference)**.** *$w_d > w_m$.*

Consistent with this assumption, the intra-household median earnings difference (father minus mother earnings) in our analysis sample is positive.[55]

[54] As discussed in footnote 15, Sweden's parental leave program grants benefits to both parents of a child regardless of their marital or cohabitation status. In our model, we refer to the mom and dad as residing in one household; strictly speaking, however, we only require that parents are able to make efficient joint decisions.

[55] This fact is also true at the mean in our data. As can be seen in Table 1, the mean of mothers' earnings is approximately

Assumption 4 (Career cost)**.** *Let* $\kappa > 0$ *and* $\frac{\bar{t}}{2} < \tau^c < \bar{t}$ *such that*

$$\kappa(\tau_p) = \begin{cases} \kappa & \text{if } \tau_p \geq \tau_c \\ 0 & \text{otherwise} \end{cases}$$

Intuitively, this assumption captures the idea that absence from the labor market *for an extended period of time* (longer than τ^c) comes with a career cost. While we use a simple step function for tractability only, the idea that career costs are particularly pronounced when a parent takes a long period of leave is consistent with empirical evidence.[56] Here, the critical time threshold τ^c is chosen such that the career cost can be avoided if and only if the core days are (suitably) shared by both parents.[57]

B.3 Parental Leave System Before the "Double Day" Reform

We start by defining a "basic parental leave system" as one in which parents can freely divide the total allowance T, but where leave cannot be taken simultaneously by both parents. This represents a simplified version of Sweden's parental leave system before 1995 (when the first earmarked month of leave was introduced) and, more generally, is akin to typical parental leave systems around the world in which parents can divide up a total "budget" of leave days.

Corollary 1 (Basic system)**.** *Under the basic parental leave system, leave is taken during the entire core period, with residual leave days used in the miscellaneous period. Either mom takes all leave days, or mom takes all leave days except for a single interval of leave days taken by dad at the end of the core period.*

Proof. See Appendix B.5.1. □

75 percent of the mean of fathers' earnings. Note that we do not observe wages, only earnings (i.e., wage × hours). If, in contrast, the mother earns a higher wage than the father, then the wage effect pushes the household towards a distribution of leave-taking with greater leave use by the father. As long as the mother takes any leave at all (which is true in 100 percent of the households claiming leave in our data), Corollaries 1 and 2 below still hold, and Prediction 1 still holds with the modification that the future miscellaneous leave day crowded out by a double day also may be taken by dad.

[56] Multiple studies document negative labor market impacts of prolonged leave (Lalive and Zweimüller, 2009; Lequien, 2012; Schönberg and Ludsteck, 2014; Bičáková and Kalíšková, 2016; Canaan, 2019). In general, cross-country comparisons suggest that provisions of leave of up to one year in length have zero or positive impacts on maternal employment, whereas longer leave entitlements can negatively affect women's long-term labor market outcomes (Ruhm, 1998; Blau and Kahn, 2013; Thévenon and Solaz, 2013; Olivetti and Petrongolo, 2017; Rossin-Slater, 2018).

[57] This is likely true in the typical Swedish setting, where the core period often extends beyond the child's first birthday (as discussed in footnote 52), while the literature documents career costs associated with leave entitlements longer than a year (as discussed in footnote 56).

This allocation intuitively reflects the above assumptions: Parental leave is concentrated at the start of a child's life due to the importance of early care (Assumption 1). Further, leave is taken predominantly, if not exclusively, by moms because of maternal advantages in childrearing and parental income differences (Assumptions 2 and 3); a countervailing effect is that extended leave by one parent negatively affects that parent's future career (Assumption 4). Thus, dad may take some core days when doing so allows the household to avoid the maternal career cost.

In Sweden, under the basic parental leave system (prior to 1995) only a small share of all fathers chose to take any leave (Duvander and Johansson, 2012)—this low rate of paternal leave use was in fact the motivation for introducing the first "Daddy Month." In light of the model, this pattern suggests either that parents' income differences were so large that not even career costs could overcome them, or that income differences were modest but career costs were not substantial enough to neutralize them.[58]

Next, we add earmarked leave. Specifically, out of the family's total allowance of T leave days, $E < T$ days are earmarked for each parent (but leave days still cannot be taken simultaneously). This structure resembles Sweden's parental leave system right before the "Double Day" reform that we study, when Sweden had implemented two "Daddy Months" (in 1995 and 2002). We assume that $T - E > \bar{t}$; that is, the household is able to cover the core period with only one parent taking leave.[59]

Corollary 2 (Earmarked leave and the value of a miscellaneous day)**.** *In a basic parental leave system with earmarked leave, if dad takes leave, then he takes it at the end of the core period or during the miscellaneous period. The magnitude of a household's response to the introduction of earmarked leave reflects the household's valuation of a miscellaneous day.*

Proof. See Appendix B.5.2. □

Intuitively, earmarking affects households in which the dad would have otherwise taken less than E leave days by raising the opportunity cost of *not* taking a paternity leave day—without earmarking the mother can stay home instead; with earmarking, the day is lost. A father induced to

[58]This pattern could also be explained by fathers facing greater career costs of taking leave than mothers, as argued by Albrecht et al. (2015), Pedulla (2016), and Tô (2018). While for simplicity we abstract away from gender differences in career costs in our framework (i.e., we assume that κ is the same for both parents), all of the below corollaries would still hold if the career cost is larger for men than women.

[59]This assumption reflects the Swedish system at the time of the "Double Day" reform: T was 16 months, E was 2 months, and childcare eligibility occurred at 12 months.

take leave allocates it either to the end of the core period (when it can reduce maternal career costs) or during the miscellaneous period (when the household benefit differential is the smallest).

Corollaries 1 and B.5.2 are important for two reasons. First, they provide the model's prediction about parental division of leave before the introduction of "Double Days": Mothers take leave starting at childbirth and for the majority of the core period, while fathers take leave at the end of the core period or during (a subset of the) miscellaneous days. To gauge the plausibility of the model's predictions, we can use data on *actual* parental leave use in the pre-reform period. Appendix Figure A1 illustrates that Corollaries 1 and B.5.2 are highly consistent with actual parental leave use in Sweden in the period before the "Double Days" reform, underscoring the model's applicability to our empirical setting.

Second, the last statement in Corollary B.5.2 links a household's response to the introduction of earmarking to its valuation of a miscellaneous day. While we do not empirically analyze the impact of earmarking in our paper, this result provides an important link between existing evidence on earmarking and the model's predicted household responses to the reform that we study. In particular, multiple studies have documented that Sweden's earmarking reforms substantially increased paternity leave take-up (Duvander and Johansson, 2012; Ekberg et al., 2013; Duvander and Johansson, 2014, 2015; Avdic and Karimi, 2018). By Corollary B.5.2, this finding implies that households place a high valuation on a miscellaneous day.[60] This, in turn, has important implications for our analysis because, as we show in Section B.4 below, a household's benefit from using a "Double Day" is *directly related to a household's valuation of a miscellaneous day*. Thus, Corollary B.5.2 provides a theoretical link between existing studies on earmarking and the findings that we present in this paper. We explain this in detail below.

B.4 "Double Days" Reform

The "Double Days" reform relaxes the assumption that parents cannot take leave at the same time by allowing "double days." During the core period, parents can now take leave on the same day, using two units of leave. However, "double day" units do not count toward earmarked units.[61]

To capture the value of taking a double day, we introduce some additional notation. Let $B_{pp'}(t)$

[60] Intuitively, as we show in the Proof of Corollary B.5.2, when earmarking induces a father to take an extra leave day (that he otherwise would not have taken), the household gains one miscellaneous day.

[61] This structure closely resembles Sweden's reform, which allowed the use of "double days" before the child's first birthday (and thus before the child is eligible for public childcare), and which did not allow for "double days" to count toward either parent's earmarked allowance.

capture the direct benefit of parent p taking leave to join parent p' at home on day t. Let $C_p(t)$ be the corresponding direct cost.

Assumption 5 (Flexibility and the value of a "double day")**.** *$B_{pp'}(t)$ contains a stochastic element. The double-day decision can be made flexibly, at time t, when the daily realization of $B_{pp'}(t)$ is observed.*

In principle, $B_{pp'}(t)$ may encompass benefits to parent p who takes the additional leave (e.g., joy of leisure or domestic work), benefits to parent p' from having the second parent at home (e.g., help with household chores or emotional support), and benefits to the child from being home with two parents as opposed to one. We let this aggregate household benefit contain a stochastic element to capture the fact that it may be subject to domestic shocks that necessitate a flexible response. For example, additional support for the mother may be more valuable to the household on some days (e.g., when she is not feeling well, is fatigued, or is having mental health issues) than others.[62]

Further, for simplicity, we assume that the number of potential double days to be used is strictly smaller than $T - E - \bar{t}$. This simplifies our analysis as it ensures that use of a double day will not preclude use of a later (desired) double day.[63]

Prediction 1 (Double days)**.** *A double day is used if and only if*

$$B_{pp'}(t) > b_m + (1-\alpha)(w_p - w_{p'}). \tag{3}$$

Proof. See Appendix B.5.3. □

Prediction B.5.3 contains two insights that are important for our empirical analysis. First, households choose to take a double day on days when the direct household benefit from parent p joining p' exceeds the threshold in (3). Thus, when parents have the flexibility to decide when to take joint leave on a day-to-day basis, the optimal response is to remove the additional parent from the labor force only on days when the benefit of doing so is perceived to be sufficiently high.

Second, the right-hand side of condition (3) formalizes the notion of "sufficiently high." Intuitively, a double day has a shadow cost beyond the foregone wage of parent p: it eliminates a future

[62]In principle, another example of a domestic shock that could affect $B_{pp'}(t)$ in this general set-up is child illness. However, since one parent is already at home during the core days—and thus able to flexibly respond to unexpected child health shocks by, for example, taking the infant to the doctor—the marginal value of the second parent also staying home in response to a child health shock is likely to be low. Consistent with this conjecture, we find no empirical evidence of effects of the "Double Days" reform on measures of child health available in our data (specialist outpatient and inpatient visits as well as prescription drugs like antibiotics).

[63]This assumption is made for convenience and can be relaxed. If relaxed, the household will be more conservative in its use of a double day (relative to the case when this assumption holds); consequently, the right-hand side of equation (3) is the lower bound of the direct benefit that must be obtained from taking a double day.

miscellaneous leave day that could be taken by mom.[64] This makes the overall opportunity cost of taking a double day potentially large. Specifically, for a double day taken by the dad to join the mom at home, condition (3) becomes

$$B_{dm}(t) > b_m + (1-\alpha)\Delta_w$$

where $\Delta_w = w_d - w_m > 0$ is the wage difference between the dad and the mom. That is, the added benefit of dad joining mom on a core day allocated to mom would have to exceed the gross benefit of mom taking leave on a future miscellaneous day without childcare, plus the difference in the non-replaced wage income.[65]

Thus, the higher is the household's valuation of a future miscellaneous day, the higher is the cutoff in (3) at which the household decides to take a double day. Further, a higher cutoff in (3) implies fewer days taken as double days, and a higher perceived household benefit of each claimed double day. This relates to our above discussion of Corollary B.5.2: The strong response in paternity leave take-up to Sweden's earlier earmarking reforms suggests that the value of a miscellaneous leave day is high. We thus obtain a clear prediction: the "Double Days" reform (i) induces a relatively small average increase in the number of double days taken, but (ii) ensures that the claimed double days are associated with substantial benefits to the household.

B.5 Mathematical Proofs

B.5.1 Proof of Corollary 1

First, we show that the dad under the "basic parental leave system" does not take leave on any miscellaneous days, but may take leave on core days. Under the assumptions in Section B.2, we have that $\Delta_c(t) = c_m(t) - c_d(t) < 0$ while $\Delta_b \geq 0$; thus, if a miscellaneous leave day is taken, then it is taken by mom. Under the assumptions in Section B.2, we also have that $\Delta_C(t) = C_m(t) - C_d(t)$ can be positive on days when mom would incur a career cost; thus, dad may take leave on core days when this allows the household to avoid the maternal career cost.

[64] Corollary 1 and B.5.2 together imply that any miscellaneous day taken by the father are taken in response to earmarking; thus, they count toward the father's earmarked allowance. Because double days do not count toward the earmarked allowance, a double day (taken by any parent) replaces a miscellaneous day taken by the mother in the future. See the Proof of Proposition B.5.3 for a more formal treatment.

[65] Similarly, for a double day in which the mom joins dad at home, condition (3) becomes $B_{md}(t) > b_m$ (without career costs). In practice, however, as illustrated in Appendix Figure A1, the typical mother's first spell extends beyond the time period when double days can be used.

Second, we show that it is optimal for the household to claim leave during the entire core period. By Assumption 1, it is generally optimal to fill up core days before allocating leave to miscellaneous days. While the career cost can make taking more than τ^c of core leave days by one parent expensive, the family as a whole would always find it optimal to cover any remaining core days using the other parent (rather than have no one stay at home). This follows from the following two observations: (i) Mom and dad can allocate leave between them in a way that enables them to cover core days without incurring any career costs ($\frac{\bar{t}}{2} < \tau^c < \bar{t}$). (ii) Absent career costs, the household strictly prefers to take leave during a core day over not taking leave ($B_p - (1-\alpha)w_p > b_p - (1-\alpha)w_p > 0$).

Third, we show that, if dad takes leave, then it is taken as a single interval of leave days at the end of the core period. Within the core period, it follows directly from Assumptions 2 and 3 that it is optimal to allocate at least τ^c of core leave days to mom. If $(1-\alpha)w_m + \kappa - (1-\alpha)w_d \equiv \Delta_C^c > 0$, then it is potentially optimal to allocate some core leave days to dad.

- Specifically, on core days where $\Delta_B - \Delta_C^c < 0$, dad takes leave.
- Given Δ_C^c, the left-hand side is smaller for higher t, because Δ_B is smaller for higher t by Assumption 2. Hence, if dad takes any leave days, those will form a single interval at the end of the core period.

Fourth, we show that, once the core period is accounted for, any remaining leave days will be taken as miscellaneous days (by mom, as per the first argument in this proof). Because $b_m - (1-\alpha)w_m > 0$, the household prefers to use any miscellaneous day over not using it.

B.5.2 Proof of Corollary

First, for the $T - E$ days that mom can use without any impact on the total allowance, the same arguments apply as under the basic parental leave system (see proof of Corollary 1 in Section B.5.1 above). Given that $T - E > \bar{t}$, the above arguments imply that the core period will be covered under any allocation of leave in the presence of earmarking.

Second, the residual question is what the household does with the E days earmarked for dad. If dad takes more than E days under the basic parental leave system, then the earmarking reform does not affect the household's allocation of leave (described in Corollary 1). We thus henceforth focus on the case in which dad takes less than E leave days under the basic system. It is useful to note that, in this case, if dad had to take more leave days, then he would optimally take those extra days either during the miscellaneous period (because the benefit differential is smallest there, $\Delta_b \leq \Delta_B$), or towards the end of the core period (where, while the differential may be larger, he can reduce career costs for the mom).

Third, we show that if dad takes less than E leave days under the basic system, then the earmarking reform will strengthen his incentives to take more leave days. This is because the earmarking reform raises the household's opportunity cost of dad not taking a day of leave (up to E days): under the basic system, mom can take the day of leave instead; under earmarking, the household loses the leave benefit on that day. To see this, consider the following:

- Under the basic system, suppose dad considers taking a leave day. Since under the basic system, all T days are always used, this would effectively replace mom on that leave day who would have taken that leave day otherwise. If the candidate day is a late-period core day, then the marginal value of dad replacing mom on that day is

$$\Delta_B - \Delta_C^c,$$

  and if the candidate day is a miscellaneous day, then the marginal value is

$$\Delta_b - \Delta_c.$$

- Now, suppose dad considers using an *earmarked* day to replace mom on the above candidate days. Because he uses an earmarked day, the family allowance effectively grows; that is, mom being replaced on that day means that she can allocate the "freed up" allowance to another miscellaneous day (all core days are filled). So, the marginal benefit of dad using an earmarked day to replace mom on a late-period core day is

$$\Delta_B - \Delta_C^c + [b_m(t) - (1 - \alpha) w_m],$$

and to replace mom on a miscellaneous leave day is

$$\Delta_b - \Delta_c + [b_m(t) - (1-\alpha)w_m].$$

When comparing these to the analogous conditions under the basic system, we see that the term $[b_m(t) - (1-\alpha)w_m]$ is the added incentive that earmarking creates for dads to take more leave: the value of an additional miscellaneous leave day taken by mom.

B.5.3 Proof of Prediction

First, we show that the use of a double day always reduces the number of miscellaneous leave days. Recall that, under any allocation, the core period will be fully covered. Hence, if the use of double days reduces the total number of covered days, then the reduction will always come out of the set of miscellaneous days.

Second, it is useful to note the following on the take-up of miscellaneous days: Because $\Delta_b - \Delta_c < 0$, non-earmarked miscellaneous leave days are not taken by dad. Thus, any miscellaneous leave days taken by dad are earmarked for dad. All other miscellaneous leave days are taken by mom.

Third, we show that when a double day is taken, then it replaces one of mom's miscellaneous leave days.

- When all miscellaneous leave days are taken by mom, the use of a double day will replace one of mom's miscellaneous leave days.
- When some miscellaneous leave days are taken by dads, the use of a double day will (still) replace one of mom's miscellaneous leave days. This is because double days cannot be counted against earmarked days; hence, if a double day is used, eliminating a dad's miscellaneous leave day (which, by step 2 of this argument, is an earmarked day) does not prevent that a mom-only miscellaneous leave day is taken away. To see this, let $\hat{T}$ denote the total number of leave units taken, some possibly already on double days. Suppose $T - E < \hat{T} \leq T$, i.e., dad uses some but not more than his earmarked days (this is the necessary condition for dad to take miscellaneous leave days). Now suppose that the family decides to take another double day. To do this, the use of a unit of leave on another day must be eliminated. One could elimi-

nate the use of another unit earmarked for dad, but this would reduce the number of allowed units $\hat{T}$ by one unit, so that the need to eliminate another, non-earmarked, unit in response to the added double day remains. As per previous arguments, if a non-earmarked unit must be eliminated and dad only uses earmarked days, then it is optimal to eliminate one of mom's miscellaneous leave days (rather than one of mom's core days).

Fourth, by the preceding arguments, a double day is taken when the value of "doubling up" exceeds the loss of a mom's miscellaneous leave day, i.e., $B_{pp'}(t) - (1-\alpha)w_p > b_m - (1-\alpha)w_m$.

C Definitions of Health-Related Outcomes

Diagnosis (ICD) codes For all mothers, we obtain comprehensive inpatient and outpatient medical records. We create indicators for visits associated with the following diagnosis codes (ICD-10) within different time periods from the birth of the child (in the inpatient records, we exclude the visit associated with the birth itself):

- Conditions related to or aggravated by the pregnancy, childbirth, or by the puerperium (maternal causes or obstetric causes) (O00-O99)
- Mental, behavioral and neurodevelopmental disorders (F00-F98)
- External causes and medical counseling
  - Injury, poisoning and certain other consequences of external causes (S00-S99, T00-T32, T66-T78)
  - Assault (X92-Y09)
  - Factors influencing health status and contact with health services (Z00-Z99)

Prescription drug (ATC) codes Prescription drugs are classified according to the Anatomical Therapeutic Chemical Classification System (ATC). To associate certain prescription drugs to certain diagnoses, we use the classification system below:

- Anti-anxiety: ATC code begins with "N05B"
- Anti-depressant: ATC code begins with "N06A"
- Antibiotic: ATC code begins with "J01"
- Painkiller (analgesic): ATC code begins with "N02"