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

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We study how fathers' access to workplace flexibility affects maternal postpartum health. We use variation from a Swedish reform that granted new fathers more flexibility to take intermittent parental leave during the postpartum period and show that increasing the father's temporal flexibility—and thereby his ability to be present at home together with the mother—reduces the incidence of maternal postpartum health complications. Our results suggest that mothers bear part of the burden from a lack of workplace flexibility for men because a father's inability to respond to domestic shocks exacerbates the maternal health cost of childbearing. (*JEL* D13, I12, J13, J16, J22, J32, M54)

Temporal flexibility in the workplace is increasingly important for modern households in which both parents work. Workplace flexibility allows parents to rearrange their work hours in case of an unforeseen family need—such as a child's sickness or a snow day—while minimizing work interruption. In other words, workplace flexibility often generates flexibility in *when to stay home from work*. As mothers are more likely to be "on call" for unanticipated domestic events (Weeden, Cha, and Bucca 2016), a burgeoning literature identifies workplace flexibility as a key factor for improving maternal labor market outcomes and further reducing the gender pay gap (Bertrand, Goldin, and Katz 2010; Goldin 2014; Goldin and Katz 2016).

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Yet other important aspects of workplace flexibility remain less well understood. First, relative to the research on the implications of workplace flexibility for women's *career* costs of family formation, we know less about its impacts on other costs associated with having children.[1] Many women face large health costs during the postpartum period—a substantial share of all new mothers have physical health complications, such as infections, or mental health issues, such as postpartum depression and anxiety.[2]

Second, little is known about *fathers'* demand for workplace flexibility or the spillover effects of fathers' access to workplace flexibility on maternal well-being. Such impacts would be consistent with a broad range of economic models of the household, which posit that an expansion of the choice set for one spouse (as a result of workplace flexibility initiatives, for example) would induce household re-optimization that may alter the well-being of the other spouse (see, e.g., Becker 1973; Chiappori 1992; Lundberg and Pollak 1993; Persson 2020). While recent studies estimate intrahousehold spillover effects of maternity leave benefits on spousal labor market outcomes (Canaan 2022; Ginja, Jans, and Karimi 2020; Ginja, Karimi, and Xiao 2023), the impacts of fathers' benefits on maternal health outcomes may be different.

Third, the benefits of workplace flexibility policies are often weighed against potential moral hazard-related costs. While such costs have been discussed in the context of paid sick leave legislation (see, e.g., Pichler and Ziebarth 2017), less is known about the role of moral hazard in the context of policies targeting new parents. In many paid family leave policies, a father's (or non-birthing parent's) right to take time off from work to be at home with their child is conditioned on the (birthing) mother returning to the labor market or being enrolled in school at the same time.[3] This rule is intended to guard against moral hazard, which in this setting would constitute one parent—stereotypically, the father—engaging in leisure activities while the other parent—stereotypically, the mother—cares for the child. However, if a father's presence at home together with the mother improves her

[1] See, e.g., Kleven, Landais, and Søgaard (2019) and Kleven et al. (2019) for evidence of the "child penalty" in earnings. The career cost of having children grows in magnitude over time since childbirth; by contrast, the health cost is largely concentrated in the immediate postpartum period.

[2] Studies from multiple countries document that between 23 and 83 percent of new mothers experience pain in various parts of their bodies (including the perineum, cesarean section incisions, the back or the head) following childbirth (see Cheng, Fowles, and Walker 2006 for an overview). In the United States, about 5 to 7 percent of new mothers experience an infection associated with childbirth or breastfeeding (Dalton and Castillo 2014), and more than one out of every 100 new mothers is readmitted into the hospital within 30 days after childbirth (Clapp et al. 2017). In Sweden, our data show that 3 percent of new mothers are hospitalized in the first month after childbirth, while 10 percent require prescription painkillers and 6 percent require prescription antibiotics, respectively. With regard to mental health, recent estimates suggest about 17 percent of new mothers around the world experience postpartum depression (Wang et al. 2021). In the United States, about one in nine women report symptoms of postpartum depression (Ko et al. 2017). In Sweden, around 11 percent of new mothers are found to have depressive symptoms at two months post-childbirth based on the Edinburgh Postnatal Depression Scale (Rubertsson et al. 2005). Our data also show that more than 1 out of every 100 new mothers are prescribed antidepressant or antianxiety medications in the first month after giving birth.

[3] As one example, the Norwegian policy, which has been extensively studied in the prior literature (e.g., Cools, Fiva, and Kirkebøen 2015b; Dahl et al. 2016; Bütikofer, Riise, and Skira 2021), states: "If the father/co-mother wants to take parts of the shared period [of leave], the mother must be occupationally active (work, education or similar)." See: https://www.norden.org/en/info-norden/parental-benefit-norway. We discuss similar policies in other countries in Section V and online Appendix Table A11.

health, then the potential moral hazard-reducing benefits of such a provision must be weighed against the costs of foregone improvements in maternal health.

This paper begins to fill these gaps by analyzing fathers' demand for workplace flexibility and the spillover effects of fathers' access to workplace flexibility on maternal health. We study a Swedish reform that increased workplace flexibility for new fathers by relaxing a central restriction in the parental leave system. At the time of the reform, Swedish households were granted 16 months of job-protected paid leave (per child), to be allocated across the two parents.[4] However, parents were generally not allowed to be on leave *at the same time*—in fact, simultaneous leave use was permitted for only ten days around childbirth (hereafter referred to as "baseline leave"). Since nearly all mothers take full-time leave in the months following childbirth, this rule effectively limited fathers' ability to use paid leave alongside the mother during most of the immediate postpartum period.

The "Double Days" reform, implemented on January 1, 2012, relaxed this restriction by allowing both parents to use full-time leave benefits at the same time for up to 30 additional days during the child's first year of life. These days could be taken on a flexible, intermittent basis. Importantly, the reform did not alter the total duration of leave available to households. Thus, fathers were granted more flexibility to choose, on a day-to-day basis, whether to claim a paid leave benefit to stay home together with the mother and child or whether to save the benefit for the family's future use.[5] Put differently, households gained increased flexibility to be able to remove the father from the labor force on days when the value of doing so is high. For example, additional support for the mother may be especially valuable on days when she is not feeling well (e.g., because she is coming down with a post-childbirth or breastfeeding-related infection), is fatigued or stressed, or is having mental health issues.

We use detailed linked Swedish administrative data and begin by showing that maternal health issues are substantially more prevalent in the *first month after childbirth* than in the subsequent months, underscoring the potential value of access to flexible leave for fathers during that initial postpartum month. To identify the causal impacts of access to such leave, we leverage the nonlinear variation in the share of days during the child's first month of life that a family is eligible for simultaneous leave among parents of children born in the months surrounding the reform: parents of children born on January 1, 2012 or later are eligible for the entirety of the first post-birth month; parents of children born between December 1 and December 31, 2011 are eligible for a share of days that varies linearly between 0 and 1; while parents of children born on November 30, 2011 or earlier are not eligible for any "Double Days" in the first postpartum month. We then consider all families with firstborn singleton children born in the three months before and after January 1, 2012, as well as families with children born in these same calendar months in the three prior years, and estimate regression models that use the "share days eligible" as the key treatment

[4] Parents faced some restrictions on how to split this leave. In particular, at the time of the reform, two months were earmarked for each parent. See Section I for details.

[5] Importantly, Swedish law states that parents are not required to notify their employers in advance of taking this leave. See Section I for more details.

variable, while controlling flexibly for seasonality and cohort effects. In addition, we implement a "doughnut" Regression Discontinuity Difference-in-Differences (RD-DD) model, which drops all December births, and compares the outcomes of parents of children born on October 1 through November 30, 2011 and January 1 through March 31, 2012, relative to the analogous difference between parents of children born on these days in the three prior years. Our empirical strategy thus exploits the reform-driven change in eligibility for simultaneous leave *during the first postpartum month*, while accounting for other sources of variation in family outcomes across children born on different days of the year.[6]

We find that households have substantial demand for paternal workplace flexibility in the first postpartum month. Being fully eligible for the "Double Days" in the first month post-childbirth raises the likelihood that a father uses more than the 10 days of baseline leave (hereafter referred to as "post-baseline leave") in that first month by 3.9 percentage points, which represents a 92 percent effect size relative to the sample mean. Interestingly, while the effect on *any* post-baseline leave is large, we observe a small 0.32 day increase in the total number of leave days taken on average. This small increase in average leave days is driven both by some fathers shifting from taking no leave to taking one to five days of leave, and by some fathers shifting to taking a larger number of leave days in the first postpartum month (up to 20 days of leave).

We also show that access to workplace flexibility for fathers during the first postpartum month has positive spillover effects on maternal health. We find that mothers in families that have full access to "Double Days" during the first month post-childbirth have a 1.0 percentage point (12 percent) lower likelihood of having an inpatient or specialist outpatient visit for childbirth-related complications, and a 1.5 percentage point (14 percent) lower likelihood of having an antibiotic prescription in the same month. We additionally find suggestive evidence of a reduced likelihood of having a visit for external causes or counseling,[7] and of having an antianxiety drug prescription in the first postpartum month. The effects on maternal health outcomes are larger in both absolute and relative terms for mothers with pre-childbirth medical histories.[8] Additional analyses suggest that the maternal health effects of access to the "Double Days" in the first postpartum month are mostly concentrated within the same month, although there is some suggestive evidence of continued benefits throughout the first year post-childbirth.

[6] Such differences may stem from a variety of factors, including seasonality in births, differences in holiday time off work, and differential sorting because of school starting-age laws (see, e.g., Buckles and Hungerman 2008a; Currie and Schwandt 2013a; Black, Devereux, and Salvanes 2011).

[7] This category of visits includes those that are coded as "factors influencing health status and contact with health services." These codes are used for occasions when there are circumstances other than a disease, injury, or other diagnosed external cause that lead to a health encounter. Most relevant to our study, these codes can be used to classify visits in which a new mother receives medical counseling or advice but is not diagnosed with any particular condition (e.g., she may receive advice regarding postpartum "baby blues," but is not formally diagnosed with depression). See Section I and online Appendix D for more details.

[8] We define mothers with a pre-birth medical history as those who have either any inpatient visit in the 24 months before childbirth or any specialist outpatient visit for mental health reasons in the 60 months before childbirth or any antianxiety or antidepressant prescription drug in the 36 months before childbirth. See Section II for more details.

The large maternal health effect magnitudes are consistent with the idea that fathers take leave on days when the marginal benefit of doing so is especially high. To provide further support for this conjecture, we show that the "Double Days" reform increases the likelihood that the father takes at least one day of leave on the same day as when the mother has an encounter with the health care system. This result suggests that the option to take simultaneous leave allows fathers to stay home and care for their infants while mothers get medical care. The fact that we also find an overall reduction in maternal health care encounters with hospitals and specialist providers (as well as in prescription drug use) additionally suggests that fathers' flexibility to be able to stay home averts health complications that necessitate medical intervention in the first place. For instance, if a mother starts coming down with symptoms of mastitis—a common breastfeeding-related infection—then having the father stay at home may allow her to rest, sleep, and breastfeed (i.e., following the recommended protocol for treating initial symptoms of mastitis) and avoid the need for antibiotics.[9]

Our study contributes to a large literature on parental leave (for some overviews, see: Olivetti and Petrongolo 2017; Rossin-Slater 2018; Rossin-Slater and Uniat 2019). However, unlike most studies that identify the impacts of program implementation or extensions, our paper instead provides insights into the details of program *design*. In the pre-reform period, Sweden constrained fathers' ability to take leave at the same time as the mothers. Similar inflexibility is built into parental leave systems in numerous other countries because policymakers view paternity leave as a way of promoting father–child bonding, changing gender norms, and improving maternal labor market outcomes. These goals are perceived to be more attainable if fathers are encouraged to stay at home *alone* with the child and for a *consolidated* time period. Indeed, nearly all existing studies of paternity leave focus on the impacts of so-called "Daddy Month" reforms on fathers' involvement with childcare and on parental labor market outcomes. While countries differ as to whether or not fathers are explicitly prohibited from taking leave at the same time as mothers, in practice, these policies tend to generate a lumpy leave-taking pattern, where fathers take leave *after mothers return to work* (See, e.g.: Duvander and Johansson 2012; Ekberg, Eriksson, and Friebel 2013; Duvander and Johansson 2014, 2015b; Avdic and Karimi 2018; Rege and Solli 2013; Dahl, Løken, and Mogstad 2014; Cools, Fiva, and Kirkebøen 2015b; Dahl et al. 2016; Eydal and Gislason 2008; Schober 2014; Bünning 2015b; Patnaik 2019; Farré and González 2019; Olafsson and Steingrimsdottir 2020; Andresen and Nix 2022; Lappegård et al. 2020.) Although the evidence on the potential father–child bonding and labor market benefits of such inflexibility is mixed,[10] our study demonstrates that doing the opposite—letting

[9] We do not have any data on primary care visits. It is also possible that allowing fathers the option to take leave at the same time as mothers allows mothers to seek prompt primary care and thus avoid more serious health complications that require specialist or inpatient treatment.

[10] While there are some studies suggesting that Swedish fathers who take longer leaves share household tasks and childcare more equally than those who take shorter leaves (e.g., Almqvist and Duvander 2014a), others find null or even adverse effects on paternal participation in childcare, parental labor market trajectories, and marital stability (Ekberg, Eriksson, and Friebel 2013; Duvander and Johansson 2015b; Avdic and Karimi 2018; Gerst and Grund 2022; Lappegård et al. 2020).

fathers take leave *intermittently* and *jointly* with the mother, especially immediately after childbirth—could be critical to maternal postpartum recovery.

Our results on the impacts of paternity leave on *maternal health* are consistent with findings from Fontenay and Tojerow's (2020) study set in Belgium, which shows that fathers' eligibility for two weeks of paternity leave in the month after childbirth (i.e., while the mother is also on leave) reduces maternal use of disability insurance. At the same time, Ugreninov (2013) shows no effect of the Norwegian "Daddy Month" reform on maternal sick leave use, perhaps due to the fact that the "Daddy Month" is almost never taken in the immediate postpartum period. While both Fontenay and Tojerow (2020) and Ugreninov (2013) examine proxies of maternal health based on social insurance take-up, research on more direct maternal health measures is limited. One study from Great Britain finds that self-reported health outcomes of postpartum women whose partners took two weeks of paternity leave are better than those of postpartum women whose partners took no leave, conditional on selected observable characteristics (Redshaw and Henderson 2013b). Another correlational study using Swedish data finds that infants of fathers who do not take any paternity leave are less likely to be breastfed than infants of fathers who do (Flacking, Dykes, and Ewald 2010). However, unobservable differences between families with fathers who do and do not use paternity leave generate challenges for causal interpretation.

In sum, the central insight that emerges from our analysis is that mothers bear the majority of the cost of a lack of workplace flexibility—not only directly through greater career costs of family formation (as documented in prior literature), but also *indirectly* as fathers' inability to respond to domestic shocks exacerbates the maternal health costs of childbearing.[11] Moreover, the policy's key feature—the flexibility for fathers to take one or a few days of leave as needed—limits the potential for adverse future labor market consequences associated with longer paternity leaves (e.g., as found by Gerst and Grund 2022).[12] By leveraging families' private information about when it is most desirable to stay home relative to the cost of missed time at work, workplace flexibility allows households to ensure that they reap large benefits relative to the number of leave days used.

More broadly, our results contribute to our understanding of how policy influences maternal postpartum health. While discussions about maternal health often center around the role of the medical system,[13] less attention has been paid to the mother's

[11] Work-family conflict is a major source of stress (Shockley et al. 2017) that is associated with adverse physical and mental health outcomes (Frone 2000; Allen and Armstrong 2006; Backé et al. 2012; Berkman et al. 2015; O'Donnell et al. 2019). While there is some evidence that public and organizational policies that promote workplace flexibility can mitigate this relationship (Dionne and Dostie 2007; Kelly, Moen, and Tranby 2011; Moen, Fan, and Kelly 2013; Ziebarth and Karlsson 2014; Bloom et al. 2014; Moen et al. 2016; Pichler and Ziebarth 2017; Stearns and White 2018), most studies use relatively small samples of workers in specific firms or industries and focus on interventions that increase workers' autonomy in navigating their typical day-to-day workloads (e.g., shortened work hours, work-from-home options, and sick leave days). Further, little is known about the potentially distinct impacts of workplace flexibility during *critical* periods in workers' lives, such as shortly after the birth of a child.

[12] Related, Johnsen, Ku, and Salvanes (forthcoming) use data from Norway to demonstrate that a father's labor market trajectory is influenced by the share of his coworkers who take paternity leave through a "competition effect"—fathers who have a higher share of coworkers taking leave have higher future earnings than their counterparts who have a lower share of leave-taking coworkers.

[13] For example, the "Lost Mothers" special series by the National Public Radio (NPR) largely focuses on the role of the medical system in contributing to rising maternal mortality in the United States. See: https://www.npr.org/series/543928389/lost-mothers.

postpartum environment *at home*, where women spend the majority of their time in the weeks following childbirth. Consistent with the idea that the home environment could be important for maternal health, a growing literature shows that *maternity* leave benefits are associated with improvements in mothers' health outcomes (Hyde et al. 1995; Staehelin, Bertea, and Stutz 2007; Baker and Milligan 2008c; Chatterji and Markowitz 2012; Aitken et al. 2015; Avendano et al. 2015; Beuchert, Humlum, and Vejlin 2016; Bütikofer, Riise, and Skira 2021; Hewitt, Strazdins, and Martin 2017; Heymann et al. 2017; Jou et al. 2018; Guertzgen and Hank 2018; Bullinger 2019).[14] This paper emphasizes the importance of a particular aspect of a new mother's home environment: the presence of the father.

I. Institutional Setting and Theoretical Predictions

Sweden implemented its gender-neutral paid parental leave policy in 1974, replacing the previous maternity leave system that only covered mothers.[15] The program is largely funded through employer social security contributions. Since the early 2000s, the program has featured a per child benefit of 13 months of wage-replaced leave, as well as an additional three months of leave with a flat-rate benefit.[16] Parental leave benefits do not need to all be used in one spell; they can be claimed at any point until the child turns eight or, more recently, 12 years old.[17] Moreover, the benefits can be claimed on a part-time basis.[18]

Parental leave is job protected in Sweden, with different rules applying during the first 18 months post-childbirth and beyond. During the first period, parents are entitled to full-time leave with job protection. Then, until the child turns 8 (or 12) years old, parents are legally able to reduce their working hours by as much as 25 percent while still working at the same job.[19]

[14] Beuchert, Humlum, and Vejlin (2016) study a reform in Denmark that increased leave duration for both parents. However, given that they find that mothers' leave duration responds much more strongly to the reform than fathers' leave duration, the authors attribute estimated maternal health benefits to the effects of extended maternity leave.

[15] Sweden's parental leave program is not tied to marital status. Thus, it confers benefits to the (biological or adoptive) parents of a child regardless of whether they are married or not. In practice, a substantial share of parents are unmarried but cohabiting at childbirth (Persson 2020), and, as we discuss further below, we control for marital status in our empirical models.

[16] During the time period covered in our analysis, the replacement rate was approximately 78 percent of prior gross earnings, up to a ceiling. The flat-rate benefit has increased over time: from 180 SEK per day in the mid-2000s to 250 SEK (approximately $27) per day in 2016. To be eligible for the wage-replaced benefits, individuals must have had at least 240 days of employment paid at or above the flat rate (e.g., 250 SEK per day in 2016) before the expected date of childbirth. Individuals who do not meet this employment requirement receive the lower flat-rate benefit only (Duvander, Haas, and Hwang 2017).

[17] Specifically, for children born before January 1, 2014, parental leave benefits can be claimed until the child turns eight or finishes the first year of school; for children born thereafter, benefits can be claimed until the child turns 12 years old.

[18] In particular, a parent can file for 100 percent leave (corresponding to 8 hours), 87.5 percent leave (corresponding to 7 hours), and so on, down to the smallest claim amount of 12.5 percent leave (1 hour).

[19] In order to help employers plan for long employee absences, an employer may request that their employees notify them in advance of planned parental leave spells. For example, as we discuss below, the median mother takes around 14 months of parental leave following childbirth. This does not preclude employers from allowing employees to take leave on short notice, and, in practice, unplanned leave spells of a few days or less typically fall into this category.

Additionally, although leave in the original system was completely transferrable between parents, the vast majority of the leave days was taken by mothers.[20] In an effort to promote a more gender-equitable division of parental leave, the Swedish government has implemented three reforms (in 1995, 2002, and 2016) that each earmarked one month of wage-replaced leave to each parent. In other words, if a parent does not use their earmarked leave, the family loses that amount of leave. Since virtually all mothers take more than three months of leave throughout this time period, these reforms are in actuality only binding for fathers, and therefore colloquially referred to as the "Daddy Month" reforms.

Restrictions on Simultaneous Leave Use.—While both parents have access to paid leave in Sweden, there are important restrictions on the *simultaneous* use of parental leave. Specifically, until 2012, fathers were only entitled to ten "baseline days" of wage-replaced leave that could be used while mothers claim full-time leave, and they could only use them during the first 60 days after childbirth.[21] Beyond these ten days, parents could only be on leave simultaneously part-time if they are also each working part-time, as long as the total amount of leave claimed by the two parents did not exceed the equivalent of a full-time job. In practice, however, since nearly all mothers were taking full-time leave in the months following childbirth, a father could only claim paid leave if the mother did not claim her benefit on that day (i.e., she took unpaid leave for the day).

Online Appendix Figure A1 presents a stylized representation of how the median Swedish family allocated leave between parents using data on parents of firstborn singleton children born duringn the 2008–2011 period. The figure shows that other than a maximum of ten baseline leave days that could be taken by fathers shortly after childbirth, the median mother was at home alone on full-time leave for about 14 months. After she returned to work, the median father took two months of leave. Children then typically entered public daycare, and the parents could use any remaining days of leave on a sporadic basis until the child's eighth birthday. As children's summer school breaks are usually longer than parental vacation time off, in practice these days are often used to cover the childcare gap during the summer.

This figure highlights that most policy efforts surrounding encouraging fathers to take leave are focused on *sequential* (rather than simultaneous) and *lumpy* (rather than intermittent) leave. Indeed, as shown in the picture, the median Swedish father was taking the full two "Daddy Months" that were available during the 2008–2011 time period, but he was doing so in one stretch after the mother returned to work. Yet, while policies that incentivize fathers to stay home on their own for a consolidated stretch of time may be important for father–child bonding and promoting paternal participation in household work (despite mixed empirical evidence on these outcomes), they also preclude the father from having flexibility to be home during the vulnerable immediate postpartum period.

[20] Duvander and Johansson (2012) report that men used 0.5 percent of all parental leave days at the time of the program's inception in 1974, and this number rose only slightly over the next two decades.

[21] These ten days of baseline paternity leave do not count toward the total amount of wage-replaced parental leave that the parents divide between them.

"Double Days" Reform.—On January 1, 2012, Sweden implemented a "Double Days" reform, which changed the parental leave system such that parents were now allowed to take full-time, wage-replaced leave *at the same time* for up to 30 additional days (beyond the baseline days) during the child's first year of life.[22] Importantly, parents are *not* required to notify their employers in advance of taking this leave, especially if the second leave-taker—who is, in virtually all cases, the father or non-birthing co-parent—is doing so because the primary caregiver of the child is sick.[23] Further, the reform left all other policy details—including total leave duration, the wage replacement rate, and the amount of earmarked leave—completely unchanged. Thus, the "Double Days" reform essentially provided families with more flexibility in choosing how to allocate the timing of their leave; fathers could now take full-time paid leave on an as-needed basis during the postpartum period when the mothers were also at home on paid leave.

The fact that the total duration of leave allotted to parents remained unchanged implies that families incur a cost of the father taking a "Double Day" while the mother is on leave—the family must forego the option to take a day of leave in the future. Therefore, while the reform allowed parents to use up to 30 days of full-time leave simultaneously, we should not expect all households to use up all of their "Double Days," nor should we expect that they use them in a single spell. This is made clear in online Appendix Figure A2. The figure plots the distribution of the length of all joint spells of leave taken by parents of firstborn children born January–March 2012 in the first year after childbirth, and demonstrates that a large share of these spells are only one or a few days long.[24]

Since all parents of children under age one become eligible for "Double Days" starting on January 1, 2012, parents of children born in 2011 are, in principle, able to use "Double Days," but only as their children age (i.e., they are *not* eligible immediately at the time of childbirth). However, if maternal health complications are most common in the immediate postpartum period, then the value of the father being able to stay home in that initial period is potentially higher than his ability to do so at a later point during the child's first year of life. Figure 1 plots trends in the total number of health care encounters and prescription drug claims for various physical and mental health conditions by month following childbirth averaged across the 2008–2011 birth cohorts in our data.[25] Out of the nine measures of health issues displayed in the figure, all but one exhibit significantly higher prevalence in the first

[22] The Swedish parliament voted on the reform on October 12, 2011; that is, less than three months before it went into effect (Riksdag 2011). Thus, there was minimal scope for any "anticipation effects," especially in terms of the decision of when to have a child.

[23] See paragraph 13 of the Swedish law here: https://www.do.se/diskriminering/lagar-om-diskriminering/foraldraledighetslagen.

[24] Note that the range of joint spell lengths includes cases that exceed 30 days. This happens because we count as a day of joint leave any day in which both parents claim either part- or full-time leave, paid or unpaid.

[25] For inpatient and outpatient visits and antibiotic drug claims, we aggregate across all encounters/claims that occur in each 30-day period post-childbirth (i.e., if a mother has multiple visits, then we count each of them). For mental health prescription drugs, we aggregate across initial prescription drug claims post-childbirth only, since once a mother receives a prescription for a mental health medication, she is likely to continue to take it in the subsequent months to treat the same underlying condition.

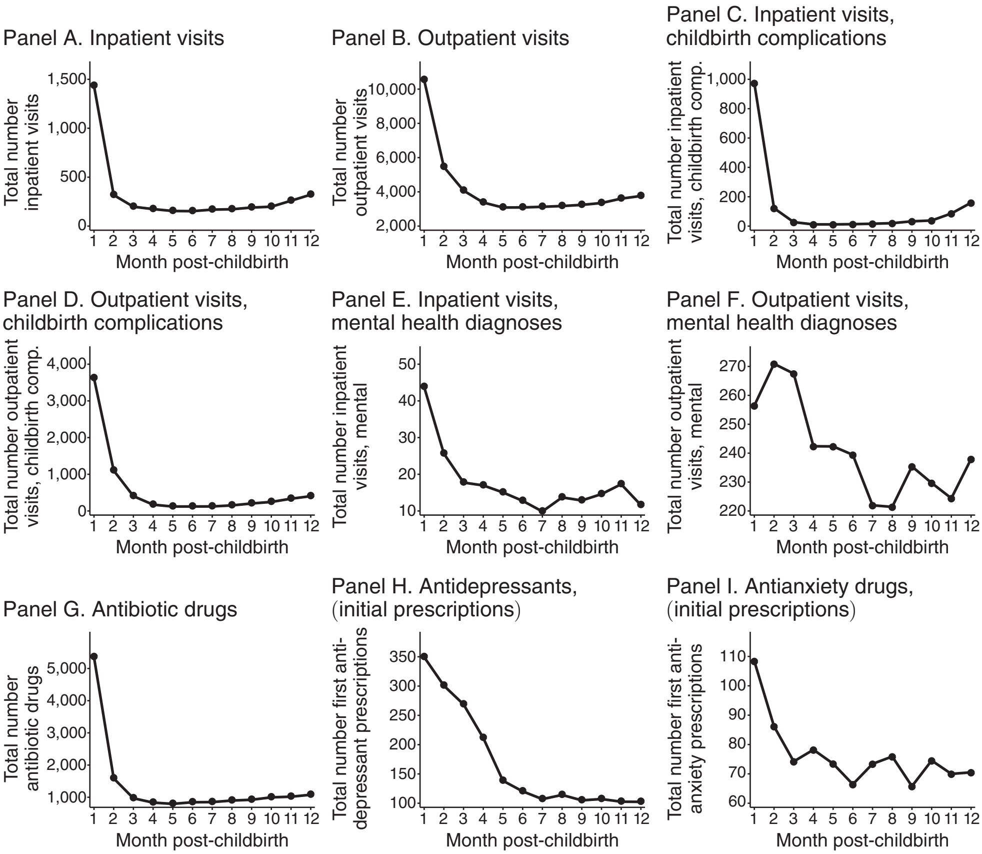

Figure 1. Frequency of Maternal Health Issues by Month Post-childbirth, 2008–2011 Births

Notes: The sample includes all firstborn singleton children born in 2008-2011 period with information on exact date of birth (see footnote 29 for details on how we obtain exact dates of birth). Panels A–G display the total number of health care encounters or prescription drug claims (listed in the subtitle) in each 30-day period following childbirth, averaged across the four cohorts of births. Panels H and I display the total number of initial prescription drug claims (i.e., the first prescription for a given mother post-childbirth) in each 30-day period following childbirth, averaged across the four cohorts of births. See online Appendix D for more details on the exact ICD and ATC codes for outcomes.

month after childbirth than in any of the subsequent months.[26] Therefore, as we explain in more detail in Section III, our empirical strategy focuses on identifying the effects of eligibility for "Double Days" *during the first month post-childbirth.*

Other Benefits.—In the pre-reform period, when fathers were restricted to only ten baseline days during which they could take full-time paid parental leave at the same time as mothers, fathers could, in principle, rely on other benefits to stay home if necessary. While Sweden does not provide any family leave benefits to care for adult family members (i.e., postpartum mothers), it is possible that fathers relied on

[26] The only exception is outpatient visits with mental health diagnoses, for which prevalence is somewhat higher in the second and third months postpartum.

own sick leave benefits for these purposes. In addition, if a mother claims her sick leave benefit instead of her parental leave benefit on a given day, then the father can claim a full-time parental leave benefit on that same day. However, sick leave benefits are reimbursed at a lower rate than parental leave benefits for most parents, making this a potentially unappealing option. Nevertheless, if parents were using sick leave for these purposes before the "Double Days" reform, we would expect there to be a decline in sick leave use among both mothers and fathers in the post-reform period.

As sick leave data are only available at an annual level, we are unable to use our main empirical approach of comparing families with children born January–March 2012 to those born October–December 2011 (and relative to the difference between families of children born in these months in prior years).[27] Instead, we compare the number of sick leave days in the year of childbirth used by parents of firstborn, singleton children born January–March 2011 and January–March 2012 in online Appendix Table A1. We do not detect any statistically significant differences either in the average number of sick leave days or in the share of parents with any sick leave across the two groups, suggesting that substitution from sick leave toward parental leave is not affecting the interpretation of our main estimates.[28]

Unfortunately, we do not have data on other benefits, such as vacation days. However, in Sweden, vacation benefits are not very temporally flexible, as vacation time has to be scheduled with the employer in advance (moreover, employees are typically required to take at least a portion during the summer months). Thus, vacation benefits are far less flexible than sick leave benefits, which we do observe. Nonetheless, if anything, substitution from other time off to paid parental leave among fathers would imply that our effects of fathers' workplace flexibility on maternal health are attenuated.

Theoretical Predictions about the Impacts of the "Double Days" Reform.—To understand household demand for father presence at home as well as the potential impacts of fathers' access to increased temporal workplace flexibility on maternal well-being, online Appendix B presents a theoretical analysis of the flexibility reform. Based on four parsimonious assumptions about the benefits and costs of parental leave, our dynamic model describes how parents divide a household's allocation of parental leave days, taking into account the evolution of the labor market costs and household benefits of the presence of each parent. We first derive parents' optimal division of leave when they are *not* allowed to take leave simultaneously. This characterization is highly consistent with actual parental leave use in Sweden in the pre-reform period, which underscores the model's applicability to our setting. We then introduce a reform that relaxes the restriction on simultaneous leave.

[27] Specifically, the problem is that for parents of children born between October and December, we can only observe the total number of sick leave taken in the same calendar year, and thus cannot distinguish between sick leave days taken before and after the birth.

[28] If anything, in supplementary analyses we also find that parents who are eligible for the "Double Days" in the first postpartum month use slightly *more* sick leave days in the year following childbirth. As using a "Double Day" in the immediate postpartum period reduces the number of future parental leave days available for the family, this result may potentially reflect a tendency to "make up for" the future reduction in parental leave days by instead claiming sick leave benefits.

Our analysis of optimal household behavior in this framework emphasizes that in a setting where households have the flexibility to decide when to take simultaneous leave, the *timing* of the take-up of a joint day of parental leave is not random. Instead, households optimally respond to the need for maternal support by removing the father from the labor force on precisely the days when the household has private information that the benefit of doing so is the highest. Our model thus predicts large maternal health benefits associated with a relatively low number of leave days taken by the father.

II. Data

Our empirical analysis uses multiple Swedish administrative datasets: birth records data as well as inpatient, outpatient, and drug claims data from the National Board of Health and Welfare (Socialstyrelsen 2019), population register data from Statistics Sweden containing demographic and labor market information on the parents (Statistics Sweden n.d.), and data on parental leave claims from the Swedish Social Insurance Agency (Försäkringskassan n.d.).

Births Data.—We have data on all Swedish births from 2000 to 2016, with unique parental and child identifiers and with detailed information on pregnancy and delivery characteristics and birth outcomes, including child gender, birth order, birth type (singleton versus multiple birth), gestational age in days, expected due date, birth weight in grams, the Apgar score, an indicator for small-for-gestational-age (SGA), and indicators for cesarean section (C-section) deliveries, inductions of labor, and various pregnancy risk factors and labor/delivery complications. We use these data to identify firstborn singleton live births during our analysis time frame and to calculate the children's exact dates of birth using information on gestational age and expected due date.[29] We focus on firstborn singleton children because leave in Sweden is allocated on a per child basis, which means that parents of multiple children have more leave days available for their use. For example, for a second-born child, the father could use a day of leave allocated to the firstborn (older) child in order to stay at home with the mother in the immediate postpartum period. Thus, the "Double Days" reform represents a bigger change in the availability of flexible simultaneous leave for parents of firstborns than for parents of higher-order children.[30]

Demographic Information and Parental Leave Claims.—We use administrative data from Statistics Sweden to obtain information about each mother's and father's age, educational attainment, marital status, and income in the year before the first child's birth. To measure take-up of parental leave, we add spell-level data from the Swedish Social Insurance Agency. For each child, we observe the universe of

[29] To measure the date of birth, we subtract 280 days (40 weeks) from the expected due date to obtain the conception date, and then add the gestational age in days.

[30] Consistent with this policy feature, we find that our results on fathers' leave use and maternal health are stronger for parents of firstborn than parents of higher-order children.

parental leave spells taken from 1993 until 2016. For each spell, the data contain the exact start and end dates, as well as information about the type of compensation (wage-replaced or flat-rate day), as described in Section I. We merge the two datasets to the birth records data using parental identifiers.[31]

Our two main leave outcomes are an indicator for any post-baseline leave taken by fathers during the first 30 days post-childbirth, and the total number of post-baseline leave days taken by fathers during this period.[32]

Maternal Health Outcomes.—We merge information from inpatient care, specialist outpatient care, and prescription drug records using maternal identifiers. We have access to inpatient records from 1995 to 2016, specialist outpatient records from 2001 to 2016, and prescription drug records from 2005 to 2017. The inpatient records contain information on the universe of a patient's visits to the hospital that result in hospital admission, including cases where the individual is admitted and discharged on the same day. The outpatient data records all visits *excluding* primary care. In Sweden, primary care (e.g., regular postpartum check-ups and annual physical exams) is provided at municipal "care centers" (*Vårdcentraler*), which are mostly staffed with nurses. "Care centers" can provide referrals to more specialized outpatient care, which is what we observe in the outpatient records. The drug records contain the universe of an individual's prescription drug purchases made in pharmacies but do not include drugs administered in hospitals.

For each visit to an inpatient or specialized outpatient provider, the data contain information on the date of the visit, the associated International Classification of Diseases (ICD-10) diagnosis codes, and the length of stay (for inpatient data only). For each occasion when a prescription drug was obtained, the prescription data contain information about the drug name, active substance, average daily dose, and the drug's exact Anatomical Therapeutic Chemical (ATC) code.[33] The ATC classification allows us to link the drugs to the conditions they are most commonly used to treat.

We examine maternal health outcomes measured in the first 30 days post-childbirth. Using the inpatient and outpatient data, we define indicators for any inpatient or outpatient visit following the child's birth (excluding the birth itself), as well as indicators for any visits associated with the following three distinct diagnosis groups: (i) conditions related to pregnancy, childbirth, or the puerperium period, (ii) diagnoses for mental, behavioral, and neurodevelopmental disorders, and (iii) external causes and medical counseling. Categories (i) and (iii) are chosen based on the fact that the sets of diagnoses codes for these conditions—those with ICD-10 codes that begin with "O" and "Z," respectively—represent some of the most common diagnoses for maternal inpatient and outpatient visits in

[31] The underlying source of the data on parental leave claims changed in 2014, and there are many missing records in the data at the end of 2013. This is a key reason why we use births in the pre-reform period (2008–2011) as our placebo cohorts and avoid using post-reform cohorts in the analysis.

[32] For both measures, we count any day with any leave benefit claimed, regardless of whether it is wage-replaced or a flat rate, and regardless of whether it is full time or part time, as a day of leave.

[33] The ATC classification system is controlled by the World Health Organization Collaborating Centre for Drug Statistics Methodology (WHOCC) and was first published in 1976.

the first postpartum month (see online Appendix Tables A2 and A3, respectively).[34] Mental health-related diagnoses in category (ii) are less common, but nevertheless represent an important component of maternal postpartum health, which we also capture using prescription drug data.[35]

Specifically, in the prescription drug data, we create an indicator for any drug claim, as well as indicators for drug claims in the following four categories: antianxiety, antidepressant, antibiotic, and painkiller. As shown in online Appendix Table A4, antibiotics and painkillers are the two most commonly prescribed drugs in the first 30 days post-childbirth. We also study antianxiety and antidepressant medications to capture impacts on maternal mental health, as noted above. Online Appendix D lists the exact ICD and ATC codes for all of our outcomes.

Finally, to examine a particularly vulnerable subgroup of new mothers, we use information from the inpatient, outpatient, and prescription drug records to measure pre-childbirth medical histories. We classify mothers as having a medical history if they satisfy any of the following conditions: (i) any inpatient visit in the 24 months before childbirth, (ii) any specialist outpatient visit for mental health reasons in the 60 months before childbirth, or (iii) any antianxiety or antidepressant prescription drug in the 36 months before childbirth.[36]

Analysis Sample and Summary Statistics.—To analyze the effects of the 2012 "Double Days" reform, we first consider all 233,981 firstborn singleton children born in the 2008–2012 period and then limit the sample to the 222,638 observations for which we can calculate exact dates of birth.[37] Additionally, to zoom in on families with children born in a time window surrounding the reform, we constrain our sample to only include those with children born in October through December of 2011 and January through March of 2012, as well as those with children born in these same months in the three prior years (i.e., October–December of 2008, 2009, and 2010 and January–March of 2009, 2010, and 2011).

Table 1 reports sample means of selected parental background characteristics and maternal health outcomes measured in the first month post-childbirth. Column 1 includes all firstborn singleton children born in the period 2008–2012. Column 2 limits the sample to children with information on exact date of birth. Column 3 uses our primary analysis sample of families with children born during the period of October–December 2008–2011 and January–March 2009–2012, while column 4

[34] As noted in footnote 7, "medical counseling" refers to visits with codes that start with the letter *Z* in the ICD-10 system for "factors influencing health status and contact with health services." The external causes category includes visits for injuries, poisonings, accidents, and assaults.

[35] Note that inpatient and outpatient visits with a mental health diagnosis are generally associated with severe and/or chronic mental illness. Milder or more temporary cases of mental health issues may instead show up in our data in the form of prescription drug treatment. To that point, one does not need to have a formal mental health diagnosis in order to be prescribed antianxiety or antidepressant medications.

[36] We choose these time frames such that we capture women with a medical history in a time period sufficiently close to childbirth, and so that we retain enough sample size to have sufficient statistical power. We choose to focus on outpatient visits and prescription drugs related to mental health since most women have at least some kind of (non-mental health-related) specialist outpatient visit or prescription drug in the months before childbirth. Our results are not sensitive to small alterations to the time windows used to measure medical histories.

[37] We are unable to calculate exact dates of birth for the approximately 5 percent of observations that are missing data on the expected due date.

Table 1—Means of Background Characteristics and Maternal Health Outcomes in First 30 Days Post-childbirth

	All (1)	Exact DOB (2)	Analysis sample (3)	Med. history (4)
Mother low education	0.447	0.448	0.447	0.533
Father low education	0.569	0.569	0.570	0.623
Mother age	28.835	28.789	28.848	28.629
Father age	31.900	31.860	31.914	31.614
Mother income (1,000s)	207.841	207.002	205.600	179.234
Father income (1,000s)	275.262	274.219	273.321	258.545
Mother foreign-born	0.211	0.213	0.215	0.181
Father foreign-born	0.216	0.218	0.218	0.198
Any inpatient	0.030	0.031	0.030	0.038
Any specialist outpatient	0.160	0.169	0.163	0.204
Any visit for childbirth comp.	0.076	0.080	0.077	0.095
Any visit for mental health	0.005	0.005	0.005	0.014
Any visit for external causes/medical counseling	0.001	0.001	0.001	0.002
Any antianxiety/antidepressant drug	0.012	0.012	0.012	0.037
Any painkiller drugs	0.057	0.060	0.056	0.078
Any antibiotic drugs	0.098	0.103	0.098	0.121
Observations	233,836	222,497	88,450	25,439

Notes: This table reports the means of selected parental background characteristics and maternal health outcomes measured in the first 30 days post-childbirth. Column 1 includes all firstborn singleton children born in the 2008–2012 period. Column 2 limits the sample to children with information on exact date of birth (see footnote 29 for details on how we obtain exact dates of birth). Column 3 uses our primary analysis sample, which consists of firstborn singleton children with information on exact dates of birth born in the months of October–December of the 2008–2011 period and January–March of the 2009–2012 period. Column 4 limits the analysis sample to children of mothers who have a pre-birth medical history, which we define as either having any inpatient visit in the 24 months before childbirth or any specialist outpatient visit for mental health reasons in the 60 months before childbirth, or any antianxiety or antidepressant prescription drug in the 36 months before childbirth. See text for more details. Appendix C provides more details on the exact ICD and ATC codes for maternal health outcomes.

further limits the analysis sample to families with mothers who have a pre-childbirth medical history. About 45 percent of mothers and 57 percent of fathers have a low education level (defined as high school or less), respectively, and the average mother (father) is 29 (32) years old in the year before birth. Maternal and paternal average annual employment incomes in the year before birth are 208,000 SEK (US$29,060) and 276,000 SEK (US$38,498) in 2010 kronas, respectively.[38] About 21 (22) percent of the mothers (fathers) in our data are born outside of Sweden. There are no large differences in these characteristics across the first three columns, while families in which mothers have a pre-birth medical history (column 4) have lower average education levels and incomes.

The table further shows that about 3 percent of new mothers have at least one inpatient visit in the first month postpartum, while 16 percent have at least one specialist outpatient visit during the same time frame. Eight percent of mothers have an inpatient or outpatient visit for childbirth-related complications, 0.5 percent have a visit with a mental health diagnosis, while 0.1 percent have a visit for external causes or medical counseling. Consistent with the idea that one does not need to have a formal mental health diagnosis in order to be prescribed a mental health-related medication

[38] We obtain information about inflation from the Organisation for Economic Co-operation and Development (2010).

(see footnote 35), we observe that 1 percent of new mothers have an antianxiety or antidepressant drug prescription, which is double the share of women with a diagnosis. Six and 10 percent of new mothers have painkiller and antibiotic prescriptions, respectively, during the first month after giving birth. Not surprisingly, the means of the maternal health outcomes are higher among mothers with pre-birth medical histories in column 4.

III. Empirical Methods

Our goal is to examine the causal link between fathers' access to workplace flexibility and maternal health in the immediate postpartum period. We study this question by exploiting the natural experiment stemming from the "Double Days" reform on January 1, 2012. Specifically, we calculate the share of days between the child's first and thirtieth day of life that the parents are eligible for the "Double Days." Thus, a family with a child born on January 1, 2012 or later gets a value of 1 for this share. A family with a child born on December 31, 2011 gets a value of $\frac{29}{30} = 0.96$, while a family with a child born on December 1, 2011 gets a value of $\frac{1}{30} = 0.03$. Families with children born on November 30, 2011 or earlier get a value of 0.

Intuitively, our quasi-experiment compares the outcomes of parents of first-born singleton children born in the periods of January–March 2012 and October–December 2011 (the "reform period"), relative to the difference in outcomes in the same months in the previous three years (January–March 2011, 2010, and 2009 versus October–December 2010, 2009, and 2008; the "nonreform periods"). This is effectively a type of Regression Discontinuity Difference-in-Differences (RD-DD) model, except we alter it in two ways: (1) we model treatment using the (nonlinear but continuous) "share days eligible" variable rather than measuring a discontinuous jump between December 31, 2011 and January 1, 2012 births, and (2) we estimate a "doughnut" RD-DD in which we drop all December births.

Specifically, the "share days eligible" model takes the form

$$y_{idp} = \alpha_0 + \alpha_1 \mathit{ShareDaysEligible}_{idp} + \alpha_2 \mathbf{1}\{d \geq c\} + \\ + f(d-c) + \mathbf{1}\{d \geq c\} \times f(d-c) + \mathbf{x}_i^{\prime}\kappa + \theta_p + \varepsilon_{idp} \tag{1}$$

for each family of child i born on day of the year d in time period p, where we refer to each October through March as a separate period (e.g., October 2008–March 2009, October 2009–March 2010, etc.) y_{idp} is an outcome of interest such as an indicator for any post-baseline leave used in the month after childbirth or an indicator for a maternal inpatient or outpatient visit in the first postpartum month. c denotes January 1, the reform threshold and the first day of every calendar year. The dummy variable $\mathbf{1}\{d \geq c\}$ is set to 1 for children born January–March in any year. $f(d-c)$ is a flexible function of the day of birth centered around January 1 (the "running variable"), for which we use a quadratic polynomial in our main specifications and allow for it to have a different shape on opposite sides of the threshold in all periods. We also include fixed effects for every time period, θ_p.[39]

The vector $\mathbf{x}_i$ includes a dummy for child gender, as well as the following family control variables, measured in the year before birth: maternal and paternal earnings (in 1000s of real SEK in year 2010 terms), 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, and indicators for each parent being foreign-born. ε_{idp} is an unobserved error term. The coefficient of interest is α_1, which represents the effect of moving from 0 to 100 percent of days eligible for the "Double Days" in the first postpartum month.

For the "doughnut" RD-DD model, we exclude all families with children born in December of any year and estimate

$$y_{idp} = \beta_0 + \beta_1 R_i \times \mathbf{1}\{d \geq c\} + \beta_2 \mathbf{1}\{d \geq c\} + \\ + f(d-c) + \mathbf{1}\{d \geq c\} \times f(d-c) + \mathbf{x}_i'\gamma + \rho_p + \epsilon_{idp} \tag{2}$$

for each family of child i born on day of the year d in time period p. Here, R_i is an indicator set to 1 for children who are in the reform period (i.e., the October 2011–March 2012 births, excluding December 2011 births), and 0 otherwise. The coefficient of interest is on the interaction between the reform period dummy, R_i and the dummy for January–March births, $\mathbf{1}\{d \geq c\}$, and is denoted by β_1. It represents an estimate of the difference in parental outcomes between January–March and October–November births in the reform period, relative to the analogous difference in outcomes in the nonreform periods. All other variables are the same as in model (1).

Due to the large number of outcomes that we study, we use the Romano-Wolf correction to account for multiple hypothesis testing and report the Romano-Wolf p−value associated with our key coefficient for each outcome and in each model.[40]

Identifying Assumption.—We purposely do not use a standard regression discontinuity (RD) design in our analysis since our treatment variable—eligibility for the "Double Days" in the first postpartum month—does *not* change discontinuously at the reform date. Instead, it only jumps from 0 to 1 between births on November 30, 2011 and January 1, 2012, and varies linearly between 0 and 1 for all births in December 2011. However, similar to an RD model, we rely on an assumption that all other variables possibly related to our outcomes of interest are smooth and continuous functions of the day of birth (Imbens and Lemieux 2008; Lee and Lemieux 2010) and are not systematically correlated with the "share days eligible" variable.

[39] Note that the main effect of being in the reform sample is absorbed with the inclusion of period fixed effects.

[40] The Romano-Wolf correction controls for the familywise error rate, which is the probability of rejecting at least one true null hypothesis among a family of hypotheses under a test. See Romano and Wolf (2005a,b); Romano, Shaikh, and Wolf (2010); Romano and Wolf (2016); and Clarke, Romano, and Wolf (2020).

As documented in multiple prior studies, there are important differences in the number and composition of births across months of the year due to nonrandom fertility patterns and environmental or health factors such as the timing of the influenza season (Buckles and Hungerman 2008a; Currie and Schwandt 2013a). Additionally, January 1 is the school starting age cutoff date in Sweden, implying that parents who wish to have their children be the oldest or youngest in the class may strategically sort on different sides of the cutoff. Further, and relevant to our study of leave use, there are differences in the number of holidays when parents can stay home from work across these months. To net out all the seasonal differences in births unrelated to the "Double Days" reform, we use as a control group births in the same months in three years before the reform, as described above.

To further probe the plausibility of the identifying assumption, we first perform the RD-DD version of the McCrary (2008) test. Specifically, we collapse our data into week-of-birth bins, and estimate a version of model (2) using the collapsed data with the number of firstborn singleton births as the dependent variable and a 26-week (6 month) bandwidth. The running variable is the week of birth normalized relative to the first week of January in every period, and we report coefficients from RD-DD models that use first through sixth order polynomials in the running variable. Online Appendix Table B5 presents the results, and we also report the Akaike Information Criterion (AIC) in the bottom row of each table. The results are very stable across the different specifications, and, importantly, we detect no significant discontinuities in the number of births at the time of the reform. Online Appendix Figure A3 presents analogous graphical evidence: subfigure A plots the total number of births by birth week in the reform sample, while subfigure B plots the average of the total number of births by birth week across all years in the nonreform sample. The fitted lines are predicted from fourth order polynomial models; we follow Lee and Lemieux (2010) by selecting the model with the smallest AIC value.

We next check whether any predetermined characteristics of families are correlated with eligibility for the "Double Days." Online Appendix Tables A6 and A7 report results from estimating versions of models (1) and (2), omitting the controls in vector $\mathbf{x}_i$ and instead using parental characteristics, children's birth outcomes, and maternal pre-birth medical history indicators as the dependent variables. Out of the 40 coefficients reported across the two tables, only four are statistically significant at the 5 percent level. None of the estimates is statistically significant once we account for multiple hypothesis testing. Moreover, in both tables, joint F-tests from seemingly unrelated regression models yield insignificant results. These results are reassuring and suggest that there are no systematic differences between families who are and are not eligible for "Double Days" in the first postpartum month, allowing for a causal interpretation of our main models.

IV. Results

Effects of the "Double Days" Reform on Paternity Leave Use.—We begin by providing evidence that the "Double Days" reform affects paternity leave use in the month immediately following childbirth. Figure 2 plots the share of fathers who use any post-baseline leave in the first 30 days after childbirth by the child's birth

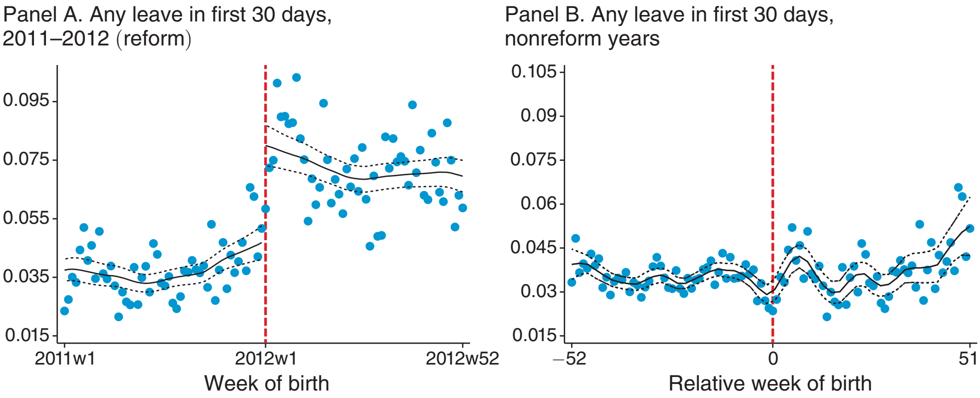

Figure 2. Fathers' Post-baseline Leave Use in the First 30 Days Post-childbirth by Week of Childbirth

Notes: The sample includes all firstborn singleton children born in the 2008–2012 period 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. Panel A uses the reform period (2011–2012 births), while panel B uses the nonreform periods (2008–2009, 2009–2010, and 2010–2011 births), where each point reflects the weekly mean across the three nonreform periods. The first week of January is denoted with vertical red dashed lines. The fitted curves and 95 percent confidence intervals are predicted from local linear polynomial models on each side of the cutoff.

week, separately for births in the reform period (2011–2012), and for births in the nonreform periods (2010–2011, 2009–2010, and 2008–2009).[41] We also plot the predictions and 95 percent confidence intervals from estimating local linear polynomial models on each side of the first week of January in each period.

There are three key takeaways from these graphs. First, there is a clear jump in fathers' leave use in the first month post-childbirth at the time of the reform (January 2012), but such a jump does not exist in the nonreform periods. Second, fathers' leave take-up exhibits some seasonal variation, which supports our use of families with children born in nonreform periods but in the same calendar months as those in the reform period as a control group. Third, fathers' leave use appears to begin to increase starting with births in the last four weeks of 2011, which is consistent with parents of children born shortly before the reform becoming eligible for "Double Days" on the reform date. Since we are only measuring leave use in the first month after childbirth in these graphs, the lack of change in leave use for fathers of children born in earlier weeks of 2011 is consistent with them not being eligible in the immediate postpartum period.

Table 2 presents results from estimating equations (1) and (2) using our two main paternity leave variables as outcomes: any post-baseline leave taken in the first 30 days post-childbirth, and the total number of post-baseline leave days taken in the first 30 days. We show estimates for the whole sample (panel A) and for the subsample of families with mothers who have a pre-birth medical history (panel B). For each outcome and sample, we report the α_1 coefficient from model (1), the

[41] In Figure 2, the weekly means of outcomes reflect averages across the three nonreform periods. We present means separately for each nonreform period in online Appendix Figure A4.

Table 2—Effects of "Double Days" Reform on Paternity Leave Take-Up in First 30 Days Post-childbirth

	Any post-baseline leave (1)	Total number of days (2)
A. All first births		
Share days eligible in days 1–30 post-birth	0.0394	0.318
	[0.00380]	[0.0411]
Romano-Wolf *p*	{0.010}	{0.010}
Dep. var mean	0.0432	0.376
N	82,558	82,558
RD-DD drop December births		
Reform × birth Jan–Mar	0.0433	0.351
	[0.00390]	[0.0425]
Romano-Wolf *p*	{0.010}	{0.010}
Dep. var mean	0.0447	0.390
N	69,953	69,953
B. Mothers with medical history		
Share days eligible in days 1-30 post-birth	0.0539	0.425
	[0.00768]	[0.0873]
Romano-Wolf *p*	{0.010}	{0.010}
Dep. var mean	0.0561	0.523
N	23,935	23,935
RD-DD drop December births		
Reform × birth Jan–Mar	0.0592	0.475
	[0.00797]	[0.0910]
Romano-Wolf *p*	{0.010}	{0.010}
Dep. var mean	0.0587	0.550
N	20,230	20,230

Notes: Each coefficient is from a separate regression. The outcomes are: (1) indicator for any post-baseline paternity leave in the first 30 days post-childbirth and (2) total number of post-baseline paternity leave days in the first 30 days post-childbirth. The reported coefficients are from either the "Share Days Eligible" model using the full analysis sample or the "doughnut" RD-DD model dropping all December births. See notes under Table 1 for more details about the analysis sample. All regressions include controls for child gender and for the following family characteristics measured in the year before birth: maternal and paternal earnings (in 1,000s of SEK), 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. We also include birth year fixed effects. Robust standard errors are in brackets, while *p*-values from implementing the Romano-Wolf multiple hypothesis correction are in curvy brackets. Panel A reports results for the whole analysis sample. Panel B limits the sample to mothers with a pre-birth medical history, which we define as either having any inpatient visit in the 24 months before childbirth or any specialist outpatient visit for mental health reasons in the 60 months before childbirth, or any antianxiety or antidepressant prescription drug in the 36 months before childbirth.

β_1 coefficient from model (2), the corresponding robust standard errors, and the Romano-Wolf *p*-values that account for multiple hypothesis testing.

In the overall sample, column 1 shows that moving from 0 to 100 percent eligibility for "Double Days" in the first postpartum month raises the likelihood that the father uses any post-baseline leave by 3.9 percentage points, which is a 92 percent effect at the sample mean. In column 2, we observe that the total number of post-baseline leave days used increases by 0.32 days. The coefficients from the

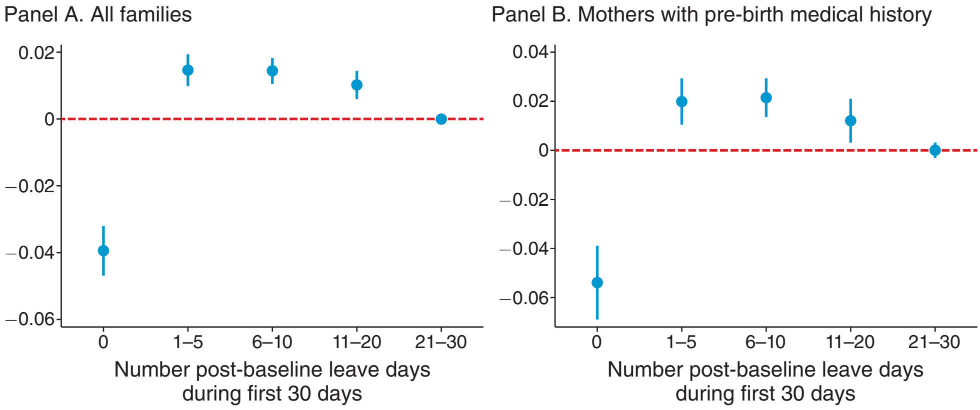

Figure 3. Effect of 2012 "Double Days" Reform on the Distribution of Post-baseline Leave Days Taken by Fathers during First 30 Days Post-childbirth

Notes: The figures plot the key treatment coefficients and 95 percent confidence intervals from the "Share Days Eligible" model using separate regressions that each use as the outcome an indicator for the father taking the number of post-baseline leave days denoted in bins on the *x*-axis of each graph. Panel A uses our primary analysis sample, while panel B limits the analysis sample to families with mothers who have a pre-birth medical history. See notes with Tables 1 and 2 for more details about the analysis sample and specifications.

"doughnut" RD-DD model are similar in magnitude. We observe bigger impacts in both absolute and relative terms among fathers in families with mothers who have a medical history: a 5.4 percentage point increase in any leave use (96 percent at the sample mean) and a 0.43 day increase in the total number of post-baseline leave days used. These effects remain highly statistically significant after adjusting for multiple hypothesis testing.[42]

To explore the impacts of the reform on the distribution of post-baseline leave days taken by fathers in the first month post-childbirth, Figure 3 plots the α_1 coefficients from model (1) and the associated 95 percent confidence intervals from separate regression models that use as outcomes indicator variables for fathers taking different numbers of post-baseline leave days denoted in bins on the x-axis of each graph. We show results for the overall sample in panel A, and for families with mothers who have a medical history in panel B. Consistent with the estimates in Table 2, we observe significant extensive margin effects—in both samples, there are large reductions in the shares of fathers who take zero post-baseline leave days. However, we also see increases in the likelihoods of fathers taking 1 to 5 days, 6 to 10 days, and 11-20 days of leave, and no change in the likelihood of taking 21-30 days of leave. Thus, it appears that the fairly small effect magnitude on the total number of leave days taken reflects that some fathers shift from zero to one or a few days of leave, while other fathers—concentrated in families where mothers may be most prone to health problems—take a more extended period of time off.

[42] A Swedish government report on the evaluation of the Double Days reform notes that the response in parental leave take-up was larger among the types of families in which fathers would have been less likely to take any parental leave pre-reform (Fahlén and Bjurström 2018). We have explored differences in impacts on leave take-up by parental characteristics (e.g., heterogeneity with respect to maternal and paternal educational attainment), finding no statistically significant differences across groups (results available on request).

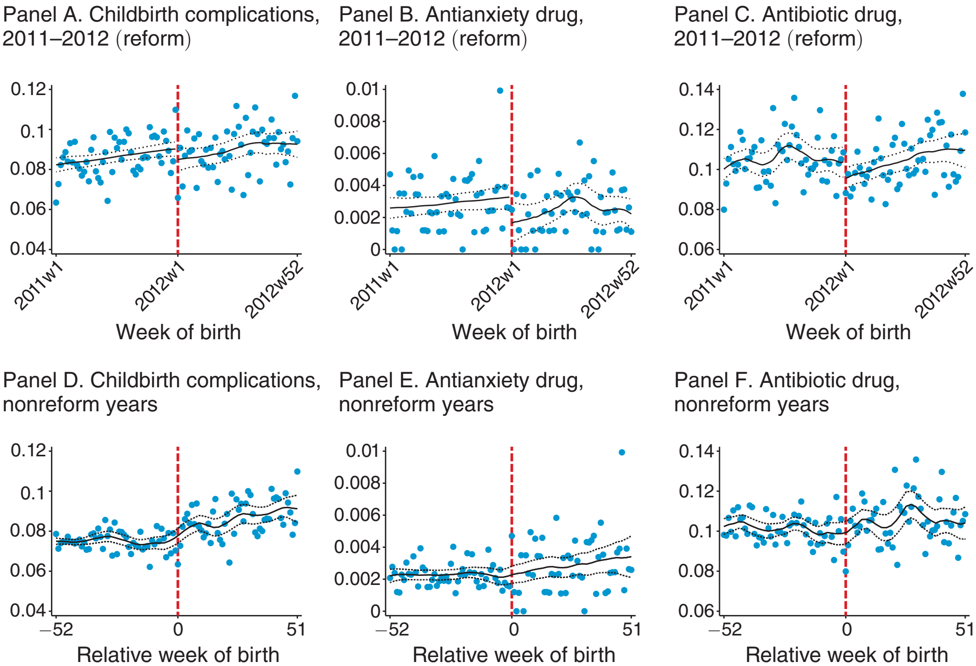

FIGURE 4. MATERNAL HEALTH OUTCOMES IN FIRST 30 DAYS POST-CHILDBIRTH BY WEEK OF CHILDBIRTH

Notes: The sample includes all firstborn singleton children born in the 2008–2012 period 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. Panels A–C use the reform period (2011–2012 births), while panels D–F use the nonreform periods (2008–2009, 2009–2010, and 2010–2011 births), where each point on each graph reflects the weekly mean across the three nonreform periods. The first week of January is denoted with vertical red dashed lines in every panel. The fitted curves and 95 percent confidence intervals are predicted from local linear polynomial models on each side of the cutoff. See online Appendix D for more details on the exact ICD and ATC codes for outcomes.

Importantly, as discussed in Section I and formalized in our theoretical model in online Appendix B, households may reap gains from a reform that grants flexibility in the use of simultaneous parental leave, even if fathers, ex post, end up shifting only a few extra days of leave to the immediate postpartum period. The availability of simultaneous leave allows families to keep the father in the household on precisely the days when his presence is particularly valuable for the family. Next, we examine the impacts of such leave on maternal postpartum health.

Effects of the "Double Days" Reform on Maternal Health.—Figure 4 plots raw means of three of our maternal health outcomes measured as indicators in the first 30 days post-childbirth—inpatient and outpatient visits for childbirth complications, antibiotic drug prescriptions, and antianxiety drug prescriptions—by birth week, separately for the reform period (2011–2012 births), and the nonreform periods (2010–2011, 2009–2010, and 2008–2009 births).[43] As in Figure 2, we plot the predictions

[43] Figure 4 plots weekly averages across the three nonreform periods. Online Appendix Figure B5 shows the avearges separately for each nonreform period.

TABLE 3—EFFECTS OF "DOUBLE DAYS" REFORM ON MATERNAL HEALTH OUTCOMES IN FIRST 30 DAYS POST-CHILDBIRTH IN INPATIENT AND OUTPATIENT DATA

	Any	Diagnosis Categories		
		Childbirth comp.	Mental	External/Counseling
A. All first births				
Share days eligible in days 1–30 post-birth	−0.0103	−0.00976	0.000336	−0.00135
	[0.00677]	[0.00484]	[0.00125]	[0.000586]
Romano-Wolf *p*	{0.267}	{0.178}	{0.792}	{0.079}
Dep. var mean	0.185	0.0799	0.00492	0.00125
N	82,558	82,558	82,558	82,558
RD-DD drop December births				
Reform × birth Jan–Mar	−0.0128	−0.0130	0.00109	−0.00120
	[0.00706]	[0.00504]	[0.00128]	[0.000592]
Romano-Wolf p	{0.198}	{0.050}	{0.455}	{0.139}
Dep. var mean	0.185	0.0801	0.00496	0.00119
N	69,953	69,953	69,953	69,953
B. Mothers with medical history				
Share days eligible in days 1-30 post-birth	−0.00400	−0.0197	0.000567	−0.00194
	[0.0132]	[0.00955]	[0.00388]	[0.00114]
Romano-Wolf *p*	{0.941}	{0.238}	{0.941}	{0.347}
Dep. var mean	0.229	0.0972	0.0143	0.00159
N	23,935	23,935	23,935	23,935
RD-DD drop December births				
Reform × birth Jan–Mar	−0.00567	−0.0208	0.00266	−0.00133
	[0.0139]	[0.00999]	[0.00400]	[0.00107]
Romano-Wolf p	{0.772}	{0.168}	{0.772}	{0.505}
Dep. var mean	0.228	0.0983	0.0146	0.00153
N	20,230	20,230	20,230	20,230

Notes: Each coefficient is from a separate regression. All of the outcomes are measured in the first 30 days post-childbirth. The outcomes are indicators for: (1) any inpatient or specialist outpatient visit, (2) any visit for childbirth complications, (3) any visit for mental health reasons, and (4) any visit for external causes or counseling. The reported coefficients are from either the "Share Days Eligible" model using the full analysis sample or the "doughnut" RD-DD model dropping all December births. See notes for 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. Panel A reports results for the whole analysis sample. Panel B limits the sample to mothers with a pre-birth medical history, which we define as either having any inpatient visit in the 24 months before childbirth or any specialist outpatient visit for mental health reasons in the 60 months before childbirth or any antianxiety or antidepressant prescription drug in the 36 months before childbirth. Online Appendix C provides more details on the exact ICD and ATC codes for maternal health outcomes.

and 95 percent confidence intervals from estimating local linear polynomial models on each side of the first week of January in each period. We observe suggestive evidence of a reduced incidence of each outcome at the time of the reform, and no evidence of any change in the nonreform periods.

We next proceed to analyze maternal health outcomes using our regression models. Tables 3 and 4 present estimates from models (1) and (2) using maternal health outcomes from inpatient/outpatient and prescription drug data, respectively. Again, we report the α_1 coefficient from model (1), the β_1 coefficient from model (2), robust standard errors, and the Romano-Wolf p-values that account for multiple hypothesis testing.

Table 3 shows that in the overall sample, moving from 0 to 100 percent eligibility for the "Double Days" in the first postpartum month leads to a 1.0 percentage

Table 4—Effects of "Double Days" Reform on Maternal Health Outcomes in First 30 Days Post-childbirth in Prescription Drug Data

	Any prescription drug	Any antianxiety drug	Any antidepressant drug	Any painkiller	Any antibiotic
A. All first births					
Share Days Eligible in days 1-30 Post-Birth	−0.00867	−0.00172	−0.000999	−0.00385	−0.0145
	[0.00725]	[0.000899]	[0.00160]	[0.00398]	[0.00519]
Romano-Wolf *p*	{0.475}	{0.188}	{0.515}	{0.515}	{0.030}
Dep. var mean	0.233	0.00240	0.00855	0.0579	0.101
N	82,558	82,558	82,558	82,558	82,558
RD-DD Drop December Births					
Reform × Birth Jan–Mar	−0.0124	−0.00147	−0.000783	−0.00346	−0.0186
	[0.00758]	[0.000931]	[0.00168]	[0.00416]	[0.00543]
Romano-Wolf *p*	{0.376}	{0.376}	{0.723}	{0.703}	{0.030}
Dep. var mean	0.233	0.00247	0.00875	0.0583	0.101
N	69,953	69,953	69,953	69,953	69,953
B. Mothers with medical history					
Share Days Eligible in days 1-30 Post-Birth	−0.00676	−0.00487	−0.00526	−0.00341	−0.0178
	[0.0141]	[0.00255]	[0.00515]	[0.00831]	[0.0103]
Romano-Wolf *p*	{0.851}	{0.257}	{0.584}	{0.851}	{0.257}
Dep. var mean	0.290	0.00618	0.0280	0.0804	0.125
N	23,935	23,935	23,935	23,935	23,935
RD-DD Drop December Births					
Reform × Birth Jan–Mar	−0.0120	−0.00401	−0.00471	−0.00183	−0.0235
	[0.0148]	[0.00263]	[0.00547]	[0.00874]	[0.0109]
Romano-Wolf *p*	{0.822}	{0.455}	{0.822}	{0.822}	{0.158}
Dep. var mean	0.293	0.00623	0.0287	0.0812	0.126
N	20,230	20,230	20,230	20,230	20,230

Notes: Each coefficient is from a separate regression. All of the outcomes are measured in the first 30 days post-childbirth. The outcomes are indicators for: any prescription drug, any antianxiety drug, any antidepressant drug, any painkiller drug, and any antibiotic drug. The reported coefficients are from either the "Share Days Eligible" model using the full analysis sample or the "doughnut" RD-DD model dropping all December births. See notes for 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. Panel A reports results for the whole analysis sample. Panel B limits the sample to mothers with a pre-birth medical history, which we define as either having any inpatient visit in the 24 months before childbirth or any specialist outpatient visit for mental health reasons in the 60 months before childbirth or any antianxiety or antidepressant prescription drug in the 36 months before childbirth. Online Appendix C provides more details on the exact ICD and ATC codes for maternal health outcomes.

point (12 percent) lower likelihood of an inpatient or specialist outpatient visit for childbirth-related complications. For mothers with pre-birth medical histories, the corresponding effect size is a 2.0 percentage point (20 percent) reduction in visits for childbirth-related complications. The coefficients from the "doughnut" RD-DD models are similar in magnitude. While all of these coefficients are statistically significant individually, only one—the coefficient from the "doughnut" RD-DD model in the overall sample—remains significant when we adjust for multiple hypothesis testing. We do not observe any impacts on inpatient and outpatient visits with mental health diagnoses.

We also see some suggestive evidence of a decline in visits for external causes and counseling: a 0.1 percentage point (108 percent) reduction in the overall sample, and a 0.2 percentage point (122 percent) reduction in the subsample of mothers with pre-birth medical history. We note, however, that only one of these coefficients remains marginally significant when we adjust for multiple hypothesis testing (p-value $=$ 0.08).

Table 4 shows that being fully eligible for the "Double Days" in the first month post-childbirth reduces the likelihood that the mother has an antibiotic prescription by 1.5 percentage points (14 percent) in the overall sample and by 1.8 percentage points (14 percent) in the subsample of those with pre-birth medical histories. The coefficients from both of our models in the overall sample remain statistically significant when we adjust for multiple hypothesis testing. We also find suggestive evidence of a reduction in antianxiety prescriptions by 0.2 percentage points (72 percent) in the overall sample and 0.5 percentage points (79 percent) in the subsample of mothers with pre-birth medical histories. While these coefficients are individually marginally significant at the 10 percent level, they are no longer significant after adjusting for multiple hypothesis testing. We do not observe any changes in painkiller or antidepressant prescriptions.

Timing of Effects.—We next explore the timing of the effects on paternity leave use and maternal percent health in more detail. Online Appendix Figure A6 plots the treatment coefficients scaled by the dependent variable means (i.e., such that the magnitudes can be interpreted as percent changes relative to sample means) and corresponding 95 percent confidence intervals from estimating model (1), using as outcomes indicators measured in different windows of time since childbirth, as denoted on the x-axis of each graph (first 30 days, days 31–90, days 91–180, and so on, through days 991–1080). We examine fathers' leave-taking in the first two years after childbirth and maternal health outcomes in the first three years post-birth.[44] Subfigure A demonstrates that most of the increase in using post-baseline leave use among fathers occurs in the first six months after childbirth, with a stronger relative impact in the first three months. Note that there is a decline in fathers' leave use in days 541-630 post-childbirth (i.e., when the child is around one and a half years old), consistent with the fact that fathers need to forego using leave in a later period in order to take advantage of the "Double Days" during the earlier postpartum months.

Subfigure B shows that the decline in maternal inpatient and outpatient visits for childbirth-related complications is most pronounced in months four through six postpartum, and persists through the end of the first postpartum year, but not beyond. In subfigure C, we find that the reduction in antianxiety prescriptions is large and statistically significant during the first three months post-childbirth. The coefficients for this outcome in later periods are, if anything, positive, although mostly insignificant. Subfigure D shows that the reduction in antibiotic prescriptions is particularly strong in the first postpartum month, although the coefficients

[44] The parental leave claims were recorded differently starting in 2014. We therefore study fathers' leave-taking for two (as opposed to three) years, as this allows us to use parental leave claims recorded in a consistent manner throughout the follow-up period. Because of the transition between two different recording systems, the quality of the claims data for the last quarter of 2013 is lower; thus, the estimate for the last quarter should be interpreted with caution.

for slightly later periods are similar (but statistically insignificant). These results underscore the idea that the ability of the household to flexibly choose to keep the father at home alongside the mother, if need be, in the first month post-childbirth, has large and nearly immediate impacts on multiple measures of maternal postpartum health.

Mechanisms.—We argue that the increased flexibility of the "Double Days" reform allows households to keep the father at home on days when the marginal benefit of doing so is particularly high. This is consistent with the fact that the magnitudes of our estimated effects on maternal inpatient and specialist outpatient visits, as well as prescription drugs use, are large when compared to the modest average increase in the total number of leave days that fathers use. Our results suggest that fathers' ability to take a few days of paid leave when this is especially needed may avert maternal health complications that require medical intervention.[45]

However, it is also possible that the "Double Days" reform allows fathers to take leave so that mothers can seek prompt medical care. To examine this possibility, we ask whether there is an increase in the likelihood that the father takes leave on the same days as when the mother has a health care encounter. Table 5 presents results from our two regression models, using as the outcome an indicator set to 1 when the father takes leave on a day that overlaps with when the mother has either an inpatient or outpatient visit or fills a drug prescription. We find that having full eligibility for the "Double Days" is associated with a 0.5 percentage point (40 percent) increase in the likelihood of this event occurring in the overall sample (panel A) and a 1.3 percentage point (65 percent) increase among families with mothers who have a pre-birth medical history (panel B). This result suggests that in families in which mothers are particularly vulnerable to postpartum health issues, the "Double Days" reform grants fathers the flexibility to take leave and stay home with their infants on days when mothers need medical care.

In addition, we analyze whether the effects of the "Double Days" reform differ across families who do and do not have at least one grandparent aged 74 years or less residing in the same county.[46] Fathers' ability to take full-time leave in the postpartum period may be especially important for families who do not have another family member—such as the child's grandparent—who can step in to help when a mother experiences health issues. As such, it may be that the impacts of the "Double Days" reform on maternal health are stronger in families without a relatively young grandparent residing in close proximity. Online Appendix Tables A8, A9, and A10 report the results of this heterogeneity analysis for the paternity leave, maternal inpatient/outpatient, and maternal prescription drug outcomes, respectively. Interestingly, we find that the impacts on paternity leave use are similar for families with and without a grandparent in the same county, suggesting that the reform induced fathers in both groups to take post-baseline leave. However, the coefficient magnitudes for some of

[45] As noted in Section II, we do not have data on primary care visits. Thus, it is possible that the "Double Days" reform allows fathers to take leave so that mothers seek prompt primary care and thereby avoid more serious complications that would have required specialist visits or hospitalizations.

[46] The age restriction on grandparents is due to a data constraint as we only observe demographic information including county of residence for individuals aged 74 or less in our data.

Table 5: Effect of "Double Days" Reform on the Likelihood of Father Taking Leave on Days When Mother Needs Medical Care

	Father takes leave when mother gets medical care	
	Share days eligible model	"Doughnut" RD-DD
A. All first births		
Share days eligible in first 30 days	0.00495	
	[0.00200]	
Reform × birth Jan–Mar		0.00577
		[0.00209]
Dep. var mean	0.0125	0.0130
N	82,558	69,953
B. Mothers with medical history		
Share days eligible in first 30 days	0.0128	
	[0.00451]	
Reform × birth Jan–Mar		0.0134
		[0.00479]
Dep. var mean	0.0198	0.0209
N	23,935	20,230

Notes: Each coefficient is from a separate regression. The outcome is an indicator that is equal to one if a father takes at least one day of leave on the same day as when the mother has an inpatient or specialist outpatient visit or fills a prescription, measured during the first 30 days days post-childbirth. The reported coefficients in column 1 are from the "Share Days Eligible" model, while the coefficients in column 2 are from the "doughnut" RD-DD model that excludes December births. Panel A uses our full analysis sample, while panel B limits the sample to mothers with a pre-birth medical history. See notes for Tables 1 and 2 for more details about the analysis sample and specifications. Robust standard errors in brackets.

the maternal physical health outcomes—such as visits for childbirth complications and antibiotic prescriptions—are slightly larger for families without a grandparent in the same county (although most estimates are not statistically significant in either subsample). The pattern of these results could reflect the idea that fathers' ability to take full-time paid leave in the postpartum period is particularly important when no other potential caregivers are available to help mothers recover and rest. That said, these results should be interpreted with caution, as the 95 percent confidence intervals of the estimates are in many cases overlapping across the two subgroups. Moreover, families with and without a young grandparent in the same county differ on a variety of other margins (e.g., socioeconomic status, urban/rural residence, age, etc.), and these differences complicate the interpretation of any heterogeneous effects.

V. Conclusion

When a woman gives birth to a child, much of the attention is typically placed on the health and well-being of the newborn baby. There are many medical and social policy interventions targeting infants, and a plethora of research has been dedicated to understanding the causes and consequences of early life health (see, e.g., Currie 2011; Almond and Currie 2011a; Chen, Oster, and Williams 2016; Almond, Currie, and Duque 2018; Persson 2018; Chen, Persson, and Polyakova 2022). New mothers, who undergo a significant physical and emotional transition after childbirth, are comparably under-discussed and under-studied.

Recent evidence documenting that the United States has experienced a disturbing increasing trend in maternal mortality in the last several decades (Kassebaum et al. 2016) has brought about increasing awareness of maternal postpartum health. A lot of the resulting discussion has centered around the role of the health-care system in delivering prenatal and postpartum care.[47] But the mother's environment at home can have significant influence on her well-being during the often emotional and overwhelming months of new parenthood. In fact, in recent commentary about the rise in maternal mortality in the United States, Dr. Neel Shah, a leading maternal health expert at the Harvard Medical School, argues:

> 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.[48]

Our paper attempts to isolate the effect of a key factor in the mother's postpartum home environment: the presence (or absence) of the child's father in the month immediately following childbirth. To study this question, we take advantage of linked Swedish administrative data and quasi-experimental variation from a reform in January 2012, which granted fathers the flexibility to take paid leave on an intermittent basis alongside the mother during the postpartum period. We document that this reform is associated with a 92 percent increase in the share of fathers using leave in the first month after childbirth.

We then present evidence that fathers' access to flexible leave in the immediate postpartum period improves maternal health. We find a 12 percent decrease in the likelihood of a mother having an inpatient or specialist outpatient visit for childbirth-related complications and a 14 percent reduction in the likelihood of having an antibiotic drug prescription in the same month. We also observe some suggestive evidence of declines in visits for external causes and counseling, as well as antianxiety prescription drugs. The effects on these maternal health outcomes are larger in both absolute and relative terms for mothers with a pre-birth medical history, who may be particularly vulnerable and thus benefit the most from a policy that grants fathers the flexibility to stay home from work in the postpartum period. These large effects are consistent with our theoretical framework in which households use their private information to optimally choose to keep the father at home on precisely the days when his presence is especially valuable.

In addition to informing questions about determinants of maternal postpartum health, our findings have important implications for debates about workplace flexibility and the design of paid family leave (PFL) policies. The United States remains the only high-income country without a national PFL policy, although ten states and

[47] For examples of these discussions in the press, see: https://www.vox.com/science-and-health/2017/6/26/15872734/what-no-one-tells-new-moms-about-what-happens-after-childbirth, https://www.npr.org/2017/05/12/528098789/u-s-has-the-worst-rate-of-maternal-deaths-in-the-developed-world, https://www.npr.org/2017/05/12/527806002/focus-on-infants-during-childbirth-leaves-u-s-moms-in-danger.

[48] See: https://www.pbs.org/newshour/show/whats-behind-americas-rising-maternal-mortality-rate

Washington, D.C., have either implemented or passed PFL legislation that provides partially paid parental leave to both mothers and fathers.[49] Just as in other countries that have had paid parental leave policies for decades, fathers in states with PFL programs take much less leave than mothers do.[50]

Moreover, discussions about encouraging men to take paternity leave typically focus on policies that promote sequential and consolidated leave use (such as "Daddy Month"-style programs). Indeed, a number of countries around the world restrict parents' ability to take parental leave at the same time, just as Sweden does. Online Appendix Table B11 provides details on the length of paid maternity and paternity leave available in a range of other countries—the 10 OECD countries with the highest per capita income, the top 10 most populous countries, as well as all of Scandinavia—and demonstrates that not only is paternity leave typically substantially shorter than maternity leave, but also that simultaneous leave is not allowed in several countries other than Sweden, including Austria, Australia, Finland, Norway, and Russia. Our findings imply that policies that restrict fathers' flexibility in being able to take leave at the same time as mothers on an intermittent basis could have negative spillover effects on maternal health.

Finally, our results suggest that workplace flexibility for fathers could be a cost-effective way of improving maternal postpartum health. The "Double Days" reform does not change the total number of days of leave allocated to the household; rather, it grants parents agency to allocate their leave in a way that maximizes the household's benefits. The medical and psychological literature suggests that these benefits may be long-lasting—maternal postpartum health issues have important consequences for the mother's long-term well-being as well as the family's welfare overall (see Meltzer-Brody and Stuebe 2014 and Saxbe, Rossin-Slater, and Goldenberg 2018 for some overviews). Thus, our finding of short-term benefits for maternal health may underestimate the total value of paternal access to workplace flexibility.

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[49] These are: California (in 2004), New Jersey (in 2009), Rhode Island (in 2014), New York (in 2018), D.C. (in 2020), Washington state (in 2020), Massachusetts (in 2021), Connecticut (in 2022), and Oregon (in 2023), Colorado (in 2024), and Maryland (in 2025).

[50] Bartel et al. (2018) estimate that the introduction of California's six-week PFL program only increased fathers' leave duration from about 1 to 1.5 weeks on average. Bana, Bedard and Rossin-Slater (2018) document that only 12 percent of eligible new fathers in California made a PFL claim in 2014, 10 years after the introduction of the program. In contrast, in the same year, 47 percent of eligible new mothers made a PFL claim. Moreover, while fathers in California are eligible for six weeks of paid leave, over three-quarters of those who take leave take less than the maximum amount.

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