# Early Life Interventions: Evidence from the Swedish Maternity and Infant Health Care Program

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**Abstract**

This paper estimates the effects of the universal introduction of free ante- and neonatal health care in Sweden that started in 1938. Based on data from official statistics we measure the short-run effects on fertility, infant mortality, stillbirths and maternal mortality. Using the Swedish Death Index delivering death data on a majority of the treated individuals who died until 2013, we estimate mortality effects at the individual level. Finally, based on individual-level data from the 1980s, we estimate long-run effects on schooling, wage and a variety of self-assessed health variables. We find negative mortality effects of both pre- and postnatal care. There is some evidence that these effects are increasing in age. Prenatal care has beneficial effects on some health outcomes. Further, our estimates suggest considerable wage gains from prenatal care. We find some evidence for beneficial effects in maternal mortality, no effects on fertility and stillbirths, and the effects on education are ambiguous.

JEL-Classification: I12, I18, H41
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# 1 Introduction

In this paper, we estimate effects of a universal ante- and neonatal health care program in Sweden on health, mortality, fertility and socioeconomic status. While a bunch of recent literature points at robust and lasting gains from early health interventions,[1] our knowledge of the effectiveness of public health programs targeting infants is limited to date, particularly concerning long-term effects. Recent contributions show that an availability of publicly provided health services in early years can play a substantial role in child development even in developed countries (e.g., Bharadwaj et al., 2013; Wüst, 2012; Almond et al., 2010; Daysal et al., forthcoming; Almond and Currie, 2011; Jewell and Triunfo, 2006; Rous et al., 2004). Such services include both safe and clean birth delivery under the supervision of qualified medical staff, but positive health effects may also relate to maternal advice and health surveillance during pregnancy and after birth.

Our study makes important contributions over the existing literature. It extends the scarce evidence on long-term effects of universal early-life health interventions. The effects measured by existing studies are often confounded since health care policies are in many cases targeted at disadvantaged subgroups. Our paper is among the first to study the causal effects of a universal early-life health intervention on adult outcomes. One exception is Bütikofer et al. (2014) who find positive effects of the introduction of mother and child health care centers in Norway on education and earnings. A second exception is the study of Hjort et al. (2014) who find negative effects of a universal infant health intervention on mortality, hospitalization and cardiovascular disease.

Furthermore, we add to the growing literature following Barker (1990) which points at early-childhood conditions predetermining later-life health and socioeconomic conditions (e.g., Almond, 2006; Black et al., 2007). This literature suggests a widening of the social gradient in health over the life cycle, explained theoretically by health impairments accumulating over time (Currie and Stabile, 2003; Case et al., 2002). Supplementing this, our evidence indicates that the benefit from early-life health interventions is increasing in age. The topic is of ultimate political importance, as it suggests that the origins of existing social inequalities may consist in the health conditions during pregnancy and early childhood.

[1] Currie and Rossin-Slater (2015) survey the evidence.

Finally, we evaluate an early-life intervention in a context that is comparable to the situation in many developing countries today. Historical Sweden in the 1930s exhibited stillbirth rates, infant mortality rates and maternal mortality rates of similar size as many developing countries today.[2] The historical intervention we evaluate was conducted many decades ago and therefore allows us to measure long-term effects giving important implications to political choices taken nowadays in poor countries.

The introduction of free ante- and neonatal care services provided to all expectant mothers and infants in Sweden started in 1938. By 1960, the prenatal care utilization rate had reached about 85%, while in terms of postnatal care universal coverage was achieved already during the 1950s. The intervention included a combination of health checks for expectant mothers and infants conducted by physicians and nurses at health care centers as well as educating parents about health, parenting skills, and nutrition through home visits, executed by specially-trained nurses and midwives. Home-visiting initiatives are among the most promising policies designed to improve early-life health (Currie and Rossin-Slater, 2015).

We exploit the regional variation in the densities of health care centers during the implementation process to identify effects of pre- and postnatal care utilization. Intervention data for 24 counties and the City of Stockholm is used for the years 1940 to 1950. We measure short-run effects on fertility, infant mortality, stillbirths and maternal mortality using data from official Swedish statistics. Based on the Swedish Death Index, we estimate mortality effects at the individual level. The Death Index comprises the majority of deaths that occurred in the treated birth cohorts until 2013. Finally, using individual-level data from the 1980s, we estimate long-run effects on schooling, wage and a variety of self-assessed health variables.

We find negative effects on mortality of both pre- and postnatal care. Using aggregated data we find that an increase in the prenatal care utilization rate of 1 percentage point decreases the infant mortality rate by 0.9%. Reduced form regressions based on the Swedish Death Index suggest significant negative effects of different types of child care facilities that increase when the considered time horizon is extended. For instance, increasing the density of child care centers of

[2]Current rates for developing countries can be found e.g. in Cousens et al. (2011, stillbirth rates), World Bank (2015, infant mortality rates) and WHO (2014, maternal mortality rates). Compare Figures A1, A2, A5 and A6 in this chapter for historical descriptives for Sweden.

type I[3] by one standard deviation decreases the probability of dying before age 1 by 0.1%, while it decreases the probability of dying before age 63 by 0.5%. A standard deviation increase in child care stations reduces the probability of dying before age 63 by even 0.8%. A difference-in-difference comparison of survival rates shows a rise in the intervention effects beyond age 50 and suggests that postnatal care affects mortality only beyond age 50, which is in line with the findings of Bütikofer et al. (2014). Reduced form regressions for health and labor income indicate significant effects of prenatal care. In particular, the densities of maternity centers of types I and II have significant negative effects on the probabilities to be disabled and to be diagnosed with a severe illness. The density of maternity centers of type I further reduces the number of long-term illnesses. With regards to labor income, a one standard deviation increase in the density of maternity centers of type I is measured to increase labor income by 7.6%, while such an increase in the density of maternity stations labor income by even 16.1%. In line with our results, Bütikofer et al. (2014) find that access to free postnatal health care leads to an increase in lifetime earnings and has beneficial effects on health. Finally, we find some evidence for beneficial effects from postnatal care on maternal mortality from eclampsia and from childbed fever after childbirth. Confirming Bütikofer et al. (2014), there are no effects on fertility. Also, there is no evidence for effects on stillbirths, and the effects on education are ambiguous.

The remainder of the paper is structured as follows. Section 2 outlines the national rollout of free ante- and neonatal care in Sweden. Section 3 describes the data sources exploited in the empirical analysis and presents descriptive statistics. Our estimation strategy is outlined in Section 4. In Section 5 our empirical results are presented. Section 6 concludes.

# 2 The Rollout of Universal Ante- and Neonatal Health Care

The history of the Swedish midwifery system dates back to the 18th century. When in 1751 the first national statistics on maternal mortality revealed a rate of almost

[3]Health care facilities were either centers of type I, centers of type II or health care stations. They differed by the quality of health care provided and the locations where they were established, as described in detail in Section 2.

900 deaths per 100,000 live births, the Swedish authorities initiated a system of thorough training and supervision of midwives for the first time (Högberg, 2004). During the 19th century, midwives were deployed particularly in areas with a shortage of midwives. Their overall number was restricted by the fact that initially there was only one midwifery school. When a second school was opened in 1856 and the health authorities started to subsidize some students, the number of midwives increased. Until the 1930s, midwives were in charge of nearly all obstetric care services since home births were the norm and hospital deliveries constituted only a very small percentage of all births (see Pettersson-Lidbom, 2014, for details).

Before the 1930s, a system called *Mjölkdroppen* was in place which relied on visits to physicians and had the purpose of distributing a nutritious cow milk mixture to poor mothers who did not breastfeed their newborns. In addition, there was a system called *Barnavårdscentralsystemet* with a focus on outreach activities to increase awareness, home calls by nurses and center-based health check-ups for children and mothers (Wallgren, 1935, 1936). Both institutions were established only in the larger cities and exhibited no eligibility restrictions, although the former aimed at low-income families. Still, none of the systems covered the entire population, not even in the cities.

In the 1920s and early 1930s Sweden experienced stagnating infant and maternal mortality rates. This trend was accompanied by a rapid decline in birth numbers. While the protection of the mother and her child before and after the birth had been legally consolidated long before, it was only when confronted with this situation that Sweden realized a necessity for more intense public support of the individual mother. The 1930s constituted a decade of change for maternity support and early-life health care in several respects. Maternity benefits were introduced in 1931 to compensate mothers enrolled in a sickness fund or with a low family income for unpaid maternity leave and a midwife's assistance. A statute of 1937 expanded this policy to apply to nearly all mothers-to-be and raised the maternity allowance to cover an estimate of three-fourths of the normal minimum costs connected with childbirth (Wangson, 1938). Additionally, a vast shift from home to institutional deliveries occurred over the decade (Statistics Sweden, various issues).

Simultaneously, the Swedish health system moved towards the universal provision of free maternity and infant health care. In a first step, a field trial was

conducted in seven Swedish medical districts from 1931 to 1933.[4] The decision for the national rollout of the program was taken on July 21, 1937, and the reform was gradually implemented from 1938 onwards. The intervention included the setup of maternity and child health care centers all over the country where expectant mothers and infants were to undergo standardized health examinations. This practice was supplemented by home visits executed by nurses and midwives (Ström, 1942).

A central organization of the new ante- and neonatal health care system was complicated by the diversity of local conditions across the country. In cities, towns, municipal communities with densely populated surrounding rural areas or densely populated industrial areas, suitable facilities for the setup of health care centers were already given and qualified staff was available. There were places, however, where institutions exhibiting the preconditions to guarantee the intended extent of health care provision did not exist, as was obviously the case in the pure countryside (Population Commission, 1936).

To overcome these local differences and maximize the possible gains from preventive care, the organization was decentralized to the counties and cities[5] and the local agencies were instructed to implement health care institutions in any of the following forms (Population Commission, 1936):

1. Maternal or child care centers of type I should be introduced in inpatient or children's hospitals, independent maternity and paediatric clinics or in other places where specially trained women or pediatricians worked. They were to be led by specially-trained, licensed physicians or pediatricians, respectively, assisted by a nurse or midwife.

2. Maternal or child care centers of type II should be set up in common, purpose-designed premises, under the direction of a licensed physician and with the necessary assistance of a nurse or midwife.

3. Maternal and child health stations should be directed by a physician, usually using his reception facilities, who is assisted by a district nurse or midwife.

As intended, type I centers were introduced in the larger cities. Centers of type II were built up in the cities where specially-trained staff was not available or in very

[4]Bhalotra et al. (2014) and Bhalotra et al. (2015) evaluate the field trial in terms of its effects on mortality as well as on academic performance and sickness absence in primary school, respectively.

[5]Several large cities organized the intervention independently of their counties.

densely populated industrial areas. Maternal and child care stations were opened in smaller communities and rural areas. For the latter no new staff was necessary since the requirements could be met by the physicians in service and the district nurses (Medicinalstyrelsens Förslag, 1935).

The reform was financed by state subsidies to the counties and cities to cover the costs for equipment of the centers and their operating costs. In comparison to the latter, the former were negligible. The operating expenditures consisted of expenses for physicians', nurses' and midwives' services as well as travel expenses for home visits. In 1940, the total intervention costs amounted to 713,885 SEK, Göteborg and Malmö excluded, of which 77% where attributed to the counties and 23% to the cities. At the same time, the annual cost per supervised individual amounted to an average of 10.28 SEK in the counties and 18.29 SEK in the cities[6] (Ström, 1942).

The health checks of the mothers consisted of medical tests complemented with urine albumin tests. Infants were monitored by physicians through examinations at clinics as well as by nurses during their home calls or in special clinics. In the latter case the service consisted mostly of weight control (Ström, 1942).

# 3 Data[7]

## 3.1 Data Sources and Sample Restrictions

In the empirical analysis we make use of several aggregated and individual-level data sources. Official medical, population and death statistics deliver data on the numbers of health care facilities implemented, the shares of expectant mothers and infants treated as well as population numbers, numbers of mothers, births, maternal and infant deaths and physicians over the period of treatment implementation (Statistics Sweden, various issues). These data are available for 24 counties and the City of Stockholm.The Swedish census of 1930 delivers data on occupation shares and average income at the parish and the district level, respectively.

These aggregate data are combined with the Swedish Survey of Living Conditions (ULF; Statistics Sweden, 2013). The ULF provides individual information for a

[6]The difference is partly explained by the more expensive monitoring practice adopted by the cities and the comparably low costs for health care stations in the countryside.

[7]Detailed definitions of all variables used in the empirical analysis are given in Appendix Table A1.

random sample representative of the Swedish population. The panel study combines information collected in annual face-to-face interviews and register data. We use data from the waves 1980, 1981, 1988, 1989, 1996, 1997, 2004 and 2005. The ULF database delivers information on educational attainment, wage level and a range of self-reported health variables for the birth cohorts treated by the introduction of free ante- and neonatal health care. This data is matched with the census 1930 via the parish name.[8] Not in all cases a match is found, e.g. due to different spelling of a parish name or different regional divisions. We plan to raise the match rate from currently 88.4% to 100% of all ULF parishes for a future version of the analysis.

Finally, we combine the aggregate data available for 25 regions with the Swedish Death Index, which is provided by the Swedish Genealogical Society (2014). The dataset comprises universal information on all deaths that occured in Sweden from 1901 to 2013. Hence, it provides us with the mortality information on the great majority of individuals who were born during the introduction of nationwide pre- and postnatal health care and have not survived until the end of 2013. The information in this database stems from official records such as church books.

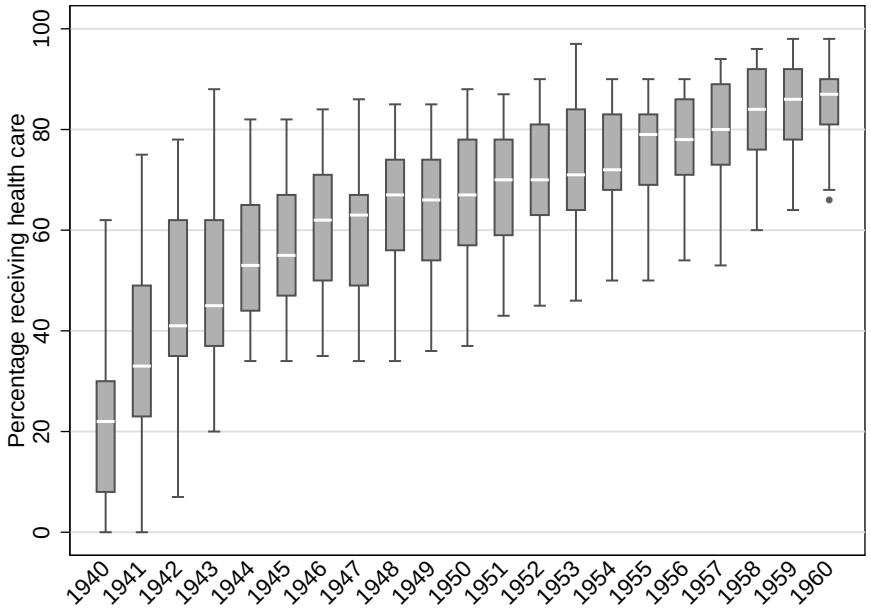
While the pre- and postnatal care interventions began in 1938, our data on numbers of health care centers and utilization rates starts only in 1940. Because the period up to 1950 exhibited the largest variation in utilization rates we focus on the birth cohorts from 1940 to 1950 in the regressions. Consequently, our aggregated data sample for 25 regions comprises 275 observations. The individual samples are further restricted to persons born in Sweden to guarantee a potential treatment by the interventions. In addition, the ULF sample is restricted to observations without missings on the relevant outcome variables. The final ULF data sample comprises 6,990 observations. The Death Index delivers information on an individual's birth date and place only if the individual died until 2013. Since we intend to measure survival probabilities, we simulate the observations of the survivors based on actual annual birth numbers by county and sex and assign month and day of birth randomly. The resulting sample consists of 228,270 dead and 1,064,151 survivors.

[8]For the birth cohorts until 1946, the ULF reports the actual parish of birth (i.e. the place of the hospital) instead of the parish of residence at birth. Because the numbers of institutional deliveries rose sharply during the 1930s, this provides a potential source of measurement error as described by (Fischer et al., 2013). However, as our regressor of interest exhibits a highly aggregated regional level, we consider the measurement error problem as negligible in the context of the present analysis.

## 3.2 Descriptive Statistics

The boxplots shown in Figures 1 and 2 illustrate the utilization rates of ante- and neonatal health care in the newly established centers and stations over time. In terms of its median, the proportion of mothers utilizing care rose sharply from about 20% in 1940 to 60% in 1946. Thereafter, it grew rather moderately at a nearly constant rate to roughly 90% in 1960. In comparison, the share of infants monitored grew at a much steeper rate during the early 1940s. While its median had exceeded 90% already in 1946, nearly universal coverage was reached during the 1950s.

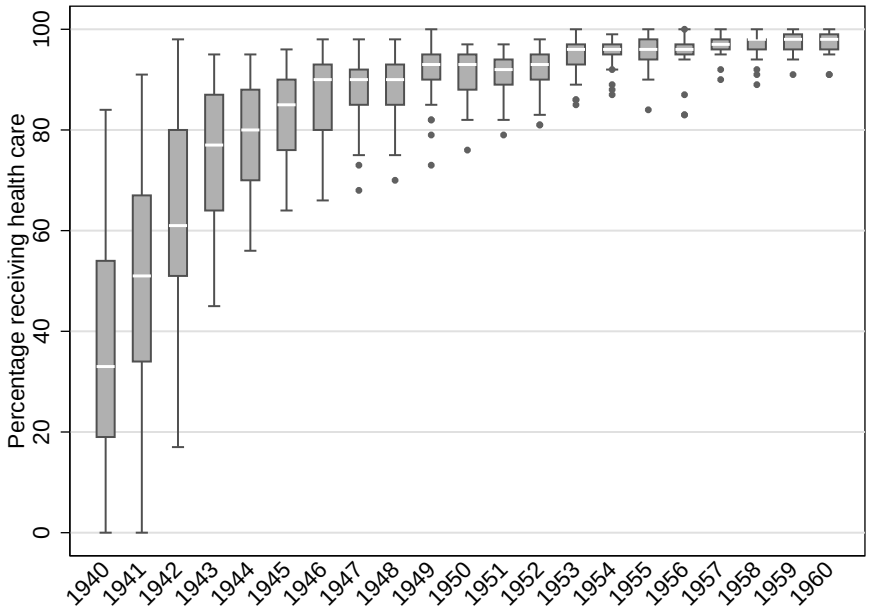
Figure 1: Health Care Utilization Rate of Expectant Mothers




Figures 1 and 2 also reveal the regional variation in utilization rates over time. With regards to maternal care, it remained fairly constant over the observation period, exhibiting only a slight decrease. In contrast, infant supervision rates differed strongly during the early 1940s but shrinked considerably while approaching universal coverage.

The differences in speed of implementation and variation levels resulted possibly from the way how knowledge of the interventions was spreading. It is likely that at an early state of implementation many women who became pregnant were unaware

Figure 2: Health Care Utilization Rate of Infants




of the centers' existence and their potential utility. Slow diffusion of information might explain the only gradual uptake of prenatal care under large regional variation. Frequently, mothers learned about the newly available health care only at the time of childbirth at the hospital (Ström, 1942). Under the assumption that a mother follows the professional advise given her by the hospital staff, most mothers will have initiated the receipt of postnatal care for their newborns after delivery, even when they have not utilized prenatal care during their pregnancies. This reasoning would fuel the expectation that the proportion of infants in postnatal care grew closely as rapidly as geographic coverage by health care centers and stations did.

Tables 1 and 2 show the relationships before and during treatment implementation between pre- and postnatal health care utilization and several of the aggregated outcome variables we will discuss in the empirical analysis of Section 5.1. Solely the infant mortality of 1937 seems to be slightly positively correlated with the maternal and infant care rates measured in 1942, but this correlation is not significant. There is no evidence for a systematic connection between the pre-treatment characteristics of the counties and the implementation process that could induce a reverse causality concern.

Table 1: Treatment Correlations with Population, Fertility and Stillbirths

| Year | 1942 | | 1937 | | | 1942 | | |
|---|---|---|---|---|---|---|---|---|
| County | Prenatal care (%) | Postnatal care (%) | Population | Birth rate | Stillbirth rate | Population | Birth rate | Stillbirth rate |
| Kronobergs | 8 | 17 | 152941 | 14.2 | 238.6 | 152133 | 16.8 | 250.8 |
| Örebro | 7 | 25 | 219800 | 12.4 | 347.6 | 230868 | 17.9 | 249.2 |
| Skaraborgs | 34 | 32 | 238540 | 14.4 | 270.9 | 241466 | 17.5 | 184.6 |
| Malmöhus | 21 | 34 | 523407 | 14.7 | 263.2 | 535237 | 17.7 | 196.2 |
| Kristianstads | 33 | 39 | 247963 | 16.0 | 242.1 | 249487 | 17.7 | 199.8 |
| Jönköpings | 35 | 49 | 238082 | 14.7 | 300.2 | 245458 | 17.7 | 237.4 |
| Jämtlands | 37 | 51 | 136763 | 16.2 | 319.8 | 141956 | 20.3 | 250.1 |
| Hallands | 43 | 54 | 152106 | 15.0 | 336.4 | 152355 | 17.3 | 194.0 |
| Södermanlands | 74 | 56 | 190128 | 13.6 | 310.3 | 194227 | 17.2 | 203.1 |
| Östergötlands | 43 | 56 | 312181 | 14.4 | 299.9 | 323022 | 18.0 | 225.7 |
| Blekinge | 39 | 60 | 145067 | 16.7 | 288.9 | 146329 | 18.6 | 202.4 |
| Gävleborgs | 41 | 60 | 278772 | 14.8 | 258.8 | 273863 | 16.6 | 231.2 |
| Kalmar | 47 | 61 | 230230 | 15.7 | 346.1 | 228411 | 18.0 | 290.0 |
| Värmlands | 41 | 61 | 270967 | 13.7 | 353.3 | 268895 | 16.0 | 211.9 |
| Gotlands | 24 | 67 | 58066 | 17.2 | 189.8 | 59275 | 20.3 | 257.3 |
| Göteborgs/Bohus | 41 | 72 | 476800 | 13.9 | 267.8 | 489855 | 17.0 | 208.4 |
| Älvsborgs | 47 | 72 | 324545 | 14.6 | 285.8 | 331570 | 16.8 | 232.0 |
| Stockholm city | 74 | 76 | 556954 | 11.6 | 250.0 | 613754 | 18.5 | 234.4 |
| Kopparbergs | 67 | 80 | 247407 | 13.7 | 342.5 | 251132 | 17.3 | 228.4 |
| Uppsala | 43 | 81 | 138726 | 13.7 | 247.2 | 139255 | 17.6 | 191.6 |
| Norrbottens | 62 | 81 | 209974 | 23.0 | 292.6 | 223117 | 24.6 | 293.4 |
| Stockholm county | 41 | 82 | 273702 | 13.3 | 297.7 | 295137 | 17.7 | 166.2 |
| Västmanlands | 63 | 84 | 164452 | 14.7 | 228.2 | 171967 | 17.8 | 167.0 |
| Västerbottens | 78 | 92 | 217156 | 20.5 | 323.4 | 223872 | 22.1 | 263.1 |
| Västernorrlands | 65 | 98 | 279993 | 16.6 | 277.5 | 275559 | 18.7 | 229.2 |

Prenatal (postnatal) care (%): health care utilization rate of expectant mothers (infants). Counties are sorted by postnatal care (%). The correlation coefficient between pre- and postnatal care equals 0.82 (significant at 1%). Birth rate: number of births per 1,000 inhabitants. Stillbirth rate: number of stillbirths per 10,000 births.

Figures A1 to A6 in the Appendix illustrate the evolvements of the dependent variables in the aggregated analysis of Section 5.1. After the interventions had started in 1938, both infant mortality and stillbirths seem to have experienced a sudden drop in the early 1940s (Figures A1 and A2). However, the infant mortality rate, at least, had followed a falling trend already before. With regards to fertility, Sweden experienced a phase of very low birth numbers during the 1930s followed by a strong boom starting in the late 1930s and early 1940s, which was particularly driven by the urban areas (Figures A3 and A4). Maternal mortality, finally, was stagnating at a high level during the 1920s and 1930s before it experienced an unparalleled drop that began in the late 1930s (Figures A5 and A6). During this phase, maternal mortality from all causes decreased with mortality from childbed fever sinking fastest.

Appendix Table A2 reports descriptive statistics for the individual-level data samples. In the sample based on the Death Index, 2% of all individuals have died

Table 2: Treatment Correlations with Infant Mortality, Maternal Mortality and the Physician Rate

| Year | 1942 | | 1937 | | | 1942 | | |
|---|---|---|---|---|---|---|---|---|
| County | Prenatal care (%) | Postnatal care (%) | Infant mortality | Maternal mortality | Physician rate | Infant mortality | Maternal mortality | Physician rate |
| Kronobergs | 8 | 17 | 417.6 | 32.7 | 0.5 | 293.9 | 19.9 | 0.7 |
| Örebro | 7 | 25 | 395.2 | 11.2 | 0.6 | 292.8 | 24.5 | 0.7 |
| Skaraborgs | 34 | 32 | 471.9 | 41.4 | 0.7 | 279.2 | 16.8 | 0.6 |
| Malmöhus | 21 | 34 | 392.2 | 27.7 | 1.1 | 306.0 | 18.2 | 1.2 |
| Kristianstads | 33 | 39 | 451.5 | 25.7 | 0.4 | 304.3 | 6.9 | 0.7 |
| Jönköpings | 35 | 49 | 385.9 | 34.7 | 0.7 | 248.9 | 14.0 | 0.8 |
| Jämtlands | 37 | 51 | 427.9 | 22.9 | 0.5 | 357.8 | 7.0 | 0.8 |
| Hallands | 43 | 54 | 454.3 | 31.0 | 0.7 | 235.8 | 7.7 | 0.7 |
| Södermanlands | 74 | 56 | 399.5 | 15.7 | 0.7 | 289.7 | 15.2 | 0.8 |
| Östergötlands | 43 | 56 | 324.3 | 22.5 | 0.7 | 258.5 | 12.2 | 0.8 |
| Blekinge | 39 | 60 | 404.5 | 16.8 | 0.7 | 220.8 | 7.5 | 0.6 |
| Gävleborgs | 41 | 60 | 476.5 | 44.2 | 0.5 | 301.6 | 15.6 | 0.6 |
| Kalmar | 47 | 61 | 487.3 | 30.9 | 0.5 | 355.8 | 7.4 | 0.6 |
| Värmlands | 41 | 61 | 415.3 | 35.5 | 0.6 | 314.4 | 14.2 | 0.7 |
| Gotlands | 24 | 67 | 519.5 | 10.1 | 0.5 | 249.0 | 16.8 | 0.7 |
| Göteborgs/Bohus | 41 | 72 | 320.4 | 24.4 | 1.0 | 216.8 | 15.8 | 1.1 |
| Älvsborgs | 47 | 72 | 336.6 | 23.6 | 0.7 | 233.8 | 10.9 | 0.8 |
| Stockholm city | 74 | 76 | 375.0 | 35.9 | 1.6 | 221.2 | 22.3 | 1.6 |
| Kopparbergs | 67 | 80 | 490.1 | 23.9 | 0.6 | 281.5 | 7.0 | 0.7 |
| Uppsala | 43 | 81 | 336.7 | 37.0 | 1.2 | 248.7 | 16.5 | 1.5 |
| Norrbottens | 62 | 81 | 738.7 | 37.9 | 0.5 | 473.8 | 18.4 | 0.6 |
| Stockholm county | 41 | 82 | 405.2 | 36.4 | 0.9 | 267.4 | 17.4 | 1.0 |
| Västmanlands | 63 | 84 | 332.0 | 25.2 | 0.7 | 225.9 | 19.8 | 0.7 |
| Västerbottens | 78 | 92 | 649.0 | 45.7 | 0.6 | 315.7 | 22.6 | 0.6 |
| Västernorrlands | 65 | 98 | 568.0 | 39.2 | 0.6 | 390.4 | 13.7 | 0.7 |

Prenatal (postnatal) care (%): health care utilization rate of expectant mothers (infants). Counties are sorted by postnatal care (%). The correlation coefficient between pre- and postnatal care equals 0.82 (significant at 1%). Infant (maternal) mortality: number of infant (maternal) deaths per 10,000 births (mothers). Physician rate: number of physicians per 1,000 inhabitants.

before reaching their first birthday, while only 5% did not survive until age 40. This difference of only three percentage points reflects the still high infant mortality during the 1940s. 13% of the individuals have died before reaching age 63. In the ULF sample, a good general health condition is reported for 83% of the observations, 23% receive regular medical treatment and 74% hold at least a secondary schooling degree.

# 4 Empirical Strategy

In order to identify the effects of ante- and neonatal health care on various outcomes, we exploit the regional variation in the treatments during their gradual implementation by comparing the proportions of mothers and infants treated across regions

and over time. Since visiting the health care facilities was voluntary, participation in the treatment was subject to individual decisions which were possibly related to individual characteristics such as level of education. In order to identify the causal effect of the treatment, we conduct a standard 2SLS approach in which we exploit the regional variation in the densities of different health care centers as instruments for actual health care utilization.[9] Because the establishment of new centers was subject to institutional decisions, we consider our instruments as unrelated to individual preferences and therefore exogenous.

Our baseline second-stage regression equation reads as follows:

$$y_{itr} = \beta_0 + \beta_1 \hat{T}_{Mtr} + \beta_2 \hat{T}_{Itr} + \mu_t + v_r + \varepsilon_{itr} \quad (1)$$

where $y_{itr}$ is an outcome of individual $i$ born in year $t$ in parish $r$, $T_{Mtr}$ is the proportion of mothers treated, $T_{Itr}$ is the proportion of infants treated, and $\mu_t$ and $v_r$ are birth year and region fixed effects, respectively.

$\hat{T}_{Mtr}$ and $\hat{T}_{Itr}$ are estimated from the following first-stage regressions:

$$T_{Ctr} = \alpha_0 + \mathbf{X}\boldsymbol{\alpha_1} + \eta_t + w_r + u_{tr} \quad (2)$$

where $C = M, I$. $\mathbf{X}$ is a vector of center densities of different types, and $\eta_t$ and $w_r$ are birth year and region fixed effects, respectively. Our first- and second-stage regression equations for the aggregated outcome variables are formulated accordingly at the regional level (omitting the individual index $i$).

$\beta_1$ and $\beta_2$ reflect the effects of pre- and postnatal care utilization on the outcome which we are interested in. We measure them by estimating various specifications of Equations (1) and (2) based on the datasets described in Section 3.

We define different estimation specifications by applying the following modifications to Equations (1) and (2). First, by replacing county fixed effects by the average income level and the occupation shares in 1930, we test whether the county fixed effects capture more than only regional differences in economic measures. Second, we add county-specific linear time trends to the regressors to account for region-specific developments over time. Third, we add the physician rate as a control variable to account for regional quality differences in the medical system. Fourth,

[9] In the empirical analysis, regressions are estimated applying the Stata command `ivreg2` (Baum et al., 2010).

we add socio-economic background variables to capture initial individual differences possibly affecting our outcome variables.

Finally, we take into account the timing of health care utilization. The year of pre- and postnatal care utilization is in most cases not entirely identical with the year of birth because the former takes place during the pregnancy and the latter takes place during the first year of life. To take these temporal deviations into account, we also estimate the above equations a), by replacing $T_{Mtr}$ by the share of mothers supervised in the previous year $T_{M(t-1)r}$, and b), by replacing $T_{Itr}$ by the share of infants supervised in the subsequent year $T_{I(t+1)r}$. The analysis of mortality conducted in Section 5.2.1 allows a more accurate procedure to account for the timing of health care utilization because the Death Index reports an individual's exact date of birth. By exploiting the date of birth we are able to calculate utilization probabilities which cover the individual gestational period or the first birth year, respectively. In particular, we calculate individual-specific averages over the prenatal care utilization rates in the previous year and the current year, weighting accordingly to cover the period of gestation. Analogously, we average over the postnatal care utilization rates in the current year and the subsequent year, weighting to cover the first year of birth. We apply temporal shifts to the center densities contained in vector $\mathbf{X}$ in an identical way.

# 5 Results

In this section we present estimates of the impact of the interventions on various outcomes. We begin with a discussion of the short-run effects on several aggregated outcomes, followed by an analysis of the effects on individual mortality, long-run health and socioeconomic status.

## 5.1 Aggregated Analysis

### 5.1.1 First-Stage Results

Our aggregated analysis focuses on estimates from 2SLS regressions of fertility, infant mortality and stillbirths as well as maternal mortality. All aggregated outcomes in this section have been logarithmized ($ln$) and are to be interpreted accordingly. Our first stage is based on the assumption that the densities of maternity and child

care centers and stations, respectively, are important predictors of the utilization rates of ante- and neonatal health care during the implementation process. Since a utilization of the newly available health care became possible only after having gained access to a suitable health care center, we are confident that the plausibility of this relationship is sufficiently established.

Appendix Tables A3 and A4 report the results from the first-stage regressions of pre- and postnatal care utilization.[10] Our main focus is on the third and fourth columns since they control for regional time trends. In most of the specifications for prenatal care, the density of maternity centers of type II has a significant positive effect, particularly after including linear time trends in the regressions. In the lower panel of Table A3, the density of maternity stations offers an additional effect on prenatal care utilization. Considering the results for postnatal care in Table A4, the densities of child care centers of type I and child care stations have positive effects in the upper panel, but their significance levels reduce to only 10% in the medium panel. In the lowest panel, at least for child care stations the positive sign returns. For both pre- and postnatal care utilization there are some significant effects for centers offering the respective other type of health care, possibly because a number of centers offers both types of health care.

Since our estimation specification comprises more than one endogenous regressor, we report the Angrist-Pischke multivariate F-test of excluded instruments for each first-stage regression. For neither of the regressions the threshold of an F-statistic of 10 is reached, implying that we cannot reject the hypothesis of under- or weak identification of one of the endogenous regressors. However, the Angrist-Pischke F-statistics reported in the last two columns of the medium and lower panels of Tables A3 and A4 range between 7.8 and 8.7, which is close to the threshold of 10. Our following interpretation of the second-stage results will therefore focus on these specifications.

### 5.1.2 Fertility

We hypothesize that the increasing utilization of free pre- and postnatal health care has incentivized couples to increase their own fertility. Such an effect would

[10]For the regressions of fertility, center densities have been based on population numbers instead of birth numbers. Since this does not lead to qualitative changes in the results, the first-stage regressions using center densities based on population numbers are not reported here.

contribute to explaining the strong baby boom of the 1940s. Table 3 reports the second-stage estimates from regressions of the fertility rate in the subsequent year on utilization rates. As described above in Section 5.1.1, our focus is on the third and fourth columns of the medium and lower panels. Because the estimation coefficients in these specifications are insignificant, the results to not support our expectation of positive intervention effects on fertility.

Table 3: Second Stage, Fertility

| | | | | |
|---|---|---|---|---|
| Prenatal care | -0.006 | -0.005* | -0.012** | -0.012** |
| | (0.005) | (0.003) | (0.006) | (0.006) |
| Postnatal care | 0.005* | 0.004* | 0.008* | 0.008* |
| | (0.003) | (0.002) | (0.004) | (0.004) |
| Observations | 275 | 275 | 275 | 275 |
| Prenatal care$_{(-1)}$ | 0.002 | 0.002 | 0.001 | 0.001 |
| | (0.002) | (0.002) | (0.001) | (0.001) |
| Postnatal care | 0.000 | -0.001 | -0.000 | -0.000 |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Observations | 250 | 250 | 250 | 250 |
| Prenatal care | -0.000 | -0.000 | -0.001 | -0.001 |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Postnatal care$_{(+1)}$ | 0.002 | -0.000 | -0.001 | -0.001 |
| | (0.002) | (0.001) | (0.001) | (0.001) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Appendix Tables A5 to A7 report results focusing on the fertility of different groups of mothers as defined by marital status. As for overall fertility, the coefficients of interest are insignificant for married, unmarried as well as engaged women, not supporting our expectation.

Appendix Tables A10 to A13 report the reduced-form regressions. The results imply insignificant coefficients or unexpected effect signs. Overall, we cannot conclude that the interventions contributed to the baby boom of the 1940s.

Table 4: Second Stage, Infant Mortality

| | | | | |
|---|---|---|---|---|
| Prenatal care | 0.009 | 0.001 | 0.000 | 0.002 |
| | (0.010) | (0.004) | (0.008) | (0.007) |
| Postnatal care | -0.006 | -0.001 | -0.000 | -0.001 |
| | (0.005) | (0.003) | (0.005) | (0.005) |
| Observations | 275 | 275 | 275 | 275 |
| Prenatal care$_{(-1)}$ | 0.002 | -0.007* | -0.009*** | -0.009*** |
| | (0.004) | (0.004) | (0.003) | (0.003) |
| Postnatal care | -0.003 | 0.004 | 0.004 | 0.004 |
| | (0.003) | (0.003) | (0.003) | (0.003) |
| Observations | 250 | 250 | 250 | 250 |
| Prenatal care | 0.005 | -0.003 | 0.001 | 0.001 |
| | (0.005) | (0.003) | (0.004) | (0.004) |
| Postnatal care$_{(+1)}$ | -0.005 | 0.001 | -0.002 | -0.003 |
| | (0.004) | (0.003) | (0.004) | (0.004) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

### 5.1.3 Infant Mortality and Stillbirths

The introduction of free ante- and neonatal health care aimed at improving the health of infants and mothers. We therefore expect the interventions to have reduced infant mortality and the number of stillbirths. Table 4 presents the second-stage results for effects on infant mortality. The third and fourth columns of the medium panel reveal a negative effect of prenatal care utilization in the previous year. Specifically, an increase in the prenatal care utilization rate of 1 percentage point decreases the infant mortality rate by 0.9%. Table 5 reports the second-stage results for stillbirths. In the lower panel, prenatal care utilization exhibits a positive sign, which is significant, however, only at the 10% level.

Appendix Tables A8 and A9 present the corresponding reduced-form regressions. Again considering the medium and lower panels only, the density of maternity centers of type I has a negative effect on infant mortality, while there is no evidence that stillbirths are affected by any of the center densities. Unexpectedly, the current density of child care centers of type II positively affects infant mortality, as reported in the medium panel of Table A8.

Table 5: Second Stage, Stillbirths

| | | | | |
|---|---|---|---|---|
| Prenatal care | 0.012 | 0.007 | 0.012 | 0.011 |
| | (0.008) | (0.005) | (0.012) | (0.011) |
| Postnatal care | -0.006 | -0.004 | -0.010 | -0.008 |
| | (0.004) | (0.004) | (0.009) | (0.008) |
| Observations | 275 | 275 | 275 | 275 |
| Prenatal care$_{(-1)}$ | 0.002 | 0.004 | -0.006 | -0.006 |
| | (0.005) | (0.003) | (0.005) | (0.005) |
| Postnatal care | -0.001 | -0.004 | 0.002 | 0.002 |
| | (0.003) | (0.003) | (0.004) | (0.004) |
| Observations | 250 | 250 | 250 | 250 |
| Prenatal care | 0.010* | 0.009** | 0.006* | 0.005* |
| | (0.006) | (0.004) | (0.003) | (0.003) |
| Postnatal care$_{(+1)}$ | -0.006 | -0.008* | -0.005 | -0.004 |
| | (0.005) | (0.004) | (0.003) | (0.003) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

### 5.1.4 Maternal Mortality

As for infant mortality and stillbirths, we expect negative intervention effects on maternal mortality. The second-stage results for maternal mortality are presented in Table 6. None of the specifications confirms our expectation, while maternity care utilization in the previous year even implies a positive effect, which is, however, only significant at the 10% level. Table A14 delivers the reduced-form results. After controlling for regional time trends, there are no significant effects at all.

We also estimated the effects on maternal mortality from different causes such as childbed fever after childbirth or miscarriage and eclampsia. Because all coefficients from these regressions are insignificant or, in one case, unexpectedly positive, we refrain from reporting all the regression tables here. However, with regards to the reduced-form regressions, two exceptions deserve mention. First, the density of child care centers of type I has a significant negative effect on maternal mortality from childbed fever after childbirth. Second, a higher density of child care stations significantly reduces maternal mortality from eclampsia. Although child care centers and stations were primarily designed to supervise infants, probably also mothers received

Table 6: Second Stage, Maternal Mortality

| | | | | |
|---|---|---|---|---|
| Prenatal care | 0.015 | 0.023 | -0.013 | -0.009 |
| | (0.019) | (0.016) | (0.049) | (0.046) |
| Postnatal care | -0.007 | -0.013 | 0.001 | -0.002 |
| | (0.013) | (0.013) | (0.035) | (0.034) |
| Observations | 275 | 275 | 275 | 275 |
| Prenatal care$_{(-1)}$ | 0.026 | 0.029 | 0.029* | 0.028* |
| | (0.019) | (0.019) | (0.015) | (0.015) |
| Postnatal care | -0.015 | -0.018 | -0.012 | -0.012 |
| | (0.017) | (0.017) | (0.018) | (0.017) |
| Observations | 250 | 250 | 250 | 250 |
| Prenatal care | -0.009 | 0.006 | -0.011 | -0.010 |
| | (0.013) | (0.013) | (0.018) | (0.018) |
| Postnatal care$_{(+1)}$ | 0.010 | 0.000 | 0.007 | 0.006 |
| | (0.010) | (0.017) | (0.017) | (0.016) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

advice and supervision in these localities after childbirth, which could explain these findings. The regression results are available upon request.

## 5.2 Individual Analysis

This section is devoted to the measurement of longer-term intervention effects on individual outcomes. As outlined above, the existing literature indicates that prenatal and early-childhood conditions predetermine later-life health and socioeconomic outcomes with initial differences reinforcing over the life cycle. Against this background, we expect to find positive intervention effects on individual mortality, health and socioeconomic status, potentially increasing in age.

### 5.2.1 Mortality

Our analysis of intervention effects on individual mortality is based on the Death Index sample. In a first step, we compare mortality of children born during the implementation phase to mortality of pre-intervention children. Additionally, we compare the children with regards to the utilization levels of pre- and postnatal

care in their birth regions during the implementation process. The double difference then captures the effect of being born in a region with a high utilization as compared to being born in a region with a low utilization of pre- and postnatal health care, respectively.

Figure 3: Survival Curves for Birth Cohorts 1937 and 1942 Splitted at Median of Predicted Prenatal Care Utilization 1942

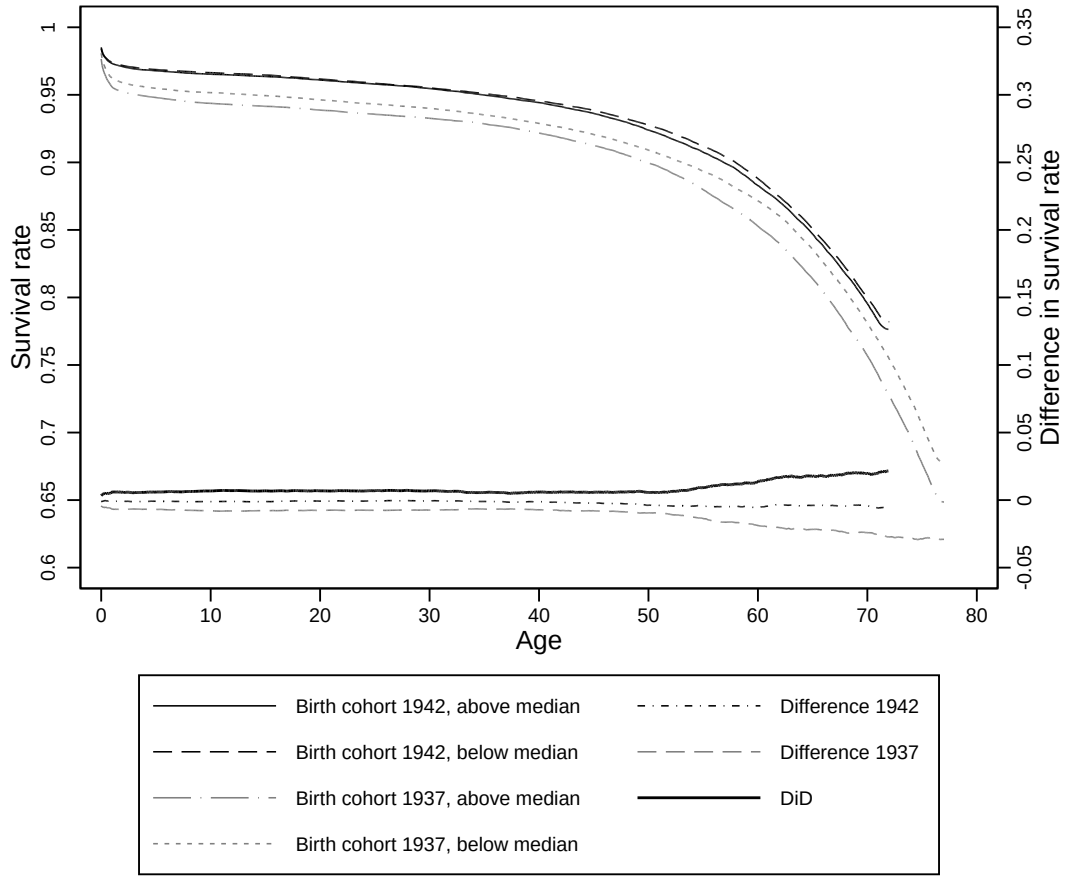



Figure 3 plots the survival curves for children born in 1937, the year before the intervention started, and children born in 1942, one of the years with the largest variation in utilization rates (compare Figures 1 and 2). We divide the two birth cohorts at the median of prenatal care utilization in 1942 as predicted from regressions on center densities. Black curves refer to children born in 1942 and gray curves refer to children born in 1937. While in 1937 the survival rate of children born in high-utilization regions was below the survival rate of children born in low-utilization regions, there is nearly no visible difference between high- and low-utilization regions

for children born in 1942. This is reflected in the double difference, the difference-in-difference (DiD), which we plot against the right y-axis. It implies that the effect on the survival rate of being born in a high-utilization county as compared to being born in a low-utilization county is slightly positive at all ages and starts to increase after about age 53.

Figure 4: Survival Curves for Birth Cohorts 1937 and 1942 Splitted at Median of Predicted Postnatal Care Utilization 1942

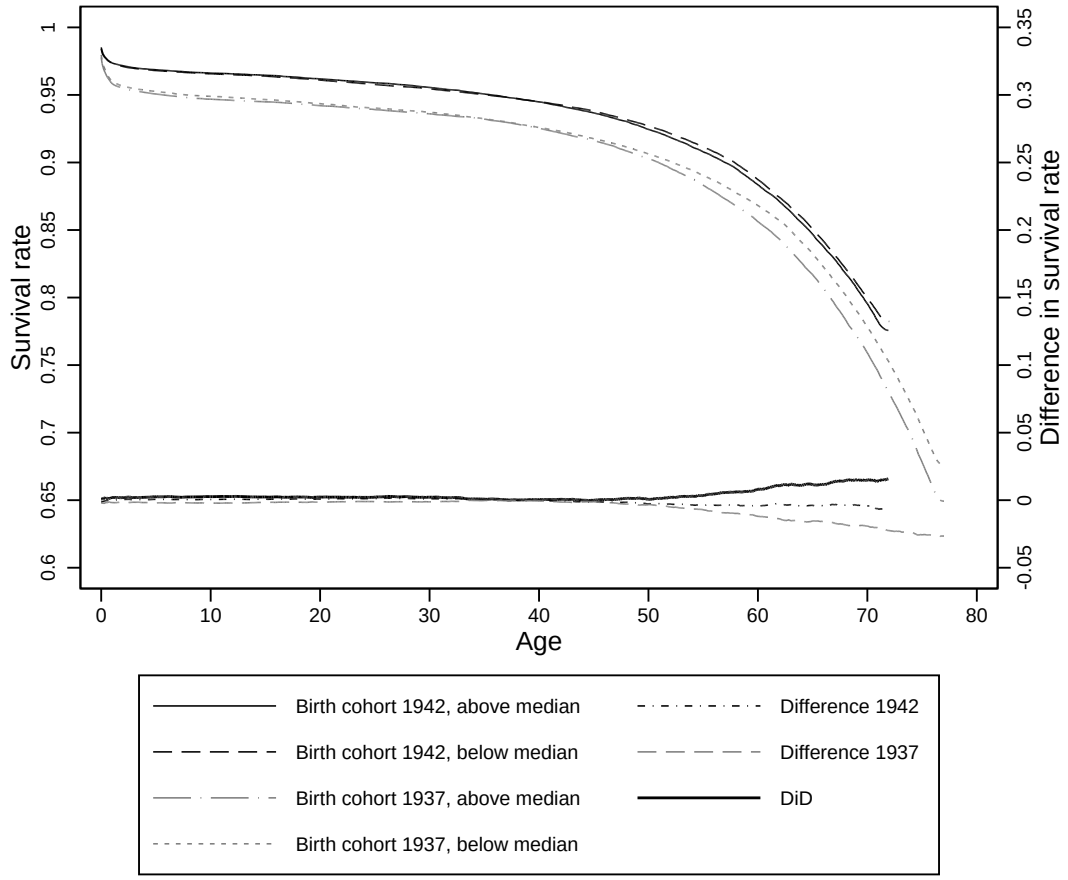



Figure 4 plots the analogous surival rates with regards to postnatal care utilization as predicted from center densities. Within the birth cohorts, the survival curves differ barely by level of utilization, which indicates an effect of the intervention that is close to zero. This is reflected by the double difference, which, however, becomes positive and increases after age 50.

In summary, our comparison of pre- and during-intervention children indicates a positive effect of prenatal health care on survival at all ages which increases from

the mid 50s onwards. Similarly, the effect of postnatal health care, while being close to zero before age 50, becomes positive and increases above age 50. These results are in line with our expectation of positive intervention effects that increase over the life cycle.

In a second step, we present 2SLS estimates of intervention effects on individual mortality focusing on different time horizons. The utilization rates of pre- and postnatal care have been calculated based on the birth year, as described above in Section 4. In addition, they have been divided by the factor 1,000 because in many cases the estimation coefficients are quite small, which has to be taken into account when interpreting the following results.

Table 7: Second Stage, Individual Mortality

| | | | |
|---|---|---|---|
| *Died before reaching age 1* | | | |
| Prenatal care$_w$ | -0.8742** | -1.7948*** | -1.7859*** |
| | (0.3917) | (0.5731) | (0.5751) |
| Postnatal care$_w$ | 0.6490* | 1.0565** | 1.0458** |
| | (0.3664) | (0.4946) | (0.4978) |
| Observations | 1292421 | 1292421 | 1292421 |
| *Died before reaching age 5* | | | |
| Prenatal care$_w$ | -0.9239** | -2.1445*** | -2.1365*** |
| | (0.3925) | (0.6879) | (0.6891) |
| Postnatal care$_w$ | 0.7212* | 1.3303** | 1.3198** |
| | (0.3771) | (0.5789) | (0.5810) |
| Observations | 1292421 | 1292421 | 1292421 |
| *Died before reaching age 35* | | | |
| Prenatal care$_w$ | -1.0750** | -2.5903*** | -2.5849*** |
| | (0.4319) | (0.8439) | (0.8376) |
| Postnatal care$_w$ | 0.8063** | 1.4526** | 1.4418** |
| | (0.4102) | (0.6588) | (0.6568) |
| Observations | 1292421 | 1292421 | 1292421 |
| *Died before reaching age 63* | | | |
| Prenatal care$_w$ | -2.2687** | -6.6852*** | -6.6919*** |
| | (1.0434) | (2.0112) | (1.9923) |
| Postnatal care$_w$ | 1.7217* | 3.3928** | 3.3781** |
| | (0.9663) | (1.7183) | (1.7079) |
| Observations | 1292421 | 1292421 | 1292421 |
| County fixed effects | √ | √ | √ |
| Regional time trends | | √ | √ |
| Physician rate | | | √ |

Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A15 in the Appendix reports the first-stage regressions. While several densities have significant effects on utilization rates, particularly centers of type II and health care stations, the Angrist-Pischke F-statistics are quite low for all specifications and not even exceeding a value of 4. Therefore, the second stage results need to be interpreted with caution.

In Table 7 we report intervention effects on the probabilities of dying before reaching ages 1, 5, 35 and 63.[11] Robustly, prenatal care utilization has a significant negative effect in all specifications. In most of the specifications, postnatal care has significant positive effects on mortality, but this effect may be to small in comparison to fully compensate the negative effects measured for prenatal care.

Tables A16 and A17 report the reduced form regressions. The density of child care centers of type I has a significantly negative effect on mortality in the context of all considered time horizons. Furthermore, its effect seems to increase with age. While an increase of one standard deviation in the density of child care centers of type I decreases the probability of dying before age 1 by only 0.1%, it decreases the probability of dying before age 63 by 0.5%. Also the density of child care stations affects mortality in middle ages. An increase of one standard deviation in this density reduces the probability of dying before reaching age 35 by 0.2% and the probability of dying before age 63 by even 0.8%.

Overall, the 2SLS regression results are to be interpreted with severe caution. However, the reduced form regressions provide evidence for negative effects of postnatal health care on mortality which are robust across specifications and increase with age.

### 5.2.2 Health

In this subsection we present estimates of the intervention effects on various health outcomes from the ULF data sample. Appendix Tables A18 and A19 report the first stage regressions. Several specifications suggest significant effects of the densities of maternity centers of type II and maternity stations on prenatal care utilization and, likewise, of the densities of child care centers of both types and of child care stations on postnatal care utilization. The Angrist-Pischke test of excluded instruments indicates an F-statistic close to 10 only for the third, fourth and fifth columns of the

[11] As the Death Index ends in 2013, deaths occurring in the youngest birth cohort in our sample that was born in 1950 can be observed maximally up to age 63.

lower panel (F-values between 7.9 and 9.5). In addition to these specifications we will cautiously interpret the third, fourth and fifth columns of the medium panel in the following discussion, where the F-statistic is at least close to 6.

Because we estimated utilization effects on a large range of health outcomes, we shift the second stage regression tables to the Appendix (Tables A20 to A26) and only summarize the results here. Focusing only on specifications with F-statistics larger than 5, none of the regressions of any health outcome reveals robust and significant intervention effects. At least, the coefficients of prenatal care utilization exhibit the expected signs for most of the considered outcomes and are sometimes significant at the 10% level.

While our second stage regressions provide only little evidence that the interventions have mattered for long-term health, the reduced form regressions shown in Tables A27 to A33 deliver some support for this hypothesis. In particular, an increase of one standard deviation in the density of type I maternity centers in the previous year reduces the probability to have been diagnosed with a severe illness by 2.4% (Table A28, medium panel). Similarly, a decrease in the same outcome of 1.7% is measured for an increase in the density of maternity centers of type II by one standard deviation (Table A28, lower panel). Also, increasing the density of type I maternity centers in the previous year by one standard deviation reduces the number of long-term illnesses by 0.1 (Table A32, medium panel) as well as the probability of having a disability by 0.8% (Table A33, medium panel). The probability of being disabled is also reduced by 1.4%, when the density of maternity centers of type II increases by one standard deviation (Table A33, lower panel). Finally, there is also an unexpected effect. The medium panel of Table A31 suggests that an increase in the density of maternity centers of type I in the previous year reduces the probability to be able to run 100 meters.

Overall, while there is nearly no evidence for effects of pre- and postnatal health care utilization on health outcomes in the second stage, the reduced form regressions reveal some significant coefficients. Particularly the finding that maternity centers of type I are beneficial for health exhibits some degree of robustness.

### 5.2.3 Socioeconomic Status

This subsection discusses intervention effects on socioeconomic status as measured by education and wage. Again, we will focus on the specifications reported in the third, fourth and fifth columns of the medium and lowest panels of each table (the relevant first-stage regressions, delivered in Appendix Tables A18 and A19, are identical to those presented in the previous section).

Table 8: Second Stage, Secondary Education or Higher

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | 0.001 | -0.007 | 0.000 | -0.002 | 0.001 |
| | (0.003) | (0.006) | (0.006) | (0.007) | (0.006) |
| Postnatal care | 0.001 | 0.004 | -0.003 | -0.002 | -0.003 |
| | (0.002) | (0.004) | (0.005) | (0.005) | (0.005) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | 0.003 | 0.002 | 0.007** | 0.007** | 0.008*** |
| | (0.002) | (0.004) | (0.003) | (0.003) | (0.003) |
| Postnatal care | -0.000 | -0.000 | -0.007** | -0.006** | -0.007** |
| | (0.002) | (0.003) | (0.003) | (0.003) | (0.003) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | 0.002 | -0.001 | -0.002 | -0.003 | -0.001 |
| | (0.003) | (0.004) | (0.003) | (0.003) | (0.003) |
| Postnatal care$_{(+1)}$ | 0.000 | -0.000 | -0.002 | -0.002 | -0.003 |
| | (0.003) | (0.004) | (0.003) | (0.004) | (0.004) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 8 presents the second stage results for effects on education. The coefficients in the medium panel indicate that an increase in prenatal care utilization by one percentage point increases the probability to hold at least a secondary schooling degree by 0.8%. However, the effect of postnatal care utilization points in the opposite direction, which is difficult to interpret. The lower panel does not show significant coefficients. The corresponding reduced form regressions are reported in Appendix Table A35. The coefficients shown here are mostly insignicant, while an increase in the density of child care centers of type II of one standard deviation unexpectedly decreases the probability of receiving a secondary schooling degree,

even after controlling for social background.

Table 9 reports the results from wage regressions. After controlling for social background, only the medium panel shows a positive wage effect of prenatal care in the previous year, signficant at 10%. The reduced form regressions delivered in Table A34 provide more support for positive intervention effects on labor income. An increase of one standard deviation in the density of maternity centers of type I in the previous year increases the labor income by 7.6% (medium panel). Increasing the density of maternity care stations by one standard deviation increases labor income by even 16.1% (lower panel).

Table 9: Second Stage, *ln* of Gross Labor Income

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | 0.009* | 0.004 | 0.011 | 0.010 | 0.013 |
| | (0.005) | (0.005) | (0.013) | (0.010) | (0.013) |
| Postnatal care | -0.006 | -0.002 | -0.008 | -0.007 | -0.009 |
| | (0.004) | (0.004) | (0.009) | (0.008) | (0.010) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | -0.002 | 0.005 | 0.008 | 0.008 | 0.012* |
| | (0.004) | (0.007) | (0.006) | (0.006) | (0.007) |
| Postnatal care | 0.004 | -0.002 | -0.003 | -0.003 | -0.006 |
| | (0.004) | (0.007) | (0.007) | (0.007) | (0.008) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | 0.014** | 0.011* | 0.011 | 0.010 | 0.008 |
| | (0.006) | (0.007) | (0.008) | (0.007) | (0.006) |
| Postnatal care$_{(+1)}$ | -0.011* | -0.014* | -0.012** | -0.011* | -0.008 |
| | (0.006) | (0.007) | (0.006) | (0.006) | (0.006) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Overall, the results for education effects are ambiguous. With regards to labor income, positive intervention effects are visible in the reduced form, where considerable gains are suggested.

# 6 Conclusion

In this paper, we measure the short-run effects of the universal introduction of free ante- and neonatal health care on fertility, infant mortality, stillbirths and maternal mortality using data from official Swedish statistics. Based on the Swedish Death Index which comprises a majority of the deaths of members of the treated birth cohorts that occurred until 2013, we estimate mortality effects at the individual level. Finally, using individual-level data from the 1980s, we identify long-run effects on schooling, wage and a variety of self-assessed health variables under control for social background.

We find negative effects on mortality of both pre- and postnatal care. Using aggregated data we find that an increase in the prenatal care utilization rate of 1 percentage point decreases the infant mortality rate by 0.9%. Reduced form regressions based on the Swedish Death Index suggest significant negative effects of different types of child care facilities that increase when the considered time horizon is extended. For instance, increasing the density of child care centers of type I by one standard deviation decreases the probability of dying before age 1 by 0.1%, while it decreases the probability of dying before age 63 by 0.5%. A standard deviation increase in child care stations reduces the probability of dying before age 63 by even 0.8%. A difference-in-difference comparison of survival rates shows a rise in the intervention effects beyond age 50 and suggests that postnatal care affects mortality only beyond age 50. Reduced form regressions for health and labor income indicate significant effects of prenatal care. In particular, the densities of maternity centers of types I and II have significant negative effects on the probabilities to be disabled and to be diagnosed with a severe illness. The density of maternity centers of type I further reduces the number of long-term illnesses. With regards to labor income, a one standard deviation increase in the density of maternity centers of type I is measured to increase labor income by 7.6%, while such an increase in the density of maternity stations labor income by even 16.1%. Finally, we find some evidence for beneficial effects from postnatal care on maternal mortality from eclampsia and from childbed fever after childbirth. There are no effects on fertility and stillbirths, and the effects on education are ambiguous.

Overall, beneficial effects from prenatal care are measured more frequently and more robustly across specifications compared to gains from postnatal care. This

may suggest that prenatal care is the more effective type of intervention. Another lesson from our analysis is that different qualities of health checks seem to matter. As Currie and Rossin-Slater (2015) point out, there is little support for the quantity of prenatal care being a critical dimension, possibly because the quality is the more important variable. Yet, there is almost no evidence existent on the impacts of prenatal care quality.

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# Appendix

Table A1: Variable Definitions

| | |
|---|---|
| **Outcome variables** | |
| *Aggregated data:* | |
| Infant mortality | number of infant deaths per 10,000 births |
| Live births | number of live births per 1,000 births |
| Stillbirths | number of stillbirths per 10,000 births |
| Fertility | number of births per 1,000 inhabitants in subsequent year |
| Fertility, married women | number of births to married women per 1,000 inhabitants in subsequent year |
| Fertility, unmarried women | number of births to unmarried women (incl. engaged) per 1,000 inhabitants in subsequent year |
| Fertility, engaged women | number of births to engaged women per 1,000 inhabitants in subsequent year |
| Maternal mortality | number of maternal deaths per 10,000 mothers |
| Maternal mortality from childbed fever | number of maternal deaths from childbed fever (after childbirth or miscarriage) per 10,000 mothers |
| Maternal mortality from childbed fever after childbirth | number of maternal deaths from childbed fever after childbirth per 10,000 mothers |
| Maternal mortality from childbed fever after miscarriage | number of maternal deaths from childbed fever after miscarriage per 10,000 mothers |
| Maternal mortality from eclampsia | number of maternal deaths from eclampsia per 10,000 mothers |
| Maternal mortality from other cause of death | number of maternal deaths from other cause of death per 10,000 mothers |
| *ULF data:* | |
| Gross labor income | real gross labor income |
| *ln* of gross labor income | *ln* of real gross labor income |
| Secondary education or higher | dummy variable indicating if the individual holds a secondary schooling degree or higher |
| Good general health condition | dummy variable indicating if the individual reports a good general health condition (instead of average or bad) |
| Had a severe diagnosis | dummy variable indicating if the individual was diagnosed with a severe illness |
| Regular medical treatment | dummy variable indicating if the individual receives regular medical treatment |

| | |
|---|---|
| Normal weight | dummy variable indicating if the individual's body mass index is between 18.50 and 24.99 |
| Only able to run less than 100 meters | dummy variable indicating if the individual is not able to run 100 meters |
| Number of long-term illnesses | number of long-term illnesses the individual was diagnosed with |
| Disabled | dummy variable indicating if the individual is disabled |
| *Death Index:* | |
| Probability of dying before reaching age 1 | dummy variable indicating if the individual died before reaching age 1 |
| Probability of dying before reaching age 5 | dummy variable indicating if the individual died before reaching age 5 |
| Probability of dying before reaching age 40 | dummy variable indicating if the individual died before reaching age 40 |
| Probability of dying before reaching age 63 | dummy variable indicating if the individual died before reaching age 63 |

**Independent variables**

| | |
|---|---|
| *Endogenous regressors:* | |
| Prenatal care | proportion of expectant mothers who utilize health care in % |
| Postnatal care | proportion of infants who receive health care in % |
| *Instruments:* | |
| MtypI | density of type I maternity centers, defined as current number of maternity centers of type I divided by birth number in subsequent year,† normalized by one standard deviation |
| MtypII | density of type II maternity centers, defined as current number of maternity centers of type II divided by birth number in subsequent year,† normalized by one standard deviation |
| Mstat | density of maternity stations, defined as current number of maternity stations divided by birth number in subsequent year,† normalized by one standard deviation |
| CtypI | density of type I child care centers, defined as number of child care centers of type I divided by number of births†, normalized by one standard deviation |
| CtypII | density of type II child care centers, defined as number of child care centers of type II divided by number of births†, normalized by one standard deviation |
| Cstat | density of child care stations, defined as number of child care stations divided by number of births†, normalized by one standard deviation |

| | |
|---|---|
| *Control variables:* | |
| Avg. income 1930 | average hourly income in 1930, measured at district level (census 1930) |
| Ind. shares 1930 | industry shares in 1930, measured at parish level (census 1930) |
| County fixed effects | dummy variables for 24 counties and Stockholm |
| Regional time trends | county-specific linear time trends |
| Physician rate | number of physicians per 1,000 inhabitants |
| Social background | dummy variables for occupation of father, foreign parental background and number of siblings (ULF) |
| *Indices:* | |
| $variable_{(-1)}$ | *variable* in previous year |
| $variable_{(+1)}$ | *variable* in subsequent year |
| $variable_{w}$ | (Prenatal care, MtypI, MtypII, Mstat:) *variable* during the individual gestational period, calculated as weighted average of *variable* in previous and current year with weights being defined according to date of birth |
| $variable_{w}$ | (Postnatal care, CtypI, CtypII, Cstat:) *variable* during the individual's first year of life, calculated as weighted average of *variable* in current and subsequent year with weights being defined according to date of birth |

† For the regressions of fertility, numbers of centers are divided by current population numbers.

Figure A1: Infant Mortality Rate, 1900-1960

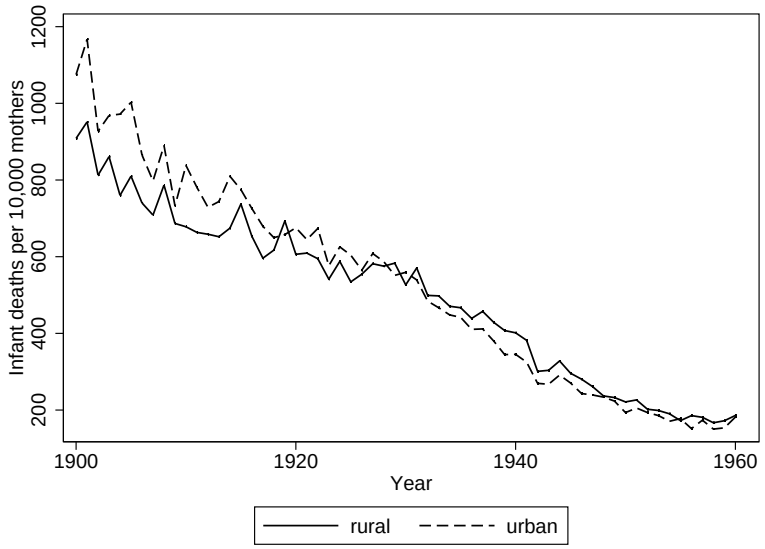

Figure A2: Stillbirth Rate, 1930-1960


Figure A3: Fertility Rate, 1900-1960

Figure A4: Fertility Rate by Level of Urbanization, 1930-1960

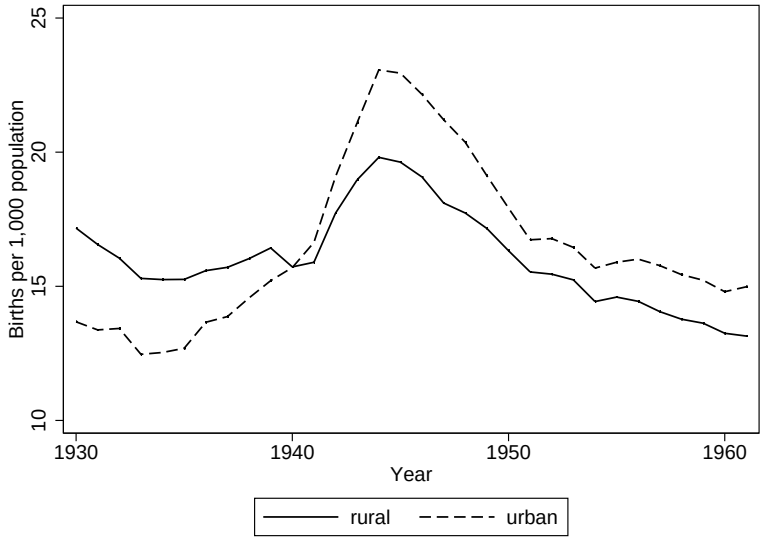


Figure A5: Maternal Mortality by Cause of Death, 1900-1960

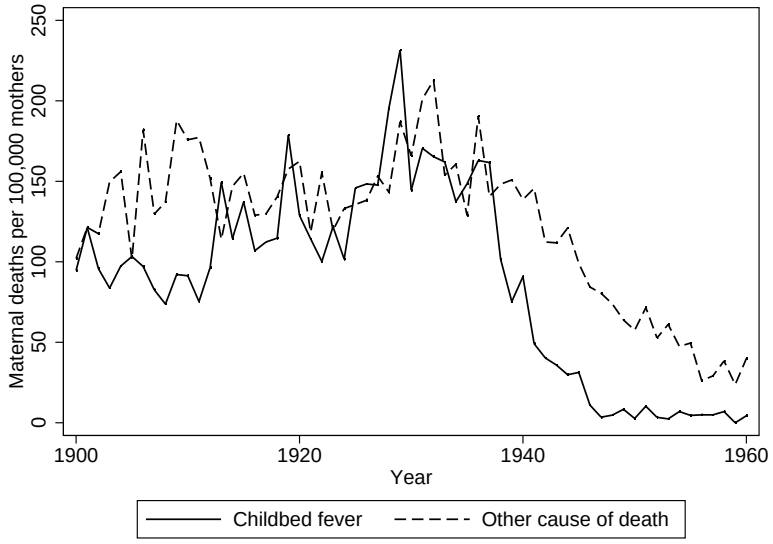

Figure A6: Maternal Mortality by Cause of Death, 1931-1960

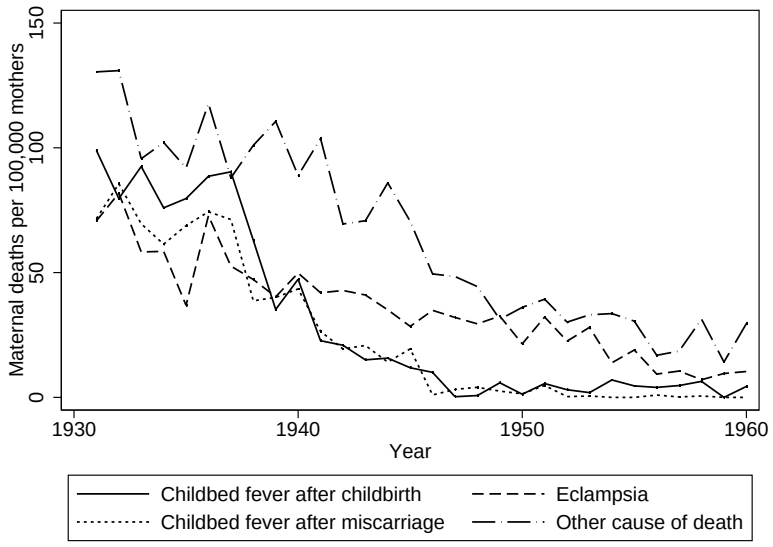

Table A2: Descriptive Statistics, Individual Samples

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| *Death Index* | | | | | |
| Year of birth | 1945.43 | 2.87 | 1940.00 | 1950.00 | 1292421 |
| Year of death | 1990.05 | 23.75 | 1940.00 | 2013.00 | 228270 |
| Died before reaching age 1 | 0.02 | 0.16 | 0.00 | 1.00 | 1292421 |
| Died before reaching age 5 | 0.03 | 0.17 | 0.00 | 1.00 | 1292421 |
| Died before reaching age 35 | 0.05 | 0.21 | 0.00 | 1.00 | 1292421 |
| Died before reaching age 63 | 0.13 | 0.34 | 0.00 | 1.00 | 1292421 |
| *ULF* | | | | | |
| Year of birth | 1945.26 | 2.99 | 1940.00 | 1950.00 | 6990 |
| Female | 0.50 | 0.50 | 0.00 | 1.00 | 6990 |
| Both parents born in Sweden | 0.97 | 0.17 | 0.00 | 1.00 | 6990 |
| At least two siblings | 0.55 | 0.50 | 0.00 | 1.00 | 6990 |
| Good general health condition | 0.83 | 0.38 | 0.00 | 1.00 | 6990 |
| Had a severe diagnosis | 0.12 | 0.32 | 0.00 | 1.00 | 6990 |
| Regular medical treatment | 0.23 | 0.42 | 0.00 | 1.00 | 6990 |
| Normal weight | 0.61 | 0.49 | 0.00 | 1.00 | 6990 |
| Only able to run less than 100m | 0.06 | 0.24 | 0.00 | 1.00 | 6990 |
| Number of long-term illnesses | 0.58 | 0.90 | 0.00 | 6.00 | 6990 |
| Disabled | 0.02 | 0.13 | 0.00 | 1.00 | 6990 |
| Gross labor income | 2037.83 | 20718.87 | 1.00 | 999999.00 | 6990 |
| Secondary education or higher | 0.74 | 0.44 | 0.00 | 1.00 | 6990 |

SD: standard deviation. N: number of observations.

Table A3: First Stage for Prenatal Care, Aggregated Outcomes

| | | | | |
|---|---|---|---|---|
| MtypI | 4.240 | 1.089 | 1.379 | 1.154 |
| | (3.362) | (1.709) | (1.353) | (1.252) |
| MtypII | -0.182 | 1.914 | 4.324*** | 4.311*** |
| | (3.424) | (2.327) | (1.441) | (1.320) |
| Mstat | 1.303 | -3.884 | 1.810 | 3.598 |
| | (13.774) | (15.025) | (9.669) | (9.196) |
| CtypI | -0.511 | 0.684 | 8.941** | 8.970*** |
| | (3.086) | (1.839) | (3.214) | (2.972) |
| CtypII | 3.806 | 5.108 | 2.540* | 2.587* |
| | (3.048) | (3.266) | (1.464) | (1.420) |
| Cstat | 5.916 | 16.086 | 7.219 | 5.643 |
| | (13.329) | (16.402) | (12.013) | (11.708) |
| Observations | 275 | 275 | 275 | 275 |
| APF | 0.45 | 1.07 | 0.45 | 0.54 |
| $\text{MtypI}_{(-1)}$ | 4.238 | 1.433 | 1.437 | 1.401 |
| | (3.343) | (1.644) | (1.026) | (1.009) |
| $\text{MtypII}_{(-1)}$ | 4.644** | 5.974*** | 6.188*** | 6.147*** |
| | (2.196) | (1.581) | (1.389) | (1.330) |
| $\text{Mstat}_{(-1)}$ | 9.897*** | 10.903*** | 9.126* | 9.207* |
| | (3.152) | (2.817) | (4.633) | (4.650) |
| CtypI | -2.326 | -0.315 | 2.338 | 2.298 |
| | (2.642) | (1.885) | (3.067) | (3.076) |
| CtypII | -1.062 | 1.390 | -1.122 | -1.116 |
| | (2.423) | (2.368) | (1.415) | (1.426) |
| Cstat | -2.230 | 2.066 | 1.119 | 1.207 |
| | (3.691) | (3.150) | (2.485) | (2.492) |
| Observations | 250 | 250 | 250 | 250 |
| APF | 1.93 | 3.63 | 8.07 | 7.80 |
| MtypI | 4.463 | 1.713 | 2.211 | 1.989 |
| | (3.346) | (1.820) | (1.451) | (1.362) |
| MtypII | 3.149 | 5.179*** | 6.338*** | 6.349*** |
| | (2.344) | (1.745) | (1.226) | (1.120) |
| Mstat | 9.277*** | 10.319*** | 10.190** | 10.473** |
| | (3.112) | (2.618) | (4.015) | (4.067) |
| $\text{CtypI}_{(+1)}$ | -1.467 | 0.259 | 1.834 | 1.634 |
| | (2.721) | (1.981) | (3.465) | (3.296) |
| $\text{CtypII}_{(+1)}$ | 0.054 | 1.546 | -1.178 | -1.298 |
| | (2.209) | (2.038) | (1.019) | (1.048) |
| $\text{Cstat}_{(+1)}$ | -2.050 | 1.425 | 2.197 | 2.001 |
| | (3.594) | (3.170) | (2.486) | (2.469) |
| Observations | 275 | 275 | 275 | 275 |
| APF | 1.85 | 3.97 | 8.71 | 8.20 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. APF: Angrist-Pischke multivariate F test of excluded instruments.

Table A4: First Stage for Postnatal Care, Aggregated Outcomes

| | | | | |
|---|---|---|---|---|
| MtypI | 8.180** | 3.178 | 2.493 | 2.306 |
| | (3.069) | (2.035) | (1.728) | (1.643) |
| MtypII | 3.962* | 7.422*** | 4.573** | 4.562*** |
| | (2.092) | (2.449) | (1.637) | (1.532) |
| Mstat | -23.472 | -38.954*** | -13.648 | -12.163 |
| | (15.013) | (12.122) | (8.747) | (8.525) |
| CtypI | -4.946** | -3.455* | 7.591*** | 7.615*** |
| | (1.925) | (1.912) | (2.270) | (2.132) |
| CtypII | 0.548 | 2.378 | 2.956 | 2.995 |
| | (2.617) | (2.428) | (2.168) | (2.157) |
| Cstat | 34.768** | 53.147*** | 27.187*** | 25.878** |
| | (15.318) | (12.592) | (9.521) | (9.353) |
| Observations | 275 | 275 | 275 | 275 |
| APF | 0.45 | 1.07 | 0.45 | 0.54 |
| $\text{MtypI}_{(-1)}$ | 6.269** | 1.297 | 1.413 | 1.353 |
| | (2.992) | (1.372) | (0.999) | (0.943) |
| $\text{MtypII}_{(-1)}$ | 5.774*** | 7.613*** | 4.066*** | 3.997*** |
| | (1.600) | (2.271) | (1.382) | (1.376) |
| $\text{Mstat}_{(-1)}$ | 1.757 | 1.728 | 6.423* | 6.558* |
| | (2.860) | (3.077) | (3.159) | (3.185) |
| CtypI | -2.853* | -0.405 | 4.533* | 4.467* |
| | (1.594) | (2.260) | (2.284) | (2.315) |
| CtypII | -1.551 | 3.654* | 4.093* | 4.103* |
| | (1.901) | (1.959) | (2.176) | (2.185) |
| Cstat | 9.099*** | 10.484** | 11.919* | 12.067* |
| | (3.240) | (4.541) | (6.123) | (6.088) |
| Observations | 250 | 250 | 250 | 250 |
| APF | 1.93 | 3.63 | 8.07 | 7.80 |
| MtypI | 6.273** | 2.394 | 1.906 | 1.936 |
| | (2.759) | (1.655) | (1.288) | (1.319) |
| MtypII | 4.758*** | 7.247*** | 4.520*** | 4.519*** |
| | (1.344) | (2.137) | (1.408) | (1.413) |
| Mstat | 1.172 | 0.504 | 6.383** | 6.345** |
| | (2.827) | (3.164) | (2.946) | (2.978) |
| $\text{CtypI}_{(+1)}$ | -2.855* | -0.483 | 2.735 | 2.761 |
| | (1.408) | (2.288) | (2.392) | (2.393) |
| $\text{CtypII}_{(+1)}$ | -0.870 | 3.032 | 3.527* | 3.543* |
| | (1.819) | (1.801) | (1.897) | (1.909) |
| $\text{Cstat}_{(+1)}$ | 8.416** | 9.324* | 12.536** | 12.562** |
| | (3.176) | (4.562) | (5.780) | (5.811) |
| Observations | 275 | 275 | 275 | 275 |
| APF | 1.85 | 3.97 | 8.71 | 8.20 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. APF: Angrist-Pischke multivariate F test of excluded instruments.

Table A5: Second Stage, Fertility of Married Women

| | | | | |
|---|---|---|---|---|
| Prenatal care | -0.006 | -0.005* | -0.012** | -0.012** |
| | (0.006) | (0.003) | (0.006) | (0.006) |
| Postnatal care | 0.005* | 0.004* | 0.008* | 0.008* |
| | (0.003) | (0.002) | (0.004) | (0.004) |
| Observations | 275 | 275 | 275 | 275 |
| Prenatal care$_{(-1)}$ | 0.004* | 0.002 | 0.001 | 0.001 |
| | (0.002) | (0.002) | (0.001) | (0.001) |
| Postnatal care | -0.001 | -0.001 | -0.000 | -0.000 |
| | (0.002) | (0.001) | (0.001) | (0.001) |
| Observations | 250 | 250 | 250 | 250 |
| Prenatal care | 0.001 | -0.000 | -0.001 | -0.001 |
| | (0.002) | (0.001) | (0.001) | (0.001) |
| Postnatal care$_{(+1)}$ | 0.001 | -0.000 | -0.001 | -0.001 |
| | (0.002) | (0.001) | (0.001) | (0.001) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A6: Second Stage, Fertility of Unmarried Women

| | | | | |
|---|---|---|---|---|
| Prenatal care | -0.008 | -0.004 | -0.014* | -0.014* |
| | (0.013) | (0.003) | (0.008) | (0.008) |
| Postnatal care | 0.006 | 0.003 | 0.011* | 0.011* |
| | (0.007) | (0.002) | (0.006) | (0.006) |
| Observations | 275 | 275 | 275 | 275 |
| Prenatal care$_{(-1)}$ | -0.007 | -0.001 | -0.002 | -0.002 |
| | (0.006) | (0.002) | (0.002) | (0.002) |
| Postnatal care | 0.009 | 0.000 | 0.001 | 0.001 |
| | (0.006) | (0.002) | (0.002) | (0.002) |
| Observations | 250 | 250 | 250 | 250 |
| Prenatal care | -0.007* | -0.000 | 0.001 | 0.001 |
| | (0.004) | (0.002) | (0.003) | (0.003) |
| Postnatal care$_{(+1)}$ | 0.009* | -0.000 | -0.002 | -0.002 |
| | (0.005) | (0.002) | (0.002) | (0.002) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A7: Second Stage, Fertility of Engaged Women

| | | | | |
|---|---|---|---|---|
| Prenatal care | -0.053 | -0.007 | 0.002 | 0.001 |
| | (0.051) | (0.010) | (0.011) | (0.011) |
| Postnatal care | 0.031 | 0.008 | 0.000 | 0.001 |
| | (0.029) | (0.007) | (0.008) | (0.008) |
| Observations | 225 | 225 | 225 | 225 |
| Prenatal care$_{(-1)}$ | -0.008 | 0.004 | -0.000 | -0.000 |
| | (0.009) | (0.004) | (0.004) | (0.004) |
| Postnatal care | 0.005 | -0.000 | 0.001 | 0.001 |
| | (0.008) | (0.003) | (0.004) | (0.004) |
| Observations | 200 | 200 | 200 | 200 |
| Prenatal care | -0.010 | 0.006 | 0.002 | 0.002 |
| | (0.011) | (0.006) | (0.005) | (0.005) |
| Postnatal care$_{(+1)}$ | 0.008 | -0.001 | -0.003 | -0.003 |
| | (0.010) | (0.005) | (0.003) | (0.003) |
| Observations | 225 | 225 | 225 | 225 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A8: Reduced Form, Infant Mortality

| | | | | |
|---|---|---|---|---|
| MtypI | -0.021 | -0.017 | -0.024 | -0.027 |
| | (0.018) | (0.017) | (0.019) | (0.021) |
| MtypII | -0.021 | -0.001 | -0.011 | -0.011 |
| | (0.037) | (0.025) | (0.034) | (0.037) |
| Mstat | -0.069 | 0.037 | -0.005 | 0.019 |
| | (0.175) | (0.130) | (0.151) | (0.148) |
| CtypI | -0.010 | 0.025 | -0.030 | -0.029 |
| | (0.031) | (0.020) | (0.081) | (0.080) |
| CtypII | 0.079* | 0.046 | 0.064* | 0.065* |
| | (0.041) | (0.028) | (0.036) | (0.037) |
| Cstat | 0.008 | -0.080 | -0.014 | -0.035 |
| | (0.183) | (0.123) | (0.136) | (0.135) |
| Observations | 275 | 275 | 275 | 275 |
| $\text{MtypI}_{(-1)}$ | -0.028 | -0.032*** | -0.041*** | -0.042*** |
| | (0.020) | (0.011) | (0.011) | (0.011) |
| $\text{MtypII}_{(-1)}$ | -0.034 | -0.021 | -0.023 | -0.024 |
| | (0.028) | (0.014) | (0.032) | (0.030) |
| $\text{Mstat}_{(-1)}$ | -0.060** | -0.019 | -0.042 | -0.040 |
| | (0.027) | (0.031) | (0.040) | (0.041) |
| CtypI | -0.008 | 0.021 | -0.026 | -0.028 |
| | (0.030) | (0.021) | (0.074) | (0.072) |
| CtypII | 0.091*** | 0.066*** | 0.068*** | 0.068*** |
| | (0.031) | (0.015) | (0.019) | (0.019) |
| Cstat | -0.005 | -0.038 | 0.002 | 0.005 |
| | (0.037) | (0.044) | (0.034) | (0.034) |
| Observations | 250 | 250 | 250 | 250 |
| MtypI | -0.015 | -0.016 | -0.019 | -0.022 |
| | (0.018) | (0.016) | (0.015) | (0.016) |
| MtypII | 0.005 | 0.014 | 0.022 | 0.022 |
| | (0.024) | (0.018) | (0.026) | (0.027) |
| Mstat | -0.013 | 0.032 | -0.006 | -0.002 |
| | (0.032) | (0.032) | (0.037) | (0.037) |
| $\text{CtypI}_{(+1)}$ | -0.018 | 0.008 | -0.093* | -0.096* |
| | (0.030) | (0.020) | (0.050) | (0.051) |
| $\text{CtypII}_{(+1)}$ | 0.054* | 0.030 | 0.030 | 0.028 |
| | (0.030) | (0.028) | (0.031) | (0.031) |
| $\text{Cstat}_{(+1)}$ | -0.048 | -0.113*** | -0.082 | -0.085 |
| | (0.048) | (0.039) | (0.051) | (0.051) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A9: Reduced Form, Stillbirths

| | | | | |
|---|---|---|---|---|
| MtypI | -0.032 | 0.008 | 0.003 | 0.007 |
| | (0.024) | (0.014) | (0.015) | (0.016) |
| MtypII | 0.005 | -0.003 | 0.032 | 0.032 |
| | (0.041) | (0.060) | (0.069) | (0.066) |
| Mstat | 0.391*** | 0.303** | 0.317** | 0.284** |
| | (0.126) | (0.118) | (0.124) | (0.125) |
| CtypI | 0.001 | -0.005 | -0.026 | -0.027 |
| | (0.015) | (0.013) | (0.034) | (0.038) |
| CtypII | 0.023 | -0.010 | -0.021 | -0.022 |
| | (0.047) | (0.053) | (0.068) | (0.066) |
| Cstat | -0.386*** | -0.269** | -0.293** | -0.264* |
| | (0.125) | (0.127) | (0.142) | (0.147) |
| Observations | 275 | 275 | 275 | 275 |
| $\text{MtypI}_{(-1)}$ | -0.028 | 0.013 | 0.008 | 0.010 |
| | (0.027) | (0.011) | (0.012) | (0.011) |
| $\text{MtypII}_{(-1)}$ | -0.033 | -0.037 | -0.035 | -0.033 |
| | (0.028) | (0.031) | (0.027) | (0.026) |
| $\text{Mstat}_{(-1)}$ | -0.004 | 0.008 | -0.045 | -0.048 |
| | (0.049) | (0.043) | (0.076) | (0.076) |
| CtypI | -0.011 | -0.018 | -0.038 | -0.036 |
| | (0.014) | (0.013) | (0.047) | (0.051) |
| CtypII | 0.052 | -0.004 | -0.001 | -0.001 |
| | (0.033) | (0.028) | (0.037) | (0.036) |
| Cstat | 0.002 | 0.040 | 0.040 | 0.037 |
| | (0.035) | (0.046) | (0.066) | (0.064) |
| Observations | 250 | 250 | 250 | 250 |
| MtypI | -0.030 | 0.003 | -0.001 | 0.003 |
| | (0.024) | (0.013) | (0.014) | (0.014) |
| MtypII | -0.005 | -0.009 | 0.015 | 0.015 |
| | (0.024) | (0.028) | (0.039) | (0.037) |
| Mstat | 0.070** | 0.080** | 0.032 | 0.026 |
| | (0.028) | (0.029) | (0.080) | (0.078) |
| $\text{CtypI}_{(+1)}$ | -0.003 | -0.014 | 0.021 | 0.024 |
| | (0.013) | (0.012) | (0.026) | (0.029) |
| $\text{CtypII}_{(+1)}$ | 0.029 | -0.018 | -0.015 | -0.012 |
| | (0.031) | (0.024) | (0.026) | (0.025) |
| $\text{Cstat}_{(+1)}$ | -0.066** | -0.055 | -0.063 | -0.059 |
| | (0.032) | (0.033) | (0.060) | (0.061) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A10: Reduced Form, Fertility

| | | | | |
|---|---|---|---|---|
| MtypI | 0.016 | -0.005 | -0.002 | -0.001 |
| | (0.013) | (0.007) | (0.009) | (0.008) |
| MtypII | 0.012 | -0.013 | -0.011 | -0.011 |
| | (0.015) | (0.009) | (0.008) | (0.007) |
| Mstat | -0.180* | -0.165*** | -0.156*** | -0.163*** |
| | (0.096) | (0.042) | (0.036) | (0.036) |
| CtypI | -0.044*** | -0.041*** | -0.045*** | -0.045*** |
| | (0.011) | (0.006) | (0.015) | (0.015) |
| CtypII | 0.004 | 0.004 | -0.005 | -0.005 |
| | (0.018) | (0.008) | (0.007) | (0.007) |
| Cstat | 0.169 | 0.146*** | 0.156*** | 0.162*** |
| | (0.099) | (0.042) | (0.036) | (0.037) |
| Observations | 275 | 275 | 275 | 275 |
| $\text{MtypI}_{(-1)}$ | 0.018 | 0.002 | 0.005 | 0.005 |
| | (0.014) | (0.004) | (0.003) | (0.003) |
| $\text{MtypII}_{(-1)}$ | 0.014 | 0.001 | -0.003 | -0.003 |
| | (0.011) | (0.006) | (0.005) | (0.005) |
| $\text{Mstat}_{(-1)}$ | -0.015 | -0.002 | 0.016 | 0.016 |
| | (0.013) | (0.013) | (0.014) | (0.014) |
| CtypI | -0.042*** | -0.039*** | -0.022** | -0.021** |
| | (0.009) | (0.007) | (0.010) | (0.010) |
| CtypII | 0.006 | -0.006 | -0.007 | -0.007 |
| | (0.015) | (0.005) | (0.006) | (0.006) |
| Cstat | 0.008 | -0.018 | 0.004 | 0.004 |
| | (0.015) | (0.012) | (0.011) | (0.011) |
| Observations | 250 | 250 | 250 | 250 |
| MtypI | 0.014 | -0.006 | -0.005 | -0.004 |
| | (0.013) | (0.006) | (0.009) | (0.009) |
| MtypII | 0.012 | -0.006 | -0.009 | -0.009 |
| | (0.012) | (0.006) | (0.007) | (0.006) |
| Mstat | -0.021* | -0.006 | -0.006 | -0.006 |
| | (0.010) | (0.007) | (0.011) | (0.011) |
| $\text{CtypI}_{(+1)}$ | -0.033*** | -0.034*** | -0.027*** | -0.027*** |
| | (0.008) | (0.008) | (0.009) | (0.009) |
| $\text{CtypII}_{(+1)}$ | 0.009 | 0.002 | -0.001 | -0.001 |
| | (0.015) | (0.007) | (0.006) | (0.006) |
| $\text{Cstat}_{(+1)}$ | 0.012 | -0.027* | -0.011 | -0.011 |
| | (0.016) | (0.014) | (0.012) | (0.012) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A11: Reduced Form, Fertility of Married Women

| | | | | |
|---|---|---|---|---|
| MtypI | 0.021 | -0.004 | -0.002 | -0.001 |
| | (0.015) | (0.007) | (0.008) | (0.007) |
| MtypII | 0.003 | -0.015 | -0.012 | -0.012 |
| | (0.017) | (0.010) | (0.009) | (0.008) |
| Mstat | -0.232** | -0.176*** | -0.140*** | -0.148*** |
| | (0.108) | (0.039) | (0.039) | (0.039) |
| CtypI | -0.055*** | -0.043*** | -0.047*** | -0.047*** |
| | (0.014) | (0.006) | (0.016) | (0.016) |
| CtypII | 0.016 | 0.005 | -0.007 | -0.007 |
| | (0.018) | (0.009) | (0.008) | (0.007) |
| Cstat | 0.210* | 0.157*** | 0.144*** | 0.151*** |
| | (0.110) | (0.038) | (0.037) | (0.038) |
| Observations | 275 | 275 | 275 | 275 |
| $\text{MtypI}_{(-1)}$ | 0.023 | 0.003 | 0.005 | 0.005 |
| | (0.016) | (0.004) | (0.004) | (0.004) |
| $\text{MtypII}_{(-1)}$ | 0.009 | 0.000 | -0.003 | -0.003 |
| | (0.013) | (0.006) | (0.005) | (0.005) |
| $\text{Mstat}_{(-1)}$ | -0.014 | -0.002 | 0.021 | 0.021 |
| | (0.013) | (0.014) | (0.013) | (0.014) |
| CtypI | -0.050*** | -0.041*** | -0.021** | -0.020* |
| | (0.013) | (0.008) | (0.010) | (0.010) |
| CtypII | 0.013 | -0.006 | -0.009 | -0.009 |
| | (0.016) | (0.006) | (0.006) | (0.006) |
| Cstat | -0.005 | -0.016 | 0.006 | 0.006 |
| | (0.016) | (0.012) | (0.011) | (0.011) |
| Observations | 250 | 250 | 250 | 250 |
| MtypI | 0.019 | -0.005 | -0.004 | -0.004 |
| | (0.016) | (0.006) | (0.008) | (0.008) |
| MtypII | 0.008 | -0.008 | -0.011 | -0.011* |
| | (0.014) | (0.006) | (0.007) | (0.007) |
| Mstat | -0.021* | -0.007 | -0.002 | -0.003 |
| | (0.011) | (0.008) | (0.013) | (0.013) |
| $\text{CtypI}_{(+1)}$ | -0.040*** | -0.036*** | -0.027*** | -0.027*** |
| | (0.012) | (0.009) | (0.009) | (0.009) |
| $\text{CtypII}_{(+1)}$ | 0.018 | 0.003 | -0.001 | -0.000 |
| | (0.016) | (0.009) | (0.008) | (0.008) |
| $\text{Cstat}_{(+1)}$ | 0.001 | -0.027* | -0.010 | -0.009 |
| | (0.022) | (0.015) | (0.014) | (0.014) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A12: Reduced Form, Fertility of Unmarried Women

| | | | | |
|---|---|---|---|---|
| MtypI | -0.014 | -0.012 | -0.006 | -0.007 |
| | (0.029) | (0.016) | (0.017) | (0.018) |
| MtypII | 0.092* | 0.008 | -0.002 | -0.002 |
| | (0.045) | (0.014) | (0.012) | (0.012) |
| Mstat | 0.098 | -0.103 | -0.308** | -0.301** |
| | (0.231) | (0.148) | (0.122) | (0.127) |
| CtypI | 0.018 | -0.019* | -0.026 | -0.026 |
| | (0.039) | (0.009) | (0.028) | (0.030) |
| CtypII | -0.101* | -0.008 | 0.010 | 0.010 |
| | (0.059) | (0.015) | (0.014) | (0.015) |
| Cstat | -0.023 | 0.088 | 0.300** | 0.294** |
| | (0.244) | (0.154) | (0.114) | (0.118) |
| Observations | 275 | 275 | 275 | 275 |
| $\text{MtypI}_{(-1)}$ | -0.018 | -0.014 | -0.007 | -0.008 |
| | (0.030) | (0.010) | (0.009) | (0.009) |
| $\text{MtypII}_{(-1)}$ | 0.052 | 0.002 | -0.000 | -0.001 |
| | (0.034) | (0.015) | (0.021) | (0.021) |
| $\text{Mstat}_{(-1)}$ | -0.027 | -0.009 | -0.005 | -0.004 |
| | (0.034) | (0.023) | (0.032) | (0.033) |
| CtypI | 0.012 | -0.021 | -0.026 | -0.026 |
| | (0.042) | (0.012) | (0.036) | (0.039) |
| CtypII | -0.064 | 0.002 | 0.015 | 0.015 |
| | (0.047) | (0.012) | (0.015) | (0.015) |
| Cstat | 0.097 | -0.025 | 0.012 | 0.013 |
| | (0.069) | (0.027) | (0.036) | (0.037) |
| Observations | 250 | 250 | 250 | 250 |
| MtypI | -0.019 | -0.015 | -0.006 | -0.008 |
| | (0.032) | (0.016) | (0.018) | (0.019) |
| MtypII | 0.055* | 0.006 | 0.013 | 0.013 |
| | (0.032) | (0.011) | (0.018) | (0.018) |
| Mstat | -0.011 | 0.007 | -0.008 | -0.006 |
| | (0.034) | (0.024) | (0.031) | (0.032) |
| $\text{CtypI}_{(+1)}$ | 0.012 | -0.015 | -0.021 | -0.022 |
| | (0.039) | (0.013) | (0.029) | (0.028) |
| $\text{CtypII}_{(+1)}$ | -0.067 | -0.002 | -0.003 | -0.004 |
| | (0.042) | (0.018) | (0.022) | (0.022) |
| $\text{Cstat}_{(+1)}$ | 0.079 | -0.038 | -0.021 | -0.022 |
| | (0.072) | (0.028) | (0.031) | (0.031) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A13: Reduced Form, Fertility of Engaged Women

| | | | | |
|---|---|---|---|---|
| MtypI | 0.066 | 0.015 | -0.027 | -0.026 |
| | (0.043) | (0.021) | (0.018) | (0.016) |
| MtypII | 0.167** | 0.071* | 0.010 | 0.010 |
| | (0.066) | (0.038) | (0.030) | (0.031) |
| Mstat | 0.046 | -0.042 | -0.277 | -0.279 |
| | (0.399) | (0.278) | (0.334) | (0.351) |
| CtypI | -0.032 | -0.087** | 0.094 | 0.094 |
| | (0.087) | (0.034) | (0.105) | (0.104) |
| CtypII | -0.244*** | -0.041 | 0.027 | 0.026 |
| | (0.080) | (0.048) | (0.039) | (0.039) |
| Cstat | -0.001 | 0.051 | 0.211 | 0.213 |
| | (0.401) | (0.277) | (0.300) | (0.320) |
| Observations | 225 | 225 | 225 | 225 |
| $\text{MtypI}_{(-1)}$ | 0.064 | 0.026* | 0.008 | 0.008 |
| | (0.043) | (0.015) | (0.015) | (0.015) |
| $\text{MtypII}_{(-1)}$ | 0.071 | 0.034 | -0.011 | -0.011 |
| | (0.046) | (0.030) | (0.029) | (0.030) |
| $\text{Mstat}_{(-1)}$ | -0.040 | 0.016 | 0.015 | 0.015 |
| | (0.071) | (0.045) | (0.073) | (0.073) |
| CtypI | -0.013 | -0.067** | 0.043 | 0.043 |
| | (0.092) | (0.030) | (0.150) | (0.149) |
| CtypII | -0.162** | -0.004 | 0.034 | 0.034 |
| | (0.067) | (0.039) | (0.038) | (0.039) |
| Cstat | 0.061 | -0.035 | -0.027 | -0.027 |
| | (0.097) | (0.055) | (0.088) | (0.088) |
| Observations | 200 | 200 | 200 | 200 |
| MtypI | 0.054 | 0.010 | -0.021 | -0.021 |
| | (0.045) | (0.020) | (0.017) | (0.016) |
| MtypII | 0.095* | 0.063* | 0.032 | 0.032 |
| | (0.048) | (0.031) | (0.036) | (0.036) |
| Mstat | -0.068 | -0.006 | -0.042 | -0.042 |
| | (0.062) | (0.050) | (0.079) | (0.079) |
| $\text{CtypI}_{(+1)}$ | -0.064 | -0.108*** | -0.042 | -0.042 |
| | (0.076) | (0.019) | (0.069) | (0.069) |
| $\text{CtypII}_{(+1)}$ | -0.188** | -0.044 | -0.012 | -0.012 |
| | (0.069) | (0.032) | (0.027) | (0.027) |
| $\text{Cstat}_{(+1)}$ | 0.085 | -0.013 | -0.016 | -0.017 |
| | (0.113) | (0.056) | (0.069) | (0.070) |
| Observations | 225 | 225 | 225 | 225 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A14: Reduced Form, Maternal Mortality

| | | | | |
|---|---|---|---|---|
| MtypI | -0.018 | -0.027 | 0.002 | -0.004 |
| | (0.048) | (0.071) | (0.091) | (0.089) |
| MtypII | -0.148 | -0.183 | -0.049 | -0.050 |
| | (0.146) | (0.184) | (0.200) | (0.203) |
| Mstat | 0.829* | 0.932** | 0.413 | 0.465 |
| | (0.404) | (0.451) | (0.834) | (0.879) |
| CtypI | -0.172** | -0.174* | -0.367 | -0.366 |
| | (0.070) | (0.090) | (0.362) | (0.353) |
| CtypII | 0.112 | 0.252 | 0.140 | 0.141 |
| | (0.147) | (0.182) | (0.302) | (0.306) |
| Cstat | -0.857* | -0.980* | -0.511 | -0.556 |
| | (0.437) | (0.501) | (0.781) | (0.828) |
| Observations | 275 | 275 | 275 | 275 |
| $\text{MtypI}_{(-1)}$ | 0.042 | 0.045 | 0.088 | 0.086 |
| | (0.050) | (0.054) | (0.065) | (0.064) |
| $\text{MtypII}_{(-1)}$ | -0.070 | 0.026 | 0.189 | 0.186 |
| | (0.117) | (0.112) | (0.123) | (0.121) |
| $\text{Mstat}_{(-1)}$ | 0.148 | 0.234 | 0.156 | 0.161 |
| | (0.194) | (0.206) | (0.255) | (0.259) |
| CtypI | -0.195** | -0.189 | -0.655 | -0.657 |
| | (0.091) | (0.117) | (0.401) | (0.391) |
| CtypII | 0.030 | -0.000 | 0.024 | 0.024 |
| | (0.116) | (0.126) | (0.159) | (0.160) |
| Cstat | -0.179 | -0.283 | -0.150 | -0.145 |
| | (0.165) | (0.186) | (0.268) | (0.267) |
| Observations | 250 | 250 | 250 | 250 |
| MtypI | -0.013 | -0.019 | -0.014 | -0.019 |
| | (0.053) | (0.071) | (0.098) | (0.097) |
| MtypII | -0.099 | -0.060 | 0.014 | 0.014 |
| | (0.088) | (0.067) | (0.070) | (0.071) |
| Mstat | -0.113 | -0.030 | -0.128 | -0.122 |
| | (0.106) | (0.114) | (0.246) | (0.247) |
| $\text{CtypI}_{(+1)}$ | -0.181*** | -0.180*** | -0.121 | -0.125 |
| | (0.046) | (0.064) | (0.311) | (0.307) |
| $\text{CtypII}_{(+1)}$ | 0.040 | 0.048 | 0.006 | 0.004 |
| | (0.085) | (0.125) | (0.150) | (0.150) |
| $\text{Cstat}_{(+1)}$ | 0.102 | 0.049 | 0.110 | 0.106 |
| | (0.110) | (0.178) | (0.168) | (0.165) |
| Observations | 275 | 275 | 275 | 275 |
| Avg. income 1930 | √ | | | |
| Occ. shares 1930 | √ | | | |
| County fixed effects | | √ | √ | √ |
| Regional time trends | | | √ | √ |
| Physician rate | | | | √ |

Regressions include birth year fixed effects and are weighted by birth numbers. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A15: First Stage, Individual Mortality

| | | | |
|---|---|---|---|
| *Prenatal care* | | | |
| $\text{MtypI}_w$ | -0.0007 | 0.0001 | 0.0001 |
| | (0.0009) | (0.0004) | (0.0004) |
| $\text{MtypII}_w$ | 0.0027** | 0.0012** | 0.0011** |
| | (0.0010) | (0.0006) | (0.0005) |
| $\text{Mstat}_w$ | 0.0055** | 0.0021 | 0.0022 |
| | (0.0024) | (0.0014) | (0.0014) |
| $\text{CtypI}_w$ | -0.0003 | 0.0010 | 0.0009 |
| | (0.0012) | (0.0008) | (0.0008) |
| $\text{CtypII}_w$ | 0.0032*** | 0.0015** | 0.0015** |
| | (0.0011) | (0.0007) | (0.0007) |
| $\text{Cstat}_w$ | 0.0069** | 0.0033** | 0.0033** |
| | (0.0028) | (0.0016) | (0.0016) |
| Observations | 1292421 | 1292421 | 1292421 |
| APF | 1.21 | 3.31 | 3.57 |
| *Postnatal care* | | | |
| $\text{MtypI}_w$ | -0.0007 | 0.0002 | 0.0002 |
| | (0.0011) | (0.0003) | (0.0003) |
| $\text{MtypII}_w$ | 0.0048*** | 0.0018** | 0.0018** |
| | (0.0015) | (0.0007) | (0.0007) |
| $\text{Mstat}_w$ | 0.0041 | 0.0037** | 0.0037** |
| | (0.0026) | (0.0015) | (0.0015) |
| $\text{CtypI}_w$ | -0.0006 | 0.0007 | 0.0007 |
| | (0.0015) | (0.0005) | (0.0005) |
| $\text{CtypII}_w$ | 0.0051*** | 0.0026** | 0.0026** |
| | (0.0017) | (0.0010) | (0.0010) |
| $\text{Cstat}_w$ | 0.0056* | 0.0046** | 0.0046** |
| | (0.0031) | (0.0019) | (0.0019) |
| Observations | 1292421 | 1292421 | 1292421 |
| APF | 1.21 | 3.31 | 3.57 |
| County fixed effects | √ | √ | √ |
| Regional time trends | | √ | √ |
| Physician rate | | | √ |

Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A16: Reduced Form, Died Before Reaching Age 1/5

| | | | |
|---|---|---|---|
| *Died before reaching age 1* | | | |
| $\text{MtypI}_w$ | -0.0002 | -0.0004 | -0.0004 |
| | (0.0004) | (0.0004) | (0.0004) |
| $\text{MtypII}_w$ | 0.0002 | -0.0003 | -0.0003 |
| | (0.0004) | (0.0006) | (0.0006) |
| $\text{Mstat}_w$ | -0.0012* | 0.0003 | 0.0003 |
| | (0.0006) | (0.0009) | (0.0009) |
| $\text{CtypI}_w$ | -0.0009* | -0.0013** | -0.0013** |
| | (0.0005) | (0.0006) | (0.0006) |
| $\text{CtypII}_w$ | 0.0009 | 0.0001 | 0.0001 |
| | (0.0006) | (0.0007) | (0.0007) |
| $\text{Cstat}_w$ | -0.0030*** | -0.0012* | -0.0012* |
| | (0.0007) | (0.0007) | (0.0007) |
| Observations | 1292421 | 1292421 | 1292421 |
| *Died before reaching age 5* | | | |
| $\text{MtypI}_w$ | -0.0003 | -0.0003 | -0.0003 |
| | (0.0005) | (0.0005) | (0.0005) |
| $\text{MtypII}_w$ | 0.0004 | -0.0002 | -0.0002 |
| | (0.0003) | (0.0006) | (0.0006) |
| $\text{Mstat}_w$ | -0.0010* | 0.0005 | 0.0005 |
| | (0.0006) | (0.0009) | (0.0009) |
| $\text{CtypI}_w$ | -0.0013** | -0.0015** | -0.0015** |
| | (0.0005) | (0.0006) | (0.0006) |
| $\text{CtypII}_w$ | 0.0011 | 0.0002 | 0.0002 |
| | (0.0006) | (0.0007) | (0.0008) |
| $\text{Cstat}_w$ | -0.0029*** | -0.0011 | -0.0011 |
| | (0.0006) | (0.0007) | (0.0007) |
| Observations | 1292421 | 1292421 | 1292421 |
| County fixed effects | √ | √ | √ |
| Regional time trends | | √ | √ |
| Physician rate | | | √ |

Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A17: Reduced Form, Died Before Reaching Age 35/63

| | | | |
|---|---|---|---|
| *Died before reaching age 35* | | | |
| $\text{MtypI}_w$ | -0.0003 | -0.0004 | -0.0004 |
| | (0.0005) | (0.0004) | (0.0004) |
| $\text{MtypII}_w$ | 0.0004 | -0.0002 | -0.0002 |
| | (0.0006) | (0.0007) | (0.0007) |
| $\text{Mstat}_w$ | -0.0012 | -0.0002 | -0.0002 |
| | (0.0007) | (0.0010) | (0.0010) |
| $\text{CtypI}_w$ | -0.0015*** | -0.0018*** | -0.0018*** |
| | (0.0005) | (0.0003) | (0.0003) |
| $\text{CtypII}_w$ | 0.0008 | -0.0001 | -0.0001 |
| | (0.0008) | (0.0008) | (0.0008) |
| $\text{Cstat}_w$ | -0.0033*** | -0.0021** | -0.0021** |
| | (0.0008) | (0.0009) | (0.0009) |
| Observations | 1292421 | 1292421 | 1292421 |
| *Died before reaching age 63* | | | |
| $\text{MtypI}_w$ | -0.0019* | -0.0010 | -0.0010 |
| | (0.0010) | (0.0007) | (0.0007) |
| $\text{MtypII}_w$ | 0.0008 | -0.0001 | -0.0001 |
| | (0.0011) | (0.0011) | (0.0011) |
| $\text{Mstat}_w$ | -0.0016** | -0.0034* | -0.0034* |
| | (0.0006) | (0.0019) | (0.0019) |
| $\text{CtypI}_w$ | -0.0060*** | -0.0047*** | -0.0047*** |
| | (0.0011) | (0.0005) | (0.0005) |
| $\text{CtypII}_w$ | 0.0010 | -0.0003 | -0.0003 |
| | (0.0015) | (0.0017) | (0.0017) |
| $\text{Cstat}_w$ | -0.0068*** | -0.0082** | -0.0082** |
| | (0.0013) | (0.0030) | (0.0030) |
| Observations | 1292421 | 1292421 | 1292421 |
| County fixed effects | √ | √ | √ |
| Regional time trends | | √ | √ |
| Physician rate | | | √ |

Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A18: First Stage for Prenatal Care, Health and Socioeconomic Status

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 1.895 | 1.260 | 0.763 | 0.520 | 0.527 |
| | (3.365) | (1.733) | (1.676) | (1.370) | (1.373) |
| MtypII | -2.251 | 2.161 | 3.695** | 4.006*** | 4.005*** |
| | (3.658) | (1.995) | (1.683) | (1.294) | (1.294) |
| Mstat | 11.588 | -3.693 | 3.676 | 9.436 | 9.416 |
| | (12.968) | (13.904) | (10.607) | (10.421) | (10.349) |
| CtypI | 3.743 | 0.547 | 12.113*** | 10.977*** | 10.993*** |
| | (3.004) | (2.151) | (4.279) | (3.358) | (3.342) |
| CtypII | 4.332 | 4.829* | 2.876* | 3.050* | 3.096* |
| | (3.308) | (2.796) | (1.613) | (1.521) | (1.511) |
| Cstat | -2.012 | 15.478 | 5.918 | 0.829 | 0.758 |
| | (13.695) | (15.351) | (11.377) | (11.338) | (11.272) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| APF | 1.42 | 1.24 | 0.89 | 0.89 | 0.89 |
| $\text{MtypI}_{(-1)}$ | 1.591 | 1.146 | 0.821 | 0.938 | 0.959 |
| | (2.851) | (1.444) | (1.125) | (1.054) | (1.046) |
| $\text{MtypII}_{(-1)}$ | 2.876 | 5.948*** | 6.659*** | 6.750*** | 6.726*** |
| | (2.524) | (1.465) | (1.084) | (0.966) | (0.957) |
| $\text{Mstat}_{(-1)}$ | 15.458*** | 10.823*** | 10.752*** | 11.215*** | 11.186*** |
| | (4.454) | (2.862) | (3.488) | (3.504) | (3.475) |
| CtypI | 3.391 | 0.348 | 6.929* | 5.899* | 5.889* |
| | (3.302) | (2.106) | (3.826) | (3.354) | (3.340) |
| CtypII | -0.547 | 1.597 | 0.509 | 0.533 | 0.551 |
| | (2.973) | (2.199) | (1.047) | (1.087) | (1.073) |
| Cstat | -4.552 | 2.273 | 0.919 | 1.109 | 1.052 |
| | (4.810) | (3.183) | (2.734) | (2.698) | (2.711) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| APF | 1.54 | 2.86 | 5.89 | 5.80 | 5.92 |
| MtypI | 2.285 | 1.892 | 1.492 | 1.261 | 1.269 |
| | (3.254) | (1.797) | (1.571) | (1.332) | (1.343) |
| MtypII | 1.203 | 5.381*** | 6.002*** | 6.391*** | 6.418*** |
| | (2.506) | (1.516) | (1.300) | (0.949) | (0.960) |
| Mstat | 14.964*** | 10.475*** | 9.380*** | 10.160*** | 10.072*** |
| | (4.551) | (2.653) | (2.885) | (3.009) | (2.972) |
| $\text{CtypI}_{(+1)}$ | 2.945 | 0.111 | 8.534* | 6.516* | 6.511* |
| | (2.825) | (2.290) | (4.902) | (3.713) | (3.722) |
| $\text{CtypII}_{(+1)}$ | 0.467 | 1.413 | 0.284 | 0.169 | 0.178 |
| | (2.612) | (1.452) | (0.773) | (0.749) | (0.756) |
| $\text{Cstat}_{(+1)}$ | -5.005 | 0.656 | 0.941 | 0.796 | 0.780 |
| | (4.126) | (3.160) | (2.819) | (2.769) | (2.770) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| APF | 1.71 | 4.03 | 7.91 | 9.36 | 9.49 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors (SE) are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A19: First Stage for Postnatal Care, Health and Socioeconomic Status

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 8.161*** | 3.234 | 1.757 | 1.699 | 1.728 |
| | (2.487) | (1.917) | (1.503) | (1.432) | (1.420) |
| MtypII | 0.875 | 6.559*** | 4.334** | 4.408** | 4.358** |
| | (2.471) | (2.017) | (1.777) | (1.754) | (1.741) |
| Mstat | -9.583 | -38.856*** | -10.666 | -9.300 | -9.375 |
| | (13.251) | (12.093) | (9.949) | (10.137) | (10.029) |
| CtypI | 0.868 | -4.603** | 9.348*** | 9.078*** | 9.118*** |
| | (2.811) | (2.014) | (2.947) | (2.818) | (2.815) |
| CtypII | 3.325 | 3.038 | 6.098** | 6.139*** | 6.181*** |
| | (3.395) | (2.005) | (2.185) | (2.170) | (2.141) |
| Cstat | 22.198 | 51.713*** | 21.425** | 20.218** | 20.201** |
| | (13.336) | (12.430) | (8.918) | (8.841) | (8.751) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| APF | 1.42 | 1.24 | 0.89 | 0.89 | 0.89 |
| $\text{MtypI}_{(-1)}$ | 6.214*** | 1.519 | 0.636 | 0.720 | 0.686 |
| | (1.941) | (1.198) | (0.755) | (0.775) | (0.767) |
| $\text{MtypII}_{(-1)}$ | 3.393* | 7.006*** | 4.286*** | 4.351*** | 4.340*** |
| | (1.867) | (1.883) | (1.227) | (1.202) | (1.185) |
| $\text{Mstat}_{(-1)}$ | 6.601** | 2.145 | 3.355 | 3.686 | 3.704 |
| | (2.438) | (2.745) | (2.888) | (2.904) | (2.879) |
| CtypI | 1.387 | -1.007 | 7.824** | 7.085** | 7.108** |
| | (2.418) | (2.267) | (3.120) | (2.748) | (2.739) |
| CtypII | 0.734 | 3.853** | 6.607*** | 6.624*** | 6.631*** |
| | (2.500) | (1.761) | (1.815) | (1.787) | (1.771) |
| Cstat | 5.923* | 9.088** | 7.573* | 7.710* | 7.665* |
| | (2.895) | (4.201) | (4.412) | (4.392) | (4.329) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| APF | 1.54 | 2.86 | 5.89 | 5.80 | 5.92 |
| MtypI | 6.572*** | 2.849* | 1.632** | 1.626** | 1.637** |
| | (1.773) | (1.397) | (0.790) | (0.767) | (0.757) |
| MtypII | 2.807* | 6.731*** | 4.452*** | 4.461*** | 4.434*** |
| | (1.508) | (1.797) | (1.409) | (1.407) | (1.406) |
| Mstat | 4.935* | -0.005 | 1.466 | 1.484 | 1.412 |
| | (2.613) | (3.161) | (3.040) | (3.149) | (3.141) |
| $\text{CtypI}_{(+1)}$ | 0.479 | -1.757 | 5.950* | 5.904* | 5.933* |
| | (2.043) | (2.296) | (3.368) | (3.129) | (3.134) |
| $\text{CtypII}_{(+1)}$ | 0.977 | 3.083* | 5.288*** | 5.285*** | 5.304*** |
| | (2.299) | (1.528) | (1.390) | (1.395) | (1.382) |
| $\text{Cstat}_{(+1)}$ | 5.617** | 7.730* | 5.824 | 5.821 | 5.825 |
| | (2.389) | (4.276) | (4.732) | (4.721) | (4.704) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| APF | 1.71 | 4.03 | 7.91 | 9.36 | 9.49 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors (SE) are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A20: Second Stage, Good General Health Condition

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | -0.000 | 0.001 | -0.002 | -0.002 | -0.001 |
| | (0.002) | (0.003) | (0.005) | (0.004) | (0.004) |
| Postnatal care | -0.001 | 0.000 | 0.003 | 0.003 | 0.002 |
| | (0.001) | (0.002) | (0.004) | (0.003) | (0.003) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | 0.000 | -0.003 | -0.002 | -0.002 | -0.001 |
| | (0.001) | (0.002) | (0.003) | (0.003) | (0.003) |
| Postnatal care | -0.002 | 0.003 | 0.002 | 0.003 | 0.002 |
| | (0.001) | (0.002) | (0.002) | (0.002) | (0.002) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | 0.000 | -0.000 | -0.002 | -0.002 | -0.001 |
| | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |
| Postnatal care$_{(+1)}$ | -0.001 | 0.002 | 0.003 | 0.003 | 0.003 |
| | (0.001) | (0.002) | (0.002) | (0.002) | (0.002) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A21: Second Stage, Had a Severe Diagnosis

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | -0.001 | -0.000 | -0.001 | -0.003 | -0.004 |
| | (0.002) | (0.003) | (0.004) | (0.004) | (0.004) |
| Postnatal care | 0.001 | -0.000 | 0.000 | 0.002 | 0.002 |
| | (0.001) | (0.002) | (0.003) | (0.002) | (0.003) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | 0.002 | -0.000 | -0.000 | -0.000 | -0.000 |
| | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |
| Postnatal care | -0.001 | -0.001 | -0.001 | -0.001 | -0.000 |
| | (0.001) | (0.002) | (0.002) | (0.002) | (0.002) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | -0.001 | -0.002 | -0.001 | -0.001 | -0.002 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Postnatal care$_{(+1)}$ | 0.001 | 0.000 | 0.000 | 0.001 | 0.001 |
| | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A22: Second Stage, Regular Medical Treatment

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | -0.006 | -0.009** | -0.012 | -0.013 | -0.013 |
| | (0.004) | (0.004) | (0.010) | (0.010) | (0.010) |
| Postnatal care | 0.003 | 0.005 | 0.008 | 0.009 | 0.009 |
| | (0.003) | (0.003) | (0.008) | (0.007) | (0.007) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | -0.004 | -0.005 | -0.004 | -0.004 | -0.004 |
| | (0.002) | (0.004) | (0.003) | (0.003) | (0.003) |
| Postnatal care | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 |
| | (0.002) | (0.003) | (0.003) | (0.003) | (0.003) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | -0.004 | -0.005 | -0.002 | -0.002 | -0.002 |
| | (0.003) | (0.003) | (0.002) | (0.002) | (0.002) |
| Postnatal care$_{(+1)}$ | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 |
| | (0.002) | (0.003) | (0.001) | (0.001) | (0.001) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A23: Second Stage, Normal Weight

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | 0.001 | -0.000 | 0.003 | 0.002 | 0.005 |
| | (0.003) | (0.003) | (0.006) | (0.006) | (0.007) |
| Postnatal care | 0.000 | 0.001 | -0.001 | -0.001 | -0.003 |
| | (0.002) | (0.002) | (0.005) | (0.004) | (0.005) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | 0.001 | 0.001 | -0.001 | -0.002 | -0.002 |
| | (0.002) | (0.003) | (0.002) | (0.002) | (0.002) |
| Postnatal care | -0.001 | 0.001 | 0.003 | 0.003 | 0.003 |
| | (0.002) | (0.003) | (0.002) | (0.002) | (0.002) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | 0.002 | 0.004 | 0.004 | 0.004 | 0.005 |
| | (0.003) | (0.004) | (0.004) | (0.004) | (0.004) |
| Postnatal care$_{(+1)}$ | -0.001 | -0.002 | -0.004 | -0.004 | -0.005* |
| | (0.002) | (0.004) | (0.003) | (0.003) | (0.003) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A24: Second Stage, Only Able to Run Less than 100 Meters

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | 0.000 | 0.001 | 0.001 | 0.001 | 0.001 |
| | (0.002) | (0.002) | (0.003) | (0.003) | (0.003) |
| Postnatal care | -0.000 | -0.002 | -0.002 | -0.002 | -0.002 |
| | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | -0.001 | 0.002 | 0.002 | 0.002 | 0.002 |
| | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) |
| Postnatal care | 0.001 | -0.002 | -0.003* | -0.003* | -0.002* |
| | (0.001) | (0.001) | (0.002) | (0.001) | (0.001) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | -0.001 | -0.001 | -0.002 | -0.002 | -0.003 |
| | (0.001) | (0.002) | (0.002) | (0.002) | (0.002) |
| Postnatal care$_{(+1)}$ | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| | (0.001) | (0.002) | (0.002) | (0.002) | (0.002) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A25: Second Stage, Number of Long-term Illnesses

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | -0.007 | -0.016 | -0.019 | -0.022 | -0.023 |
| | (0.005) | (0.011) | (0.016) | (0.016) | (0.017) |
| Postnatal care | 0.005 | 0.009 | 0.012 | 0.014 | 0.015 |
| | (0.004) | (0.008) | (0.013) | (0.013) | (0.013) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | -0.001 | -0.005 | -0.002 | -0.002 | -0.003 |
| | (0.005) | (0.008) | (0.007) | (0.006) | (0.006) |
| Postnatal care | 0.001 | 0.003 | 0.001 | 0.001 | 0.001 |
| | (0.004) | (0.007) | (0.006) | (0.005) | (0.005) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | -0.004 | -0.009 | -0.007 | -0.007 | -0.008 |
| | (0.004) | (0.008) | (0.006) | (0.006) | (0.006) |
| Postnatal care$_{(+1)}$ | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 |
| | (0.003) | (0.006) | (0.005) | (0.005) | (0.005) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A26: Second Stage, Disabled

| | | | | | |
|---|---|---|---|---|---|
| Prenatal care | -0.000 | -0.000 | -0.000 | -0.001 | -0.001 |
| | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) |
| Postnatal care | 0.000 | -0.000 | -0.000 | -0.000 | 0.000 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Prenatal care$_{(-1)}$ | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Postnatal care | -0.000 | -0.001 | -0.002 | -0.002 | -0.002 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| Prenatal care | -0.001 | -0.002 | -0.003 | -0.003 | -0.003* |
| | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) |
| Postnatal care$_{(+1)}$ | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 |
| | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A27: Reduced Form, Good General Health Condition

| | | | | | |
|---|---|---|---|---|---|
| MtypI | -0.010 | 0.002 | -0.003 | -0.002 | -0.001 |
| | (0.014) | (0.017) | (0.021) | (0.019) | (0.018) |
| MtypII | -0.006 | -0.000 | -0.006 | -0.008 | -0.006 |
| | (0.013) | (0.015) | (0.013) | (0.012) | (0.012) |
| Mstat | -0.032 | -0.008 | 0.007 | -0.020 | 0.005 |
| | (0.067) | (0.106) | (0.114) | (0.122) | (0.119) |
| CtypI | 0.007 | 0.007 | 0.030 | 0.036 | 0.040 |
| | (0.007) | (0.011) | (0.035) | (0.032) | (0.031) |
| CtypII | 0.013 | 0.027 | 0.032 | 0.032 | 0.031 |
| | (0.016) | (0.022) | (0.021) | (0.020) | (0.019) |
| Cstat | 0.020 | 0.009 | -0.009 | 0.015 | -0.003 |
| | (0.064) | (0.103) | (0.114) | (0.120) | (0.116) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | -0.018** | -0.015** | -0.016** | -0.017** | -0.014* |
| | (0.007) | (0.007) | (0.007) | (0.007) | (0.008) |
| $\text{MtypII}_{(-1)}$ | 0.005 | 0.021 | 0.025 | 0.024 | 0.026 |
| | (0.016) | (0.016) | (0.017) | (0.017) | (0.016) |
| $\text{Mstat}_{(-1)}$ | -0.016 | -0.015 | -0.030 | -0.034 | -0.027 |
| | (0.016) | (0.019) | (0.021) | (0.021) | (0.021) |
| CtypI | 0.008 | 0.006 | 0.007 | 0.015 | 0.019 |
| | (0.005) | (0.009) | (0.023) | (0.024) | (0.024) |
| CtypII | 0.004 | 0.006 | 0.005 | 0.004 | 0.002 |
| | (0.017) | (0.020) | (0.020) | (0.020) | (0.019) |
| Cstat | -0.002 | -0.012 | 0.002 | -0.000 | 0.000 |
| | (0.019) | (0.022) | (0.024) | (0.023) | (0.023) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | -0.007 | 0.005 | 0.002 | 0.003 | 0.004 |
| | (0.013) | (0.016) | (0.017) | (0.016) | (0.015) |
| MtypII | -0.002 | 0.007 | 0.007 | 0.006 | 0.008 |
| | (0.010) | (0.013) | (0.010) | (0.010) | (0.010) |
| Mstat | 0.021 | 0.021 | 0.014 | 0.011 | 0.016 |
| | (0.027) | (0.025) | (0.025) | (0.025) | (0.026) |
| $\text{CtypI}_{(+1)}$ | 0.002 | -0.003 | -0.023 | -0.016 | -0.016 |
| | (0.007) | (0.008) | (0.033) | (0.037) | (0.035) |
| $\text{CtypII}_{(+1)}$ | 0.011 | 0.024 | 0.024 | 0.024 | 0.023 |
| | (0.013) | (0.016) | (0.015) | (0.015) | (0.014) |
| $\text{Cstat}_{(+1)}$ | -0.035 | -0.035 | -0.025 | -0.025 | -0.022 |
| | (0.031) | (0.039) | (0.039) | (0.039) | (0.039) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A28: Reduced Form, Had a Severe Diagnosis

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 0.003 | 0.008 | 0.010 | 0.010 | 0.009 |
| | (0.006) | (0.008) | (0.009) | (0.008) | (0.008) |
| MtypII | -0.006 | -0.034 | -0.023 | -0.022 | -0.025 |
| | (0.017) | (0.021) | (0.021) | (0.021) | (0.021) |
| Mstat | -0.134** | -0.121 | -0.161* | -0.150 | -0.166* |
| | (0.062) | (0.084) | (0.085) | (0.089) | (0.088) |
| CtypI | -0.001 | 0.009 | 0.014 | 0.012 | 0.012 |
| | (0.006) | (0.008) | (0.031) | (0.031) | (0.031) |
| CtypII | 0.001 | 0.017 | 0.003 | 0.004 | 0.005 |
| | (0.017) | (0.025) | (0.025) | (0.025) | (0.025) |
| Cstat | 0.138** | 0.120 | 0.152* | 0.143 | 0.155* |
| | (0.062) | (0.086) | (0.087) | (0.091) | (0.088) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | -0.012* | -0.020*** | -0.023*** | -0.023*** | -0.024*** |
| | (0.007) | (0.006) | (0.006) | (0.006) | (0.006) |
| $\text{MtypII}_{(-1)}$ | 0.006 | -0.007 | -0.003 | -0.002 | -0.004 |
| | (0.013) | (0.011) | (0.012) | (0.011) | (0.012) |
| $\text{Mstat}_{(-1)}$ | -0.001 | 0.002 | 0.005 | 0.008 | 0.004 |
| | (0.015) | (0.016) | (0.017) | (0.018) | (0.018) |
| CtypI | 0.007 | 0.020** | 0.011 | 0.004 | 0.005 |
| | (0.007) | (0.008) | (0.032) | (0.029) | (0.029) |
| CtypII | -0.007 | 0.008 | 0.002 | 0.003 | 0.003 |
| | (0.013) | (0.014) | (0.016) | (0.015) | (0.015) |
| Cstat | 0.002 | -0.013 | -0.018 | -0.017 | -0.016 |
| | (0.016) | (0.019) | (0.020) | (0.020) | (0.020) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | 0.004 | 0.011 | 0.011 | 0.010 | 0.010 |
| | (0.006) | (0.008) | (0.009) | (0.008) | (0.008) |
| MtypII | 0.002 | -0.023** | -0.017** | -0.016** | -0.017** |
| | (0.011) | (0.010) | (0.008) | (0.008) | (0.007) |
| Mstat | -0.026 | -0.025 | -0.025* | -0.023* | -0.027* |
| | (0.017) | (0.016) | (0.013) | (0.013) | (0.014) |
| $\text{CtypI}_{(+1)}$ | -0.001 | 0.010 | 0.023 | 0.018 | 0.017 |
| | (0.006) | (0.008) | (0.020) | (0.022) | (0.021) |
| $\text{CtypII}_{(+1)}$ | -0.005 | 0.010 | 0.002 | 0.002 | 0.002 |
| | (0.011) | (0.017) | (0.013) | (0.013) | (0.013) |
| $\text{Cstat}_{(+1)}$ | 0.028* | 0.027* | 0.022* | 0.022* | 0.022 |
| | (0.014) | (0.014) | (0.012) | (0.013) | (0.014) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A29: Reduced Form, Regular Medical Treatment

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 0.004 | -0.026* | -0.017 | -0.017 | -0.014 |
| | (0.013) | (0.013) | (0.019) | (0.018) | (0.017) |
| MtypII | -0.001 | -0.000 | 0.014 | 0.015 | 0.015 |
| | (0.015) | (0.015) | (0.020) | (0.020) | (0.021) |
| Mstat | -0.290*** | -0.281** | -0.364** | -0.360** | -0.350** |
| | (0.080) | (0.105) | (0.149) | (0.149) | (0.152) |
| CtypI | -0.019 | -0.019 | -0.061* | -0.062* | -0.058* |
| | (0.012) | (0.013) | (0.030) | (0.031) | (0.033) |
| CtypII | -0.014 | -0.015 | -0.023 | -0.023 | -0.023 |
| | (0.014) | (0.013) | (0.022) | (0.022) | (0.022) |
| Cstat | 0.270*** | 0.238** | 0.323** | 0.319** | 0.307** |
| | (0.081) | (0.103) | (0.143) | (0.143) | (0.146) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | 0.005 | -0.014 | -0.013 | -0.012 | -0.011 |
| | (0.010) | (0.012) | (0.010) | (0.010) | (0.010) |
| $\text{MtypII}_{(-1)}$ | -0.007 | -0.015 | -0.002 | -0.002 | -0.003 |
| | (0.012) | (0.011) | (0.011) | (0.011) | (0.011) |
| $\text{Mstat}_{(-1)}$ | -0.045 | -0.031 | -0.030 | -0.027 | -0.027 |
| | (0.027) | (0.027) | (0.029) | (0.029) | (0.031) |
| CtypI | -0.019* | -0.005 | -0.049* | -0.056* | -0.048 |
| | (0.009) | (0.011) | (0.027) | (0.029) | (0.030) |
| CtypII | -0.004 | 0.021 | 0.018 | 0.018 | 0.018 |
| | (0.013) | (0.016) | (0.018) | (0.018) | (0.018) |
| Cstat | 0.024 | -0.019 | -0.021 | -0.020 | -0.024 |
| | (0.026) | (0.035) | (0.036) | (0.035) | (0.035) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | 0.003 | -0.027* | -0.024 | -0.024 | -0.021 |
| | (0.013) | (0.013) | (0.016) | (0.016) | (0.014) |
| MtypII | 0.008 | 0.007 | 0.014 | 0.015 | 0.016 |
| | (0.011) | (0.013) | (0.016) | (0.017) | (0.017) |
| Mstat | -0.065* | -0.057 | -0.055 | -0.054 | -0.054 |
| | (0.032) | (0.034) | (0.037) | (0.037) | (0.034) |
| $\text{CtypI}_{(+1)}$ | -0.014 | -0.006 | 0.001 | -0.004 | -0.006 |
| | (0.009) | (0.009) | (0.031) | (0.032) | (0.035) |
| $\text{CtypII}_{(+1)}$ | -0.018* | -0.019* | -0.020 | -0.020 | -0.021 |
| | (0.010) | (0.010) | (0.013) | (0.013) | (0.014) |
| $\text{Cstat}_{(+1)}$ | 0.044 | 0.008 | 0.002 | 0.002 | -0.000 |
| | (0.035) | (0.037) | (0.036) | (0.036) | (0.033) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A30: Reduced Form, Normal Weight

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 0.020 | 0.034 | 0.036 | 0.038* | 0.039* |
| | (0.018) | (0.022) | (0.024) | (0.021) | (0.019) |
| MtypII | -0.016 | 0.022 | 0.011 | 0.009 | 0.009 |
| | (0.026) | (0.031) | (0.035) | (0.033) | (0.033) |
| Mstat | 0.075 | 0.016 | 0.073 | 0.039 | 0.099 |
| | (0.092) | (0.122) | (0.147) | (0.150) | (0.147) |
| CtypI | 0.011 | -0.000 | -0.011 | -0.004 | 0.003 |
| | (0.010) | (0.013) | (0.033) | (0.040) | (0.038) |
| CtypII | 0.026 | -0.025 | -0.015 | -0.016 | -0.014 |
| | (0.020) | (0.024) | (0.033) | (0.032) | (0.032) |
| Cstat | -0.068 | 0.009 | -0.046 | -0.017 | -0.061 |
| | (0.092) | (0.132) | (0.152) | (0.155) | (0.155) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | -0.001 | -0.023** | -0.025** | -0.026** | -0.014 |
| | (0.009) | (0.010) | (0.010) | (0.011) | (0.011) |
| $\text{MtypII}_{(-1)}$ | -0.020* | 0.011 | -0.006 | -0.007 | -0.007 |
| | (0.011) | (0.014) | (0.015) | (0.015) | (0.015) |
| $\text{Mstat}_{(-1)}$ | 0.019 | 0.007 | 0.007 | 0.002 | -0.003 |
| | (0.026) | (0.026) | (0.029) | (0.026) | (0.027) |
| CtypI | 0.023* | 0.011 | 0.031 | 0.041 | 0.042 |
| | (0.012) | (0.017) | (0.037) | (0.050) | (0.047) |
| CtypII | 0.027** | 0.008 | 0.023 | 0.023 | 0.015 |
| | (0.012) | (0.019) | (0.020) | (0.020) | (0.018) |
| Cstat | -0.010 | 0.033 | 0.031 | 0.030 | 0.043 |
| | (0.027) | (0.037) | (0.035) | (0.035) | (0.032) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | 0.023 | 0.031 | 0.035 | 0.036* | 0.037* |
| | (0.017) | (0.022) | (0.022) | (0.021) | (0.019) |
| MtypII | -0.004 | 0.014 | 0.009 | 0.007 | 0.009 |
| | (0.016) | (0.018) | (0.022) | (0.020) | (0.019) |
| Mstat | 0.064* | 0.047 | 0.049 | 0.045 | 0.065* |
| | (0.037) | (0.037) | (0.036) | (0.035) | (0.037) |
| $\text{CtypI}_{(+1)}$ | 0.005 | -0.011 | -0.054* | -0.045 | -0.044 |
| | (0.008) | (0.012) | (0.030) | (0.030) | (0.028) |
| $\text{CtypII}_{(+1)}$ | 0.011 | -0.022 | -0.018 | -0.018 | -0.021 |
| | (0.015) | (0.020) | (0.022) | (0.022) | (0.021) |
| $\text{Cstat}_{(+1)}$ | -0.057* | -0.045 | -0.044 | -0.043 | -0.047 |
| | (0.031) | (0.036) | (0.038) | (0.037) | (0.037) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A31: Reduced Form, Only Able to Run Less than 100 Meters

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 0.005 | -0.006 | -0.003 | -0.004 | -0.003 |
| | (0.008) | (0.013) | (0.016) | (0.016) | (0.014) |
| MtypII | 0.004 | -0.007 | 0.000 | 0.000 | -0.001 |
| | (0.005) | (0.010) | (0.008) | (0.008) | (0.008) |
| Mstat | 0.074* | 0.122** | 0.083 | 0.086 | 0.081 |
| | (0.037) | (0.055) | (0.062) | (0.063) | (0.061) |
| CtypI | -0.010 | -0.007 | -0.003 | -0.004 | -0.002 |
| | (0.006) | (0.007) | (0.015) | (0.015) | (0.015) |
| CtypII | -0.012** | 0.006 | -0.004 | -0.004 | -0.003 |
| | (0.005) | (0.010) | (0.010) | (0.010) | (0.011) |
| Cstat | -0.071* | -0.133** | -0.099 | -0.101 | -0.101 |
| | (0.036) | (0.055) | (0.062) | (0.063) | (0.059) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | 0.014*** | 0.012** | 0.014** | 0.014** | 0.012** |
| | (0.005) | (0.006) | (0.006) | (0.006) | (0.005) |
| $\text{MtypII}_{(-1)}$ | 0.005 | -0.003 | 0.004 | 0.004 | 0.003 |
| | (0.007) | (0.009) | (0.012) | (0.012) | (0.012) |
| $\text{Mstat}_{(-1)}$ | 0.013 | 0.017 | 0.013 | 0.013 | 0.010 |
| | (0.013) | (0.013) | (0.015) | (0.015) | (0.015) |
| CtypI | -0.014*** | -0.014** | -0.024 | -0.024 | -0.019 |
| | (0.003) | (0.006) | (0.015) | (0.016) | (0.016) |
| CtypII | -0.010 | -0.006 | -0.013 | -0.013 | -0.012 |
| | (0.006) | (0.008) | (0.010) | (0.010) | (0.011) |
| Cstat | -0.007 | -0.029 | -0.034* | -0.034* | -0.036* |
| | (0.013) | (0.020) | (0.019) | (0.019) | (0.020) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | 0.005 | -0.006 | -0.003 | -0.003 | -0.002 |
| | (0.007) | (0.012) | (0.016) | (0.016) | (0.014) |
| MtypII | -0.007 | -0.014 | -0.008 | -0.008 | -0.009 |
| | (0.007) | (0.010) | (0.010) | (0.010) | (0.010) |
| Mstat | -0.020 | -0.016 | -0.022 | -0.022 | -0.027 |
| | (0.015) | (0.016) | (0.018) | (0.019) | (0.019) |
| $\text{CtypI}_{(+1)}$ | -0.009* | -0.012* | -0.011 | -0.011 | -0.012 |
| | (0.005) | (0.006) | (0.013) | (0.015) | (0.015) |
| $\text{CtypII}_{(+1)}$ | -0.002 | 0.012 | 0.006 | 0.006 | 0.007 |
| | (0.006) | (0.013) | (0.011) | (0.011) | (0.010) |
| $\text{Cstat}_{(+1)}$ | 0.023 | 0.015 | 0.016 | 0.016 | 0.016 |
| | (0.014) | (0.015) | (0.016) | (0.016) | (0.015) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A32: Reduced Form, Number of Long-term Illnesses

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 0.019 | -0.034 | -0.027 | -0.027 | -0.027 |
| | (0.020) | (0.025) | (0.028) | (0.029) | (0.026) |
| MtypII | -0.038 | -0.048 | -0.013 | -0.014 | -0.015 |
| | (0.024) | (0.031) | (0.037) | (0.038) | (0.038) |
| Mstat | -0.600*** | -0.661** | -0.665** | -0.684** | -0.699** |
| | (0.203) | (0.289) | (0.280) | (0.283) | (0.267) |
| CtypI | -0.022 | -0.038 | -0.083 | -0.079 | -0.076 |
| | (0.022) | (0.024) | (0.070) | (0.073) | (0.072) |
| CtypII | 0.004 | 0.003 | -0.016 | -0.017 | -0.017 |
| | (0.026) | (0.032) | (0.034) | (0.034) | (0.032) |
| Cstat | 0.608*** | 0.592* | 0.608** | 0.625** | 0.631** |
| | (0.208) | (0.298) | (0.285) | (0.288) | (0.271) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | 0.005 | -0.064*** | -0.076*** | -0.077*** | -0.083*** |
| | (0.022) | (0.020) | (0.018) | (0.018) | (0.018) |
| $\text{MtypII}_{(-1)}$ | 0.001 | 0.006 | 0.024 | 0.024 | 0.019 |
| | (0.030) | (0.036) | (0.040) | (0.040) | (0.040) |
| $\text{Mstat}_{(-1)}$ | -0.018 | -0.024 | 0.001 | 0.000 | -0.002 |
| | (0.046) | (0.054) | (0.054) | (0.053) | (0.056) |
| CtypI | -0.008 | -0.004 | -0.076 | -0.074 | -0.063 |
| | (0.024) | (0.032) | (0.073) | (0.076) | (0.074) |
| CtypII | -0.016 | 0.027 | 0.021 | 0.021 | 0.024 |
| | (0.030) | (0.045) | (0.052) | (0.052) | (0.051) |
| Cstat | 0.032 | -0.051 | -0.053 | -0.053 | -0.060 |
| | (0.043) | (0.059) | (0.059) | (0.058) | (0.059) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | 0.021 | -0.030 | -0.035 | -0.035 | -0.035 |
| | (0.019) | (0.025) | (0.024) | (0.024) | (0.021) |
| MtypII | -0.018 | -0.033 | -0.023 | -0.023 | -0.025 |
| | (0.023) | (0.030) | (0.031) | (0.033) | (0.032) |
| Mstat | -0.069 | -0.085 | -0.052 | -0.051 | -0.058 |
| | (0.076) | (0.088) | (0.086) | (0.086) | (0.085) |
| $\text{CtypI}_{(+1)}$ | -0.014 | -0.015 | 0.003 | 0.002 | -0.005 |
| | (0.016) | (0.028) | (0.099) | (0.104) | (0.104) |
| $\text{CtypII}_{(+1)}$ | -0.001 | 0.016 | 0.023 | 0.023 | 0.025 |
| | (0.021) | (0.027) | (0.032) | (0.032) | (0.030) |
| $\text{Cstat}_{(+1)}$ | 0.074 | -0.013 | -0.039 | -0.039 | -0.042 |
| | (0.084) | (0.091) | (0.088) | (0.088) | (0.086) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A33: Reduced Form, Disabled

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 0.003 | 0.000 | 0.001 | 0.001 | 0.001 |
| | (0.004) | (0.005) | (0.005) | (0.006) | (0.005) |
| MtypII | -0.003 | -0.015** | -0.011** | -0.012** | -0.012** |
| | (0.005) | (0.006) | (0.005) | (0.005) | (0.005) |
| Mstat | 0.005 | 0.027 | -0.008 | -0.013 | -0.014 |
| | (0.027) | (0.044) | (0.050) | (0.048) | (0.046) |
| CtypI | -0.004 | -0.009* | 0.004 | 0.004 | 0.005 |
| | (0.003) | (0.004) | (0.010) | (0.010) | (0.010) |
| CtypII | 0.001 | 0.009 | 0.003 | 0.003 | 0.003 |
| | (0.005) | (0.008) | (0.006) | (0.006) | (0.006) |
| Cstat | -0.004 | -0.037 | -0.009 | -0.005 | -0.005 |
| | (0.026) | (0.046) | (0.051) | (0.049) | (0.048) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | -0.001 | -0.007* | -0.008** | -0.008** | -0.008** |
| | (0.004) | (0.004) | (0.003) | (0.004) | (0.004) |
| $\text{MtypII}_{(-1)}$ | 0.001 | -0.003 | -0.001 | -0.001 | -0.002 |
| | (0.005) | (0.006) | (0.008) | (0.008) | (0.008) |
| $\text{Mstat}_{(-1)}$ | 0.015 | 0.011 | 0.009 | 0.008 | 0.006 |
| | (0.011) | (0.009) | (0.009) | (0.008) | (0.008) |
| CtypI | -0.002 | -0.009** | 0.002 | 0.003 | 0.005 |
| | (0.004) | (0.003) | (0.008) | (0.009) | (0.009) |
| CtypII | -0.003 | -0.000 | -0.006 | -0.006 | -0.005 |
| | (0.004) | (0.006) | (0.007) | (0.007) | (0.007) |
| Cstat | -0.011 | -0.023* | -0.028* | -0.029* | -0.029** |
| | (0.009) | (0.012) | (0.014) | (0.014) | (0.014) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | 0.004 | 0.002 | 0.002 | 0.002 | 0.003 |
| | (0.004) | (0.005) | (0.005) | (0.005) | (0.005) |
| MtypII | -0.006 | -0.015*** | -0.014*** | -0.014*** | -0.014*** |
| | (0.005) | (0.005) | (0.004) | (0.004) | (0.004) |
| Mstat | -0.022 | -0.025* | -0.031* | -0.031* | -0.033* |
| | (0.013) | (0.014) | (0.017) | (0.017) | (0.017) |
| $\text{CtypI}_{(+1)}$ | -0.003 | -0.009*** | 0.002 | 0.004 | 0.004 |
| | (0.003) | (0.003) | (0.009) | (0.010) | (0.010) |
| $\text{CtypII}_{(+1)}$ | 0.004 | 0.012* | 0.009* | 0.010* | 0.010* |
| | (0.005) | (0.006) | (0.005) | (0.005) | (0.005) |
| $\text{Cstat}_{(+1)}$ | 0.023 | 0.026 | 0.024 | 0.025 | 0.025 |
| | (0.014) | (0.016) | (0.017) | (0.017) | (0.017) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A34: Reduced Form, *ln* of Gross Labor Income

| | | | | | |
|---|---|---|---|---|---|
| MtypI | -0.039* | -0.047 | -0.067 | -0.066 | -0.063 |
| | (0.019) | (0.041) | (0.044) | (0.045) | (0.045) |
| MtypII | -0.077** | -0.080 | -0.082 | -0.084 | -0.068 |
| | (0.032) | (0.052) | (0.059) | (0.061) | (0.058) |
| Mstat | -0.241 | -0.359** | -0.083 | -0.110 | -0.040 |
| | (0.168) | (0.166) | (0.200) | (0.203) | (0.221) |
| CtypI | 0.032 | 0.018 | 0.059 | 0.064 | 0.080 |
| | (0.022) | (0.025) | (0.099) | (0.103) | (0.096) |
| CtypII | 0.045 | 0.049 | 0.058 | 0.057 | 0.039 |
| | (0.030) | (0.050) | (0.060) | (0.061) | (0.061) |
| Cstat | 0.263 | 0.410** | 0.182 | 0.206 | 0.126 |
| | (0.173) | (0.191) | (0.222) | (0.224) | (0.231) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | 0.050** | 0.095*** | 0.095*** | 0.096*** | 0.076*** |
| | (0.022) | (0.019) | (0.023) | (0.022) | (0.018) |
| $\text{MtypII}_{(-1)}$ | 0.022 | 0.030 | 0.044 | 0.044 | 0.040 |
| | (0.024) | (0.032) | (0.031) | (0.031) | (0.029) |
| $\text{Mstat}_{(-1)}$ | 0.006 | 0.016 | 0.011 | 0.014 | 0.076 |
| | (0.045) | (0.053) | (0.056) | (0.056) | (0.050) |
| CtypI | -0.000 | 0.054 | -0.079 | -0.085 | -0.046 |
| | (0.019) | (0.032) | (0.093) | (0.099) | (0.102) |
| CtypII | -0.029 | -0.064 | -0.067 | -0.067 | -0.062 |
| | (0.028) | (0.049) | (0.053) | (0.053) | (0.051) |
| Cstat | 0.035 | 0.082 | 0.138** | 0.139** | 0.084 |
| | (0.045) | (0.056) | (0.060) | (0.059) | (0.060) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | -0.038* | -0.045 | -0.068 | -0.066 | -0.062 |
| | (0.021) | (0.043) | (0.041) | (0.042) | (0.042) |
| MtypII | -0.035 | -0.032 | -0.047 | -0.049 | -0.051 |
| | (0.034) | (0.060) | (0.066) | (0.067) | (0.055) |
| Mstat | 0.150* | 0.141* | 0.192** | 0.188** | 0.161** |
| | (0.078) | (0.081) | (0.089) | (0.087) | (0.076) |
| $\text{CtypI}_{(+1)}$ | 0.027 | 0.034 | 0.104 | 0.114 | 0.113 |
| | (0.019) | (0.036) | (0.094) | (0.110) | (0.095) |
| $\text{CtypII}_{(+1)}$ | 0.006 | 0.002 | 0.010 | 0.011 | 0.020 |
| | (0.029) | (0.044) | (0.053) | (0.053) | (0.042) |
| $\text{Cstat}_{(+1)}$ | -0.126 | -0.146 | -0.151 | -0.150 | -0.116 |
| | (0.081) | (0.099) | (0.096) | (0.096) | (0.090) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A35: Reduced Form, Secondary Education or Higher

| | | | | | |
|---|---|---|---|---|---|
| MtypI | 0.010 | 0.021 | 0.021 | 0.024 | 0.025 |
| | (0.017) | (0.015) | (0.018) | (0.016) | (0.016) |
| MtypII | -0.009 | -0.039 | -0.006 | -0.009 | -0.000 |
| | (0.025) | (0.027) | (0.031) | (0.028) | (0.031) |
| Mstat | -0.107 | -0.185 | -0.166 | -0.220 | -0.149 |
| | (0.138) | (0.170) | (0.188) | (0.197) | (0.210) |
| CtypI | -0.006 | -0.058*** | -0.057 | -0.046 | -0.035 |
| | (0.013) | (0.014) | (0.044) | (0.051) | (0.046) |
| CtypII | -0.014 | -0.004 | -0.058* | -0.059* | -0.061* |
| | (0.024) | (0.024) | (0.032) | (0.030) | (0.031) |
| Cstat | 0.131 | 0.173 | 0.158 | 0.205 | 0.156 |
| | (0.134) | (0.181) | (0.195) | (0.203) | (0.216) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| $\text{MtypI}_{(-1)}$ | 0.006 | -0.003 | -0.009 | -0.010 | -0.001 |
| | (0.013) | (0.018) | (0.018) | (0.019) | (0.018) |
| $\text{MtypII}_{(-1)}$ | 0.036* | 0.045* | 0.055* | 0.054* | 0.052* |
| | (0.020) | (0.025) | (0.028) | (0.028) | (0.027) |
| $\text{Mstat}_{(-1)}$ | 0.030 | 0.014 | 0.022 | 0.017 | 0.032 |
| | (0.032) | (0.035) | (0.031) | (0.031) | (0.032) |
| CtypI | 0.004 | -0.031* | -0.060* | -0.050 | -0.035 |
| | (0.014) | (0.017) | (0.034) | (0.046) | (0.045) |
| CtypII | -0.043* | -0.036 | -0.064*** | -0.064*** | -0.064*** |
| | (0.023) | (0.027) | (0.023) | (0.022) | (0.021) |
| Cstat | 0.005 | -0.016 | -0.007 | -0.009 | -0.008 |
| | (0.028) | (0.044) | (0.049) | (0.049) | (0.042) |
| Observations | 6524 | 6524 | 6524 | 6524 | 6524 |
| MtypI | 0.009 | 0.020 | 0.014 | 0.016 | 0.018 |
| | (0.016) | (0.013) | (0.015) | (0.014) | (0.013) |
| MtypII | -0.023 | -0.043** | -0.047* | -0.049** | -0.041 |
| | (0.018) | (0.020) | (0.024) | (0.023) | (0.025) |
| Mstat | 0.007 | -0.010 | -0.001 | -0.007 | 0.008 |
| | (0.061) | (0.055) | (0.058) | (0.059) | (0.055) |
| $\text{CtypI}_{(+1)}$ | -0.002 | -0.053*** | -0.036 | -0.021 | -0.019 |
| | (0.012) | (0.014) | (0.029) | (0.029) | (0.031) |
| $\text{CtypII}_{(+1)}$ | 0.006 | 0.013 | 0.005 | 0.006 | 0.002 |
| | (0.015) | (0.017) | (0.022) | (0.023) | (0.024) |
| $\text{Cstat}_{(+1)}$ | 0.015 | -0.020 | -0.023 | -0.022 | -0.009 |
| | (0.066) | (0.076) | (0.075) | (0.075) | (0.070) |
| Observations | 6990 | 6990 | 6990 | 6990 | 6990 |
| Avg. income 1930 | √ | | | | |
| Occ. shares 1930 | √ | | | | |
| County fixed effects | | √ | √ | √ | √ |
| Regional time trends | | | √ | √ | √ |
| Physician rate | | | | √ | √ |
| Social background | | | | | √ |

Social background variables: occupation of father, parental foreign background, number of siblings. Regressions include birth year fixed effects. Standard errors are clustered at the county level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.