

# Source of Payment Information from the Minnesota Birth Certificate

## A CLOSER LOOK AT PAYMENT REPORT ACCURACY

### Introduction

Knowing whether some form of public assistance was needed in order to provide health care coverage for the birth of a child (“delivery”) has long been a valuable piece of information in health research. This payment information can serve a unique source of data for understanding the socioeconomic status of the birth family.

Generally, income data has not been available, except in gross population categories, from sources such as U.S. Census and American Community Survey. Typically, fields like “Education Level of Mother” (and sometimes of father) serves as a proxy for socioeconomic status. Yet, drawing conclusions about a person’s income by education level has limitations.

This brief provides a detailed look at the source of payment information gathered from the Minnesota (MN) Birth Certificate. The main purpose for this in-depth study is to determine the accuracy of the data entries, over the six-year period of its inclusion, and their reliability for use in future studies. The field “Principal Source of Payment for This Delivery” was added in 2011, when a major revision of the Minnesota birth certificate was introduced.

### Source of Payment Section on Minnesota Birth Certificate

The “Source of Payment” field on the birth certificate comes from clinic records, which is filled out on the medical worksheet by the hospital birth registrar. Birth data is entered into the electronic, Minnesota Registration and Certification system. The specific check-marked fields come from the National Center for Health Statistics, and are the standard choices used.

Following are the national standard codes during data entry:

- 1 = Medicaid
- 2 = Private Insurance
- 3 = Self-pay
- 4 = Indian Health Service
- 5 = CHAMPUS/TRICARE
- 6 = Other Government (Federal, State, Local)
- 8 = Other
- 9 = Unknown

For the field “Other” there is a text box for the birth registrar to fill in any additional information. The definition of CHAMPUS/Tricare is:

**Tricare** (styled **TRICARE**), formerly known as the Civilian Health and Medical Program of the Uniformed Services (**CHAMPUS**), is a health care program of the United States Department of Defense Military Health System.

## Analysis

To determine the accuracy of the “Source of Payment” data gathered from birth certificate entries, this data is compared with the results of the MN Center for Health Statistics (MCHS) match-merging of Medicaid member birth claims records to MN resident birth certificate records.

The MN Department of Human Services receives Medicaid claims records. An algorithm, created in-house within MCHS links the resident MN birth record to the Medicaid record of a birth mother and/or child. This match-merging task has been performed every year by MCHS, since 1997, with an average of 98.8% of Medicaid records successfully linked to a MN resident birth record.

## Data and Observations

According to data linkage conducted by MCHS, 44.7% (N=31,182) of MN resident births were covered by Medicaid in 2016. This is a consistent pattern, showing a gradual increase from 2011, when 43.4% (N=29,701) of resident births were Medicaid-covered.

While the “Source of Payment” field was added to the birth certificate in 2011, the MN Office of Vital Records (OVR) has long collected this data, although there were known difficulties with data accuracy and issues of consistency compared to the National Center for Health Statistics (NCHS) expected proportions of medical assistance coverage. To remedy this, OVR in partnership with NCHS, implemented changes in the wording on the birth certificate forms. To improve accurate reporting OVR has conducted direct educational seminars in facilities.

For the birth registrar in a hospital, lack of time is the main challenge for precisely confirming “Source of Payment.” Minnesota statutes 144.215, Subdivision 3, states that all births must be registered within 5 days from the date of birth. Generally, the birth registrar relies on the payment information previously recorded by the admitting/registration area of the hospital, collected during the pre-admission process for births. Comparison of Medicaid Status to Source of Payment Entry on Birth Certificate

**Table 1. Comparison of Medicaid Status to Source of Payment Entry on Birth Certificate**

Report Medicaid	Source of Payment	2011 (N)	2011 (%)	2012 (N)	2012 (%)	2013 (N)	2013 (%)	2014 (N)	2014 (%)	2015 (N)	2015 (%)	2016 (N)	2016 (%)
No	Medicaid	782	2.0%	777	2.0%	966	2.5%	1,193	3.0%	1,175	3.0%	1,307	3.4%
No	Private Insurance	27,623	71.3%	35,131	90.4%	36,010	91.5%	36,496	91%	35,908	91.9%	35,422	91.9%
No	Self-pay	331	0.9%	587	1.5%	780	2.0%	1,011	2.5%	990	2.5%	951	2.5%
No	Indian Health Service	9	0.0%	17	0.0%	31	0.1%	25	0.1%	3	0.0%	2	0.0%
No	CHAMPUS/TRICARE	315	0.8%	400	1.0%	423	1.1%	435	1.1%	41	0.1%	43	0.1%
No	Other Government Program	280	0.7%	434	1.1%	324	0.8%	293	0.7%	17	0.0%	7	0.0%
No	Other	1,177	3.0%	1,017	2.6%	511	1.3%	469	1.2%	855	2.2%	756	2.0%
No	Unknown	8,198	21.2%	480	1.2%	291	0.7%	172	0.4%	96	0.2%	76	0.2%
Yes	Medicaid	9,233	31.1%	14,087	47.1%	17,380	58.2%	19,122	64.1%	21,201	68.9%	20,467	65.6%
Yes	Private Insurance	7,453	25.1%	8,367	27.9%	8,189	27.4%	7,546	25.3%	7,647	24.9%	9,168	29.4%
Yes	Self-pay	735	2.5%	597	2.0%	589	2.0%	689	2.3%	717	2.3%	759	2.4%
Yes	Indian Health Service	28	0.1%	37	0.1%	51	0.2%	54	0.2%	4	0.0%	6	0.0%
Yes	CHAMPUS/TRICARE	351	1.2%	310	1.0%	272	0.9%	176	0.6%	3	0.0%	6	0.0%
Yes	Other Government Program	4,285	14.4%	4,952	16.5%	2,463	8.3%	1,400	4.7%	53	0.2%	15	0.0%
Yes	Other	1,104	3.7%	1,326	4.4%	769	2.6%	681	2.3%	1,026	3.3%	673	2.2%
Yes	Unknown	6,512	21.9%	264	0.9%	134	0.4%	154	0.5%	99	0.3%	88	0.3%

Table 1 shows the breakdown of these entries for “Source of Payment” from 2011-2016. Notably there is a significant decrease in recent years (moving to near zero) in selecting the vague “Other Government Program” option, for both Medicaid and non-Medicaid births. A similar pattern is seen for the option “Unknown.” OVR attributes these improvements in data certainty are attributed to their ongoing monitoring and performance improvement efforts.

Looking at the data in Table 1, only 31.1% of Medicaid births were recognized as such at the time of birth registration in 2011. However, that rate improves to 65.6% of Medicaid births being reported as having Medicaid coverage, by 2016. However, a significant percentage of Medicaid births continue to be reported as having either “Private Insurance” (29.4% in 2016) or “Self-pay” (2.4% in 2016), (31.8% combined). By 2016, very few births reported entries of “Indian Health Service”, “CHAMPUS/TRICARE”, or “Other Government Program.” Births reported as “Other”, also decreased each year to a low of 4.2% for confirmed Medicaid and non-Medicaid births, by 2016.

## Conclusions

Accuracy in the “Source of Payment” field on the MN Birth Certificate continues to improve every year, judging by the growing comparability between the births self-identified as having Medicaid coverage and the births confirmed by MCHS data linkage as Medicaid-covered births. However, the consistency of agreement is not yet great enough to use this field as the standard source of birth payment information. MCHS will continue to monitor and work with OVR to improve this field over time, as it provides wealth of valuable information for those who use MN Birth Certificate data in their research. Further, this field may provide an increasingly reliable source of data about a significantly underserved group of Minnesotans: children born to families with no source of health care coverage.

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For questions, to request vital statistics data, or to obtain this document in a different format please contact the Minnesota Center for Health Statistics.

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