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Medicaid Enrollment Gaps, 2005–2007[1]

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The Medicaid program provides health insurance coverage every year to more than 60 million Americans spanning all ages. Eligibility is based on both categorical factors and income. Each can change, resulting in a potential loss of eligibility for an enrollee. Prior research has established that the loss of Medicaid coverage, whether temporary or permanent, has consequences for both the individual and the community. In this report, we use data from a new source—Medicaid administrative records that have been unduplicated and linked over time—to investigate discontinuities in Medicaid enrollment by eligibility group and state over the period January 2005 through December 2007. Of the nearly 41 million persons who were enrolled with full benefits in January 2005, 22.1 percent had one or more gaps in coverage during the next three years. For those who enrolled during 2005, 38.9 percent had one or more gaps in coverage before December 2007. Of the gaps that started in 2005 or 2006 among those who were enrolled in January 2005, 21.6 percent lasted just one month, and another 12.8 percent lasted only two months. Only 17.5 percent of the gaps lasted more than 12 months. Among those who enrolled during the course of 2005, gaps were not only more common but shorter: 28.3 percent lasted one month, and another 16.1 percent lasted just two months while only 8.5 percent lasted more than 12 months.

Background

Gaps in Medicaid coverage have been examined from a number of perspectives in studies using both Medicaid enrollment data and household survey data. Ellwood and Irvin (2000) analyzed Medicaid enrollment patterns of children and their parents in five states in 1995 and documented the extent of turnover in the Medicaid caseload. During the year, 1.5 million children and nearly 1 million adults disenrolled, yet monthly enrollment declined by only 180,000. The study also called attention to the role of "churning"—interruptions in enrollment due to disenrollment then re-enrollment—in caseload turnover. The subject of churning in the Medicaid caseload, particularly interruptions lasting only a month or two, has attracted the interest of policy researchers. Several studies have documented adverse consequences of discontinuous coverage of any length.[2]

Medicaid administrative data cannot reveal whether those who leave Medicaid, briefly or indefinitely, acquire other health insurance coverage or become uninsured, but studies based on longitudinal survey data suggest that many do become uninsured. Using data from the Survey of Income and Program Participation (SIPP) for 1992 to 1994, Czajka (1999) found that just over one-half of the children who left Medicaid lacked health insurance the next month, and more than one-half of those who lacked coverage appeared to be still eligible. Sommers (2008) analyzed data from the Medical Expenditure Panel Survey (MEPS) for 2000 to 2004 and found that six months after disenrolling from Medicaid, 49 percent of adults and 43 percent of children were uninsured.

About This Series

The MAX Medicaid policy issue brief series highlights the essential role MAX data can play in analyzing the Medicaid program. MAX is a set of annual, person-level data files on Medicaid eligibility, service utilization, and payments that are derived from state reporting of Medicaid eligibility and claims data into the Medicaid Statistical Information System (MSIS). MAX is an enhanced, research-friendly version of MSIS that includes final adjudicated claims based on the date of service, and data that have undergone additional quality checks and corrections. CMS produces MAX specifically for research purposes. For more information about MAX, please visit: http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/MAXGeneralInformation.html.

Data

States are required to submit quarterly enrollment and claims records to the Centers for Medicare & Medicaid Services (CMS) through the Medicaid Statistical Information System (MSIS) for all individuals enrolled in regular Medicaid and M-CHIP. The reporting of S-CHIP data is optional. The data submitted through MSIS are the ultimate source of the data used in this analysis, but extensive processing conducted in several stages is required to transform the MSIS submissions into the analytical data used here. To provide health policy researchers with access to Medicaid administrative data in a form suitable for research, CMS has funded and overseen the development of an annual Medicaid Analytic Extract (MAX) file, which is produced by reorganizing the quarterly MSIS submissions into calendar-year files and applying a variety of corrections and enhancements. However, the application of MAX data to national-level and longitudinal research has been limited by the fact that the files do not fully identify records belonging to the same individual, either over time or across states. To address this limitation, CMS contracted with Mathematica Policy Research to design and construct unduplicated research files from Medicaid enrollment records in MAX 2005, 2006, and 2007. An unduplicated research file containing one record per unique enrollee per state was produced for each of the three years. The analysis presented here uses the unduplicated data linked across years within states, but not across states. For our purposes, Medicaid includes M-CHIP but not S-CHIP.

Findings

Our analysis of gaps in Medicaid enrollment focused on two areas: (1) continuity of coverage and (2) the duration of enrollment gaps.

Continuity of Coverage

In examining continuity of coverage over the three years, we differentiate between "established enrollees," who were enrolled in Medicaid in January 2005, and "new enrollees," who were not enrolled in Medicaid in January but enrolled at some point during 2005. We also examine the frequency and timing of disenrollment at four transition ages.

Established Enrollees. Nearly one-half (46.6 percent) of the 40.9 million established enrollees who were eligible for full benefits in all their months of enrollment remained enrolled in Medicaid through the end of 2007, but more than one-fifth (22.1 percent) disenrolled and then re-enrolled at least once—that is, they had one or more gaps in their Medicaid coverage (Table 1). The remaining 31.3 percent exited Medicaid without returning. Enrollees who were eligible on the basis of age or disability were much more likely to remain continuously enrolled and far less likely to have gaps in enrollment than those who were

Table 1. Medicaid Enrollment in the Same State in 2005 through 2007: Established Enrollees by Benefit Type and Initial Basis of Eligibility

Benefit Type and Initial Basis of Eligibility	Number Enrolled Jan 2005 (1,000s)	Continuously Enrolled	1 Exit; No Return	1 or More Exits and Returns
All Benefit Types	**46,614**	**44.2**	**32.7**	**23.0**
Adults	10,592	22.7	44.9	32.4
Children	23,469	41.1	31.8	27.1
Aged	4,596	57.6	35.8	6.6
Disabled	7,958	74.3	17.4	8.3
Full Benefits Only	**40,913**	**46.6**	**31.3**	**22.1**
Adults	7,463	27.0	42.3	30.7
Children	22,890	41.6	31.7	26.7
Aged	3,331	60.8	35.0	4.2
Disabled	7,228	76.3	17.1	6.6
Restricted Benefits Only	**4,016**	**22.6**	**51.7**	**25.8**
Adults	2,498	10.3	57.5	32.2
Children	381	22.2	48.4	29.4
Aged	830	46.3	44.8	8.9
Disabled	307	58.9	27.0	14.2
Full and Restricted Benefits[a]	**1,686**	**37.4**	**22.2**	**40.4**
Adults	631	21.0	26.6	52.5
Children	198	20.9	18.0	61.1
Aged	434	54.7	24.2	21.1
Disabled	423	51.7	15.7	32.6

[a] Enrollee was entitled to full benefits in some months and restricted benefits in other months during the three-year period.

eligible as adults or children. For example, only 4.2 percent of aged enrollees and 6.6 percent of enrollees with disabilities had gaps in enrollment. By contrast, nearly one-third (30.7 percent) of adult enrollees and more than one-quarter of child enrollees (26.7 percent) experienced discontinuous Medicaid coverage—and, presumably, interruptions in medical care. People who were eligible for only restricted benefits in all of their months of enrollment (4.0 million in January 2005) had sharply lower rates of continuous enrollment and sharply higher rates of exiting without returning than their counterparts with full benefits. Only 22.6 percent remained enrolled through the end of 2007 while 51.7 percent disenrolled without returning. The fraction with one or more gaps in enrollment, 25.8 percent, was only slightly higher than among those with full benefits, however. The remaining analysis focuses on enrollees who were eligible for full benefits in all their months of enrollment.

States exhibited wide variability in the extent to which Medicaid enrollees with full benefits tended to remain enrolled for extended periods of time or experienced multiple gaps in enrollment. Among established enrollees the proportion who remained enrolled for the entire 36 months ranged from a low of 24.6 percent in Nevada to a high of 63.7 percent in Illinois (data not shown). In Nevada, 48.1 percent disenrolled and did not return, whereas this fraction in Illinois was only 23.8 percent. Alaska had the highest proportion with one or more gaps in enrollment, at 42.4 percent; Tennessee had the lowest, at 9.9 percent.

New Enrollees. Discontinuous coverage was much more common among new enrollees than among established enrollees. Of the 12.9 million new enrollees in 2005 with full benefits, only 23.0 percent or just half of the fraction among established enrollees remained enrolled through the end of December 2007 while 38.9 percent had one or more gaps in coverage (Table 2). Even among those eligible on the basis of age or disability, new enrollees were much more likely than established enrollees to experience gaps in coverage. Gaps were observed for 16.9 percent of aged enrollees, 26.6 percent of enrollees with disabilities, 41.1 percent of adults, and 40.5 percent of children.

State patterns for persons with full benefits reflect the overall lower rate of continuous enrollment, higher exit rate, and higher fraction with one or more gaps in enrollment among new enrollees versus established enrollees. For all eligibility groups combined, the proportion continuously enrolled ranged from a low of 11.1 percent in Nevada to a high of 42.7 percent in Tennessee, which was below the national average for established enrollees (data not shown). The fraction who exited Medicaid and did not return varied from a low of 24.1 percent in Vermont to a high of 56.4 percent in Nevada. The proportion with one or more gaps in coverage ranged from a low of 22.0 percent in Tennessee (nearly as high as the national average among established enrollees) to a high of 63.4 percent in Alaska.

Transition Ages. There are three ages at which Medicaid eligibility changes in many states and one additional age that represents a transition point for other public health insurance. In 2011, there were 22 states in which the eligibility thresholds for Medicaid declined between infancy and age 1, and 19 states in which the eligibility thresholds declined between ages 5 and 6 (Kaiser Commission on Medicaid and the Uninsured 2011). In nearly all states, there was a substantial decline in eligibility between ages 18 and 19, when children must re-establish eligibility as adults. In all but a small number of states, eligibility for full Medicaid benefits among nondisabled adults is restricted to parents, and income limits are generally well below those for 18-year-olds. In moving from age 64 to 65, most Medicaid enrollees qualify for Medicare. While they do not lose Medicaid eligibility as a result, their access to Medicare could reduce the perceived value of continued enrollment in Medicaid—at least for some.

Table 2. Medicaid Enrollment in the Same State in 2005 through 2007: New Enrollees in 2005, by Benefit Type and Initial Basis of Eligibility

Benefit Type and Initial Basis of Eligibility	Number Who Enrolled in 2005 (1,000s)	Continuously Enrolled	1 Exit; No Return	1 or More Exits and Returns
All Benefit Types	**15,652**	**21.5**	**39.4**	**39.1**
Adults	5,561	11.9	46.9	41.1
Children	8,183	23.8	35.5	40.7
Aged	833	39.9	39.9	20.2
Disabled	1,076	39.4	30.0	30.7
Full Benefits Only	**12,872**	**23.0**	**38.1**	**38.9**
Adults	3,672	13.8	45.1	41.1
Children	7,856	24.3	35.2	40.5
Aged	489	40.4	42.7	16.9
Disabled	856	40.7	32.6	26.6

We observed very high exit rates among enrollees who were age 18 at the start of 2005 (58.1 percent), but exit rates for infants—33.9 percent—were just above those for all persons under age 19, at 30.3 percent (Table 3). Exit rates for 5-year-olds (27.8 percent) were below those for all persons under age 19, and exit rates for 64-year-olds (24.7 percent) were well below those for persons 19 to 64 years old (32.3 percent) and those 65 and older (33.0 percent).[3]

In theory, exits due to losing eligibility at age 1 or 19 should be seen in the month after the individual's birthday, and our data are generally consistent with this. Only 2.2 percent of infants who were enrolled with full benefits in January 2005 left Medicaid in the month they turned age 1, whereas 14 percent left Medicaid in the month after turning age 1, and 4.7 percent exited two months later (Table 4). Exit rates dropped to less than 3 percent per month after that. Among 18-year-olds, 3.9 percent left Medicaid in the month they turned 19, 22.2 percent left one month later, and 6.4 percent left two months later. Monthly exit rates then dropped below 4 percent.

States showed wide variation in the rate at which enrollees at the four transition ages exited Medicaid upon attaining the next age. The sharpest exit rate spikes were at the transition between 18 and 19 years old. In Arkansas, Idaho, Louisiana, New Hampshire, and South Dakota, more than one-half of enrollees left Medicaid the month after they turned 18 (data not shown). Rates above 30 percent were recorded in another 19 states, whereas only 10 states had exit rates below 10 percent. With respect to infants, New Mexico stood out, with 20.6 percent of infants leaving Medicaid in the month they turned age 1. In Alaska, Mississippi, and Utah, the proportion of infants who left Medicaid one month after turning age 1 exceeded 35 percent. In eight other states, the exit rates in this month exceeded 20 percent.

Table 3. Medicaid Enrollment with Full Benefits in the Same State in 2005 through 2007: Established Enrollees at Transition Ages and in Broad Age Groups, by Age on January 1, 2005

Age Group	Total Enrolled Jan 2005 (1,000s)	Continuously Enrolled	1 Exit; No Return	1 or More Exits and Returns
Transition Ages				
Infants	2,115	35.8	33.9	30.3
Age 5	1,387	45.8	27.8	26.4
Age 18	728	15.2	58.1	26.7
Age 64	150	68.9	24.7	6.4
Broad Age Groups				
Under 19	23,581	43.8	30.3	25.8
19 to 64	13,251	47.1	32.3	20.6
65 and older	3,838	63.1	33.0	3.9

Table 4. Timing of Medicaid Exits Relative to Birthday Month: Established Enrollees at Transition Ages with Full Benefits, by Age on January 1, 2005

Age	Enrolled Jan 2005 (1,000s)	Before Birthday Month	Same Month	One Month Later	Two Months Later	Three Months Later	Four Months Later	Five Months Later	6 to 11 Months Later	12 or More Months Later
Infants	2,115	6.2	2.2	14.0	4.7	2.8	2.2	2.0	10.1	19.9
Age 5	1,387	9.0	2.1	3.4	2.6	2.4	2.3	2.2	10.8	19.4
Age 18	728	15.8	3.9	22.2	6.4	3.9	3.1	2.6	10.5	16.6
Age 64	150	5.8	1.5	1.8	1.7	1.3	1.1	1.0	5.5	11.4

Duration of Enrollment Gaps

Earlier we showed that 22.1 percent of established enrollees and 38.9 percent of new enrollees with full benefits had one or more gaps in enrollment between 2005 and 2007. Here we examine the duration of these gaps in enrollment—that is, the number of months without enrollment. We look first at gaps among established enrollees and then at gaps among new enrollees.

Established Enrollees. Brief gaps—representing one or two months without enrollment—accounted for more than one-third of all gaps in enrollment that started in 2005 or 2006 among established enrollees with full benefits (Table 5). One-month gaps were 21.6 percent of the total, and two-month gaps accounted for another 12.8 percent. The literature suggests that most if not all one-month gaps are due to administrative processing issues in recertifying enrollees, and two-month gaps may largely involve such administrative churning as well. Brief gaps were more common among aged and disabled enrollees than among adults and children, accounting for more than 40 percent of all gaps among the aged and disabled compared to 30.7 percent among adults and 35.4 percent among children. There was less variation in the proportion of gaps lasting more than 12 months, however. Such gaps represented 20.5 percent of the gaps among adults but ranged from 15.3 to 16.5 percent among the other three eligibility groups.

Among all full benefit enrollees, one-month gaps occurred at rates that were well above the national average in four states: Arkansas, 37.2 percent; Delaware, 37.0 percent; Vermont, 41.8 percent; and Wisconsin, 32.0 percent (data not shown). Three states had exceptionally low rates: Illinois, 14.7 percent; Louisiana, 11.6 percent; and Tennessee, 14.0 percent. The high rates of one-month gaps in Delaware, Vermont, and Wisconsin extended to adults and children, whereas Arkansas had a high rate for children but not adults.

One-month gaps for aged and disabled enrollees occurred with much greater frequency among the outlier states than did one-month gaps for adults and children. In Vermont, 85.3 percent of the gaps among aged enrollees and 73.7 percent of the gaps among enrollees with disabilities were a single month in length. In Mississippi, North Dakota, and South Dakota, more than one-half of the enrollment gaps among aged enrollees were one month in length. For enrollees with disabilities, no state approached Vermont, but Arkansas, Montana, New Jersey, North Dakota, South Dakota, and Texas had rates between 40 and 50 percent.

New Enrollees. Brief gaps were even more common among new enrollees than among established enrollees, accounting for nearly 45 percent of all gaps, with 28.3 percent lasting one month and 16.1 percent lasting two months (Table 6). Eligibility groups were more differentiated as well. Brief gaps represented 54.1 percent of all gaps among enrollees with disabilities, 50.9 percent among aged enrollees, 45.9 percent among children, and 39.4 percent among adults. Only 8.5 percent of all gaps lasted more than 12 months, ranging from 6.5 percent among disabled enrollees to 11.0 percent among adults. The same states that stood out with respect to the frequency of short versus long gaps among established enrollees did so for new enrollees as well. This is not at all surprising, as the same administrative processes would apply to both populations in these states.

Table 5. Length of Medicaid Enrollment Gaps Starting in Calendar Years 2005 and 2006 among Established Enrollees with Full Benefits, by Eligibility Group in January 2005

Eligibility Group	Number of Gaps (1,000s)	1 Month	2 Months	3 Months	4 Months	5 Months	6 to 9 Months	10 to 12 Months	More than 12 Months
Full Benefits Only	**9,084**	**21.6**	**12.8**	**9.3**	**7.2**	**6.1**	**16.6**	**8.8**	**17.5**
Adults	2,437	19.1	11.6	8.8	7.0	6.2	17.4	9.4	20.5
Children	6,040	22.1	13.3	9.5	7.4	6.1	16.4	8.7	16.5
Aged	134	27.7	14.1	10.3	6.3	4.8	14.2	7.3	15.3
Disabled	473	27.4	12.8	9.1	6.4	5.3	15.2	7.8	15.9

Table 6. Length of Medicaid Enrollment Gaps Starting in Calendar Years 2005 and 2006 among New Enrollees with Full Benefits, by Eligibility Group in January 2005

Eligibility Group	Number of Gaps (1,000s)	1 Month	2 Months	3 Months	4 Months	5 Months	6 to 9 Months	10 to 12 Months	More than 12 Months
Full Benefits Only	**5,733**	**28.3**	**16.1**	**11.1**	**8.2**	**6.6**	**15.4**	**5.8**	**8.5**
Adults	1,774	24.9	14.7	10.7	8.2	6.9	16.9	6.8	11.0
Children	3,571	29.1	16.8	11.2	8.4	6.6	15.1	5.5	7.5
Aged	98	34.1	16.8	11.2	6.8	5.4	12.4	4.8	8.4
Disabled	291	37.7	16.4	10.7	6.9	5.4	12.4	4.1	6.5

Discussion

The analysis presented here provides a statistical portrait of the frequency with which Medicaid enrollees remained enrolled continuously throughout the period January 2005 to December 2007, disenrolled and did not return, or experienced one or more gaps in enrollment. We consider some implications of these findings, suggest further research, and discuss the limitations of the study.

Implications and Further Research

The enrollee who leaves Medicaid entirely may eventually obtain coverage from another source, perhaps after a period without insurance. We cannot ascertain this outcome from Medicaid data alone. But if an enrollee has gaps in his or her Medicaid coverage (that is, leaves and returns), prior research indicates that the odds are high that his or her receipt of medical care will be discontinuous as well. Among established enrollees, nearly one-third of adults and more than one-quarter of children experienced discontinuities in Medicaid coverage—and, presumably, interruptions in medical care. Among new enrollees, more than 40 percent of adults and children experienced discontinuities. Our findings suggest that establishing greater continuity of care among those who are served by public health insurance remains an important policy goal. These findings are especially timely in light of the substantial expansion of Medicaid for adults 19 to 64 years old that will occur in 2014 under the Affordable Care Act.

One of the key aspects of our findings is the documentation of differences among the states. On most of the measures we presented, the states varied substantially. State variation reflects a variety of factors including, but not limited to, Medicaid and other program eligibility levels; state Medicaid policies and administrative practices; state labor markets, industry mix, and economic conditions; and the composition of the state population along a number of dimensions. A useful follow-up to this work would attempt to estimate the impact of state Medicaid policies and practices on observed differences in continuity of enrollment and the frequency and length of enrollment gaps.

Limitations

Besides the fact that our data cannot tell us anything about people's health insurance coverage in the month(s) that they were not enrolled in Medicaid, two additional limitations to the analysis presented here should be noted. First, our analysis is based entirely on linkages of records within the same state. If an enrollee moved to another state, that person would be treated in our analysis as disenrolling. Second, there is evidence, albeit anecdotal, that state enrollment databases may continue to show people as enrolled in Medicaid when, in fact, their enrollments have been terminated. To the extent that such "ghost" enrollment of any kind appears in the Medicaid enrollment data, it will affect our findings, potentially, in three ways. One, it will falsely lengthen spells of enrollment, which could increase our estimates of people enrolled continuously. Two, if such ghost enrollees re-enroll, the length of their enrollment gaps will be understated and, in some cases, no gap will be observed. Three, ghost enrollment is likely to vary widely across states and, if so, will contribute to observed differences among states in our estimates of continuity and gaps in enrollment.

Conclusion

Using data developed from Medicaid administrative records submitted to CMS by the 50 states and DC, this issue brief has documented the enrollment patterns from 2005 through 2007 of those who were enrolled in Medicaid at the beginning of 2005 or who enrolled during the course of that year. Earlier research suggests that Medicaid enrollees who leave the program and return within a relatively short time are unlikely to obtain other health insurance

coverage in the interim. This has implications for the quality of the medical care that they receive over time. We found that nearly one-third of the adult enrollees and more than one-quarter of the child enrollees who were enrolled in Medicaid in January 2005 with full benefits experienced discontinuities in Medicaid coverage—and, presumably, interruptions in medical care—over the next three years. Among those who enrolled between February and December of 2005, gaps were even more common: more than 40 percent of the adults and children had one or more gaps in enrollment before December 2007. Gaps in enrollment were not nearly as common among established enrollees who were eligible on the basis of age or disability, running 7 and 8 percent among those enrolled in January 2005, but they grew to 20 and 31 percent, respectively, among those who enrolled during the balance of 2005. More than one-third of the gaps among established enrollees and nearly 45 percent of the gaps among new enrollees ended after one or two months—durations that suggest administrative churning rather than actual changes in eligibility. Comparatively few gaps extended beyond 12 months—only 17.5 percent among established enrollees and 8.5 percent among new enrollees. With re-enrollment following disenrollment after a relatively short period in most cases, it is unlikely that many of these individuals were able to establish regular medical care outside of Medicaid.

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Endnotes

[1] The full report on which this issue brief is based is available at: http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/Medicaid_Enrollment_Gaps2005_2007.pdf

[2] See, for example, Schoen and DesRoches (2000).

[3] The higher mortality rates of persons 65 and older compared to those aged 64 (or just turning 65) could be a factor in their higher exit rates.

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