Published in final edited form as:

Matern Child Health J. 2016 June ; 20(6): 1280–1287. doi:10.1007/s10995-016-1929-9.

Medicaid Disenrollment Patterns among Children Coming into Contact with Child Welfare Agencies

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Abstract

Objectives—To examine retention of Medicaid coverage over time for children in the child welfare system.

Methods—We linked a national survey of children with histories of abuse and neglect to their Medicaid claims files from 36 states, and followed these children over a 4 year period. We estimated Cox proportional hazards model on time to first disenrollment from Medicaid.

Results—Half of our sample (50%) retained Medicaid coverage across 4 years of follow up. Most disenrollments occurred in year 4. Being 3-5 years of age and rural residence were associated with increased hazard of insurance loss. Fee-for-service Medicaid and other non-managed insurance arrangements were associated with a lower hazard of insurance loss.

Conclusions—A considerable number of children entering child environments seem to retain Medicaid coverage over multiple years. Finding ways to promote entry of child welfare-involved children into health insurance coverage will be critical to assure services for this highly vulnerable population.

Keywords

Medicaid; child maltreatment; retention; attrition

BACKGROUND

Securing health insurance coverage for children has been a cornerstone of Federal policy for several decades (1). However, maintaining such access to stable insurance coverage is even more critical for children with histories of abuse or neglect, who are investigated by child protective services and then may be deemed to require services through child welfare agencies (collectively, hereafter, *child welfare system*) nationwide. This is because maltreated children have considerable needs for physical and behavioral health services (2), and rely upon Medicaid to finance those needs (3). Currently, there is little empirical data on

the ability of children in the child welfare system to successfully maintain Medicaid insurance coverage over time.

The thrust of Federal policymaking for children coming into contact with child welfare agencies is on *initial* access. Such policymaking is targeted more towards children in foster care (for whom the state is *in loco parentis*) than for children who are maintained within their homes of origin but receive services from, or arranged by, child welfare agencies. By law, states are required to provide Medicaid coverage for all children in foster care for whom states receive federal reimbursement for foster care expenses under Title IV-E of the Social Security Act (4). States have the option of covering children in foster care who are not Title IV-E eligible, and all do so (5). Consequently, 99% of all children in foster care are covered under Medicaid (6). Coverage for children with an open case or those receiving services from a child welfare agency but who are maintained within their own homes (“in-home”) is less comprehensive. Of these, 66% are covered under federal Medicaid regulations, 17% under state regulations, and less than 1% under county regulations, accounting for an overall Medicaid coverage rate of approximately 84% (6). For in-home children, Medicaid entitlements are similar to those governing coverage for non-maltreated children – i.e., eligibility is obtained largely through income levels. The only difference being that child welfare involvement brings with it child welfare workers, whose efforts on behalf of the child increases his/her likelihood of entry into Medicaid. This is why national studies on insurance stability among children in the child welfare have reported that entry into the child welfare system acts as a conduit into health insurance (7).

Once children are in foster care, they face a variety of situational threats to maintaining Medicaid coverage. The biggest is placement. Because the strongest entitlements to Medicaid are based on foster care status, children can experience insurance instability if they leave a foster care placement (where they are categorically entitled to coverage) to become reunified (where they have no categorical eligibility, but may be eligible for Medicaid because of income levels) (8). For both children in foster care and those maintained in-home, mental health inpatient use may place them, paradoxically, at a greater risk of disenrollment (9). This is especially critical for the approximately 2% of child welfare-involved children who utilize inpatient mental health facilities (10). These factors of placement instability and service use place child welfare-involved children at risk of insurance instability. These unique risks of insurance disenrollment are in addition to those risks common across all child Medicaid beneficiaries, including changes in state policymaking, and the inability of caregivers to complete renewal forms (11). Only half of all children who lose Medicaid coverage reenroll after 1 year (12). Across 5 states, up to 41% of children display discontinuous Medicaid coverage, a phenomenon described as a “revolving door” (13). Such patterns of coverage can have serious implications for the health and well-being of child welfare-involved children.

Comparatively little research has been conducted on the stability of insurance coverage for children in the child welfare system. Those that have, attempt to derive insurance coverage information solely from parental self-report for in-home children, the validity of which can be adversely affected by imperfect information possessed by foster parents, or by social desirability on the part of birthparents investigated by child welfare agencies. Consequently,

the magnitude of insurance disenrollment is unclear from the few extant studies that have examined this issue among children in the welfare system (7, 14).

In the present study we examine disenrollment in Medicaid health insurance coverage among children coming into contact with child welfare agencies nationwide. Relying upon a unique linkage between a national child welfare survey data – the National Survey of Child and Adolescent Well-Being – and Medicaid claims from 36 states, we report the prevalence of disenrollment from Medicaid (from claims data), and the factors that place children at risk of such disenrollment (from survey data).

METHODS

Data Sources and Creation of Analytic Data Set

The first National Survey of Child and Adolescent Well-Being I (NSCAW I) is the first nationally representative, longitudinal study of children and adolescents coming into contact with child welfare agencies. This sample contains data on 5501 youth investigated by Child Protective Services for possible abuse and neglect, and 727 youth in long-term foster care placement, in 97 counties throughout the United States. NSCAW's baseline wave sampled children presenting to child protective services agencies within a 15-month period beginning in October 1999, with three follow up waves of data collection extending over three years. Data within NSCAW is obtained from children, their child welfare workers, their caregivers, and their teachers. This study used data obtained from the child's caregivers and child welfare workers. Details on NSCAW's design and fielding have been published elsewhere (15, 16). We also obtained Medicaid claims files for years 2000 through 2003, corresponding to the time frame of NSCAW administration (17). We obtained data on all 36 states that were part of the NSCAW sampling frame.

Both NSCAW and MAX data contain social security numbers (SSNs) of participants and beneficiaries, which we procured for this study. For some children, their caregivers had permitted the use of these SSNs to link individual children with other data sources. For this group, we used SSNs to link 2371 NSCAW children to their Medicaid enrollment files. A second group of children did not have SSNs but their caregivers had permitted data linkage. For these children, we developed an indirect matching procedure in which all unique 5-digit ZIP code, date of birth, gender, and race/ethnicity combinations were identified in NSCAW (based on sampling information) and in the MAX data (based on enrollment records). In the third case, where the NSCAW child's caregiver refused permission to link children's SSNs to external files, we did not undertake any linkage even when we had the data in hand to do so. Linked and non-linked children did not differ in their demographic characteristics or behavioral health need. Our total linked NSCAW-MAX sample contained 4359 children.

We linked these enrollment files across four years, and aggregated individual claims within a single calendar year for a given NSCAW child. We did not use information on children under the age of 2 years to assess mental health need because the instrument used to determine such need in NSCAW – the Child Behavior Checklist (CBCL) (18) – is not normed for this age group. We can observe enrollment and utilization for children enrolled only in some types of Medicaid plans—fee-for-service (FFS), primary care case management

(PCCM), or “other” managed care plans with non-mental health care carve-out. We had to delete children in fully managed plans because of a lack of data availability. A child had to be continuously enrolled on Medicaid for 10 months in order to qualify for inclusion into our study. Data are unweighted because we use expenditure estimates from Medicaid as an outcome that do not have weights, and the linkage creates a subset, on which original sample weights no longer apply.

These analyses were approved by the Washington University Human Research Protection Office and the Institutional Review Board of Research Triangle Institute (RTI International).

Attrition from Medicaid

Our outcome variable was the time in months to the first non-observation of a child in the Medicaid Personal Summary (i.e., enrollment) file in our MAX data set. We first used NSCAW data to obtain current insurance information from the child's current caregiver (birthparent for in-home children, or foster parent or other caregiver for out-of-home children), triangulated with child welfare worker report; all contradictions were coded in favor of the child welfare worker. We used this variable of “Medicaid coverage at entry” to specify our analytic sample; children ascertained as being Medicaid beneficiaries at the time of fielding of NSCAW's baseline wave formed our sample. Some of these children may possess Medicaid coverage prior to their being included within the NSCAW study; however, that is not the focus of this study. We are principally interested in patterns of coverage once children have become involved with the child welfare system. Linked MAX data of all of these children were then subject to analysis. Beginning with the first month of observation, we counted the number of calendar months that a child was enrolled in Medicaid. For a child that either did not appear in the Medicaid enrollment file or were reported as ineligible for Medicaid, we determined that the child had left Medicaid rolls.

Covariates

All covariates were obtained from the NSCAW I survey, and were primarily based on information provided by the child's primary caregiver and investigating child welfare worker. Child-level covariates included age in years (recoded into five age categories as shown in Table 2), gender (male/female), and race/ethnicity (white, African American, Hispanic, and other), all as contained in the NSCAW data set. We created dummy variables for insurance type (fee-for-service [FFS], primary care case management [PCCM], or other types) directly from the child's Medicaid enrollment files.

We used scores on the clinical range of the internalizing and externalizing subscales of the CBCL as an indicator of mental health need for children over 2 years of age. For physical health need – measured in NSCAW using a 5-item Likert scale – we developed binary indicators representing “fair” or “poor” health, with “excellent,” “very good,” or “good” serving as the referent. Each child's placement status was grouped into two mutually exclusive categories of in-home (i.e., living with their permanent primary caregiver, usually their birthparent), or out-of-home (in family foster care – either with a relative or nonrelative – or in congregate care, such as a group home or residential treatment center).

Information on whether the child lived in an urban or rural area was used as a proxy for the availability of health care resources in the child's community. We also included state dummies in order to control for state fixed effects. Most covariates were measured at entry of the child into the NSCAW study. However, a child's eligibility for Medicaid based upon his/her placement (discussed above in the Background section), may vary over time. In order to model the dynamic nature of Medicaid eligibility, we analyzed placement as a time-varying covariate. Data from a total of 3 follow up waves were used to capture this variable – each wave fielded at 12, 24, and 36 months after the child's entry into the NSCAW study.

Data Analyses

All descriptive analyses were conducted using bivariate chi-square tests of proportion.

We estimated multivariable survival (event history) analysis on children retained within Medicaid until the last observed claim (as defined earlier). We use a month-based unit of time to insurance loss rather than calendar time because the exact time of insurance loss is interval-censored – i.e., while we know this event occurred between two months, we do not know the exact day on which insurance loss occurred. For this reason, we used the Breslow method to resolve tied insurance loss times. Some of these individuals regained coverage at subsequent waves; however, that was not the focus of this study – we right-censored participants at time of *first* insurance loss. As described above, placement was modeled as a time-varying covariate.

We conducted model diagnostics to assess validity of the proportional hazards assumptions that underpin the Cox model. Four variables (Black and Hispanic race/ethnicity, and physical and sexual abuse) did not meet proportional hazards assumptions. Examination of their Schoenfeld residuals did not seem to reveal any systematic patterns of change in hazards. All other variables met model assumptions for proportional hazards.

All analyses were conducted in version 13 of Stata (19).

RESULTS

Sample characteristics

Of a total sample size of 4359, 2175 (50%) were boys, and most were either of white (N=1809; 41%) or African-American (N=1439; 33%) ethnicities, with smaller numbers of children belonging to Hispanic or other or mixed race/ethnicities. Most (N=1616; 37%) were below 2 years of age. While 664 were aged between 3 and 5 years, 1366 between 6 and 11 years, and 427 between 12 and 13 years; the rest were aged 14 or over. Most children (N=2026; 46%) had fee-for-service Medicaid. A total of 781 children (18%) had a score in the clinical range of the internalizing subscale of the Child Behavior Check List, while 1022 (23%) had a similar score on the externalizing subscale of the CBCL. Most children (4017; 92%) were in reportedly good, very good, or excellent physical health. Most N=3416) were urban dwellers.

Most children (N=2941; 67%) were maintained in-home during the baseline wave of NSCAW, while the rest were either in family foster care, a group home, or some other type

of congregate care environment. Children in our sample had histories of several different types of maltreatment, including physical abuse (N=1223), sexual abuse (N=527), neglect (N=2687), and abandonment (N=263); these numbers are not mutually exclusive.

A total of 1397 children (32% of the sample) were still being observed at the 48th month. The rest of the children displayed insurance loss at varying durations prior to this period. Half of all children were censored when the study period ended after 4 years.

Patterns of retention within Medicaid

The numbers of maltreated children who lost Medicaid coverage each month over the 4 years of follow up are shown in Figure 1. The overlaid kernel density line smooths this frequency over time. As seen in the figure, rates of Medicaid loss occurred in the last few months of follow up. Between months 1 and 35, around 1% of the sample lost coverage at each month of observation. This rate increased to around 4% by month 46, and then to 5% at month 47.

These relatively low monthly frequencies do not, however, suggest that most children are stably retained within Medicaid coverage over long periods of time. Cumulatively, across the 4 years of observation, 50% of children lost coverage. As shown in the Kaplan-Meier curve (Figure 2), the hazard of insurance retention decreased (i.e. risk of becoming uninsured increased) throughout the duration of follow-up. Risk of Medicaid loss is not constant over time, but increases (i.e., the curve steepens) after about the 38th month of observation, falling off at the 48th month when the study ends.

On survival analysis of time to first insurance loss (Table 1), children aged between 3 and 5 years of age had a slightly higher hazard of insurance loss compared to children aged less than 2 years (HR: 1.2; SE: 0.08; p=0.02). Children living in rural areas also displayed increased hazard of insurance loss compared to urban-dwelling children (HR: 1.1; SE: 0.05; p=0.0009). Compared to children within Primary Care Case Management insurance arrangements, children in fee-for-service Medicaid (HR: 0.7; SE:0.05; p<0.0001) and other insurance arrangements (HR: 0.7; SE: 0.07; p<0.0001) had a lower hazard of insurance loss. The time-varying placement variable was also significantly predictive of insurance loss. Children living in out-of-home arrangements – such as foster care or a group home – had a slightly lower hazard of insurance loss (HR: 0.99; SE: 0.002; p<0.0001). Other demographic, need, and maltreatment characteristics did not appear to affect stability of insurance coverage.

DISCUSSION

In this study of Medicaid-enrolled children investigated for suspected maltreatment in 36 states, we found that 50% retained Medicaid coverage across 4 years of follow up. Most of the children who were unobserved as being on Medicaid rolls were unobserved because of censoring, when the window of observation of the study came to an end. While exits from Medicaid coverage occurred regularly in each month of observation, there were no discernable patterns of Medicaid loss, except during the last year of our 4-year period of follow up, when rates of disenrollment increased. The observed annual rates of

disenrollment among this population (Figure 1) are far lower than the 28% to over 30% annual disenrollment rates within the 2000–2003 time frame reported by other studies among all children eligible for Medicaid (11, 20). As such, these findings support prior work that suggests that children with child welfare involvement tend to retain insurance coverage with a fair degree of stability following their entry into the child welfare system (14). They also provide added impetus for the continuation and preservation of such coverage.

Securing and maintaining a pathway to insurance coverage through the child, rather than through the child's family, is especially important for children in child welfare environments. Most children in the United States today are covered as dependents on their parents' employer-sponsored health plans (21). Children in the child welfare system, disproportionately drawn from low-income families, may not have parents with jobs that carry insurance benefits. For children in foster care, who may have been the subject of termination of parental rights, this avenue to coverage is likely largely closed. Even for children whose parents do possess employer-sponsored coverage, a series of changes in the healthcare market place - fewer employers offering an insurance benefit and, among those that do, requiring that employees bear a larger share of the premium dollar - are especially onerous for low-income workers (22). Such market-driven changes, combined with the unique challenges faced by adolescents leaving foster care, limits the ability of parental employer-sponsored health insurance to be a viable source of coverage for adolescents leaving foster care.

Many of these concerns are precisely the targets of the Affordable Care Act (ACA) (23). The ACA has several implications for the care of children in general (24), and those in the child welfare system in particular. The expansion of the State Child Health Insurance Program, now authorized until 2019; expansions of Medicaid for children in foster care until age 26, which parallels the benefits available for children insured through commercial plans; and the possible retention of youth in foster care beyond age 26 due to Medicaid expansions for single adults without children are all ways in which the ACA can secure insurance entitlements for children in child welfare settings. Our study is not, admittedly, an evaluation of the ACA - the timeframe of our data are different. Our study does, however, demonstrate that many of the provisions of the ACA designed to secure Medicaid are likely to greatly benefit children in child welfare.

Our findings on retention of coverage (and, conversely, on losses of coverage) should be interpreted in the light of our study's methodology. We observe beneficiaries until they are no longer observed in Medicaid; we do not have information on the reasons why they no longer appear on Medicaid rolls. Interpreting such non-observation as disenrollment is one interpretation. But it is also possible that some of these disenrollments are positive phenomena - e.g., when a child secures coverage through a commercial health plan, say, as a result of a completed adoption. In such a case, loss of Medicaid may indicate a positive event. This information deficit is illustrated in the varying possible interpretations for the steepening of the hazard rate after the 38th month of observation. On one hand, since adoption rates increase with time spent in foster care (25), it is likely that at least some of the children who we report as disenrolling from Medicaid may have done so because they transitioned out of the child welfare system into more permanent living arrangements. On

the other hand, it may well be that this steepening represents youth aging out of the child welfare system into jobs and other living arrangements that do not assure continuity of coverage. Studies such as ours that use claims to construct insurance trajectories of beneficiaries are ill-suited to answer questions related to why youth disenroll, and what happens to their health care once they do. Studies that follow up emancipating youth or foster care alumni are necessary to shed light on the reasons behind insurance loss.

This design does, however, allow us to determine the characteristics of children who may be at risk of disenrollment. Our finding on heightened insurance loss among rural dwellers is consistent with findings on rural-urban disparities in insurance coverage, for example, in dental insurance coverage (26). It seems clear that rural residence places child welfare-involved children at greater risk of insurance loss, and that this may be a crucial mechanism that worsens rural-urban disparities in health care access and outcomes. There is not a clear explanation for why children aged between 3-5 years display greater insurance loss compared to those aged below 2 years. It is known that adoption rates are highest among infants and toddlers (25), and the relative differences in insurance loss may be functions of relative differences in adoption rates.

Our finding that out of home placement is protective in terms of insurance loss is consistent with prior work that has revealed that transitions from out-of-home care to in-home care may be associated with greater risk of insurance loss. This is because the switch between categorical eligibility (for out-of-home children) to income eligibility (for in-home children) is neither seamless nor timely (8). Our study supports this finding using a longer follow up duration and Medicaid claims – perhaps because of categorical entitlements and the efforts of child welfare workers, children placed out-of-home have lower hazards of insurance loss. This is evidence that categorical entitlements work. Today, “presumptive eligibility” - when Medicaid coverage is automatic for certain categories of individuals seeking care such as pregnant women - is enshrined in state regulations (27). It is perhaps time to extend such presumptive eligibility for children coming into contact with child welfare systems, and adopt a child-based, rather than an income-based or placement-based, pathway to coverage.

Endogeneity concerns preclude greater interpretation of the relationships between insurance type and insurance stability. In many child welfare systems, children in foster care – usually those with greater severity of maltreatment or fewer parental resources – are retained in fee-for-service Medicaid (6). Because these children have greater needs for services as a result of their maltreatment, their child welfare workers may be engaged in ensuring more stable health insurance coverage. Consequently, the relationships between insurance type and stability may be related to specific factors within the child's maltreatment history or child welfare service history to which we do not have access.

There are other limitations of our study. First, as discussed earlier, censoring youth at the time of first insurance loss may upwardly bias estimates of the total magnitude of insurance losses among children because some of these children later on regain coverage. The magnitude of this bias is likely to be small, however, because 92% of children in our study have either no loss of insurance, or display one episode of loss of insurance coverage over the 4 years of observation. Second, our approach to estimating coverage is solely based on

an existing Personal Summary file for a child; we do not examine the child's other Medicaid files. We do this because our interest is in estimating enrollment, not services. Consequently, our findings may vary from those of other scholars who use utilization as proxies for enrollment (7). We also restrict our study to Medicaid-insured children who are coming into contact with child welfare agencies, irrespective of whether or not they have had Medicaid coverage prior to such contact. Consequently, we cannot make definitive statements regarding the acquisition of Medicaid coverage, only regarding its retention. Fourth, not all variables in our model met the proportional hazards assumptions of the Cox model that we used. This does not negate the use of the model, however; for those four variables listed in the Results section, the hazards should be interpreted as average effects across the entire study duration (28). Because these variables are not statistically significant, we do not undertake any such interpretations. Finally, these data are based on an older sample of Medicaid files linked to NSCAW. The current insurance marketplace for children has changed in recent years. In 2010 insurers were prevented from imposing lifetime limits on inpatient stays, from excluding pre-existing conditions for child beneficiaries, and the age until which children could remain on their parents' health insurance coverage was increased (29–37). In 2014, health insurance exchanges were established, and additional provisions will come into effect in 2017 and 2018. The net effect of all of these changes on children in the welfare system will not be understood until several more years pass and Medicaid claims become available. But it does seem clear that a greater proportion of child welfare-involved children retain insurance compared to other child Medicaid beneficiaries. Child welfare-involved children who live in the 13 states that have opted out of the ACA-funded Medicaid expansion, and in the 6 other states considering withdrawal (38), might not be able to retain the same degree of stability when it comes to Medicaid coverage.

Despite these limitations, our study provides empirical evidence for the stability of Medicaid enrollment among children coming into contact with child welfare agencies in 36 states nationwide. Adopting policies that ensure access to, and stability of, Medicaid coverage for all children in the child welfare system is critical to ensuring that the considerable health and mental health needs of these children are adequately resourced.

Acknowledgements

This study was funded by the National Institute of Mental Health (NIMH) (R01 MH092312, and T32 MH019960), the NIMH Office for Research in Disparities and Global Mental Health (HHSN271201200644P), and the Agency for Healthcare Research and Quality (R01 HS020269).

The National Survey of Child and Adolescent Well-Being (NSCAW) was developed under contract with the Administration on Children, Youth, and Families, US Department of Health and Human Services (ACYF/DHHS). The data have been provided by the National Data Archive on Child Abuse and Neglect.

The information and opinions expressed herein reflect solely the position of the authors. Nothing herein should be construed to indicate the support or endorsement of its content by ACYF/DHHS, NIMH, or the National Institutes of Health.

REFERENCES

1. Small MA. Obstacles and advocacy in children's mental health services: managing the Medicaid maze. *Behav Sci Law*. 1991; 9(2):179–88. [PubMed: 10148838]

2. Leslie LK, Gordon JN, Meneken L, Premji K, Micheltmore KL, Ganger W. The physical, developmental, and mental health needs of young children in child welfare by initial placement type. *J Dev Behav Pediatr*. 2005; 26(3):177–85. [PubMed: 15956866]
3. Raghavan, R.; Leibowitz, AA. Medicaid and mental health care for children in the child welfare system. In: Haskins, R.; Wulczyn, F.; Webb, MB., editors. *Child Protection: Using Research to Improve Policy and Practice*. Brookings; Washington, D.C.: 2007. p. 120-139.
4. U.S. Department of Health and Human Services/Centers for Medicare and Medicaid Services. List of Medicaid Eligibility Groups, Mandatory Categorically Needy. 2015.
5. Geen, R.; Sommers, A.; Cohen, M. Medicaid spending on foster children. Urban Institute; Washington, D.C.: 2005.
6. Libby AM, Kelleher KJ, Leslie LK, O'Connell J, Wood PA, Rolls JA, et al. Child welfare systems policies and practices affecting Medicaid health insurance for children: A national study. *Journal of Social Service Research*. 2007; 33(2):39–49.
7. Raghavan R, Aarons GA, Roesch SC, Leslie LK. Longitudinal Patterns of Health Insurance Coverage Among a National Sample of Children in the Child Welfare System. *Am J Public Health*. 2008; 98(3):478–484. [PubMed: 18235059]
8. Raghavan R, Shi P, James S, Aarons GA, Roesch SC, Leslie LK. Effects of Placement Changes on Health Insurance Stability Among a National Sample of Children in the Child Welfare System. *Journal of Social Service Research*. 2009; 35(4):352–363.
9. Davis M, Abrams MT, Wissow LS, Slade EP. Identifying Young Adults at Risk of Medicaid Enrollment Lapses After Inpatient Mental Health Treatment. *Psychiatric Services*. 2014; 65(4):461–468. [PubMed: 24382689]
10. Raghavan R, Leibowitz AA, Andersen RM, Zima BT, Schuster MA, Landsverk J. Effects of Medicaid managed care policies on mental health service use among a national probability sample of children in the child welfare system. *Children and Youth Services Review*. 2006; 28(12):1482–1496.
11. Sommers BD. Why Millions Of Children Eligible For Medicaid And SCHIP Are Uninsured: Poor Retention Versus Poor Take-Up. *Health Affairs*. 2007; 26(5):w560–w567. [PubMed: 17656394]
12. Simon AE, Schoendorf KC. Medicaid enrollment gap length and number of Medicaid enrollment periods among US children. *Am J Public Health*. 2014; 104(9):e55–61. [PubMed: 25033135]
13. Fairbrother GL, Emerson HP, Partridge L. How stable is Medicaid coverage for children? *Health Affairs*. 2007; 26(2):520–528. [PubMed: 17339682]
14. Raghavan, R.; Aarons, GA.; Leslie, LK. *AcademyHealth*. Seattle, Wa: 2006. Insurance Instability Among a National Sample of Children in the Child Welfare System.
15. Dowd, K.; Kinsey, S.; Wheelless, A.; Thissen, R.; Richardson, J.; Suresh, R., et al. National Survey of Child and Adolescent Well-Being: Combined Waves 1–4, Data File User's Manual. National Data Archive on Child Abuse and Neglect; Ithaca, N.Y.: 2006.
16. NSCAW Research Group. Methodological Lessons from the National Survey of Child and Adolescent Well-Being: The First Three Years of the USA's First National Probability Study of Children and Families Investigated for Abuse and Neglect. *Children and Youth Services Review*. 2002; 24(6–7):513–541.
17. Centers for Medicare and Medicaid Services. Medicaid Analytic eXtract (MAX) Chartbooks. 2013.
18. Achenbach, TM. Manual for the Child Behavior Checklist/2–3 and 1992 Profile. Department of Psychiatry; Burlington, VT: 1992.
19. StataCorp. Stata Statistical Software: Release 13.1. StataCorp LP; College Station, TX: 2013.
20. Sommers BD. From Medicaid to Uninsured: Drop- Out among Children in Public Insurance Programs. *Health Services Research*. 2005; 40(1):59–78. [PubMed: 15663702]
21. Fronstin P. Sources of health insurance and characteristics of the uninsured. Analysis of the March 1996 Current Population Survey. EBRI Issue Brief. 1996; (179):1–27.
22. Fronstin, P. Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 2007 Current Population Survey (Issue Brief No. 310). Employer Benefit Research Institute; Washington, DC: 2007.
23. Patient Protection and Affordable Care Act PL 111–148. 2010.

24. Collins SR, Nicholson JL. Realizing health reform's potential: young adults and the Affordable Care Act of 2010. Issue Brief (Commonw Fund). 2010; 101:1–20. [PubMed: 20931737]
25. Connell CM, Katz KH, Saunders L, Tebes JK. Leaving foster care—the influence of child and case characteristics on foster care exit rates. Children and Youth Services Review. 2006; 28(7):780–798.
26. Liu J, Probst JC, Martin AB, Wang J-Y, Salinas CF. Disparities in Dental Insurance Coverage and Dental Care Among US Children: The National Survey of Children's Health. Pediatrics. 2007; 119(Supplement 1):S12–S21. [PubMed: 17272579]
27. Piper JM, Mitchel EF, Ray WA. Presumptive eligibility for pregnant Medicaid enrollees: its effects on prenatal care and perinatal outcome. American Journal of Public Health. 1994; 84(10):1626–1630. [PubMed: 7943482]
28. Allison, PD. Survival analysis using SAS: a practical guide: Sas Institute. 2010.
29. Kaiser Family Foundation. Implementation Timeline. 2011.
30. Kocher R, Emanuel EJ, DeParle NA. The Affordable Care Act and the future of clinical medicine: the opportunities and challenges. Ann Intern Med. 2010; 153(8):536–9. [PubMed: 20733178]
31. Koh HK, Sebelius KG. Promoting prevention through the Affordable Care Act. N Engl J Med. 2010; 363(14):1296–9. [PubMed: 20879876]
32. Kocher RP, Adashi EY. Hospital readmissions and the Affordable Care Act: paying for coordinated quality care. JAMA. 2011; 306(16):1794–5. [PubMed: 22028355]
33. Davis MM, Walter JK. Equality-in-quality in the era of the affordable care act. JAMA. 2011; 306(8):872–3. [PubMed: 21828310]
34. Reinhard SC, Kassner E, Houser A. How the Affordable Care Act can help move States toward a high-performing system of long-term services and supports. Health Aff. 2011; 30(3):447–53.
35. Rosenbaum S. The Patient Protection and Affordable Care Act: implications for public health policy and practice. Public Health Rep. 2011; 126(1):130–5. [PubMed: 21337939]
36. Bloom GE, Smith GR. Key provisions of the Patient Protection and Affordable Care Act. J Am Coll Radiol. 2011; 8(1):69–70. [PubMed: 21211769]
37. Long P, Gruber J. Projecting the impact of the Affordable Care Act on California. Health Aff. 2011; 30(1):63–70.
38. The Advisory Board Company. Daily Briefing primer: ACA's Medicaid expansion. 2013.

Figure 1.
Rates of disenrollment from Medicaid over 4 years of observation

Figure 2.
Kaplan-Meier (survival) curve of loss of Medicaid coverage

Table 1

Sociodemographic predictors of insurance loss

	Hazard Ratio	95% CI	P value
Male vs. Female	1.0	1.0 – 1.1	0.4
Age			
3–5 vs. Less than 2 years	1.2	1.0–1.4	0.02
6–11	1.1	0.9–1.2	0.4
12–13	1.0	0.8–1.2	0.9
14+	1.0	0.8–1.2	0.9
Race/ethnicity			
Black Non-Hispanic vs. white	1.1	1.0–1.1	0.1
Hispanic	1.1	1.0–1.2	0.09
Other/Mixed race	1.0	0.9–1.4	0.4
Insurance type at entry into study			
Fee-for-service vs. primary care case management	0.7	0.6–0.8	0.000
Other insurance arrangement	0.7	0.6–0.8	0.000
Mental health status			
Score 64 on the internalizing subscale of the Child Behavior Checklist	1.0	0.9–1.1	0.4
Score 64 on the externalizing subscale of the Child Behavior Checklist	1.0	0.9–1.0	0.5
Poor or fair health vs. excellent, very good, or good health	1.0	0.9–1.1	0.8
Rural vs. urban residence	1.1	1.0–1.2	0.009
Maltreatment history			
Physical abuse	1.0	0.9–1.1	0.7
Sexual abuse	0.9	0.8–1.0	0.2
Neglect	0.9	0.9–1.0	0.2
Abandonment	1.0	0.8–1.1	0.6
<i>Time varying covariate</i>			
Placed out of home vs. maintained in-home	1.0	0.98–0.99	0.000

Model includes 36 state fixed effects (not shown). Total N= 5877

LR $\chi^2(59) = 236.20$ Prob > $\chi^2 = 0.0000$