

# ISSUE BRIEF

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APRIL 2010  
NUMBER 1

## REFORMING HEALTH CARE

### How Does Insurance Coverage Improve Health Outcomes?

by Jill Bernstein, Deborah Chollet, and Stephanie Peterson

*Insurance coverage is strongly related to better health outcomes for both children and adults when it makes health care affordable and helps consumers use care appropriately. This brief looks at how insurance improves health outcomes by helping people obtain preventive and screening services, prescription drug benefits, mental health and other services, and by improving continuity of care. Vulnerable populations are especially at risk of poor health outcomes when they are uninsured. Insurance coverage can also improve social and economic well-being, by averting developmental problems in children, increasing workforce productivity, decreasing use of hospital services, and reducing costs of public programs.*

#### Uninsured Have Worse Health Outcomes

Uninsured people generally receive much less care, either preventive or for acute and chronic conditions, than insured people. In particular, uninsured adults report lower levels of self-perceived wellness and functioning. Estimating the number of premature deaths attributable to lack of insurance presents methodological challenges, but some research indicates that as many as 44,500 deaths per year in the United States are linked to lack of insurance.<sup>1, 2, 3, 4, 5, 6</sup>

Research on the use of preventive services, which has focused separately on children and adults, suggests that:

- Uninsured young children have lower immunization rates than insured children.<sup>7</sup>

## ABOUT THIS SERIES

This brief is the first in a series highlighting issues related to health care reform that policymakers may want to consider as they implement the federal health reform law. The list of forthcoming titles is on page 3. For more information, contact Deborah Chollet at [dchollet@mathematica-mpr.com](mailto:dchollet@mathematica-mpr.com).

- Uninsured adults are less likely than insured adults to receive preventive services or screenings, such as mammograms, pap smears, or prostate screening. In turn, inadequate prevention and screening increase the likelihood of preventable illness, missed diagnoses, and delays in treatment.<sup>8, 9, 10</sup>

When uninsured people seek emergency care for severe illness or injury, their health outcomes generally are poorer—whether they are children or adults. For example:

- Uninsured children are 70 percent less likely than insured children to receive medical care for common childhood conditions, such as sore throat, or for emergencies, such as a ruptured appendix.
- When hospitalized, uninsured children are at greater risk of dying than children with insurance.<sup>11, 12, 13</sup>
- Uninsured adults are 20 percent less likely than insured adults to receive care following an automobile accident and are at greater risk of death.<sup>14, 15</sup>
- At-risk adults without insurance have higher rates of stroke and greater risk of death than at-risk adults with insurance.<sup>16</sup>
- Adult stroke victims without insurance are more likely to have neurological impairment and longer hospital stays, and are at greater risk of dying, than adult stroke victims with insurance.<sup>17</sup>

People with chronic illnesses who lack insurance have limited access to both health care services and

effective care management. In addition, children with special health care needs who do not have adequate insurance coverage are more likely to go without needed care. For example:

- Parents of uninsured children are more likely to report unmet need for mental health services for their children.<sup>18</sup> Uninsured children are also less likely to receive treatment for chronic conditions such as diabetes and asthma.<sup>13</sup>
- Uninsured children have less access to a usual source of care, community-based services, and services to make transitions to adulthood.<sup>19, 20</sup>

Because uninsured people are less likely to have a usual source of care, they generally have poorer control of chronic conditions, such as hypertension.<sup>21, 22</sup> Even when they are aware that they have a chronic condition, uninsured adults are less likely than adults who are insured to have a usual source of care or regular checkups.<sup>23</sup> As a result, they have more emergency department visits and report greater short-term reductions in health; if they return to full health, they take longer to do so.<sup>24, 25</sup>

The prognosis for uninsured cancer patients also is worse than that for insured patients. In general, uninsured cancer patients die sooner after diagnosis, largely because they are less likely to be diagnosed in early stages of the disease. However, even when diagnosed at similar stages, uninsured patients with certain types of cancer die sooner than insured patients.<sup>10, 26</sup>

### **Lack of Insurance Affects Everyone**

Undiagnosed and untreated illnesses and conditions can result in costs to both individuals and society. For example:

- Untreated health conditions cause uninsured children to lose opportunities for normal development. Their educational achievement suffers because they miss more days of school.<sup>2, 20</sup>
- Workers who are uninsured throughout the course of a year have a greater likelihood of missing work.<sup>27</sup>
- Poorer health, greater disability, and premature death among uninsured workers have economic consequences for their families, employers, and the overall economy. The economic cost of lost productivity is substantial, especially when added to the costs of avoidable health care.<sup>28</sup>

### **INSURANCE FEATURES ASSOCIATED WITH BETTER HEALTH OUTCOMES**

- Continuous coverage
- Comprehensive coverage, including coverage for preventive services, prescription drugs, and mental health
- Affordable cost sharing

At a broader level, health providers and investors may find communities with a high proportion of uninsured residents less attractive locations than more affluent and better-insured communities.<sup>29</sup> As a result, even people with insurance may have difficulty obtaining needed care in communities with relatively high rates of uninsured residents, and they may be less satisfied with the care they receive.<sup>2</sup>

### **Coverage Features Matter**

Many Americans are insured intermittently and, when insured, not all have coverage that is equally comprehensive. The research literature has associated continuous and comprehensive coverage with better health outcomes.

**Continuous coverage.** Disruptions in insurance coverage have been associated with less access to care, lower service use, and increases in unmet medical needs.<sup>30</sup> Lapses and gaps in coverage also contribute to health disparities for people with low educational attainment and for the poor.<sup>27</sup> Conversely, adults with continuous insurance coverage are healthier and at lower risk for premature death than those who are uninsured or whose coverage is intermittent, while children with continuous coverage are more likely to visit a doctor, receive preventive care, and have prescriptions filled.<sup>13, 31, 32</sup>

Continuous coverage also can reduce administrative costs. For example, guaranteed eligibility for Medicaid and the Children's Health Insurance Program (CHIP) for 6 or 12 months can lower states' administrative costs by reducing the frequent movement (called "churning") of eligible individuals in and out of Medicaid and CHIP programs. Greater stability in plan membership also makes it easier to attract managed care plans to participate, which in turn can improve enrollees' access to care.<sup>33</sup>

**Coverage of preventive services.** Ensuring access to the full range of appropriate and effective preventive services is essential for conferring the full health benefits of insurance coverage. Coverage for preventive services can reduce racial and ethnic disparities in health outcomes.<sup>34</sup>

**Coverage of prescription drugs.** Limited coverage and high out-of-pocket costs for medication are associated with a decline in older adults' self-reported health status. Adults with certain chronic conditions who restrict their medications because of cost increase their risk of heart attacks and strokes.<sup>35</sup> Low-income adults are especially likely to fail to comply with drug regimens because of cost.<sup>36</sup> Conversely, adults with chronic conditions are more likely to follow drug regimens when they have insurance that covers prescription drugs.<sup>37</sup>

**Coverage of mental health services.** Adults with health insurance that covers mental health services are more likely to receive mental health treatment that is consistent with medical guidelines. In particular, receiving care for depression improves outcomes.<sup>38</sup> When uninsured, people with mental illness rely heavily on emergency room services, with significant costs to the community.<sup>39, 20</sup>

**Affordable cost sharing.** Health insurance helps people establish and maintain access to appropriate care, which can lead to better outcomes. High cost sharing (including deductibles, coinsurance, and copayments) can create barriers to obtaining care, reducing necessary service use among those who are insured.<sup>40, 41</sup>

## Considerations for Policymakers

The Patient Protection and Affordable Care Act (P.L. 111-148) enacted in March 2010 seeks to expand coverage immediately and over the long term. It establishes a temporary, national high-risk pool to provide coverage for individuals denied insurance in the individual market. It creates incentives for the formation of non-profit Consumer Operated and Oriented Plans (CO-OPs) to compete with existing insurers as early as 2012. By 2014, the states will create health insurance exchanges that guarantee coverage for all individuals and small businesses, and Medicaid eligibility will be extended to all residents with income below 133 percent of the federal poverty

level (FPL). With few exceptions, all individuals will be required to have coverage that qualifies as “an essential health benefits package.”

The new law acknowledges that health insurance leads to better outcomes when it makes health care affordable and helps consumers use care appropriately. By 2011, all health plans must cover at least the preventive services rated A or B by the U.S. Preventive Services Task Force, as well as recommended immunizations; preventive care for infants, children, and adolescents; and additional preventive care and screenings for women. Plans may not impose cost sharing for these services. In addition, preventive and wellness services, chronic disease management, and mental health and drug benefits are included in the essential benefit package that will constitute minimum required coverage in 2014.

In implementing the new law, federal and state policymakers should consider lessons learned about continuous coverage and affordable care. For example, cost sharing, especially for mental health and drug benefits, can create financial barriers that jeopardize the appropriate and efficient use of care. Policymakers might also consider ways to make it easier for populations enrolled in public programs and coverage through the exchanges, particularly populations with serious conditions or special needs, to maintain relationships with their primary care providers over time.

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### FORTHCOMING TITLES IN SERIES

- Preventive Health Services: How Cost-Effective Are They?
- Basing Health Care on Empirical Evidence
- Disease Management: Does It Work?
- Financial Incentives for Health Care Providers and Consumers
- Medical Homes: Will They Improve Primary Care?

Go to [www.mathematica-mpr.com/health/series.asp](http://www.mathematica-mpr.com/health/series.asp) to access briefs in this series.

## Notes

- <sup>1</sup>Baker, D., J. Sudano, J. Albert, E. Borawski, and A. Dor. "Loss of Health Insurance and the Risk for Decline in Self-Reported Health and Physical Functioning." *Medical Care*, vol. 40, no. 11, 2002, pp. 1126–1131.
- <sup>2</sup>Institute of Medicine. *America's Uninsured Crisis: Consequences for Health and Health Care*. Washington, DC: National Academy Press, 2009.
- <sup>3</sup>Institute of Medicine. *Care Without Coverage: Too Little Too Late*. Washington, DC: National Academy Press, 2002.
- <sup>4</sup>Dorn, S. *Uninsured and Dying Because of It: Updating the Institute of Medicine Analysis on the Impact of Uninsurance on Mortality*. Washington, DC: Urban Institute, 2008.
- <sup>5</sup>Wilper, A.P., S. Woolhandler, K.E. Lasser, D. McCormick, D.H. Bor, and D.U. Himmelstein. "Health Insurance and Mortality in U.S. Adults." *American Journal of Public Health*, vol. 99, no. 12, 2009, pp. 1–8. (See page 8 for state-by-state breakout of excess deaths from lack of insurance.)
- <sup>6</sup>Most research indicates that uninsured adults report lower levels of self-perceived wellness and functioning and are more likely to die prematurely than insured adults. While one recent study found the risk of subsequent mortality among uninsured respondents to be no different than among those who were insured, the author noted a number of limitations of the analysis. For instance, the analysis did not account for the potential relationship between the lower health status of those who were uninsured and the greater probability of their having been chronically uninsured. See Kronick, R. "Health Insurance Coverage and Mortality Revisited." *Health Services Research*, vol. 44, no. 4, 2009, pp. 1211–1231.
- <sup>7</sup>Becton, J.L., L. Cheng, and L.Z. Nieman. "The Effect of Lack of Insurance, Poverty, and Pediatrician Supply on Immunization Rates Among Children 19–35 Months of Age in the United States." *Journal of Evaluation in Clinical Practice*, vol. 14, no. 2, 2008, pp. 248–253.
- <sup>8</sup>Robinson, J., and V. Shavers. "The Role of Health Insurance Coverage in Cancer Screening Utilization." *Journal of Health Care for the Poor and Underserved*, vol. 19, no. 3, 2008, pp. 842–856.
- <sup>9</sup>DeVoe, J.E., A. Graham, L. Krois, J. Smith, and G.L. Fairbrother. "Mind the Gap in Children's Health Insurance Coverage: Does the Length of a Child's Coverage Gap Matter?" *Ambulatory Pediatrics*, vol. 8, no. 2, 2008, pp. 129–134.
- <sup>10</sup>For example, failure of an individual with diabetes to receive timely eye exams can result in blindness that might have been prevented. See Institute of Medicine. *Hidden Costs, Value Lost: Uninsurance in America*. Washington, DC: National Academy Press, 2003.
- <sup>11</sup>Abdullah, F., Y. Zhang, T. Lardaro, M. Black, P.M. Colombani, K. Chrouser, P.J. Pronovost, and D.C. Chang. "Analysis of 23 Million US Hospitalizations: Uninsured Children Have Higher All-Cause In-Hospital Mortality." *Journal of Public Health*. October 29, 2009, pp. 1–9. Web Exclusive. Available at [<http://jpubhealth.oxfordjournals.org/cgi/content/abstract/fdp099v1>].
- <sup>12</sup>Todd, J., C. Armon, A. Griggs, S. Poole, and S. Berman. "Increased Rates of Morbidity, Mortality, and Charges for Hospitalized Children with Public or No Health Insurance as Compared with Children with Private Insurance in Colorado and the United States." *Pediatrics*, vol. 118, no. 2, 2006, pp. 577–585.
- <sup>13</sup>Henry J. Kaiser Family Foundation. "Children's Health—Why Health Insurance Matters." Washington, DC: KFF, 2002.
- <sup>14</sup>Doyle, J. "Health Insurance, Treatment, and Outcomes: Using Auto Accidents as Health Shocks." *The Review of Economics and Statistics*, vol. 87, no. 2, 2005, pp. 256–270.
- <sup>15</sup>A more recent study found that race and insurance status independently predict death following trauma. Based on records of more than 310,000 trauma patients across 700 hospitals in the United States, this study supports other research that has shown racial disparities in health outcomes. Insurance status, however, was a stronger predictor of death after trauma than race. See Haider, A., D. Chang, E. Efron, E. Haut, M. Crandall, and E. Cornwell. "Race and Insurance Status as Risk Factors for Trauma Mortality." *Archives of Surgery*, vol. 143, no. 10, 2008, pp. 945–949.
- <sup>16</sup>Fowler-Brown, A., G. Corbie-Smith, J. Garrett, and N. Lurie. "Risk of Cardiovascular Events and Death—Does Insurance Matter?" *Journal of General Internal Medicine*, vol. 22, no. 4, 2007, pp. 502–507.
- <sup>17</sup>Shen, J.J., and E.L. Washington. "Disparities in Outcomes Among Patients with Stroke Associated with Insurance Status." *Stroke*, vol. 38, January 18, 2007, pp. 1010–1016.
- <sup>18</sup>Derigne, L., S. Porterfield, and S. Metz. "The Influence of Health Insurance on Parent's Reports of Children's Unmet Mental Health Needs." *Maternal and Child Health Journal*, vol. 13, Number 2, March, 2009, pp. 176–186.
- <sup>19</sup>Oswald, D.P., J.N. Bodurtha, J.H. Willis, and M.B. Moore. "Underinsurance and Key Health Outcomes for Children with Special Health Care Needs." *Pediatrics*, vol. 119, no. 2, Epub 2007, pp. e341–347.
- <sup>20</sup>Tu, H.T., and P.J. Cunningham. "Public Coverage Provides Vital Safety Net for Children with Special Health Care Needs." Issue Brief, no. 98. Washington, DC: Center for Studying Health System Change, 2005, pp. 1–7.
- <sup>21</sup>Jiang, H., P. Muntner, J. Chen, E.J. Roccella, R.H. Streiffer, and P.K. Whelton. "Factors Associated with Hypertension Control in the General Population of the United States." *Archives of Internal Medicine*, vol. 162, no. 9, May 13, 2002.
- <sup>22</sup>Having a usual source of care promotes earlier detection of conditions and ongoing use of recommended care that can improve health outcomes. Conversely, people without a usual source of care are at greater risk for preventable health problems, additional chronic disease, and disability (Institute of Medicine 2003).
- <sup>23</sup>Ayanian, J., J. Weissman, E. Schneider, and J. Ginsburg. "Unmet Health Needs of Uninsured Adults in the United States." *Journal of the American Medical Association*, vol. 284, no. 16, 2000, pp. 2061–2069.
- <sup>24</sup>Hadley, J. "Insurance Coverage, Medical Care Use, and Short-Term Health Changes Following an Unintentional Injury or the Onset of a Chronic Condition." *Journal of American Medical Association*, vol. 297, no. 10, 2007, pp. 1073–1084.
- <sup>25</sup>For example, uninsured individuals with diabetes are less likely to receive recommended professional services, such as regular foot or dilated-eye exams, than individuals with insurance. See Nelson, K., M. Chapko, G. Reiber, and E. Boyko. "The Association between Health Insurance Coverage and Diabetes Care." *Health Services Research*, vol. 40, no. 2, 2005, pp. 361–72. Uninsured patients with renal disease have more severe renal failure when they begin dialysis than insured patients, and they are less likely to have received treatment for other related health problems, such as anemia, before dialysis. See Kausz, A., T. Gregorio, P. Obrador, R. Ruthazer, et al. "Late Initiation of Dialysis Among Women and Ethnic Minorities in the United States." *Journal of the American Society of Nephrology*, vol. 11, no. 12, 2000, pp. 2351–2357. Uninsured individuals with HIV are less

likely to be able to maintain effective drug therapies that improve survival. In general, having health insurance of any kind can reduce the number of deaths among individuals with HIV by up to 85 percent over a six-month period (Institute of Medicine 2003).

- <sup>26</sup>One study, conducted in Kentucky, found significantly lower three-year survival rates among uninsured patients diagnosed with prostate, breast, colorectal, and lung cancers than among patients who had private health insurance. See McDavid, K., T. Tucker, A. Sloggett, and M. Coleman. "Cancer Survival in Kentucky and Health Insurance Coverage." *Archives of Internal Medicine*, vol. 163, no. 18, October 13, 2003, pp. 2135–2144. Halpern and others found that uninsured people were significantly more likely to be diagnosed with advanced-stage cancer than privately insured patients—in particular, for those cancers that can be detected early by a screening or symptom assessment, such as breast, colorectal, lung, and melanoma cancers. See Halpern, M., E. Ward, A. Pavluck, N. Schrag, J. Bian, and A. Chen. "Association of Insurance Status and Ethnicity with Cancer Stage at Diagnosis for 12 Cancer Sites: A Retrospective Analysis." *The Lancet Oncology*, vol. 9, no. 3, 2008, pp. 222–231.
- <sup>27</sup>Loftland, J., and K. Frick. "Effect of Health Insurance on Workplace Absenteeism in the U.S. Workforce." *Journal of Occupational and Environmental Medicine*, vol. 48, no. 2, 2006, pp. 13–21.
- <sup>28</sup>For example, the IOM estimated that continuous coverage for all Americans in one year would result in economic gains between \$65 and \$130 billion in 2001 dollars (Institute of Medicine 2003).
- <sup>29</sup>For example, the Institute of Medicine (2009) noted that providers generally are attracted to newer facilities with more up-to-date technologies, while financially stressed hospitals in areas with high levels of uninsurance may resort to recruiting on-call specialists.
- <sup>30</sup>Federico, S.G., J.F. Steiner, B. Beaty, L. Crane, and A. Kempe. "Disruptions in Insurance Coverage: Patterns and Relationship to Health Care Access, Unmet Need, and Utilization Before Enrollment in the State Children's Health Insurance Program." *Pediatrics*, vol. 120, no. 2, pp. 1009–1016.
- <sup>31</sup>Olson, L.M., S.F. Tang, and P.W. Newacheck. "Children in the United States with Discontinuous Health Insurance Coverage." *The New England Journal of Medicine*, vol. 353, no. 4, 2005, pp. 382–391.
- <sup>32</sup>For example, children with gaps in health care coverage are less likely to receive appropriate asthma care. See Halterman, J.S., G. Montes, L.P. Shone, and P.G. Szilagyi. "The Impact of Health Insurance Gaps on Access to Care Among Children with Asthma in the United States." *Ambulatory Pediatrics*, vol. 8, no. 1, 2008, pp. 43–49.
- <sup>33</sup>Henry J. Kaiser Family Foundation. "Medicaid Performance Bonus '5 of 8' Requirements." Washington, DC: KFF, April 2009. Available at [http://www.kff.org/medicaid/upload/7885.pdf].
- <sup>34</sup>Agency for Healthcare and Research Quality. *National Healthcare Disparities Report*. Rockville, MD: AHRQ, 2007.

- <sup>35</sup>Heisler, M., K. Langa, E. Eby, M. Fendrik, M. Kabeto, and J. Piette. "The Health Effects of Restricting Prescription Medication Use Because of Cost." *Medical Care*, vol. 42, no. 7, 2004, pp. 626–634.
- <sup>36</sup>Mojtabai, R., and M. Olfson. "Medication Costs, Adherence, and Health Outcomes Among Medicare Beneficiaries." *Health Affairs*, vol. 22, no. 4, 2003, pp. 221–229.
- <sup>37</sup>Huttin, C., J. Moeller, and R. Stafford. "Patterns and Costs for Hypertension Treatment in the United States." *Clinical Drug Investigation*, vol. 20, no. 2, 2000, pp. 151–156.
- <sup>38</sup>Wang, P., P. Berglund, and R. Kessler. "Recent Care of Common Mental Disorders in the United States." *Journal of General Internal Medicine*, vol. 15, May 2000, pp. 284–292.
- <sup>39</sup>Ballargeon, J., C. Thomas, B. Williams, C. Begley, S. Sharma, B. Pollock, et al. "Medical Emergency Department Utilization Patterns Among Uninsured Patients with Psychiatric Disorders." *Psychiatric Services*, vol. 59, no. 7, 2008, pp. 808–811.
- <sup>40</sup>Agency for Healthcare and Research Quality. "Consumer Financial Incentives: A Decision Guide for Purchasers." AHRQ Publication No. 290-06-0023-2. Rockville, MD: AHRQ, 2007.
- <sup>41</sup>Hibbard, J., J. Greene, and M. Tusler. "Does Enrollment in a CDHP Stimulate Cost-Effective Utilization?" *Medical Care Research and Review*, vol. 65, no. 4, 2008, pp. 437–449.

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