

# The Relationship Between Work and Health: Findings from a Literature Review

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## Summary

A central question in the current debate over work requirements in Medicaid is whether such policies promote health and are therefore within the goals of the Medicaid program. Work requirements in welfare programs in the past have had different goals of strengthening self-esteem and providing a ladder to economic progress, versus improving health. This brief examines literature on the relationship between work and health and analyzes the implications of this research in the context of Medicaid work requirements. We review literature cited in policy documents, as well as additional studies identified through a search of academic papers and policy evaluation reports, focusing primarily on systematic reviews and meta-analyses. Key findings include the following:

- **Being in poor health is associated with increased risk of job loss, while access to affordable health insurance has a positive effect on people's ability to obtain and maintain employment.**
- **There is limited evidence on the effect of *employment* on health, with some studies showing a positive effect of work on health yet others showing no relationship or isolated effects.** There is strong evidence of an association between *unemployment* and poorer health outcomes, but authors caution against using these findings to infer that the opposite relationship (work causing improved health) exists. While unemployment is almost universally a negative experience and thus linked to poor outcomes, especially poor mental health outcomes, employment may be positive or negative, depending on the nature of the job (e.g., stability, stress, hours, pay, etc.). Further, most studies note major limitations in our ability to draw broad conclusions on health and work, including:
  - Job availability and quality are important modifiers in how work affects health; transition from unemployment to poor quality or unstable employment options can be detrimental to health.
  - Selection bias in the research (e.g., healthy people being more likely to work) and other methodological limitations restrict the ability to determine a causal work-health relationship.
- **Studies note several caveats to and implications of the research on work and health that are particularly relevant to work requirements in Medicaid.** For example:
  - The work-health relationship may differ for the Medicaid population compared to the broader populations studied in the literature, as Medicaid enrollees report worse health than the general population and face significant challenges related to social determinants of health.
  - Limited job availability or poor job quality may moderate or reverse any positive effects of work.
  - Work or volunteering to fulfill a requirement may produce different health effects than work or volunteer activities studied in existing literature.
  - Loss of Medicaid coverage under work requirements could negatively impact health care access and outcomes, as well as exacerbate health disparities.

## Introduction

On January 11, 2018, CMS issued a [State Medicaid Director Letter](#) providing new guidance for Section 1115 waiver proposals that would impose work requirements (referred to as community engagement) in Medicaid as a condition of eligibility. On January 12, 2018, CMS approved the first work requirement waiver in [Kentucky](#), and three additional work requirement waiver approvals followed in [Indiana](#) (February 1, 2018), Arkansas (March 5, 2018), and New Hampshire (May 7, 2018). The new guidance and work requirement approvals reverse previous positions of both Democratic and Republican Administrations, which had not approved work requirement waiver requests on the basis that such provisions would not further the Medicaid program's purposes of promoting health coverage and access. However, in both the new guidance and work requirement waiver approvals, CMS explains its policy reversal by maintaining that employment leads to improved health outcomes, and policies that condition Medicaid eligibility on meeting a work requirement will further this objective. Though the structure of work requirements is similar to those used in other programs, the administration's stated goal of improving health through Medicaid work requirements is different from the goals of welfare reform work requirements in the past, which were to strengthen self-esteem and provide a ladder to economic progress.

On June 29, 2018, the DC federal district court [vacated HHS's approval](#) of the Kentucky Section 1115 waiver program. The court held that consideration of whether the waiver would promote beneficiary health in general is not a substitute for considering whether the waiver promotes Medicaid's primary purpose of providing affordable health coverage and remanded to HHS to consider how the waiver would help furnish medical assistance consistent with Medicaid program objectives. However, the court also noted that plaintiffs and their *amici* assert that proclaimed health benefits of employment are unsupported by substantial evidence. Thus, there is likely to be ongoing debate and policy discussion over whether work requirements will further the aims of Medicaid.

To address whether work will further the aims of Medicaid, we examine the literature on the relationship between work and health and analyze the implications of this research in the context of Medicaid work requirements. Due to the large number of studies in this field spanning decades, this literature review focuses primarily (although not exclusively) on findings from other literature or systematic reviews rather than individual studies on these topics. We drew on studies cited in policy documents on work requirements in Medicaid, results of keyword searches of PubMed and other academic health/social policy search engines, and snowballing through searches of reference lists in previously pulled papers. In total, we reviewed more than 50 sources, the vast majority of which were published academic studies or program evaluations and most of which are reviews of multiple studies themselves. A more detailed description of the methods underlying this analysis is provided in the Methods box at the end of this brief.

## What effect do health and health coverage have on work?

**Not surprisingly, research has demonstrated that being in poor health is associated with an increased risk of job loss or unemployment.**<sup>1,2,3,4,5</sup> A meta-analysis of longitudinal studies on the relationship between health measures and exit from paid employment found that poor health, particularly

self-perceived health, is associated with increased risk of exit from paid employment.<sup>6</sup> Another study that simultaneously examined and contrasted the relative effects of unemployment on mental health and mental health on employment status in a single general population sample found mental health to be both a consequence of and a risk factor for unemployment. However, the evidence for men in particular suggested that mental health was a stronger predictor of subsequent unemployment than unemployment was a predictor of subsequent mental health.<sup>7</sup> Additional research suggests that, in some cases, individual characteristics such as income, race, sex, or education level may mediate the relationship between poor health and unemployment.<sup>8,9,10</sup> Research also demonstrates that an unmet need for mental health or substance use disorder treatment results in greater difficulty with obtaining and maintaining employment.<sup>11,12,13,14,15</sup>

**Additional research suggests that, in addition, access to affordable health insurance and care, which may help people maintain or manage their health, promotes individuals' ability to obtain and maintain employment.** For example, in an analysis of Medicaid expansion in Ohio, most expansion enrollees who were unemployed but looking for work reported that Medicaid enrollment made it easier to seek employment, and over half of employed expansion enrollees reported that Medicaid enrollment made it easier to continue working.<sup>16</sup> Similarly, a study on Medicaid expansion in Michigan found that 69% of enrollees who were working said they performed better at work once they got coverage, and 55% of enrollees who were out of work said the coverage made them better able to look for a job.<sup>17</sup> A study on Montana's Medicaid expansion found a substantial increase of 6 percentage points in labor force participation among low-income, non-disabled Montanans ages 18-64 following expansion, compared to a decline in labor force participation among higher-income Montanans.<sup>18</sup> National research found increases in the share of individuals with disabilities reporting employment and decreases in the share reporting not working due to a disability in Medicaid expansion states following expansion implementation, with no corresponding trends observed in non-expansion states.<sup>19</sup> Additional literature suggests that access to health insurance and care promotes volunteerism, finding that the expansion of Medicaid under the ACA was significantly associated with increased volunteerism among low-income adults.<sup>20,21</sup>

## What effect does work have on health and health coverage?

**Overall, the body of literature examining whether work affects health shows mixed results, with some studies showing a positive effect of work on health yet others showing no relationship or isolated effects.** A 2006 literature review found that, while “there is limited amount of high quality scientific evidence that directly addresses the question [of whether work is good for your health]... there is a strong body of indirect evidence that work is generally good for health and well-being.”<sup>22</sup> That assessment was based on comprehensive review of the literature, including other systematic reviews as well as narrative and opinion pieces. A more focused 2014 systematic review about the health effects of employment, which included 33 longitudinal studies,<sup>23</sup> found strong evidence that employment reduces the risk of depression and improves general mental health, yet it found insufficient evidence for an effect

on other health outcomes due to a lack of studies or inconsistent findings of the studies.<sup>24</sup> A 2015 review of 22 longitudinal studies found an association between employment and re-employment with better physical health.<sup>25</sup>

**In contrast, research shows a strong association between *unemployment* and poor health outcomes, though researchers caution that these findings do not necessarily mean the reverse is true (e.g. employment causes improved health).** The effect of unemployment on health has long been an area of research focus, and a substantial body of research from the U.S. and abroad consistently demonstrates a strong association between unemployment and poorer health outcomes,<sup>26,27,28,29,30,31,32</sup> with some evidence suggesting a causal relationship in which unemployment leads to poor health.<sup>33,34,35</sup> The bulk of the research in the unemployment and health field focuses on mental health outcomes.<sup>36</sup> Examples of negative health outcomes associated with unemployment include increases in depression, anxiety, mixed symptoms of distress, and low self-esteem.<sup>37,38</sup> A more limited body of research suggests an association of unemployment with poorer physical health (including increases in cardiovascular risk factors such as hypertension and serum cholesterol as well as increased susceptibility to respiratory infections), and mortality.<sup>39,40</sup> A 2006 literature review noted that there is continuing debate about the relative importance of possible mechanisms involved in this relationship, and adverse effects of unemployment may vary in nature and degree for different individuals in different social contexts.<sup>41</sup> Some evidence also indicates that cumulative length of unemployment is correlated with deteriorated health and health behavior.<sup>42</sup> However, despite the evidence of a relationship between unemployment and health, researchers caution against using findings to infer that an opposite relationship (employment causing improved health) exists.<sup>43,44</sup> In addition, researchers note that the literature on unemployment tends to study more negative than positive health outcome variables,<sup>45</sup> which may skew our understanding of the health effects of unemployment.<sup>46</sup>

**Another related area of research is studies examining the relationship between re-employment (i.e., returning to work) and health, which find some association between re-employment and mental health.** A 2012 systematic review on this topic found support for a beneficial health effect of returning to work, with most of the 18 studies included in this review focusing on mental health-related outcomes.<sup>47</sup> The review also tried to assess to what extent the relationship was causal (i.e., reemployment caused health improvements) versus due to selection (e.g., people with poor health were more likely to remain unemployed) and concluded that both were at play. The review did not reach a definitive conclusion about mechanisms linking re-employment to improved health (due to lack of evidence), and it noted that it is still unclear whether health effects of reemployment are moderated by factors such as socioeconomic status, reason for unemployment, and the nature of employment.<sup>48</sup> The 2006 literature review described above also analyzed research findings on re-employment and found strong evidence that re-employment leads to improved psychological health and measures of general well-being, with a dearth of information on physical health and some but not all studies showing that re-employment/health relationship is at least partly due to health selection. However, these authors also cite

evidence from numerous studies suggesting that “the beneficial effects of re-employment depend mainly on the security of the new job, and also on the individual’s motivation, desires, and satisfaction”<sup>49</sup>

**Studies on work and health have found that the quality and stability of work is a key factor in the work-health relationship: research finds that low-quality, unstable, or poorly-paid jobs lead to or are associated with adverse effects on health.**<sup>50,51,52,53,54,55,56</sup> For example, a 2014 meta-analysis of studies published after 2004 found that job insecurity can pose a comparable (and even modestly increased) risk of subsequent depressive symptoms compared to unemployment.<sup>57</sup> A 2011 longitudinal analysis found that while unemployed respondents had poorer mental health than those who were employed, the mental health of those who were unemployed was comparable or more often superior to those in jobs of poor psychosocial quality (based on measures of job control, perceived job security, and job demands and complexity) and the mental health of those in poor quality jobs declined more over time than the mental health of those who were unemployed. Moreover, while moving from unemployment into a high quality job led to improvement in mental health, the transitioning from unemployment to a poor quality job was more detrimental to mental health than remaining unemployed.<sup>58</sup> Additionally, a 2003 study that examined the association of different employment categories with physical health and depression found a consistent association between less than optimal jobs (based on economic, non-income, and psychological aspects of the jobs) and poorer physical and mental health among adults.<sup>59</sup>

**It is possible that the work-health association reflects people in good health being more likely to work, versus work causing good health.** Some researchers caution against the possibility that selection bias has occurred in many of the studies on work and health. The existence of a “healthy worker effect”—in which relatively healthy individuals are more likely to enter the workforce whereas those with health problems are at increased risk to withdraw from and remain outside of the workforce—has been documented in multiple studies.<sup>60,61,62,63,64,65</sup> Authors of both individual studies and literature reviews on this topic explain that the healthy worker effect is difficult to control for even in studies that attempt to do so, and thus this effect may cause an overestimation of the findings in the literature on health effects of work.<sup>66,67</sup> As authors of a 2014 systematic review of studies on health effects of employment point out, there are no randomized controlled trials on this topic available in the literature because performing such trials would be unethical,<sup>68</sup> yet randomized controlled trials are the gold standard for determining a causal relationship.

**Most study authors specifically note additional caveats to drawing broad conclusions about work and health.** The 2006 review concluding a general positive effect of work on health emphasized three major provisos to this conclusion: (1) findings are about average or group affects, and a minority of people may experience contrary health effects from work, (2) the beneficial health effects of work depend on the nature and quality of work (described above), and (3) the social context must be taken into account, particularly social gradients in health (i.e. inequalities in population health status related to inequalities in social status) and regional deprivation.<sup>69</sup> These caveats could explain the seemingly contradictory findings about employment and unemployment: While unemployment is almost universally a negative experience and thus linked to poor outcomes, especially poor mental health outcomes,

employment may be positive or negative, depending on the nature of the job (e.g., stability, stress, hours, pay, etc.). As discussed below, these provisos have implications for the applicability of research to Medicaid work requirements.

**While work can help people access employer-sponsored health coverage, many jobs—especially low-wage jobs—do not come with an affordable offer of employer coverage.** In 2017, just over half (53%) of firms offered health coverage to their employees,<sup>70</sup> and workers in low-wage firms are less likely than those in higher wage firms to be eligible for coverage through their employer.<sup>71</sup> In 2017, less than a third of workers who worked at or below their state’s minimum wage had an offer of health coverage through their employer.<sup>72</sup> Though most employees take up employer-sponsored coverage when offered, workers in low-wage firms are less likely to be covered by their employer even if coverage is offered, likely reflecting the fact that workers in such firms pay a larger share of the premium than workers in higher-wage firms.<sup>73</sup> The fact that work does not always lead to health coverage is further demonstrated by the large majority of uninsured people who are in a family with either a full-time (74%) or part-time (11%) worker.<sup>74</sup>

## What is the effect of volunteerism on health?

In the January 2018 guidance, CMS includes volunteering as a “community engagement” activity that may improve health outcomes,<sup>75</sup> and the Medicaid work requirement waivers approved to date all permit volunteer activities to count towards the required weekly/monthly hours of work activity.

**However, there is limited existing evidence that volunteer activities benefit health outcomes.** One literature review on the health effects of volunteering “did not find any consistent, significant health benefits arising through volunteering” based on experimental studies available at the time of the literature review.<sup>76</sup> The authors’ analysis of cohort studies revealed limited benefits of volunteering on depression, life satisfaction, and well-being (with no significant benefits on physical health). In addition, the cohort studies focused primarily on volunteers ages 50 and over, with some of the studies suggesting that the association between volunteerism and improved health outcomes may be limited to older volunteers and that the health benefits of volunteering may diminish as hours of volunteering increase.<sup>77</sup> Another study (published in 2018) examined the health benefits of “other-oriented volunteering” (other-regarding, altruistic, and humanitarian-concerned volunteering) compared to “self-oriented volunteering” (volunteering focused on seeking benefits and enhancing the volunteers themselves in return). While the authors found beneficial effects of both forms of volunteer activity on health and well-being, other-oriented volunteering had significantly stronger effects on the health outcomes of mental and physical health, life satisfaction, and social well-being than did self-oriented volunteering.<sup>78</sup> As discussed below, this finding may indicate that health benefits of volunteering are likely to be weaker when individuals are compelled to engage in volunteering.

## What does this research mean for Medicaid work requirements?

The body of literature summarized above includes several notable caveats and conclusions to consider in applying findings to a work requirement in Medicaid. Limitations and implications that are particularly relevant include:

**Effects found for the general population may not apply to Medicaid, as the link between work and health is not universal across populations or social contexts.** In general, the studies examined above analyze the relationship between work and health among broad populations of all income levels.

However, several authors suggest that population differences may modify the relationship between work and health. A 2003 study found that nationally, older adults, women, blacks, and individuals with low education levels were more likely to be employed in jobs viewed as “barely adequate” or “inadequate” (the types of jobs that the study found to be independently associated with poorer physical health and higher rates of depression) compared to other populations.<sup>79</sup> Authors of a 2006 literature review qualify their broad findings on the work/health relationship with the proviso that the social context must be taken into account (particularly social inequities in health and regional deprivation), and also cite evidence that the strong association between socioeconomic status and physical and mental health and mortality likely outweighs (and is confounded with) all other work characteristics that influence health.<sup>80</sup> Authors of a 2005 review on unemployment and health found a strong association between deprived areas, poor health, poverty and unemployment (although the exact relationship is not clear), and highlight the need for more research on the geographical dimension on unemployment and health.<sup>81</sup> These findings imply that the work/health relationship may differ significantly for the low-income Medicaid population, who report worse health status compared to the total US population and often face more significant challenges related to housing, food security, and other social determinants of health.<sup>82,83,84</sup> In addition, some volunteerism research suggests that the association between volunteerism and improved health outcomes may be limited to older volunteers, yet approved and pending Section 1115 Medicaid work requirement waiver requests all include exemptions for individuals above a certain age (which varies by state but ranges from 50 to 65 years).<sup>85</sup>

**Work or volunteering undertaken to fulfill a requirement may produce different health effects than work and volunteer activities studied in existing literature.** For example, research on health effects of work requirements in Temporary Assistance for Needy Families (TANF) suggests that they did not benefit and sometimes negatively affected health among enrollees and their dependents.<sup>86</sup> Another study found that welfare reform was associated with increases in self-reported poor health and self-reported disability among white single mothers without a high school diploma or GED.<sup>87</sup> These adverse effects could reflect different relationships between work and health for low-income populations, as described above, or different effects of work undertaken voluntarily versus as a requirement. Authors of a 2006 literature review on work and health found that forcing claimants off benefits and into work without adequate supports would more likely harm than improve their health and well-being.<sup>88</sup> Similarly, most studies on volunteerism and health define volunteerism as an act of free-will (essentially, a voluntary act), a

definition that may not be applicable to volunteer activity undertaken for the purpose of meeting work/community engagement requirements in order to maintain eligibility for Medicaid. Volunteer activities undertaken to retain Medicaid appear more closely aligned with the self-oriented form of volunteerism (volunteering focused on seeking benefits and enhancing the volunteers themselves in return), which research shows has weaker health effects than the other-oriented form (other-regarding, altruistic, and humanitarian-concerned volunteering).

**Limited job availability, low demand for labor, or poor job quality may moderate any positive health effects of employment.** Authors of a 2014 systematic review of prospective studies on health effects of employment commented that most studies in this field do not adjust for quality of employment and include all kinds of jobs in their analysis (e.g. part- and full-time employment, self-employment, and both blue- and white-collared jobs) despite the possibility that different forms of employment have different health effects.<sup>89</sup> Under Medicaid work requirement programs, the population subject to Medicaid work requirements may have access to only low-wage, unstable, or low-quality jobs to meet the weekly/monthly hours requirement, as these are the types of positions adults with Medicaid who currently work hold.<sup>90</sup> In discussing the policy implications of their findings, multiple researchers have concluded that such policies could be detrimental to health, with authors of one study asserting that, “Policies that promote job growth without giving attention to the overall adequacy of the jobs may undermine health and well-being.”<sup>91</sup>

**Long-term effects of work on health are unclear.** Much of the evidence on the work/health relationship is about short-term effects after about one year, which, as authors of one literature review point out, is a short period when assessing health impacts.<sup>92</sup> There is less evidence on longer-term effects over a lifetime perspective.<sup>93</sup> In addition, research on work requirements in other public programs shows little evidence of long-term impacts on employment or income. Studies on welfare recipients subject to work requirements generally have found that any initial increase in employment after an imposition of a work requirement faded over time.<sup>94,95,96</sup> After five years, one study showed those who were not required to work were just as likely or more likely to be working compared to those who were subject to a work requirement, suggesting that these work requirements had little impact on increasing employment over the long-term.<sup>97</sup> Other research has found that employment among people who left welfare was unsteady and did not lift them out of poverty.<sup>98</sup> Thus, even short-term effects are likely to disappear as short-term boosts in employment fade over time.

**Loss of health insurance coverage due to not meeting reporting or work requirements under waivers could affect access to health care and health.** Low-wage workers typically work in small firms and industries that often have limited employer-based coverage options, and very few have an offer of coverage through their employer. Work requirements in Medicaid could lead to large Medicaid coverage losses, especially among people who would remain eligible for the program but lose coverage due to new administrative burdens or red tape versus those who would lose eligibility due to not working.<sup>99</sup> Several studies on individuals leaving TANF following welfare reform show reductions in insurance coverage across this “welfare leaver” population, with significant decreases in Medicaid coverage that were not fully



offset by the smaller increases in private coverage.<sup>100,101,102,103,104</sup> A study evaluating welfare-to-work interventions found that some programs led to a reduction in health insurance coverage for both children and parents.<sup>105</sup> Given the evidence of Medicaid's positive impact on access to care and health outcomes,<sup>106</sup> as well as data demonstrating that uninsured individuals go without needed care due to cost at much higher rates than those with Medicaid coverage,<sup>107</sup> widespread coverage losses as a result of Medicaid work requirements are likely to result in adverse effects on health outcomes. In TANF evaluations, for example, studies found that children of TANF enrollees who lose benefits for failure to comply with a work requirement experience adverse health effects such as behavioral health problems<sup>108</sup> or hospitalization.<sup>109</sup>

**Policies that have disproportionate effects on certain Medicaid enrollees could widen health disparities.** Data demonstrate the persistence of clear disparities in health insurance coverage, access to care, and health outcomes for certain vulnerable populations in the US, including people with disabilities (compared to their non-disabled counterparts)<sup>110</sup> and people of color (compared to whites).<sup>111</sup> Research shows that people with disabilities and people of color are face disproportionate challenges in meeting and are disproportionately sanctioned under existing work requirement programs.<sup>112, 113</sup> If racial minority groups, people with disabilities, or other vulnerable populations face similarly disproportionate challenges in meeting work requirements when they are attached to the Medicaid program, these policies could result in wider disparities in health insurance coverage and health outcomes.

## Looking Ahead

Taken as a whole, the large body of research on the link between work and health indicates that proposed policies requiring work as a condition of Medicaid eligibility may not necessarily benefit health among Medicaid enrollees and their dependents, and some literature also suggests that such policies could negatively affect health. While it is difficult to determine a causal relationship between employment and health status (largely due to challenges controlling for health selection bias and the inability to conduct randomized controlled trials on this topic), there is strong evidence of an association between employment and good health. However, research suggests that factors like job availability and quality, as well as the social context of workers, mediate the effect of work or work requirements on health. Given the characteristics of the Medicaid population, research indicates that policies could lead to emotional strain, loss of health coverage, or widening of health disparities for vulnerable populations. As debate considers the question of whether policies to promote health—versus health coverage—are the aim of the Medicaid program, the question of whether work requirements will promote health also will remain key to the ongoing debate over the legality of work requirements in Medicaid.

## Methods

This brief is based on a review of existing research on the relationship between work and health. To collect relevant studies, we began by drawing on studies cited in policy documents on work requirements in Medicaid, including the January 2018 guidance from CMS, comments and reactions to the guidance, and documents related to the *Stewart v. Azar* litigation and decision. We then conducted keyword searches of PubMed and other academic health/social policy search engines to compile relevant studies and program evaluations. Due to the large number of studies in this field spanning decades, we focused primarily (although not exclusively) on findings from other literature or systematic reviews rather than individual studies on these topics. We then used a snowballing technique of pulling additional studies from reference lists in previously pulled papers. In areas with limited evidence or in which reviews indicated conflicting or unclear results, we looked at original source studies to understand findings and assess the strength of the evidence.

In total, we reviewed more than 50 sources, the vast majority of which were published academic studies or program evaluations and most of which are reviews of multiple studies themselves. In weighing evidence, we prioritized recent research and research based in the United States over older research and research based on experiences in other countries, though we did include older and international studies if they were highly cited, directly relevant, or included in systematic reviews that also included US-based studies. We excluded commentaries (as compared to original work or comprehensive literature reviews) and studies that were not directly focused on the link between health and work (e.g., we excluded studies of workplace wellness programs).

## Endnotes

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- <sup>11</sup> National Institute on Drug Abuse, Consequences of Drug Misuse (Bethesda, MD: National Institute on Drug Abuse, March 2017), <https://www.drugabuse.gov/related-topics/health-consequences-drug-misuse>
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<sup>19</sup> Jean Hall, Adele Shartzter, Noelle Kurth, and Kathleen Thomas, "Medicaid Expansion as an Employment Incentive Program for People With Disabilities," *American Journal of Public Health* epub ahead of print (July 2018), <https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2018.304536>

<sup>20</sup> Heeju Sohn and Stefan Timmermans, "Social Effects of Health Care Reform: Medicaid Expansion under the Affordable Care Act and Changes in Volunteering," *Socius: Sociological Research for a Dynamic World* 3 (March 2017): 1-12, <http://journals.sagepub.com/doi/full/10.1177/2378023117700903>

<sup>21</sup> Sohn and Timmermans used the volunteering supplement to the Current Population Survey (CPS) to measure volunteerism. Analyzed changes in formal volunteering based on two CPS questions: "Since September 1<sup>st</sup> of last year, have you done any volunteering activities through or for an organization?" and, "Sometimes people don't think of activities they do infrequently or activities they do for children's schools or youth organizations as volunteer activities. Since September 1<sup>st</sup> of last year, have you done any of these types of volunteer activities?" Also separately analyzed changes in informal helping based on one CPS question: "Since September 1<sup>st</sup> of last year, have you worked with people in your neighborhood to fix or improve something?"

<sup>22</sup> Gordon Waddell and A. Kim Burton, *Is Work Good for your Health and Well-Being?*, (2006), <https://www.gov.uk/government/publications/is-work-good-for-your-health-and-well-being>

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of the US total nonelderly adult population (both differences between the two populations were statistically significant).

A significantly greater percentage of Medicaid nonelderly adults compared to US total nonelderly adults also reported: that they often or sometimes cannot afford to eat balanced meals (26% vs. 11%), that they often or sometimes worry food will run out before they have money to buy more (34% vs. 15%), and that they are very or moderately worried about rent, mortgage, or other housing costs (42% vs. 24%). (Kaiser Family Foundation analysis of 2016 National Health Interview Survey data).

<sup>83</sup> Julia Paradise and Rachel Garfield, *What is Medicaid's Impact on Access to Care, Health Outcomes, and Quality of Care? Setting the Record Straight on the Evidence* (Washington, DC: Kaiser Family Foundation, <https://www.kff.org/medicaid/issue-brief/what-is-medicaids-impact-on-access-to-care-health-outcomes-and-quality-of-care-setting-the-record-straight-on-the-evidence/>)

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