

Estimates have suggested that primary care physicians treat from 1200 to 2300 patients per year, and the reported average for specialists in the years 2009 to 2010 was 2704 patients per year. Even under a conservative estimate for this sample, each DACA physician could treat 1000 patients per year, with a likely focus on the underserved.<sup>7</sup> Over a 10-year period, a DACA physician could treat 10 000 patients in populations that currently face inequity in health care and are projected to have increased demand for physicians.

This work emphasizes the distinct contributions of DACA medical students to US health care. Given the current and expanding need for socioeconomic, cultural, and linguistic diversity in the medical profession to match patients' backgrounds, the diversity of this sample provides a unique perspective to

identify and improve health disparities in the United States. Their intent to practice and work with underserved populations can alleviate current and projected health care demand in these groups, especially in primary care. The medical establishment must devote critical effort to resolving the status of DACA recipients and realize the social and economic benefits that DACA physicians provide to US health care. *AJPH*

*Julio C. Ramos, BS*  
*Wil Lieberman-Cribbin, MPH*  
*Christina Gillezeau, MPH*  
*Naomi Alpert, MS*  
*Maaik van Gerwen, MD*  
*Stephanie Tuminello, MPH*  
*Raja Flores, MD*  
*Emanuela Taioli, MD, PhD*

#### CONTRIBUTORS

J. Ramos, C. Gillezeau, and M. van Gerwen developed the questionnaire instrument and performed study outreach. W. Lieberman-Cribbin, N. Alpert, and

S. Tuminello conducted data analyses. R. Flores and E. Taioli conceptualized the study design. All authors contributed to manuscript preparation.

#### ACKNOWLEDGMENTS

We thank the participants of the study.

#### CONFLICTS OF INTEREST

The authors have no conflicts of interest.

#### HUMAN PARTICIPANT PROTECTION

Approval for this study was granted by the institutional review board of the Icahn School of Medicine at Mount Sinai. As the survey was anonymously administered, the study was deemed exempt.

#### REFERENCES

1. Migration Policy Institute. A profile of current DACA recipients by education, industry, and occupation. 2017. Available at: <https://www.migrationpolicy.org/research/profile-current-daca-recipients-education-industry-and-occupation>. Accessed August 8, 2018.
2. Association of American Medical Colleges. Supporting medical students and residents with DACA status. Available at: <https://news.aamc.org/diversity/article/supporting-medical-students-residents-daca-status>. Accessed August 10, 2018.

3. Moreno G, Walker KO, Grumbach K. Self-reported fluency in non-English languages among physicians practicing in California. *Fam Med*. 2010;42(6):414–420.

4. Association of American Medical Colleges. Diversity in medical education facts & figures 2016. Available at: <http://www.aamcdiversityfactsandfigures2016.org/index.html>. Accessed August 14, 2018.

5. Association of American Medical Colleges. Diversity of US medical students by parental income. Available at: <https://www.aamc.org/download/102338/data/aibvol8no1.pdf>. Accessed August 11, 2018.

6. Association of American Medical Colleges. The complexities of physician supply and demand: projections from 2016 to 2030 final report. Available at: [https://aamc-black.global.ssl.fastly.net/production/media/filer\\_public/85/d7/85d7b689-f417-4ef0-97fb-ecc129836829/aamc\\_2018\\_workforce\\_projections\\_update\\_april\\_11\\_2018.pdf](https://aamc-black.global.ssl.fastly.net/production/media/filer_public/85/d7/85d7b689-f417-4ef0-97fb-ecc129836829/aamc_2018_workforce_projections_update_april_11_2018.pdf). Accessed August 14, 2018.

7. Xierali IM, Nivet MA. The racial and ethnic composition and distribution of primary care physicians. *J Health Care Poor Underserved*. 2018;29(1):556–570.

## Medical Bankruptcy: Still Common Despite the Affordable Care Act

Myriad anecdotes—of a Nobel laureate who sold his medal to pay medical bills,<sup>1</sup> or the more than 250 000 GoFundMe medical campaigns last year<sup>2</sup>—attest to the financial toll of illness on American families. National surveys confirm that medical bills frequently cause financial hardship,<sup>3</sup> and the US Consumer Financial Protection Bureau reported that they were by far the most common cause of unpaid bills sent to collection agencies in 2014, accounting for more than half of all such debts.<sup>4</sup>

Less evidence is available on the medical causes of bankruptcy, a

public and stigmatizing confession of impoverishment. In surveys conducted by researchers with the Consumer Bankruptcy Project in 2001<sup>5</sup> and 2007,<sup>6</sup> a majority of recently bankrupt debtors implicated medical bills or illness-related work loss as causes of their bankruptcy, findings that President Obama used to argue for passage of the Affordable Care Act (ACA). The ACA both expanded and upgraded health insurance coverage, banning preexisting illness exclusions, imposing a cap on out-of-pocket spending, and mandating coverage for essential benefits. Although these reforms might attenuate the risk of medical

bankruptcy, increasing medical costs and stagnant incomes could have the opposite effect.

We sought to assess the incidence of medical bankruptcy in the current era using methods similar to those employed by the Consumer Bankruptcy Project in its 2001 and 2007 surveys. From court records of all US

bankruptcy filers from 2013 to 2016, we randomly sampled 200 each quarter, abstracted their court record data, and (with institutional review board approval) mailed them a questionnaire closely modeled on the questionnaires used in those earlier studies.<sup>5,6</sup>

Of the 3200 surveys we mailed, the postal service returned 108 as undeliverable and 910 debtors responded, for a response rate of 29.4%. Court records indicated that

#### ABOUT THE AUTHORS

David U. Himmelstein and Steffie Woolhandler are with Hunter College, City University of New York, New York, NY, and Harvard Medical School, Boston, MA. Robert M. Lawless is with the University of Illinois College of Law, Champaign. Deborah Thorne is with the Department of Sociology & Anthropology, University of Idaho, Moscow. Pamela Foohey is with the Maurer School of Law, Indiana University, Bloomington.

Correspondence should be sent to David U. Himmelstein, MD, 255 West 90th St, New York, NY 10024 (e-mail: dhimmels@hunter.cuny.edu). Reprints can be ordered at <http://www.ajph.org> by clicking the "Reprints" link.

This editorial was accepted November 27, 2018.

doi: 10.2105/AJPH.2018.304901

nonrespondents' financial characteristics mostly resembled those of respondents; their median net worth was similar ( $-\$32\,947$  vs  $-\$30\,409$ ;  $P = .17$ ), as were their assets, debts, and ongoing medical expenses ( $P > .05$  for all comparisons), although nonrespondents had slightly higher monthly incomes ( $\$2\,750$  vs  $\$2\,489$ ;  $P < .001$ ).

Table 1 displays debtors' responses regarding the (often multiple) contributors to their bankruptcy. The majority (58.5%) "very much" or "somewhat" agreed that medical expenses contributed, and 44.3% cited illness-related work loss; 66.5% cited at least one of these two medical contributors—equivalent to about 530 000 medical bankruptcies annually.

The share of debtors reporting a medical contributor before the ACA's January 1, 2014 implementation (65.5%) and after implementation (67.5%) was similar ( $P = .37$ ). Both of these figures are close to the 62.1% estimate from the 2007 survey, and in a difference-in-differences analysis we found no evidence that trends differed between

states that did versus did not accept the ACA's Medicaid expansion ( $P = .76$ ). The responses regarding individual items in the current survey are also similar to those in 2007, when 57.1% of debtors cited medical bills as contributors to their bankruptcy and 40.3% cited income loss due to illness.<sup>6</sup>

Among those we surveyed from 2013 to 2016, medical debtors were more likely than other respondents to live with a spouse or partner but were similar in age, gender, and likelihood of being uninsured. Medical debtors more frequently self-reported fair or poor health (odds ratio [OR] = 2.88;  $P < .001$ ), major disability (OR = 2.52;  $P < .001$ ), foregoing needed medical attention in the two years prior to the bankruptcy filing (OR = 1.77;  $P < .001$ ), and foregoing needed medications (OR = 2.65;  $P < .001$ ).

Like all surveys, ours relies on respondents' candor. Moreover, the modest response rate—17.1% lower than the response rate in the 2007 study—mandates cautious interpretation of our current findings. However, the similarities between respondents and nonrespondents is reassuring.

Even if the medical bankruptcy rate among nonrespondents were half that of respondents, the overall rate would exceed 40%.

Our findings contrast with those of a recent study analyzing the financial sequelae of hospitalization in California from 2003 to 2007.<sup>7</sup> That study found that hospitalization increased medical debts and decreased employment and income, but it suggested that medical bankruptcies were uncommon. However, its econometric approach rests on four assumptions likely to underestimate the medical bankruptcy rate. First, its cohort excluded most persons with frequent hospitalizations, a group at high risk of medical bankruptcy. Second, it assumed that only hospitalized patients can suffer a medical bankruptcy, although patients hospitalized in the course of a year account for only 18.2% of out-of-pocket costs paid by US households (Himmelstein and Woolhandler, unpublished analysis of data from the 2015 Medical Expenditure Panel Survey). Third, it assumed that a child's, elderly parent's, or other relative's illness never causes a bankruptcy. Finally, the study's

assumption that every bankrupting illness starts at the moment of an initial hospitalization is contradicted by its cohort's upsloping rate of bankruptcy filings in the baseline period prior to hospitalization. Because bankruptcy rates do not rise with age, this suggests that financial distress from illness frequently predated hospitalization. Because the study estimated medical bankruptcies from changes in filing trends before versus after hospitalization, failure to account for the upsloping baseline probably introduced a substantial downward bias.

The California study's authors argued that survey-based ascertainment of the causes of bankruptcy is unreliable, because debtors cannot know the true cause of their financial predicament—just as heart attack patients cannot know what caused their illness.<sup>7</sup> Yet in our (D. U. H. and S. W.) clinical experience, most such patients can accurately identify the smoking, dietary habits, and family history that put them at risk. Moreover, debtors are peculiarly well positioned to identify the contributors to the

**TABLE 1—Share of Debtors Citing Specific Contributors to Their Bankruptcy: United States, 2013–2016**

Reasons Cited as Contributors to Bankruptcy	(A) Very Much Agree, %	(B) Somewhat Agree, %	(A) + (B) Very Much or Somewhat Agree, %
<b>Medical-related reasons</b>			
Medical expenses	37.0	21.5	58.5
Medical problems causing work loss	27.9	16.5	44.3
Either of above	44.2	22.3	66.5
Change in family size such as birth or death	13.7	7.9	21.6
Any of above	50.1	21.4	71.5
<b>Other reasons</b>			
Income loss (including persons with medically related work loss)	61.5	16.3	77.8
Unaffordable mortgage or foreclosure	29.2	15.8	45.0
Spending/living beyond means	17.2	27.2	44.4
Student loans	14.3	11.1	25.4
Divorce/separation	18.5	5.9	24.4
Tried to help friends/relatives	12.7	15.7	28.4

Note. The sample size of the survey was n = 910.

bankruptcy. As part of their bankruptcy proceedings, all of our respondents had recently prepared detailed documentation of their assets, debts, and current finances, and had sworn to its accuracy.

Medical bankruptcy has garnered public attention because it resonates with the abuse that Americans—including many middle-class Americans—suffer at the hands of our health care finance system. Despite gains in coverage and access to care from the ACA, our findings suggest that it did not change the proportion of bankruptcies with medical causes. That's not surprising because the chronically poor—the group most affected by the ACA's coverage expansion—have reduced access to credit, have few assets (such as a home) to protect, and face particular difficulty in securing the legal help needed to navigate formal bankruptcy proceedings.

Moreover, medical costs continue to outpace incomes, 29 million remain uninsured, and many of those with health insurance face unpredictable and unaffordable out-of-pocket costs as copayments and deductibles ratchet up. And few Americans have adequate disability coverage, leaving them vulnerable to illness-related income loss that amplifies the financial distress caused by medical bills.

Rather than acting to make health care more affordable, the current administration seems intent on further hollowing out coverage: encouraging a migration to bare-bones, short-term insurance policies that leave enrollees largely unprotected; allowing states to impose Medicaid work requirements that threaten to swell the ranks of the uninsured; and joining a suit that would end enforcement of the ACA's

preexisting condition coverage mandate.

The results of the midterm election—in which health care was the most prominent issue—stand as a rebuke to these retrograde steps. Instead, policy-makers should move forward from the ACA and implement programs that guarantee coverage that is not just universal but also comprehensive, as well as sick leave and disability coverage that replaces income during illness.

Although death is inevitable, good public policy can ensure that financial suffering from illness is not. **AJPH**

*David U. Himmelstein, MD*

*Robert M. Lawless, JD*

*Deborah Thorne, PhD*

*Pamela Foohey, JD*

*Steffie Woolhandler, MD, MPH*

#### CONTRIBUTORS

D. U. Himmelstein, R. M. Lawless, and S. Woolhandler performed data analyses. D. U. Himmelstein and S. Woolhandler drafted the initial version of the manuscript. R. M. Lawless, D. Thorne, and P. Foohey were responsible for data collection. All authors reviewed and revised the final version of the manuscript.

#### CONFLICTS OF INTEREST

The authors had no conflicts of interest.

#### REFERENCES

1. Kliff S. A Nobel Prize-winning physicist sold his medal for \$765,000 to pay medical bills: only in America. *Vox*, October 4, 2018. Available at: <https://www.vox.com/health-care/2018/10/4/17936626/leon-lederman-nobel-prize-medical-bills>. Accessed October 15, 2018.
2. GoFundMe. Get help with medical fundraising: with a free GoFundMe, you can get immediate help with medical bills. Available at: <https://www.gofundme.com/start/medical-fundraising>. Accessed October 15, 2018.
3. Hamel L, Norton M, Pollitz K, Levitt L, Claxton G, Brodie M. The burden of medical debt: results from the Kaiser Family Foundation/New York Times Medical Bills Survey. Kaiser Family Foundation, 2016. Available at: <https://www.kff.org/health-costs/report/the-burden-of-medical-debt-results-from-the-kaiser-family-foundationnew-york-times-medical-bills-survey/view/print>. Accessed September 30, 2018.

4. Consumer Financial Protection Bureau. Consumer credit reports: a study of medical and non-medical collections. 2014. Available at: [http://files.consumerfinance.gov/f/201412\\_cfpb\\_reports\\_consumer-credit-medical-and-non-medical-collections.pdf](http://files.consumerfinance.gov/f/201412_cfpb_reports_consumer-credit-medical-and-non-medical-collections.pdf). Accessed September 30, 2018.

5. Himmelstein DU, Warren E, Thorne D, Woolhandler S. Illness and injury as contributors to bankruptcy. *Health Aff (Millwood)*. 2005;24(suppl Web exclusives):W5-63–W5-73.

6. Himmelstein DU, Thorne D, Warren E, Woolhandler S. Medical bankruptcy in the United States, 2007: results of a national study. *Am J Med*. 2009;122(8):741–746.

7. Dobkin C, Finkelstein A, Kluender R, Notowidigdo MJ. Myth and measurement—the case of medical bankruptcies. *N Engl J Med*. 2018;378(12):1076–1078.