Managing Medical Bills on the Brink of Bankruptcy

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Managing Medical Bills on the Brink of Bankruptcy

Melissa B. Jacoby & Mirya Holman*

I. INTRODUCTION .................................................................................. 240

II. BACKGROUND AND METHODOLOGY ............................................ 244

A. MANAGING OUT-OF-POCKET LIABILITY ......................................... 244

1. IN GENERAL .................................................................................... 244

2. MEASURING MEDICAL BURDENS OF BANKRUPTCY FILERS ......... 257

B. DATA FOR THE CURRENT STUDY .................................................... 262

III. ANALYSIS AND FINDINGS .......................................................... 265

IV. DISCUSSION .................................................................................... 286

V. CONCLUSION .................................................................................. 288

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Medical men who frequently go to law to recover fees generally lose more in the end than they gain; not only because such attempts to recover often prove fruitless, but because they excite prejudice and make influential enemies.


I. INTRODUCTION

In the vast majority of health care interactions, patients in the United States—regardless of their insurance status—bear some direct financial liability to medical providers. Whether they are not-for-profit hospitals or for-profit small businesses, health care providers cannot be indifferent to the collection of these obligations. Consultants in medical practice management have developed and marketed extensive advice for structuring all aspects of providers’ interactions with patients to mimic commercial transactions in other retail service contexts. This advice, if successful, shields providers from the public scrutiny of after-the-fact debt collection through lawsuits and liens.

Medical practice management affects the study of the financial burden imposed by health care. In recent years, lawmakers and scholars have debated the role of medical problems in fueling personal bankruptcy filings. Some scholars measure medical-related bankruptcy using survey techniques. Skeptics of survey-based findings often cite studies of bankruptcy court records that yield more conservative estimates. Court record studies look for evidence of claims by creditors with medical identities in the documents that bankruptcy filers submit to the court.

A clash over these methods arose directly prior to the passage of the

1. See infra Part II.A.

2. See, e.g., Anna Wilde Matthews, Beyond Co-Pay: Surprise Bills at the Doctor’s: To Ensure They Get Paid, Doctors Seek Entire Bill for Patient Share Upfront, WALL ST. J., Aug. 5, 2009, at D1 (citing a doctor reporting that office staff had to train patients to see doctor visits like a trip to Walmart—“pay before leaving”).

3. For scrutiny of that debt collection, see, for example, Mark A. Hall & Carl E. Schneider, Patients as Consumers: Courts, Contracts, and the New Medical Marketplace, 106 MICH. L. REV. 643 (2007); George A. Nation, III, Obscene Contracts: The Doctrine of Unconscionability and Hospital Billing of the Uninsured, 94 KY. L. J. 101 (2005).
Bankruptcy Abuse Prevention and Consumer Protection Act of 2005. This bill was the most significant set of amendments to the Bankruptcy Code in a generation and substantially restricted debt relief for individual filers. Lawmakers who opposed the bankruptcy bill cited a 2005 study by Himmelstein, Thorne, Warren, and Woolhandler finding that approximately half of bankruptcies were medical-related. Supporters of the bankruptcy bill countered with a court record analysis conducted within the Department of Justice (DOJ). According to the DOJ analysis, over half of the sample (54%) had no medical debt at all, the average medical debt among those with any such debt was under $5,000, and medical debt comprised only 5.5% of the total unsecured debt of the sample. 

More recently, debates about health care finance intensified public interest in the financial impact of medical bills and these methodological disputes. In the summer of 2009, Himmelstein et al. reported that 62% of personal bankruptcies could be construed as medical-related. President Obama used medical bankruptcy rates as a rationale for health care reform. Lawmakers held hearings on whether the current health care system is bankrupting American families. At one such hearing in July 2009, Representative John Conyers cited the

5. See infra Part II.A.2.
8. President Obama cited the Himmelstein study during his campaign and has continued to reference the connection between medical bills and bankruptcy in statements to Congress. See BARACK OBAMA AND JOE BIDEN'S PLAN TO LOWER HEALTH CARE COSTS AND ENSURE AFFORDABLE, ACCESSIBLE HEALTH COVERAGE FOR ALL 1, 1 (2008), http://www.barackobama.com/pdf/issues/HealthCareFullPlan.pdf (“Over half of all personal bankruptcies today are caused by medical bills.”). In an address to a joint session of Congress in early 2009, the President stated that “the crushing cost of health care ... is a cost that now causes a bankruptcy in America every thirty seconds.” President Barack Obama, Address to Joint Session of Congress (Feb. 24, 2009), available at http://www.whitehouse.gov/the_press_office/remarks-of-president-barack-obama-address-to-joint-session-of-congress. “In a letter to Democratic Senate leaders ... the President said: ‘Health-care reform is not a luxury. ... [S]piraling premiums and out-of-pocket expenses are pushing [families] into bankruptcy and forcing them to go without the checkups and prescriptions they need.’” Catherine Arnst, Study Links Medical Costs and Personal Bankruptcy, BLOOMBERG BUSINESSWEEK, June 4, 2009, http://www.businessweek.com/bwdaily/dnflash/content/jun2009/db2009064_666715.htm.
Himmelstein study as evidence that health care reform was urgently needed. But a scholar from the American Enterprise Institute countered by citing the earlier DOJ court record analysis and its more modest assessment of the role of medical debt in bankruptcy.

Here, we provide the first attempt to reconcile these competing methods of measuring medical burden, applying both the survey method and court record method to the same set of filers in a single dataset. Our dataset, the 2007 Consumer Bankruptcy Project ("2007 CBP"), is a nationally representative sample of people who filed for bankruptcy in early 2007. This dataset consists of hundreds of variables from court records, questionnaires, and telephone interviews. It was compiled by professors of law, medicine, and sociology at seven major research universities, including one of the authors of this Article.

The court record medical debt in our sample is patterned very consistently with the earlier DOJ sample. Someone who used the DOJ analysis to suggest that medical bills were not a problem in bankruptcy presumably would be nearly as happy to cite the court record analysis of our dataset.

However, when we compare the court record method and survey method as applied to the same dataset, court records routinely reflect smaller or even zero medical obligations for filers who report out-of-pocket expenses on the questionnaire. Indeed, one out of four respondents who explicitly reported medical bills as a reason for filing for bankruptcy has court records with zero identifiable medical debt.

After exploring several theories for these discrepancies, we observe that the deviations are quite consistent with filers' medical bill management. In other words, due to credit use, the court record method is incapable of capturing some of the most significant medical obligations incurred before bankruptcy. For example, respondents who reported significant out-of-pocket expenses, but had little or no detectable medical debt in their court records, reported credit card and mortgage use for medical bills at significantly higher rates than other respondents. Respondents who specifically cited medical bills as a reason for filing for bankruptcy mortgaged their homes to pay medical bills at nearly four


11. See infra p. 276, fig.4.
times the frequency of other filers. They also were more than a third more likely than other filers to use credit cards for medical bills. These mortgages and credit card bills are invisible in the court record method because they bear no sign of medical identity. Thus, the court record method, by itself, produces an estimate of medical burden that is not merely more conservative across the board, but skewed.

The distortion in the court record method does not seem to apply to all demographic groups uniformly, probably due to factors we cannot directly measure, such as access to credit and access to health care. Thus, interesting patterns emerge when we disaggregate our national sample on the basis of age, race, sex, and housing tenure. Court records make some filers appear as if they had incurred distinctively high medical debt because they were less likely to use credit cards or mortgages for medical bills. For similar reasons, other groups of filers have quite similar medical debts in the court records even though they incurred very different amounts of medical obligation prior to filing. Again, significant variations in medical debt management alter the picture the court records provide.

The findings reveal the problems with relying exclusively on court records to measure the financial impact of medical care. They also provide another perspective on the financial end of medical practice with which this article began. As previously noted, non-legal writings advise how medical providers should manage the risk of transacting with patients, in part because these writers have long feared that patients will put doctors at the bottom of the priority list of bills to pay. The respondents in the current study often were facing financial difficulties when they sought medical care. Yet, by the time they filed for bankruptcy, respondents had considerably reduced providers’ direct financial exposure. This suggests that even patients with modest incomes and high debt-to-income ratios feel a sense of responsibility to their doctors. Alternatively, they are responding to providers’ encouragements to reduce their direct liability.

12. See infra p. 274, fig.3.
13. Id.
14. See, e.g., DANIEL WEBSTER CATHELL, THE PHYSICIAN HIMSELF FROM GRADUATION TO OLD AGE 292 (1925). See also sources cited infra Part IV.
15. In telephone interviews with a large subset of respondents in our sample, 44% reported that they had seriously struggled financially for more than two years before filing for bankruptcy. An additional 27% reported serious struggling for more than one year. We do not have this information for all respondents in the sample, but the telephone survey subsample is not significantly different from the whole regarding variables such as filing status, chapter, total assets, total debts, priority debts, monthly income, and home value. See infra text accompanying note 100.
This Article proceeds with the following Parts. Part II.A offers background on out-of-pocket medical bills and medical practice management advice. It then contextualizes our study by reviewing the methodological and political dispute over measuring medical burden among bankruptcy filers. Part II.B describes our dataset, giving special attention to the new questions and variables that enabled this study. Part III reports our findings. Part IV highlights some implications of our study for understanding the burden of health care spending on families and medical practice management.

II. BACKGROUND AND METHODOLOGY

A. Managing Out-of-Pocket Liability

1. In General

For many reasons, today’s health care finance system expressly imposes cost-sharing and direct patient liability on patients who are covered by health insurance. According to The Coker Group, a health care industry consultant firm, 90% of patients owe money directly at the time of service. Furthermore,
obligations to be collected directly from patients represent, on average, 15-20% of a medical provider’s receivables. At least prior to the enactment of health care finance reform, the Centers for Medicare and Medicaid Services predicted continued increases in patient out-of-pocket payments. In an analysis of a recent Medical Expenditure Panel Survey, the authors reported that a fifth of privately insured non-elderly families had out-of-pocket obligations exceeding 5% of their incomes.

As an interesting sign of the times regarding direct medical obligations, a few years ago a bank started issuing a “Healthcare Visa Gift Card.” The website for the Visa card lists a variety of occasions for which such a gift might be appropriate. Although new card orders are no longer being taken, the vendor of the cards called them a “hot new Christmas gift.” Gift-givers could get the card in amounts ranging from $25 to $5,000, and using the card would be fee-free for the recipient for eight months, after which the recipient would pay a monthly maintenance fee of $1.50. Existing cards may be used for health club membership and totally elective surgery as well as for dental care and co-pays at doctors’ offices.

Certainly many people with modest out-of-pocket obligations or higher

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18. Mitch Patridge & Doug Barry, Compassionate Patient Financing Can Cure a Hospital’s Financial Ills, 32 J. HEALTH CARE FIN. 168, 171 (2006); Richard Haugh, Financial Aid: From Direct Debits to New Loans, Patients Get New Ways To Pay Off Hospital Bills, HOSP. & HEALTH NETWORKS, Nov. 2006, at 18. Patridge and Barry note that these receivables represent only 2-5% of net revenue due to insufficient collection practices. See Patridge & Barry, supra.


25. Id.
incomes pay immediately and without serious consequence. But contemporary studies continue to report that cost-sharing results in delinquent medical debt even for routine care. Nationally representative studies estimate that tens of millions of households have accrued medical debt and/or have problems paying medical bills. Concerns about medical debt are longstanding and have transcended the evolution of health care finance.


29. See, e.g., Jonathan Cohn, This Won't Hurt a Bit: Health Care Reform for Dummies, New Republic, Feb. 18, 2009, at 18 (reporting on the Committee on the Costs of Medical Care from the
Health policy researchers and patient advocates have articulated specific worries about how medical debt affects patients and their families. Prominent examples of such worries include the following: patients may self-ration medically necessary care and drugs; medical providers may deny non-emergency care; patients may self-ration important non-medical expenses; providers or their designees may engage in harsh formal debt collection activity; patients may experience adverse psychological consequences from fear about medical debt that in turn may aggravate health conditions; certain demographic groups may be disproportionately impacted by cost-related or debt-related access problems; and patients may experience pressures to convert

1930s and the concern that medical bills destabilize household finances); Editorial, *Most People Need No Aid To Pay the Doctor’s Bill*, SATURDAY EVENING POST, Jan. 10, 1953, at 10, 12 (arguing that U.S. News story was an overreaction to data from academic study); *Special Report: Doctor Bills Pile Up: How Can Families Pay?*, U.S. NEWS & WORLD REP., Oct. 17, 1952, at 65-70 (reporting on academic study finding that one in five families had outstanding medical debt).


31. See, e.g., CUNNINGHAM, supra note 28, at 3 (“In 2007, about 10 percent of people with medical bill problems reported being denied care by medical providers directly as a result of their medical bill problems.”).

32. See, e.g., Cunningham et al., supra note 27, at 4-5 (discussing families who are late on mortgages and cut down other expenses due to medical bill problems); id. at 8 (discussing choice between medical bills and keeping children housed and fed); Robert W. Seifert, *Home Sick: How Medical Debt Undermines Housing Security*, 51 ST. LOUIS U. L.J. 325 (2007).


35. See, e.g., ELIZABETH M. PATCHIAS & JUDITH WAXMAN, WOMEN AND HEALTH COVERAGE:
medical debt into third-party credit that could substantially increase the size of those bills and other consequences.36

The world looks different from the perspective of the medical practice management field. As the following paragraphs will illustrate, writers in this field focus on protecting health care providers, rather than patients, from unpaid debt. While scholars from many disciplines continue to debate whether medical care should be treated as an ordinary commodity,37 those on the front lines of practical

36. See, e.g., SARA COLLINS ET AL., THE COMMONWEALTH FUND, THE AFFORDABILITY CRISIS IN HEALTH CARE: FINDINGS FROM THE COMMONWEALTH FUND BIENNIAL HEALTH INSURANCE SURVEY 32 (2004), available at http://www.commonwealthfund.org/usr_doc/collins_biennial2003_723.pdf (one in five medical debtors had large credit card debt or home mortgage to pay medical bills); DEMOS & CTR. FOR RESPONSIBLE LEARNING, THE PLASTIC SAFETY NET: THE REALITY BEHIND DEBT IN AMERICA 56-57 (2005), available at http://www.demos.org/pubs/PSN_low.pdf (reporting that medical bills contributed to credit card debt for 29% of low and middle income households); NAT’L CONSUMER LAW CTR., UNHEALTHY PURSUITS: HOW THE SICK AND VULNERABLE ARE HARMED BY ABUSIVE MEDICAL COLLECTION TACTICS, 36 (2005), available at http://www.consumerlaw.org/news/content/medicaldebt.pdf (suggesting that providers have encouraged patients to take on high-cost credit for bills); CINDY ZELDIN & MARK RUKAVINA, BORROWING TO STAY HEALTHY: HOW CREDIT CARD DEBT IS RELATED TO MEDICAL EXPENSES (2007), available at http://www.demos.org/pubs/healthy_web.pdf; Cunningham et al., supra note 27 (giving examples of credit card, mortgages, and personal loan use for medical bills); Brian Grow & Robert Berner, Fresh Pain for the Uninsured: As Doctors and Hospitals Turn to GE, Citigroup, and Smaller Rivals To Finance Patient Care, the Sick Pay Much More, BUS. WK., Dec. 3, 2007, at 34 (reporting on loan arranging for bills of patients who were unaware of the third-party arrangement); USA Today/Kaiser Family Foundation/Harvard School of Public Health, Health Care Costs Survey, Summary and Chartpack, Chart 3 (Aug. 2005), available at http://www.kff.org/newsmedia/upload/7371 .pdf (reporting that 8% borrowed money or got second mortgages because of problems with paying medical bills). In a recent tracking survey, about one in ten respondents with problems paying medical bills. In a recent tracking survey, about one in ten respondents with problems paying medical bills reported that their providers suggested that they take out loans to meet their health care obligations. Cunning

advice to providers largely proceed from the assumption of commercial exchange.38 For the most part, a report published by the American Medical Association strongly emphasizes this theme, reminding doctors, “It’s your money—ask for it!”39

Medical practice management writings instruct providers on such matters as: how to get payments up front (including before services are rendered);40 how to...
financially screen patients;\footnote{41} when to terminate or embargo patients for nonpayment;\footnote{42} how to physically arrange a medical office or hospital to encourage payment;\footnote{43} what color envelopes should be used for medical bill collection letters;\footnote{44} and even the optimal physical posture a staff member should


\footnote{44}{See, e.g., \textit{Ten Tips for Improving Collection Letters}, \textit{HEALTH CARE COLLECTOR} (Aspen Publishers, New York, N.Y.), Mar. 2009, at 12 (recommending medical providers “[t]est pastel-colored envelopes that will stand out against other mail” and “the use of PS to emphasize. . . strongest points” relating to collection).}
assume when attempting to collect from patients. Sources recommend making a “game” out of billing for employees to maximize receipts or motivating billing and collections employees with coffee cups, T-shirts, gift certificates, additional vacation days, or merit certificates.

If doctors adhere to the advice with some success, they may be able to avert the need for formal and more public ex post debt collection efforts. The practice management literature thus implicitly and explicitly encourages medical providers to shift the risk of patient default to third-party creditors: the common advice is, whenever possible, to “push the problem of nonpayment on to someone else.”

45. Collecting Assertively Is an Acquired Skill: Confidence and Empathy Are Key, HEALTH CARE COLLECTOR (Aspen Publishers, New York, N.Y.), Dec. 2007, at 7, 8 (recommending “good posture—no slouching” while collecting medical bills in person or on the phone).

46. Dolan, supra note 40.

47. THE COKER GROUP, supra note 17, at 38.

48. See, e.g., Robert B. Avery et al., An Overview of Consumer Data and Credit Reporting, 89 FED. RES. BULL. 47, 67, 69 (2003) (using earlier data, estimating that medical bills accounted for 18.2% of court judgments on credit reports and 52.2% of collection agency actions).

49. Karen Caffarini, Keeping Rubber Checks from Clogging Revenue Flow, AM. MED. NEWS, Jan. 26, 2009, at 13; see also SOLOMON, supra note 42 (to make patient prioritize medical bills, “[r]emind the patient that he or she can use a credit card”); THE COKER GROUP, supra note 17, at 41; Jeffrey C. Levitt, Transfer of Financial Risk and Alternative Financing Solutions, 30 J. HEALTH CARE FIN. 21, 26 (2004) (“Likewise, medical providers would rather have another party take the financial exposure from patients rather than keep it on their own balance sheets. They are in the business of providing health care, not consumer financing.”); Patridge & Barry, supra note 18, at 169-170 (“Whether in the form of credit cards, bank loans, or the more widely used electronic paper-free funding programs, it is critical that the hospital offer reasonable options to the patient without placing additional financial burdens on the hospital, such as carrying long-term payment plans.”); Dolan, supra note 40 (reporting on consultant advising that medical practices should accept “all credit cards”); Mari Edlin, A Fair Trade?: Make Payment Policies Fair and Legal, PHYSICIANS PRAC., Nov. 2001, available at http://www.physicianspractice.com/index/fuseaction/articles.details/articleID/270.htm (citing practice manager saying: “We're not a bank. Take out a loan or charge it.”); Gugliemo, supra note 42 (noting that experts suggest encouraging patients to put bill on credit card, rather than payment plan with provider, if patient is employed and not in particularly bad financial shape to “shift[ ] the credit burden . . . to the credit card company”); Pamela Moore, Billing and Collections: Playing Hardball: Advice on Charging Interest and Late Fees on Past-Due Patient Accounts, PHYSICIANS PRAC., Apr. 2008, available at http://www.physicianspractice.com/index/fuseaction/articles.details/articleID/1142.htm (encouraging providers to get patients to use credit cards for balances, or to encourage patients to borrow money from companies like CareCredit so “patient can work out his troubles with someone else”); Redfearn, supra note 43 (citing consultant recommending that providers “forge relationships
Credit cards facilitate the expectation in the health care marketplace that the patient will resolve the self-pay portion of a medical bill in a "retail business" fashion at the time of service.\textsuperscript{90} Health care is analogized to hotels and car rental businesses when authors recommend that medical providers take credit card imprints before seeing or treating the patient.\textsuperscript{51} Health industry consultants have extended such analogies by recommending "sales finance programs similar to those offered by appliance and auto dealers" for particularly large out-of-pocket medical expenditures.\textsuperscript{52}

Providers and hospitals commonly take credit cards notwithstanding the servicing fees they must pay,\textsuperscript{53} and a Federal Reserve Payment Card Center researcher has noted that doctors' offices more routinely include credit and debit card kiosks.\textsuperscript{4} Not surprisingly, providers that have minimized ongoing patient receivables report a higher rate of identifying credit cards as an acceptable
MANAGING MEDICAL BILLS

method of payment (92.2%).\(^{55}\) Although the total volume of credit card expenditures for medical bills remains murky, estimates are in the tens of billions and, at least before the implementation of the Credit Card Accountability, Responsibility, and Disclosure (CARD) Act of 2009, were expected to multiply.\(^{56}\)

Issues surrounding medical billing and payment are complicated further in the context of emergency hospital care. The Emergency Medical Treatment and Active Labor Act, enacted in 1986, requires that hospitals provide services to anyone in need of emergency care, regardless of ability to pay.\(^{57}\) With emergency room revenue (or any revenue) being important to a hospital’s bottom line,\(^{58}\) much management literature advises on how to effectively seek payment while complying with federal law. Experts emphasize prompt screening, and one notes, “[T]he best-performing hospitals ensure that a high percentage of [emergency department] patients are financially screened prior to discharge.”\(^{59}\) After a patient is stabilized, emergency department billing and collections practice thus resembles those practices already discussed. For instance, one consultant advises against an emergency department layout with multiple exits, which would enable patients to leave without discussing payment.\(^{60}\) This same source cites the benefits of incentive programs for collections staff and lists credit card equipment as among the “nuts and bolts” of the emergency room collections process.\(^{61}\)

Credit products designed and offered specifically for patient management of out-of-pocket medical costs present another avenue for shifting risk away from providers.\(^{62}\) Medical providers typically do not bear legal liability for being

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55. Dolan, supra note 40.
56. According to secondary reporting on a Visa USA study, credit cards were used for about a third (or $86 billion in 2005) of paid out-of-pocket health expenditures. Kjos, supra note 16. McKinsey consultants recently offered a $45 billion estimate in credit card self-pay health spending, but predicted a multiplication of this figure in the near future. LeCuyer & Singhal, supra note 51. Some of these estimates preceded the financial crisis.
57. 42 U.S.C. § 1395dd (2006). Emergency intake personnel are also prohibited from delaying treatment to inquire about a patient’s ability to pay or insurance status. See § 1395dd(h).
58. For evidence that emergency room services are perceived as relatively unprofitable, see Jill R. Horwitz, Making Profits and Providing Care: Comparing Nonprofit, For-Profit, and Government Hospitals, 24 HEALTH AFF. 790, 792, exhibit 1 (2005).
61. Id.
62. See, e.g., Milt Freudenheim, Creating Financing; Medicine on Installment Plan: Doctors
“arrangers” of credit. By contrast, providers who directly extend credit may be required to comply with and face potential liability under federal truth-in-lending laws and regulations, as well as state credit laws or deceptive practices.

63. Federal consumer credit laws no longer include arrangers of credit under the Truth in Lending Act (TILA). King v. Second City Constr. Co., 1997 U.S. Dist. LEXIS 15696, at *9 (N.D. Ill. Sept. 30, 1997) (“At one time, the definition of creditor under the TILA and its implementing regulations included ‘arrangers of credit.’ However, that portion of the definition was deleted from both the statute and the regulations in 1982.”). We could find no evidence that state loan arranger or broker statutes have been applied to medical providers. For an example of a state broker statute, see, for example, IND. CODE ANN. § 23-2-5-3(e) (Lexis Nexis 2009) (defining a loan broker as “any person who, in return for any consideration from any source procures, attempts to procure, or assists in procuring, a loan from a third party or any other person, whether or not the person seeking the loan actually obtains the loan”).

64. 12 C.F.R. § 226.2(a)(17) (2008) (portion of regulation Z defining creditor as “a person (A) who regularly extends consumer credit that is subject to a finance charge or is payable by written agreement in more than 4 installments (not including a down payment), and (B) to whom the obligation is initially payable, either on the face of the note or contract, or by agreement when there is no note or contract”). See also Bright v. Ball Memorial Hosp., 616 F.2d 328, 335 (7th Cir. 1980) (finding that a hospital can be “creditor” for purposes of TILA); James H. Backman, Consumer Credit and the Learned Professions of Law and Medicine, 176 B.Y.U. L. REV. 783 (1976); William D. Warren & Thomas R. Larmore, Truth in Lending: Problems of Coverage, 24 STAN. L. REV. 793, 819-20 (1972) (discussing refusal to exempt medical providers and other “professionals” from TILA, but noting some accommodations for installment payment practices); Edlin, supra note 49.

254
This divergence in legal consequences not only contributes to providers’ reluctance to charge interest when they do extend credit, but also increases the attractiveness of matching patients with specialty credit products.

Medical credit products are becoming integrated with health care finance more generally: some providers of insurance products or self-insuring companies (recommending disclosures to comply with TILA if providers use payment plans); Gugliemo, supra note 42; Hansen, supra note 41; Moore, supra note 49 (recommending late fees rather than interest to ease TILA compliance); Practice Pointers: When Patients Can’t Pay, MED. ECON., June 3, 2005 (discussing legal implications of falling within consumer credit definitions); Todd Stein, Patients, Pay Up! You’d Better Have a Financial Policy, PHYSICIANS PRAC., Mar. 2005, available at http://www.physicianspractice.com/index/fuseaction/articles.details/articleID/629.htm (warning providers that if they charge interest, they should have an attorney review their policy for compliance with lending laws: “Because the rules are complex, most practices choose not to charge interest on balances owed.”).


66. The AMA Code of Medical Ethics, which is non-binding on physicians, suggests that providers notify patients of the possibility of charging interest in advance of treatment. See AMA Code of Medical Ethics, Opinion 6.08 (Interest Charges and Finance Charges) (1994), available at http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/code-medical-ethics/opinion608.shtml. But charging interest does not seem to be the norm among medical providers. See Edlin, supra note 49 (reviewing negative aspects of doctors imposing finance charges); Moore, supra note 49 (citing consultant characterizing charging interest as “touchy area” and discouraging it); Stein, supra note 64 (“[M]ost practices choose not to charge interest on balances owed.”); Hansen, supra note 41 (citing a consultant reporting that “many” medical practices do not charge interest, but that “it is prevalent for expensive medical procedures” and another consultant saying that “it’s common for physicians to collect bills without charging interest,” and a practice group reporting that it charges 6% annual interest if the bill is unpaid for more than six months); Cheryl L. Toth, Payment Plans for Patients: Better Collections for You, PHYSICIANS PRAC., Jan./Feb. 2003, available at http://www.physicianspractice.com/index/fuseaction/articles.details/articleID/365.htm (discussing downsides of charging interest). For a recent controversial example, see Press Release, The Office of Attorney General Lori Swanson, Attorney General Lori Swanson Files Suit Against Allina Health System for Charging Usurious 18% Interest on Medical Debts (Jan. 22, 2009), http://www.ag.state.mn.us/Consumer/PressRelease/090122AllinaInterest.asp (alleging provider charged 18% interest on outstanding balances up to $4,999 and 12% on balances from $5,000 to $9,999 in violation of Minnesota law); MINN. STAT. § 334.01(1) (2008) (stating the legal standard interest rate of 6% annually and maximum rate of 8%).
join with banks to offer lines of credit for the self-pay portion of bills.\textsuperscript{67} Health savings accounts (HSAs), part of high-deductible health plans, may be directly linked with credit or debit cards.\textsuperscript{68} The justification for offering adjunct credit products is to allow consumers to bridge the gap between large deductibles and more meager HSA contents.\textsuperscript{69} Several companies have filed applications for business method patents for HSA payment systems with credit line components, suggesting significant investment in the combination of financing approaches.\textsuperscript{70}

\textsuperscript{67} See, e.g., Freudenheim, supra note 62, at A21 ("Big insurers, too, are devising new financing plans with various payback options."); John Carroll, Banks Give Insurers an Offer Most of Them Cannot Refuse, \textit{Managed Care}, July 2006, \url{http://www.managedcaremag.com/archives/0607/0607.banks.html} ("Companies with self-funded or self-insured health plans started offering employees a line of credit from a bank that is a subsidiary of UnitedHealth Group, "the OnePay Plan."); One Bill, OnePay: Pilot Program Simplifies Billing for Consumers and Physicians, \textit{Hub Mag.}, 2006, \url{http://www.hubmagazine.net/pdfs/014909_OnePay.pdf} (discussing a pilot program in which the interest rate was set at the prime rate, and consumers made payment through payroll deductions). \textit{See generally} E. Haavi Morreim, \textit{High-Deductible Health Plans: Litigation Hazards for Health Insurers}, 18 \textit{Health Matrix} 1, 30 (2008) (describing OnePay plan and potential problems); LeCuyer & Singhal, supra note 51 (recommending that insurance providers offer credit lines to policy holders); Sarah Rubenstein, In New Health Plan, Patients Pay Their Share—Or Else, \textit{Wall St. J.}, Mar. 13, 2006, at B1.


In summary, the current health care system features constant, regular financial transacting between providers and their patients regardless of patients' insurance status. The sizeable number of patients with difficulty handling self-pay obligations imposes additional financial risks on providers. The recommended approaches to managing these risks in light of legal and practical considerations encourage early payoff of health care providers and seek to avoid later direct legal enforcement to the extent possible.

The practices that providers adopt to shape their financial transacting affect the ways in which researchers can measure patients’ medical burden. We turn to this matter in the following subsection, focusing specifically on the measurement of burden for people who have filed for bankruptcy.

2. Measuring Medical Burdens of Bankruptcy Filers

Researchers have differed in their methods of identifying medical bills and medical problems among people who file for bankruptcy. Most bankruptcy studies use self-reported information in one form or another. Elizabeth Warren, Jay Westbrook, and Teresa Sullivan honed the approach of using written questionnaires and other survey methods in the personal bankruptcy context. With respect to medical problems, Warren, Himmelstein, Woolhandler, and Thorne wrote a paper that used data from the 2001 Consumer Bankruptcy Project (“2001 CBP”) studying filers in five states. A key data source was written questionnaires, on which respondents could indicate whether they had out-of-pocket medical expenses of at least $1,000 in the two years prior to bankruptcy, medical uses of second mortgages, and health insurance coverage. Respondents also could pick reasons for bankruptcy (including illness or injury) from a list of


72. Most general population studies that include bankruptcy-related questions use self-reported information. See, e.g., Cunningham, supra note 28; USA Today/Kaiser Family Foundation/Harvard School of Public Health, supra note 36; Aparna Mathur, Am. Enter. Inst., Medical Bills and Bankruptcy Filings (2006), http://www.ace.org/docLib/20060719_MedicalBillsAndBankruptcy.pdf.

The 2001 CBP undertook follow-up telephone surveys with a subset of the filers that reviewed out-of-pocket costs and medical diagnoses in greater detail. Himmelstein and his coauthors analyzed that dataset and concluded in their first paper that nearly half of bankruptcies met at least one criterion for characterization as a "major medical bankruptcy" and more than half met a slightly more expansive definition of "any medical bankruptcy.”

Published in the peer-reviewed journal *Health Affairs* as a web exclusive, the Himmelstein paper was released just as Congress was restarting deliberations on a major bill to restrict bankruptcy relief. Senator Grassley, a sponsor of that bill, requested that a division of the DOJ (the Executive Office for United States Trustees) determine the validity of the Himmelstein findings. Assistant Attorney General William Moschella submitted a short letter and summary reporting the frequency and amounts of medical debt detectable in court records in a sample of “no-asset” chapter 7 cases. Those figures are reprinted in Table 1 in Part III; as noted in the introduction, Attorney General Moschella’s letter and summary conveyed that the medical debt impact was modest. The letter closed


75. *Id.* at W5-69. Among the respondents who participated in telephone interviews and said they had medical reasons for bankruptcy, the average amount of out-of-pocket expense (excluding premiums) in the year leading to bankruptcy was over $3,500. Out-of-pocket expense since illness onset averaged approximately $12,000. *Id.*

76. *Id.* at W5-66. Other studies have used the same data for analysis, see, e.g., Jacoby & Warren, supra note 33 (reanalyzing 2001 CBP data to show different ways to measure medical-related bankruptcy), or adopted similar survey instruments for use on different populations. See Watson, supra note 26 (using some CBP questions to study Missouri debtors); Ezekial Johnson & James Wright, *Are Mormons Bankrupting Utah? Evidence from the Bankruptcy Courts*, 40 SUFFOLK U. L. REV. 607 (2007) (replicating methods, finding that 61% in study of filers in Utah reported that medical problems contributed to their bankruptcy filings).

77. 151 CONG. REC. S2053, S2078 (Mar. 4, 2005) (reprinting Letter from William E. Moschella, Assistant Att’y Gen., U.S. DOJ, to Charles E. Grassley, U.S. Sen. (Feb. 10, 2005)). The letter characterized the Himmelstein et al. definitions of medical bankruptcy as “very broad” and highlighted that the article’s broader definition of medical bankruptcy included drug addiction and uncontrolled gambling, *id.*, although those factors were nominal additions to the overall count.

78. For a description of the distinction between an “asset case” and a “no-asset case,” see Dalié Jiménez, *The Distribution of Assets in Consumer Chapter 7 Bankruptcy Cases*, 83 AM. BANKR. L.J. 795 (2009). An asset case is one in which there is property to distribute to unsecured creditors after secured creditors are paid any allowed secured claims and the debtor retains exempt property. *Id.* at 798. Accordingly, in a “no-asset case,” debtors have no unencumbered non-exempt assets for distribution to unsecured creditors. *Id.* at 797.

258
by stating, "[T]he conclusion that almost 50 percent of consumer bankruptcies are ‘medical related’ requires a broad definition and generally is not substantiated by the official documents filed by debtors." 79

Assistant Attorney General Moschella’s observation is based on the following method: whether coders could find holders of claims that had demonstrably medical names on “Schedule F,” a list of claims that bankruptcy filers must submit to the court. 80 On Schedule F, debtors list the amount of non-priority unsecured claims (claims owed to general creditors who lack collateral for these debts) owed at the time of filing and the identity of the holders of such claims at that time. The DOJ’s summary of findings correctly noted that using Schedule F would exclude bills owed on the date of bankruptcy to a creditor with a non-medical name, but neither the summary nor cover letter highlighted or explained the relevance of this limit for those who would be unfamiliar with the ramifications. 81

The court record method was not without precedent. Early studies of the bankruptcy system under the 1978 Bankruptcy Code used court records to start examining filers and the system. 82 Over time, researchers interested in the circumstances of bankrupt families began to identify pros and cons to using court records. 83 As studies of bankruptcy filers have evolved and use of consumer credit for various household purposes has grown substantially, so have the

79. See supra note 77 (emphasis added).
81. See supra note 77. After the Bankruptcy Abuse Prevention and Consumer Protection Act was enacted, the Director of the United States Trustee Program was circumspect about what could be gleaned from Schedule F about medical burden. He observed that the Program did not have “definitive data” on the amount of medical debt owed by bankruptcy filers and that, even with data-enabled forms that the Program hoped to develop, medical debt would be difficult to measure through those forms. Hearing on Working Families in Financial Crisis: Medical Debt and Bankruptcy, 110th Cong. 4-5 (2007) (statement of Clifford J. White III, Director, Executive Office for United States Trustees), available at http://judiciary.house.gov/hearings/July2007/white070717.pdf. White’s testimony cited 2003 data in which 46% of the filers in no-asset chapter 7 cases included medical debt on Schedule F, about 78% of them reported debt less than $5,000, and fewer than 1% of the cases represented more than one third of the total medical debt. See id. at 4.
83. See, e.g., Jacoby et al., supra note 71 (reviewing these concerns).
number of objections to measuring medical burden with court records. Nonetheless, certain U.S. senators characterized the DOJ response as a debunking of the Himmelstein study’s finding that medical problems contributed to about half of bankruptcies. Senator Grassley issued a press release strongly suggesting that assertions of high percentages of medical-related bankruptcies were “myth.” Senator Sessions also used the DOJ study to suggest that these percentages were a “fiction.”

84. See, e.g., 151 Cong. Rec. S6010 (May 26, 2005) (reprinting Letter from David Himmelstein, Assoc. Professor of Med., Harvard Med. Sch., et al. to Charles E. Grassley, U.S. Senator (Feb. 14, 2005)). This letter identified a list of debts that likely would be excluded from the analysis cited in the Moschella letter as well as the implications of including only no-asset chapter 7 cases.

85. Senator Grassley said:

Make no mistake, misrepresentations about this legislation have been running rampant by those who oppose any meaningful bankruptcy reform. I’ve been in politics a long time, and I know that political criticism is never inhibited by ignorance. For instance, the statistical analysis in the U.S. Trustee’s office examined over 5000 bankruptcy cases and found that under one-half listed medical debts of any sort. And those filers who did list medical debts, on average, listed under $5000 in medical debts. So much for the myth that most bankruptcies are driven [sic] medical costs. The fact is there are abusers out there. The fact is S. 256 doesn’t harm bankrupts with large medical debts. Let’s stop the abuse. Let’s return to common sense. Let’s enact bankruptcy reform now, before the abuse gets worse.


86. Senator Sessions said:

This is what the United States Trustee Program found in a much more extensive survey... They were asked to survey the filings in their districts to find out what you list on your filing as your debts, who you owe. You actually list who it is. So, if it is a doctor bill, it is on there. If you don’t put it on there you don’t wipe out that debt and you remain obligated to pay it, so everybody puts every debt they have on the list so it can be wiped out when they file bankruptcy. What they found was, this professional study of 5,000 cases, not interviewing debtors but looking at what they put on their form, they found that only slightly more than 5 percent of the total unsecured debt reported in those cases was medically related. Only 5 percent was medically related. This is not 50 percent of the cases in bankruptcy being caused by medical—only 5 percent of them, of the total debt, was medical... For some people there is no doubt that medical debts are a cause for bankruptcy. I do not doubt that. But this idea that...we ought to assume that there is no fraud and abuse in bankruptcy and the idea that everybody is in bankruptcy because of medical debts is just not so.

It is just not; it is a fiction. We need to get it out of our heads.


First, let me say to my friend, the Senator from Alabama, how much I appreciate his eloquence on this bill and his very successful attempt to explain to the American people,
Likewise, academic critics of the Himmelstein study highlighted the DOJ findings and lent credence to the court record method as a valid and useful measure of medical bill burden. Within a lengthier critique of the Himmelstein study, two health care finance experts included a full paragraph identifying the DOJ findings as a counterpoint. They used the DOJ findings to illustrate that medical debt is only a small proportion of bankruptcy filers’ financial obligations. In written testimony for a congressional hearing, a law professor described and cited the DOJ findings for the proposition that only a few cases have sufficiently high medical debt for it to be properly characterized as a cause of bankruptcy.

By 2009, interest in the scope of the medical bankruptcy problem intensified. Early in the year, then-President-Elect Obama’s economic agenda included making it easier for people in medical-related bankruptcies to receive a discharge of debt. In the summer of 2009, Himmelstein, Thorne, Warren, and Woolhandler released a new study estimating that 62% of bankruptcy filings could be counted as medical-related. That study’s release dovetailed with debates on health care finance reform. In late July 2009, the House Judiciary Committee called a hearing to discuss whether the health care system was bankrupting American families. Representative Conyers cited the 2009...
Himmelstein study as evidence that health care finance reform was urgently needed. But a witness at the hearing from the American Enterprise Institute returned to the DOJ findings, which she described as the "closest comparable survey," to cast doubt on Himmelstein's findings.

No one has systematically examined the DOJ's court record method and why exactly it differs from the Himmelstein study's findings. We undertake that examination here by imposing both methods on, and collecting both types of information from, a single population.

B. Data for the Current Study

We analyze information from the 2007 Consumer Bankruptcy Project ("2007 CBP"), a nationally representative study of approximately 2,500 personal bankruptcy cases. The response rate to the questionnaire portion was 50%. Respondents and non-respondents shared similar characteristics on variables such as income, debt, assets, monthly expenses, and prior bankruptcies. The dataset has a slight underrepresentation of chapter 13 cases, which we correct with weighting when necessary. The median age of a filer in the 2007 CBP is 43, older than the median in the general U.S. population. Median household income.


94. Id. at 6-7 (written testimony of Apama Mathur, Research Fellow, American Enterprise Institute), available at http://judiciary.house.gov/hearings/pdf/Mathur090728.pdf.


96. Id. at 392.

97. Id. at 396.

98. The average Schedule F medical debt is significantly higher for chapter 7 filers than chapter 13 filers, but there was no chapter-related difference in the likelihood of reporting medical debt on Schedule F. In addition, the median Schedule F medical debt for chapter 7 and chapter 13 filers is not significantly different ($1,698 for chapter 7 filers versus $1,384 for chapter 13). Filers in the two chapters also had a similar distribution of Schedule F debts (as well as questionnaire expense) across the range, with the differences skewing the averages likely coming largely from the group of filers with Schedule F medical debts $10,000 and above. Thus, for most of our analysis, we combine the two kinds of cases without weighting, but indicate where we have used weighting.

99. Deborah Thorne, Elizabeth Warren & Teresa A. Sullivan, The Increasing Vulnerability of Older Americans: Evidence from the Bankruptcy Court, 3 HARV. L. & POL'Y REV. 87, 92 (2009). The median age in the general population in 2007 was only 36.1. Id. at 93, fig.1.
MANAGING MEDICAL BILLS

of the sample is less than $28,000.\textsuperscript{100} Median net worth is substantially negative (nearly -$24,400).\textsuperscript{101} About half were homeowners when they filed for bankruptcy, and among them, median mortgage debt was just over $100,000.\textsuperscript{102}

Respondents completed written questionnaires that included demographic information and other information about their pre-bankruptcy circumstances.\textsuperscript{103} For all respondents, the 2007 CBP also extracted information on approximately 200 variables from court records, many of which are debtor-supplied under penalty of perjury. The 2007 CBP conducted follow-up telephone surveys with approximately 1,000 respondents within a year after they filed for bankruptcy.\textsuperscript{104}

The approach taken in this Article is unique in several respects. First, we approximate the DOJ method of identifying medical debts from Schedule F in the court records.\textsuperscript{105} This enables replication and closer scrutiny of the DOJ court record method. Second, we are able to isolate filers who specifically identified medical bills as a reason for bankruptcy as compared to lost income or the other ways medical problems can contribute to financial distress.\textsuperscript{106} In addition, we use

\begin{itemize}
  \item[100.] Lawless et al., supra note 95, at 359, 404. The mean was under $31,000. Id. at 404. In terms of income distribution, about 85\% of the 2007 CBP respondents had incomes below the U.S. national median household income in 2007 (undifferentiated by household size), and more than three in ten had incomes below the “poverty rate” for a family of four. For national median income figures, see Carmen DeNavas-Walt, Bernadette D. Proctor & Jessica Smith, Income, Poverty, and Health Insurance Coverage in the United States: 2007, 5, 7 (2008), available at http://www.census.gov/prod/2008pubs/p60-235.pdf. For the poverty guidelines, see U.S. Dept. of Health & Human Servs., The 2006 HHS Poverty Guidelines, http://aspe.hhs.gov/POVERTY/06poverty.shtml (last visited Apr. 10, 2010). The income distribution of bankruptcy filers in the 2007 CBP is shown in Lawless et al., supra note 95, at 360 fig.2.
  \item[101.] Lawless et al., supra note 95, at 371, 405.
  \item[102.] Id. at 365.
  \item[103.] Id. at 399-402 (reproducing questionnaire).
  \item[104.] Id. at 396. As was previously noted, the telephone survey subsample is not significantly different from the whole regarding variables such as “filing status, filing chapter, total assets, total debts, priority debts, monthly income, [and] home value.” Id. at 396 n.177.
  \item[105.] The specific codebook instruction was as follows:
  \begin{itemize}
    \item This number represents the sum of debts that appeared to be owed to medical providers.
    \item Debts were counted as medical debts if they were owed to hospitals, doctors, labs, nursing homes and other treatment facilities, pharmacies, medical collection agencies, and anything else that looked related to health, medical, wellness, or sickness.
  \end{itemize}
  \item[106.] Jacoby & Warren, supra note 33, at 563 (2006) (discussing the importance of income effects of illness or injury). Notably, for this Article, we are not seeking a comprehensive count of cases that could be construed as medical bankruptcies. In this respect, our study is distinct from the aim of Himmelstein et al., supra note 7. Still, the explicit “medical bill reason” for bankruptcy
\end{itemize}
a more detailed series of questions about out-of-pocket medical expenses that reveal respondents’ medical bill management techniques. Specifically, the questionnaire asked whether respondents were directly responsible for medical bills uncovered by insurance within the two years leading up to the bankruptcy filing. Respondents who said “yes” were asked additional follow-up questions:

How did you, or a spouse or partner, pay for the medical bills or prescriptions that were not covered by insurance? Did you: Check all that apply: Pay with a cash, check, or debit card; Pay with a regular credit card; Pay with a medical credit card (such as CitiHealth Card, CareCredit, or MediCredit); Pay with money from a home equity loan or line of credit; Agree to a payment plan with the medical provider; Something else (please specify).

The latter questions help us scrutinize the absence of a medical bill from the court records and offer a window into the management practices explored in Part II.A. For this Article, we report findings for all of the responses, and primarily discuss the options that most directly relate to discrepancies between the court record method and the survey method: cash, credit card, and home equity loans. Also, whereas prior surveys asked only whether respondents incurred more than $1,000 in out-of-pocket expenses, respondents in this study were asked to identify the amount that they paid out-of-pocket within specified ranges: less than $1,000; $1,000-$5,000; $5,001-$10,000; and more than $10,000. This greater specificity enables a better comparison to the court record method and facilitates a more in-depth analysis of medical burden. Overall, our innovation is to deploy both the survey method and the court record method on the same dataset, and to use new methods of analysis to undertake this comparison.

helps identify filers who are likely to have some non-trivial obligation. If court records are a useful source of information about medical burden, then we at least should be able to find evidence of substantial medical bills in the records of these respondents.

107. The exact language of question 18 was: “During the TWO years before the bankruptcy, were you, or a spouse or partner, FINANCIALLY responsible for ANY medical bills, INCLUDING prescription medication or co-payments, that were NOT covered by insurance” (emphasis in original). The question did not ask the respondent to indicate the specific source of the cost (doctor, hospital, prescription drugs, etc.).

108. A more in-depth evaluation of payment plans and “something else” (other forms of payment for medical bill payment not discussed in this Article) will be reported in a separate paper.
MANAGING MEDICAL BILLS

III. ANALYSIS AND FINDINGS

We start by reporting Schedule F medical debt. The left column of Table 1 replicates the information the DOJ reported to Congress. The middle column represents our 2007 CBP data limited to no-asset chapter 7 cases (liquidation cases) to most closely match the DOJ sample. The right column represents the 2007 CBP full core sample that also includes chapter 13 (repayment plan) cases.

TABLE 1: DOJ AND 2007 CBP SAMPLE COMPARISONS

<table>
<thead>
<tr>
<th>DOJ Sample (No-Asset 7s Closed Between 2000 and 2002, Excluding N.C. &amp; Ala.)</th>
<th>2007 CBP Sample (No-Asset 7s Only)</th>
<th>2007 CBP Sample (7s and 13s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Cases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=5,203</td>
<td>N=1,719</td>
<td>N=2,438</td>
</tr>
<tr>
<td>54% listed no medical debt.</td>
<td>48.4% listed no medical debt (50.6% if including cases with missing data).</td>
<td>49.8% listed no medical debt (50% if including cases with missing data).</td>
</tr>
<tr>
<td>Medical debt accounted for 5.5% of the total general unsecured debt.</td>
<td>Medical debt accounted for 6.2% of the total general unsecured debt ($5,851,877 of $93,095,955).</td>
<td>Medical debt accounted for 5.6% of the total general unsecured debt ($7,727,494 of $136,353,023).</td>
</tr>
<tr>
<td>90.1% reported medical debts less than $5,000.</td>
<td>86.2% reported medical debts less than $5,000 (88.6% if inflation-adjusted to $5,734).</td>
<td>88% reported medical debts less than $5,000 (92.3% if inflation-adjusted to $5,734).</td>
</tr>
<tr>
<td>1% of cases accounted for 36.5% of all medical debt.</td>
<td>1% of cases accounted for 37.3% of all medical debt.</td>
<td>1% of cases accounted for 35.4% of all medical debt.</td>
</tr>
<tr>
<td>Less than 10% of all cases represented 80% of all medical debt.</td>
<td>10% of all cases represented 80.3% of all medical debt.</td>
<td>10% of all cases represented 79.8% of all medical debt.</td>
</tr>
</tbody>
</table>

265
Among the cases with medical debt, the average medical debt was $4,978 per case ($5,709 in 2007 dollars). Among the cases with medical debt, the average medical debt was $7,483 per case. Among the cases with medical debt, the average medical debt was $6,313 per case (weighted by case type).

78.4% reported medical debt below $5,000 (average of $1,212 for this group). 73.4% reported medical debt below $5,000; 76.3% with inflation adjustment (average of $1,405 for this group). 76.1% reported medical debt below $5,000; 78.8% with inflation adjustment (average of $1,394 for this group).

21.6% of cases accounted for 80.9% of all medical debt. 21.6% of cases accounted for 82.4% of all medical debt. 21.6% of cases accounted for 81.3% of all medical debt.

Medical debt accounted for 13.0% of the total general unsecured debt. Medical debt accounted for 12.3% of the total general unsecured debt. Medical debt accounted for 12.2% of the total general unsecured debt.

Table 1 shows that the application of the court record method to the 2007 CBP dataset produces results that are very close to the DOJ results. With respect to the differences, Table 1 indicates that our court records include a slightly greater proportion of cases with Schedule F medical debt than the DOJ sample. Also, our sample’s average medical debt, as indicated by the court records, is higher than the DOJ sample’s, even after adjusting the numbers for inflation using the Consumer Price Index. These increases are consistent with rising medical costs (at a rate that is outpacing inflation) and self-pay obligations during the 2000s. Furthermore, because the DOJ reported neither median debt nor a distribution of the larger debts, it is possible that a small number of large debts explain the differences in averages. In Figure 1, we report the distribution of the 8% of our sample with more than $10,000 in Schedule F medical debt,
Now that we have verified the similarities between the DOJ and 2007 CBP court records, we assess how well the court record method reflects pre-bankruptcy out-of-pocket expenses. To be included in a court record count of medical bills, a bill must have several qualities. It must be outstanding on the date of the bankruptcy filing. The filer must know about the bill to report it. Finally, the holder of the claim must be identifiable as medical to a third-party coder. Figure 2 displays medical expense of the 2007 CBP sample as indicated on the questionnaire (the survey method) and on Schedule F (the court record method). Importantly, the questionnaire asked only about expenses within two years prior to filing, whereas court records include claims incurred at any time before filing. This comparison thus suppresses even greater potential differences between the measures.

113. Of the filers with Schedule F medical debts over $100,000, four were just over this amount. Two had over $500,000. Three of these six filers were under twenty-five years old.
As Figure 2 shows, respondents had consistently lower levels of Schedule F medical debt than out-of-pocket medical expenses incurred within two years prior to filing. The darker columns in Figure 2, which represent the questionnaire responses, show that nearly eight of ten respondents reported some out-of-pocket expenses within two years before filing, whereas medical debt could be found in the court records of only about five of ten respondents.

We examined the level of congruence between the court record and questionnaire measures in various ways. We established the Cronbach's alpha between the two variables, which is 0.609. This level of congruence between the two measures is low enough to merit concern about the validity of using one

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114. As illustrated by Figure 1, the distributions of the two measures are different. Written questionnaire expense forms a unimodal distribution, with a peak at $1,001 to $5,000. Schedule F medical debt manifests a different pattern, with about half the respondents having zero Schedule F medical debt, and greater than eight out of ten reporting $5,000 or less.

115. Cronbach’s alpha is a measurement of how well two or more variables “hang together,” or whether they measure a single latent construct. It is a measure of the reliability or consistency between the items at hand and is computed through the equation: \( \alpha = \frac{N \bar{\sigma} - \bar{V}}{N - 1} \), where \( N \) is the number of items, \( \bar{\sigma} \) is the interitem covariance, and \( \bar{V} \) is the average variance of the items. At the most basic level, Cronbach’s alpha allows a researcher to evaluate how well one variable can replace another variable.
of these measures as a stand-in for the other.\textsuperscript{116}

Next, we engaged in a filer-by-filer comparison of the two measures, which can be explained as follows. First, we compared the dollar value of the court record and survey measures for each filer. Doing this, we identified about a third of respondents in our sample (32\%) who reported expenses on the questionnaire based on the survey method, but who had no medical debt in their court records. Documenting precise declines in dollar amounts when neither number is zero is more difficult because the questionnaire asked for an estimate of expense by category rather than an exact dollar amount. But we conservatively estimate that an additional 56\% of the sample had less Schedule F medical debt than questionnaire-reported expenses.\textsuperscript{117}

Our second filer-by-filer approach was to subtract a categorized measure of Schedule F medical debt from the questionnaire medical expenses category for each respondent.\textsuperscript{118} For each case, this produced a nine-point scale ranging from...

\textsuperscript{116} Generally, for comparing groups, a Cronbach's alpha of 0.70 to 0.80 or higher allows one to substitute one variable for another or to create a composite variable using the two measures. See J. Martin Bland & Douglas G. Altman, \textit{Statistics Notes: Cronbach's Alpha}, 314 \textit{BRIT. MED. J.} 572, 572 (1997).

\textsuperscript{117} To calculate the differences between questionnaire-reported medical expense and Schedule F medical debt for this particular finding, we subtracted each individual's reported expense from Schedule F medical debt, allowing us to compare the two reporting processes in a "pair-wise" manner. We needed to estimate a dollar amount for expense because the questionnaire asked only for categories of expenses. To estimate, we took the middle point of each expense category and used that to calculate the difference. For example, for the category $1,000 to $5,000, each respondent who reported expenses in that range was assigned a dollar debt amount of $3,000.50. For those who reported "more than $10,000" in expense, we assigned a dollar amount of $15,000 for purposes of this analysis. We believe that this is a particularly conservative estimate, given that on Schedule F, only half of the medical debts over $10,000 were also under $20,000. See \textit{supra} p. 267, fig.1. To prevent these respondents from skewing the average difference between the two measures, we coded anyone who reported "more than $10,000" in expenses on the questionnaire \textit{and} reported more than $10,000 in debt on Schedule F as having zero difference between the the two measures. Again, this allows our measure to be conservative.

\textsuperscript{118} The initial categories of expense, consistent with the ranges on the questionnaire, are coded as follows: "zero" means no expense, "1" means under $1,000; "2" represents expense between $1,000 and $5,000; "3" means expense between $5,001 and $10,000; and "4" represents more than $10,000. Subtracting the category of Schedule F debt from the category of questionnaire expense indicated by each respondent yields a number between "-4" and "+4." These numbers thus take on a meaning different from the original codes. For example, "zero" indicates the same category of expense on both measures, whether that category is no medical bills or over $10,000 in medical bills. When we use numbers in the appendices and going forward, we are referring to the result of this subtraction.
to “+4”. A “-4” signifies that an individual had more than $10,000 in Schedule F medical debt and no questionnaire-reported expenses. A “+4” signifies that an individual had more than $10,000 in expenses on the questionnaire but no Schedule F medical debt. Appendix A shows the distribution of cases along this scale.

Most respondents fell within the same category of expenses under both measures or had more survey expenses than court record medical debt.119 About one-fifth of the sample clearly had out-of-pocket expenses that were at least $1,000 more than their Schedule F medical debt, and often the difference was more than $5,000 or more than $10,000.120 Cases fitting this description reveal most clearly the difficulties of relying on only court records; they also present the most interesting questions of how these households managed to reduce medical obligations in the midst of financial problems.

Although the additional analysis using this scale focuses on this fifth of respondents, we must emphasize that this is not a comprehensive count of people with serious medical burden. Some respondents with very significant medical burden.

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119. In the group of cases on the negative side of the scale, Schedule F medical debt exceeded the questionnaire reports of expense. We strongly suspect that these cases can be explained by the timing: the questionnaire asked for out-of-pocket expense only within the two years prior to filing. By contrast, Schedule F captures debts older than two years. Some particularly big debts are likely to be older. Notably, the presence of some cases with Schedule F debt older than two years and no recent out-of-pocket expense slightly dampens the discrepancy between these two measures of medical burden. A small number of such cases may not only raise the Schedule F medical debt averages, but also could make the highest dollar category of medical bills (see supra p. 268, fig.2) seem more consistent across measures than it really is. Although we believe this to be the dominant explanation, particularly for the cases in the “-4” and “-3” categories, we offer several others as well. While completing the exact dollar amounts on Schedule F, respondents may have been more likely to have been consulting direct documentation and to be completing the paperwork with a lawyer. A debtor who estimated even a few dollars less on the questionnaire could create a discrepancy when this measure was compared with Schedule F medical debt. Most discrepancies on the negative side of the scale are within a one or two point difference, and thus potentially are of smaller amounts. Also, some medical providers impose interest and/or finance charges. A respondent may have recalled and reported only principal on the questionnaire, while Schedule F lists the legally collectible debt that includes these additional amounts. Finally, although the coding error rate in this study was very low, error remains a possible explanation. For the rate, see Lawless et al., supra note 95, app.

120. We refer here to categories “+2,” “+3,” and “+4,” which represent having out-of-pocket expenses of at least $1,000 more, $5,001 more, or $10,001 more, respectively, than Schedule F medical debt. The 20% figure is premised on missing variables being included in the total count. See infra app. A.
bills do not have verifiable discrepancies between the court record and survey measures. The most populous group of filers, whose expenses fall within the same category on both measures (as indicated by a "zero"), is very diverse regarding the amounts of medical debt these respondents faced both before and during bankruptcy. For example, 11% of all respondents who are a "zero" had over $10,000 of expenses in both the questionnaire and Schedule F. Such a respondent may have owed $50,000 in medical bills beforehand and could either continue to owe those bills to a provider or have reduced them to some amount above $10,000 identifiable as medical bills on Schedule F. An additional 4% had between $5,000 and $10,000 of medical expenses on both measures. The average Schedule F medical debt for this "zero" group is just under $5,000, suggesting that individuals could, in fact, have paid thousands of dollars towards their medical debt while still occupying the same category of expenses on the two measures. Cases that are a single category greater as recorded by the survey method compared to the court record method (a "+1" in Appendix A) also mask a wide range of dollar differences and significant medical obligations for the same reasons.

With respect to the fifth of the sample with the biggest verifiable discrepancies between the measures, a variety of possibilities could explain why the same debtor reported a large amount of medical expenses in the questionnaire but had little (or no) identifiable Schedule F medical debt. There is the standard problem that some medical providers or their debt collectors do not have medical-sounding identities that court record coders can discern. Also, having more questionnaire-reported medical expenses than Schedule F medical debt could reflect that individuals on the brink of bankruptcy paid off some or all of their medical bills. Such payoff would not necessarily signify a lack of

121. Forty percent of those who have the same category of medical expense on the questionnaire and medical debt on Schedule F had no out-of-pocket medical expenses or medical debt.

122. Those respondents that fall in the "+1" category have, on average, just under $1,000 in Schedule F medical debt and are most likely to report less than $1,000 in out-of-pocket expenses in the two years prior to filing. However, like the "zeros," these individuals could easily have large differences in the amount of expense and Schedule F medical debt. For example, some respondents indicated more than $10,000 in expense and reported between $9,000 and $10,000 in medical debt on Schedule F. It is possible that they had $10,001 in expenses and only paid off $100 of that debt, putting them in one category lower, but it also is possible that respondents had $25,000 in expenses and paid $15,100 off those expenses off prior to bankruptcy.

123. See infra note 152.

124. See generally Christopher Tarver Robertson, Michael Hoke & Richard Egelhof, Get Sick, Get Out: The Medical Causes of Home Mortgage Foreclosures, 18 HEALTH MATRIX 65, 90-92
financial burden from the bills; money is fungible and financially distressed families constantly make difficult choices about how to juggle expenses. Those filers most concerned with maintaining relationships with doctors could have fought very hard to pay these expenses while defaulting on other major obligations or satisfying those obligations using credit cards.\textsuperscript{125} We can test the payoff hypothesis by looking at how the filers report managing their medical expenses, paying careful attention to the reported use of cash or cash equivalents.

In addition, some existing medical bills might simply be missing from Schedule F. This could be due to inadvertence,\textsuperscript{126} a mistaken belief that insurance would fully cover a pre-bankruptcy procedure,\textsuperscript{127} or a more intentional effort to hide the bankruptcy from a provider (who, if not listed, may not hear about the case) to avoid a feared disruption in health care.\textsuperscript{128} The possibility that these circumstances explain the complete disappearance of a medical bill can be explored in part by looking at cases in which complete payoff would be most unlikely due to the size of the bills.

As the literature review suggested, reporting more expenses on the questionnaire than medical debt on Schedule F also could be due to the use of a credit card, home equity loan, or less formal borrowing to finance part or all of medical bills. In such an instance, out-of-pocket medical expenses, even if not paid fully by the time of filing bankruptcy, would not appear as Schedule F medical debt. Or, Schedule F medical debt would be lower in amount while debt to other creditors would likely be higher.

Discrepancies also could reflect that people overly attribute their financial problems on questionnaires to medical issues, which seem like a socially acceptable basis for overindebtedness.\textsuperscript{129} Due to the methods employed here, this is less likely to explain the discrepancy in this study. The discrepancy reflected in

\textsuperscript{125} It also is possible that providers gave respondents significant discounts for prompt payment that remain invisible to us, although those payments could have come from another credit source.

\textsuperscript{126} See, \textit{e.g.}, \textit{In re Hocum}, 119 B.R. 723 (Bankr. D.S.D. 1990) (granting debtor’s post-discharge request to amend Schedule F to include accidentally omitted $262.94 hospital bill that had been assigned to debt collector).

\textsuperscript{127} For example, in one case, the debtor originally failed to list a medical debt on Schedule F because he thought Medicare would fully cover his cataract operation. He amended Schedule F once he realized his error. \textit{See In re Nosier}, 2007 WL 4322315 (Bankr. M.D. Fla. Aug. 2, 2007).

\textsuperscript{128} \textit{See Jacoby et al., supra note 71, at 383.}

\textsuperscript{129} \textit{See id.} at 384-85 for discussions of overmedicalization generally.
Figure 2 and the text is based on a purely factual question about out-of-pocket obligation not covered by insurance. The 2007 CBP questionnaire did not ask people about "medical debt," which could be susceptible to inconsistent interpretations. Thus, the survey method variable for out-of-pocket expenses is straightforward. In addition, when respondents were asked to indicate their reasons for filing for bankruptcy—the place where overmedicalization would be most suspected—they did not merely check every available reason for filing that might be sympathetic. Indeed, only three out of ten respondents explicitly indicated medical bills as a reason for bankruptcy, even though far more reported substantial out-of-pocket medical expenses and had other indicators of distress.130 In other words, it is possible that respondents have assigned too little responsibility to their medical problems for their financial downfall.131 Even the greatest skeptics of the studies by Himmelstein et al. would be unlikely to suggest that the three out of ten people who reported medical bills as a reason for bankruptcy lacked any medical liability.

To begin our assessment of the possible explanations for discrepancies between the court record and survey methods, we look at the raw percentages on the use of cash, credit cards, and home equity loans for people with any medical expenses not covered by insurance.132 These absolute percentages of credit usage presumably are dampened by the proximity to bankruptcy when some filers already have consumed their available credit.133 But the overall frequency is less

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130. Respondents in our sample selected an average of 4.33 reasons for filing out of a total of 19. Respondents who included the medical bill reason had a slightly higher average (5.75), but this can be explained by the fact that there was a strong association between reporting medical bills as a reason and the other medical reasons on the list of responses. For more information about the indication of medical reasons for filing, see infra p. 281, fig.6.


132. The percentages in Figure 3 vary slightly from those in Appendix B because the questionnaire variables had fewer missing data points. Appendix B looks at these variables in combination with the court record variables, which reduced the number of observations. Also, Appendix B shows the difference in home equity loan use if one includes all who reported expense regardless of housing tenure.

133. We do not know the credit limits of our respondents. Because credit limits are not regularly reported in the general population, studies have used various techniques to estimate them. See Robert B. Avery et al., An Overview of Consumer Data and Credit Reporting, Fed. Res. Bull. 58 (Feb. 2003), available at http://www.federalreserve.gov/pubs/bulletin/2003/0203lead.pdf. The most common approach is to use the highest balance ever reported as the credit limit. Using this technique, Avery et al. found in their 2003 paper that about 25% of revolving accounts in the general population had a credit limit below $1,000; 41% had a credit limit between $1,000 and $4,999; and only a very small percentage had a credit limit of $25,000 or more. Id.
important than the circumstances under which respondents used credit. Figure 3 shows medical bill payment methods broken down by those respondents who reported that medical bills were a reason that they filed for bankruptcy and those who did not. This breakdown demonstrates that respondents who indicated medical bills as a reason for filing use regular credit cards and home equity loans at a much higher level. In this Figure, the vertical axis shows the percentage of respondents with medical expenses. The horizontal axis is a breakdown of the use of different methods of paying medical bills.

**FIGURE 3: METHODS OF MANAGING MEDICAL BILLS**

![Figure 3: Methods of Managing Medical Bills](image)

Figure 3 illustrates that those who reported medical bills as a reason for bankruptcy said they used home equity for medical bills nearly four times as frequently as the other respondents, and had a higher rate, by more than a third, of using credit cards to pay medical bills. The markedly higher use of home

Looking at the overall profile of revolving accounts, the average credit limit was about $4,500. *Id.*

134. Here, as before, we examine only those respondents who indicated having any out-of-pocket medical expense in the two years prior to filing for bankruptcy.

135. Differences between those with a medical bill reason for filing and those without a medical bill reason for filing are statistically significant (p-value ≤ .05) for use of both credit cards.
equity loans and credit cards to pay medical bills among those who reported medical bills as a reason for filing is of particular importance to our analysis. If an individual pays for medical care with a credit card or home equity loan, then these expenses will not be identified as medical bills in court records. The data presented in Figure 3 thus support a more nuanced and multi-instrument approach to evaluating the effect of medical debt on bankruptcy filings.

We also examined the congruence between medical obligations captured by the court record and survey methods depending on whether respondents listed a medical bill reason for bankruptcy. Respondents who identified this reason for filing for bankruptcy had, on average, twice the difference between survey medical expenses and Schedule F medical debt as those who did not identify medical bills as a reason for filing. And, as noted in the introduction, over one quarter (27%) of those who identified a medical bill reason for bankruptcy had zero Schedule F medical debt, rendering them invisible in the court record method.

To explore further the possible explanations for reduced or invisible medical debt using the court record method, we look at the medical bill management of respondents based on the levels of discrepancy between the two methods of measurement. Appendix B reports all of our results as well as whether the differences are statistically significant using a traditional ANOVA test. Figure 4 shows three important methods of responding to medical bills. It reports these in groups that had increasing amounts of difference between the court record and survey methods. If paying off medical bills in full were the explanation for the decline or disappearance of medical bills by the time of bankruptcy, we would expect to see high rates of reporting use of cash and cash equivalents by...
respondents with the biggest gaps. Figure 4 and Appendix B show a pattern of slightly decreasing use of cash, with the lowest frequency of cash usage reported by those who reported over $10,000 of medical expenses on the questionnaire but had no Schedule F medical debt. The pattern in Figure 4 suggests that having lower Schedule F medical debt is not due to individuals paying off medical bills completely with cash, debit cards, or checks before filing for bankruptcy.

**Figure 4: Use of Cash, Credit Cards, and Home Equity Loans for Medical Bills, by Gap in Measures**

By contrast, Figure 4 illustrates a positive relationship between the reported use of a regular credit card to pay medical bills and the difference between the reported expenses on the questionnaire and Schedule F medical debt. This is statistically significant at the 0.002 level. Using the ANOVA method of testing the differences in the groups does not allow us to identify which differences are statistically significant, but does allow us to demonstrate that the overall patterns of use vary enough to be statistically significant.

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139. The difference in use of cash, debit cards, and checks is statistically significant to the 0.002 level. Using the ANOVA method of testing the differences in the groups does not allow us to identify which differences are statistically significant, but does allow us to demonstrate that the overall patterns of use vary enough to be statistically significant.

140. The differences in use of a regular credit card for medical bills are statistically significant.
consistent with the concern that debts transferred to credit cards become minimized or invisible in court record studies.\textsuperscript{141}

Filers with significantly greater out-of-pocket expenses than Schedule F medical debt also indicated use of home equity loans with much greater frequency.\textsuperscript{142} This is especially true for those with at least $10,001 more in expenses than Schedule F medical debt; over a quarter of this group used home equity loans to pay medical debts. This is in sharp contrast to the overall rate of 5.8\% who used a home equity loan to pay off medical debt among all homeowners in the 2007 CBP.

Appendix C displays the comparative medical bill management for the group of respondents with more than $10,000 in expenses reported on the questionnaire and zero Schedule F medical debt. Members of this small group would have had to expend significant effort to pay off $10,000—or much more—completely in cash before bankruptcy. Also, this biggest of possible differences between the measures would be less likely to be due to forgetfulness about medical bills, partial payoff of medical bills, seeking to hide their bankruptcy cases from providers, or other such explanations. Respondents in this group reported using home equity loans for medical bills at over four times the frequency of everyone else; they also reported using credit cards twice as often as everyone else.

to the <0.001 level. Like anyone reporting medical expense on the questionnaire, the group that reported over $10,000 of debt on Schedule F and zero expense on the questionnaire would have skipped the question about managing out-of-pocket expense and thus had the “lowest” use of all methods of payment.

141. As another measure, when we isolated and compared the Schedule F medical debt of those who indicated using credit cards for medical bills from those who did not so indicate, the credit card users reported lower average and median medical debts. However, credit card users had nearly twice the amount of credit card debt. Credit card users had $5,264 average Schedule F medical debt versus $6,841 for non-credit card users. We also compared medians: those who used credit cards to pay medical bills had a median Schedule F medical debt of $1,473, compared to $1,791 for those who did not use a credit card. The difference is significant to the 0.05 level. Those who reported using a regular credit card to pay for medical expenses filed, on average, $31,853 in credit card debt on Schedule F, compared to $15,792 in credit card debt for those who did not use a regular credit card to pay medical expenses.

142. Figure 4 portrays the percentages of those who owned a home and used a home equity loan for medical expenses; if we look at all filers, (i.e. not just those who owned a home in the last five years) we see a similar pattern, but smaller numbers. For example, 19\% of those in the highest group report using a home equity loan, compared to 3\% of those reporting the same amount on both measures. The differences exhibited using either methods of measurement are statistically significant to the 0.0001 level. All data on the individual breakdown of use of home equity loans are available in Appendix B.
Generally, filers with the greatest amounts of out-of-pocket expenses but zero Schedule F medical debt had a much higher rate of reporting that they shifted obligations to alternate creditors that are undetectable as medical on court records. To further corroborate these findings, we looked at the amount reported on Schedule F of claims owed to credit card lenders (as opposed to claim holders with medical identities). Figure 5 reports the results.

As Figure 5 shows (and is reported more fully in Appendix D) the amount of Schedule F credit card debt grows as the gap increases between the survey and court record methods of identifying medical obligation. The filers represented

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143. It can be difficult to identify credit card debt because of the variety of ways debt can be listed on Schedule F. Although we would get the same results either way as the next footnote explains, we used a very conservative, lower bound definition of credit card debt by using only debt in which the listing contained the words "credit card," "card," "revolving credit," "charge account," or closely similar terms. Also, any listing that contained brand name words for a credit card, such as "Visa," "MasterCard," or "Discover," was counted as definitely credit card debt.

144. This result is obtained with the "definitely credit card" variable, but the same pattern
in Figure 5—the fifth of the sample with verifiably higher out-of-pocket expenses than Schedule F medical debt—had much greater average credit card debts than the $19,006 average credit card debt of all filers in the sample, and also had higher median credit card debts than the median of the overall sample. Again, this suggests that those with less Schedule F medical debt are not necessarily paying off medical debt with ease, but rather are shifting medical bills to alternate forms of credit.\textsuperscript{145} These findings also support the story that bankruptcy filers in our sample made their medical providers a higher priority than other types of creditors. As money is fungible, these individuals went into bankruptcy with lower medical debt but higher levels of credit card debt.\textsuperscript{146} In addition to the court record information on credit card usage, we find a parallel trend regarding home mortgages. As the gap grows between the questionnaire medical expenses and Schedule F medical debt, so do the amounts of secured claims against filers’ residences.\textsuperscript{147} This generally corroborates filers’ reporting of home equity use for medical bills.

We explored other indicators that might shed light on why medical expenses are not appearing on Schedule F. The 2007 CBP questionnaire asked respondents to indicate whether they engaged in a variety of methods to “make ends meet” during the previous two years.\textsuperscript{148} We were interested in whether respondents with

\textsuperscript{145} The pattern is the same for both chapter 7 and chapter 13 cases, but the amounts in chapter 7 cases are higher for cases fitting the two left-most columns on Figure 5.

\textsuperscript{146} These results are consistent with an earlier analysis of no-asset chapter 7 cases by researchers at the Executive Office for United States Trustees (in DOJ), in which Schedule F credit card debt levels were particularly high among filers with no observable medical debt on Schedule F. See Ed Flynn & Gordon Bermant, Credit Card Debt in Chapter 7 Cases, Am. Bankr. Inst. J., Dec. 2003/Jan. 2004, at 20 (credit card debt of those with no Schedule F medical debt was higher than those with Schedule F medical debt and “was more than twice as high as for debtors who listed at least $5,000 in medical debt”); see also MICHÈLE M. DOTY ET AL., SEEING RED: THE GROWING BURDEN OF MEDICAL BILLS AND DEBT FACED BY U.S. FAMILIES (Commonwealth Fund Issue Brief, 2008), available at http://www.commonwealthfund.org/Content/Publications/Issue-Briefs/2008/Aug/Seeing-Red--The-Growing-Burden-of-Medical-Bills-and-Debt-Faced-by-U-S--Families.aspx.

\textsuperscript{147} Home owners with the highest level of difference between medical expenses and Schedule F medical debt (i.e. at least $10,001 more in medical expenses than Schedule F medical debt) also have the highest level of secured claims against their residences, a dollar figure which declines as the difference between medical expenses and Schedule F medical debt decreases.

\textsuperscript{148} The questionnaire asked: “During the TWO years before the bankruptcy, did EITHER you or a spouse or partner DO, or TRY TO DO, any of the following things in order to make ends
increasingly greater questionnaire-reported expenses than Schedule F medical debt were more likely to report “Consolidated debts with a credit card or new loan” or “Put necessities on the credit card (for example, food or monthly bills)” as coping options. As Appendix E shows, those with higher expenses than Schedule F medical debt were more likely to say that they put necessities on the credit card.149

Finally, we turn back to filers’ stated reasons for bankruptcy, which in Figure 6 are broken down based on the size of the difference between the court record and survey measures of expenses. This helps determine the consequences of relying exclusively on the court record method to measure medical-related financial burden. As Figure 6 shows and Appendix F reports more fully, as the gap between the court record and survey measures grows, so does the percentage of respondents who indicated medical bills as a reason for filing for bankruptcy (the left-most column in each grouping). These findings suggest that the court record method particularly under-represents medical bill problems for filers who reported medical reasons for filing for bankruptcy.

meet? (Check all that apply.)” Possible responses were: “Worked more hours or got another job; Cashed out or borrowed from a retirement, a 401k, a pension account or life insurance; Refinanced your home, took out a home equity loan or line of credit, or took out a debt consolidation loan that was secured by your home; Sold your house; Asked creditors, such as landlords or credit card companies, to work with you on the payments; Sold or pawned a car, furniture, or other personal property; Consolidated debts with a credit card or new loan; Used a payday loan business (for example, Check to Cash) or car title lender to borrow money or take a cash advance; Put necessities on the credit card (for example, food or monthly bills); Accepted or borrowed money from family or friends; Accepted or borrowed money from a religious group or charity; or Something else.”

149. They were not more likely to say that they consolidated debt on a credit card or new loan, but it is not obvious that respondents would conceptualize moving medical bills to credit cards as a consolidation.

280
Figure 6 presents the distribution of individuals who said that medical bills, medical problems of self or spouse, or medical problems of other family members were a reason for filing. Again, this distribution is categorized by the difference between the medical expenses reported on the questionnaire and the amount of medical debt reported on Schedule F. Note that two-thirds of respondents with more than $10,000 in medical expenses on the questionnaire and zero medical debt on Schedule F reported that medical bills were a reason for filing for bankruptcy. Thus, Figure 6, like Figure 3, shows that those most affected by medical debt are less likely to show up in a court records study. Had we conducted our study relying entirely on court records as the DOJ did in 2005, our medical debt count would not have included a single member of this group.

150. While the number of cases that fall into the category of $10,000 or more expenses reported on the survey and zero Schedule F medical debt is small (19 cases in our sample), this group represents a very conservative method of analyzing medical debt in bankruptcy.
For the other respondents represented on Figure 6, a study relying exclusively on the court record method would have significantly understated their medical burden.

The analysis for this project has limits. First, as noted earlier, any attempt to code medical debts from court records risks the omission of providers or related parties with no obvious health care designation in its name; our study is no exception. This limit is consistent with our conclusion that multi-instrument studies are preferable to exclusive reliance on court records for some kinds of research questions. Second, the questionnaire did not ask respondents to identify the precise type of health care that they received, precluding a correlation of type of care and medical bill management for the full sample. Third, the nature of the data collection ultimately required that we compare a continuous variable (Schedule F medical debt) with a categorical one (pre-bankruptcy out-of-pocket expenses) based on dollar ranges. The categories are the most precise measures available for out-of-pocket estimates for the full dataset. Fourth, the variables are drawn considerably from self-reported questionnaire data and thus face the same challenges as other interview and questionnaire studies. But to emphasize, this limit applies to the court records as well. This is not a situation in which a debtor

151. The same pattern holds for illness of self or partner as a reason for filing. Familial medical problems were noted as a cause of bankruptcy by a smaller group of filers, but show similar patterns: 25% of the group with the biggest gap between medical expenses and Schedule F medical debt selected familial medical problems as a reason for bankruptcy, compared to 10.7% of the sample population. A full breakdown of the distribution into these categories is available in Appendix F.

152. For example, CSI Financial Services “takes over” a patient’s account and offers extended payment plans, but the hospital takes back the debts upon a patient’s default on a payment plan. Haugh, supra note 18, at 18. Neither CSI Financial Services nor the banks doing the interim financing would be detected as medical on Schedule F under most coding protocols. Some bulk medical debt buyers do not have medical-sounding names. See generally In re Andrews, 394 B.R. 384 (Bankr. E.D.N.C. 2008) (discussing bulk buyers in a different context).

153. Diagnosis information was collected via telephone interview and thus is available only for the subset of respondents who participated in that portion of the study.

154. Those who conduct research relying on interview and questionnaire data have long struggled with two principal issues. First, the nature of human response introduces a higher degree of error into the data. See John Bound, Charles Brown & Nancy Mathiowetz, Measurement Error in Survey Data, in HANDBOOK OF ECONOMETRICS 3705 (2001). Second, asking questions about finances and health, two private topics, might introduce additional error. See Marianne Bertrand & Sendhil Mullainathan, Do People Mean What They Say? Implications for Subjective Survey Data, 91 Am. Econ. Rev. 67, 68 (2001). In the context of our analysis, however, we believe that our findings contribute meaningfully to our understanding of an otherwise unexplained discrepancy.

282
says one thing while a court or creditor says another; in many consumer bankruptcy cases, nearly all of the documents in the court records are submitted by the debtor. Fifth, this study is designed to analyze bankruptcy filers. This means that we cannot directly comment on how non-filers deal with their medical bills. Sixth, we compare court records and questionnaire data for a sample that was drawn in 2007, whereas the DOJ sample was collected in the early 2000s. We cannot prove, of course, that a survey conducted in the early 2000s on the sample captured by the DOJ would replicate our results. But, as Table 1 illustrates, our Schedule F data and the DOJ data (reported in Table 1) are similarly patterned.

We also should take care to note some significant demographic patterns in expense and medical bill management that affect the accuracy of relying only on court records. For example, homeowners and non-homeowners had equal frequency of identifiable Schedule F medical debt, as well as similar distributions across the dollar ranges of Schedule F medical debt. But on the questionnaire, homeowners were more likely to report incurring expenses within the two years prior to filing (81% versus 73%) and had a different distribution of expenses than non-homeowners. Homeowners also were more likely to report using credit cards—and, of course, home equity loans—for medical bills than non-
A stand-alone analysis of the court records would blunt these differences.

We encountered a similar phenomenon regarding medical expenses among petitioners who identified as African American versus petitioners who identified as white. In our sample, there was not a statistically significant difference between African American petitioners and white petitioners in the frequency or average amount of Schedule F medical debt. But on the questionnaire, African American petitioners reported lower levels of out-of-pocket medical expenses than most other petitioners, and African American petitioners with medical expenses were much less likely to use credit cards or home equity loans (but just as likely to use cash) for the bills they did incur. African American petitioners

159. Nearly three out of ten (27.9%) of those petitioners who owned a home in the five years prior to bankruptcy reported using a regular credit card to pay their medical bills, compared to 17% of those who did not own a home. As previously noted, 5.8% of homeowners used a home equity loan to pay medical bills. Strangely, 1.2% of filers who said they did not own a home at any time in the prior five years selected this option on the questionnaire. It is possible that the language of the selection led them to believe that this option included lines of credit not secured by homes. Or, they may have used someone else’s home as collateral. In any event, this difference, like the difference in credit card usage, is statistically significant to the <0.001 level.

160. The written questionnaire asked respondents to indicate the group with which they identified, with the options of “African American or Black, Asian American, Hispanic or Latino/a, White or Caucasian, Other (please specify), or none.” The questionnaire asked for the same information about partners of respondents. For the comparisons, we included in our measure African American respondents who reported no partner (57%) or identified his or her partner as African American (31%), which is the great majority of the respondents who identified as African American.

161. Among households with African American petitioners, 49.4% listed medical debt on Schedule F, compared to 52.6% of white filers. Households with African American petitioners listed smaller average medical debt ($5,688 per household) than did white filers ($6,513). But both of these differences are outside the standard levels for statistical significance. Households with African American petitioners, however, had a lower median Schedule F medical debt ($1,349) than white petitioners ($1,746), and this difference is significant to the 0.05 level. The DOJ report used averages, not medians, and thus would not have captured this difference.

162. 76% of African American respondents reported using cash to pay medical bills, versus 77% percent of white respondents, a difference that is not statistically significant. African American petitioners with medical expense were much less likely than white petitioners to report using a credit card to pay medical bills (11.3% versus 30.1%). This difference persists when we examine the use of home equity loans to pay off medical expense (1.7% versus 5.3%), and when we focus on only those who owned homes some time within the five years prior to filing (2.2% versus 6.9%). The difference in credit card and home equity loan use (including either measurement) is significant to the <0.001 level.

284
also had significantly less general credit card debt in their court files than other respondents. Looking at the patterns across the distribution of both measures of medical burden, it appears that African American petitioners in our sample were less likely than white petitioners to have reduced or eliminated medical bills owed directly to providers by the time they got to bankruptcy. We cannot control for the variables that might be driving this finding, such as differences in access to medical care and credit. Whatever the explanation, Schedule F and the court record method are somewhat more (though not perfectly) reflective of the pre-bankruptcy burdens of African American respondents in this sample than they are of the pre-bankruptcy burdens of white filers.

A final example comes from the small group of youngest filers: households with at least one petitioner under twenty-five. The youngest filers reported having Schedule F medical debt with much greater frequency than any other age group or all other age groups combined. In addition, on average, households in which at least one of the filers was under twenty-five had an average medical debt on Schedule F of $13,263, compared to an average of $5,846 for all other age groups. Yet, relying on this finding alone would overstate young filers’ relative likelihood of having out-of-pocket medical expenses in the two years prior to filing, and may speak instead to their lack of financing options. These filers were less likely than other households to report using a regular credit card for medical bills and had less general credit card debt in their files overall. They were also more likely to report using a provider payment plan or doing

163. As noted earlier, we tested for a variety of other differences based on race and sex relating to medical bills and medical bill management, and they were not significant. According to one prior study, African American families are three times as likely as white families to file for bankruptcy, but their reasons for filing are similar. See Elizabeth Warren, The Economics of Race: When Making It to the Middle Isn’t Enough, 61 WASH. & LEE L. REV. 1777, 1779 (2004).

164. Although the youngest filers had a much higher average Schedule F medical debt than everyone else, the difference between the medians ($1,672 for the youngest versus $1,590 for the older filers) is not statistically significant, suggesting that a small number of the youngest filers with huge Schedule F medical debts skews the average. We see a glimpse of this in Figure 1, where three out of the six filers with Schedule F medical debts over $100,000 were under the age of twenty-five. On a filer-by-filer basis, the very youngest respondents were also much more likely to have the same category of medical expense on both measures than everyone else (46% versus 36%).

165. Among households in which either petitioner was under twenty-five years old, 18.9% reported using credit cards for medical bills, compared to 24% of all other petitioners. This difference is not statistically significant. These youngest filers also had a lower frequency of home equity loan use for medical bills (2.1% versus 4.2% for all other petitioners), but this difference is outside traditional levels for statistical significance.
“something else” about a medical bill, which often meant waiting to discharge the bill in bankruptcy. Both of these latter options increase the likelihood of a pre-bankruptcy medical bill showing up as Schedule F medical debt. Likewise, a much greater proportion of bankrupt households with younger women petitioners (34 and younger) retained direct obligation that appeared as Schedule F medical debt than other groups. But such households were less likely to use a regular credit card or a home equity loan for medical bills and much more likely than others to use a provider payment plan or “something else” as compared to other households.

These demographic observations warrant further study with additional controls. But this preliminary look reveals another layer of complexity that seems to be disregarded by those who rely exclusively on court records to measure medical debt burden.

IV. DISCUSSION

This Article is the first to demonstrate through detailed systematic analysis that the DOJ’s court record method, standing alone, is an unreliable measure of the financial burden of illness or injury faced by bankruptcy filers. In our nationally-representative sample of filers, the court record method produced a skewed undercount of medical bills and failed to account for filers with significant medical hardship who had no debt on Schedule F that could be identified as medical. The shifting of medical obligations to creditors with non-medical identities played a large role in the discrepancy between court record and survey information, particularly for respondents with the largest verifiable gaps in measures. Absent changes to the forms on which information about debts is collected, the DOJ court record methodology should not be used to measure the financial burden of health care on bankrupt families.

The demographic assessment suggests that court records better reflect medical bills for some groups of filers than for others. Yet court records, standing alone, are not well-suited to distinguish these filers on the relevant demographic

166. Petitioners under twenty-five years of age with out-of-pocket expense reported provider payment plans 27.4% of the time, compared to all other petitioners, who reported payment plans 22.8% of the time. 21% of the younger petitioners reported doing “something else” to handle expenses, compared to 9.5% of all other petitioners. Both of these differences are statistically significant to the 0.005 level.

167. Looking at the use of credit, the difference between the groups is significant to the <0.001 level using a standard ANOVA test. The difference in use of “something else” is also statistically significant to the <0.001 level, while the difference in the use of cash is too small to be statistically significant.
MANAGING MEDICAL BILLS

criteria such as age and racial identity. Furthermore, lawmakers and scholars who have been relying on the DOJ court record study have made no public efforts to draw such distinctions.

The clock cannot be turned back to 2005, when the DOJ analysis enabled lawmakers to vote with a clearer conscience in favor of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 and against amendments that members of Congress proposed to protect people with medical problems from certain harsher effects of the bill.\textsuperscript{168} However, our study should guide the use and interpretation of these kinds of studies in other contexts.

In combination with other methods, the court record method has unappreciated utility to shed light on the impact of patients' bankruptcies on providers. Consistent with the medical practice advice reviewed in Part II, health care consultants are concerned that “the last bill people pay is often their healthcare debt.”\textsuperscript{169} One might have thought that families headed to bankruptcy court would overwhelmingly defer dealing with their medical bills. However, in our national sample, due to filers’ payment and credit activities between the time of treatment and the time of bankruptcy, fewer bankruptcy filings directly affected medical providers, and for substantially smaller amounts. Nearly 80% of bankruptcy filers had received medical services or goods resulting in some self-pay obligation within two years before they filed for bankruptcy—while many already were struggling financially. And yet despite their financial hardship, a third of filers with medical obligation had managed to protect their providers entirely from the bankruptcy process, and many others reduced the dollar amount of the obligation.\textsuperscript{170} Some filers who reported the largest possible out-of-pocket

\textsuperscript{168} See, e.g., Melissa B. Jacoby, Bankruptcy Reform and the Cost of Sickness: Exploring the Intersections, 71 Mo. L. Rev. 903, 908 n.21 (2006) (reviewing failed medical-related amendments to the 2005 Act). We recognize that the legislation as a whole had been pending in various forms since 1997, and lawmakers across the political spectrum were evidently responsive to credit industry pressure to enact it. See generally Melissa B. Jacoby, Negotiating Bankruptcy Legislation Through the News Media, 41 Hous. L. Rev. 1091, 1118 (2004).

\textsuperscript{169} Robert Czerwinski & Peter M. Friend, Selling Written-Off A/R, HEALTHCARE FIN. MGMT., Sept. 2008, at 128, 130; see also A New World of Health Care: More Patients Seek Help with Bills, HEALTH CARE COLLECTOR (Aspen Publishers, New York, N.Y.), Nov. 2008, at 1 (citing an industry expert saying, “As everyone knows, we are often the last bill people pay. I thought it was telling this past month when we heard people say they had to buy books, pay school fees, or pay for their kids’ participation in sports so they could not pay the hospitals. Why? Other folks won’t let you in without paying, but hospitals will.”).

\textsuperscript{170} In theory, preferential transfer law polices eve-of-bankruptcy payoffs of creditors, including medical providers. See, e.g., 11 U.S.C. § 547 (2006); Cruse v. Hannibal Health Care Sys. (\textit{In re} Watkins), 325 B.R. 277 (Bankr. E.D. Mo. 2005) (applying preference law and ruling for
expenses within the two years prior to filing had no medical providers as creditors in the court records. Schedule F also includes debt older than two years, which increases the debt captured by the court record method. This suggests that our study is a fairly conservative measure of providers’ reduction of exposure to their patients’ bankruptcies within the two years prior to filing. Thus, a better way to use the court record method is combined with other sources to reveal the extent to which medical providers extricate themselves from the process and consequences of patients’ bankruptcies.

V. CONCLUSION

Regardless of whether they are insured, nearly all patients have direct monetary dealings with their medical providers. A body of advice and technological tools help providers manage risks associated with this financial exposure. The advice and tools encourage the use of third-party credit. Our study demonstrates how these practices affect the empirical study of medical burden on patients. In our sample, an exclusively court record study does not merely produce a more conservative measure of medical burden; it hides or diminishes cases in which medical bills were particularly significant.

The health care finance debate intensified the interest in medical bills among financially distressed families such as those found in the bankruptcy system, and the interest in this subject will not subside anytime soon. Our study urges caution in using the DOJ court record analysis or other such studies to measure patient medical debt on a standalone basis. It also casts doubt on efforts to refute survey studies based on court documents alone. Absent changes to the forms on which filers report their debts, or, perhaps, substantial changes in medical bill

trustee to recover execution on bond for payment of medical bills subject to state court judgment). Although the law is not uniform, some courts find that a creditor is vulnerable to preference attack even if the debtor simply substitutes another creditor (for example, a credit card or credit card convenience check) to pay the antecedent debt. See, e.g., In re Marshall, 550 F.3d 1251 (10th Cir. 2008); In re Wells, 382 B.R. 355 (6th Cir. BAP 2008); Flatau v. Walman Optical Co. (In re Werner), 365 B.R. 283 (Bankr. M.D. Ga. 2007). But for a variety of legal and practical reasons, preference law is unlikely to have an effect on medical bill payment pre-filing in most consumer bankruptcy cases. First, the preference period is relatively short (ninety days, as mentioned) unless the beneficiary is an insider. 11 U.S.C. § 547(b)(4) (2006) (setting 90-day preference period generally and one year look-back period for insiders). Second, recipients of transfers of value less than $600 have an absolute statutory defense to preference actions in consumer bankruptcy cases, and thus case trustees would not pursue such cases. § 547(c)(8). Third, providers have a defense if they accepted payment in the ordinary course of business, which Congress in 2005 defined broadly to protect more payment recipients. § 547(c)(2).
MANAGING MEDICAL BILLS

management, court records alone reveal very little about the burden of medical bills on financially distressed families. At best, when used in combination with other instruments, such records help to shed light on the impact of patient bankruptcy on health care providers—an important but distinct matter.
### APPENDIX A: DISTRIBUTION OF DIFFERENCE BETWEEN QUESTIONNAIRE-REPORTED OUT-OF-POCKET EXPENSES AND SCHEDULE F MEDICAL DEBT

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four categories more on Schedule F than on the questionnaire (-4)</td>
<td>19</td>
<td>0.78</td>
</tr>
<tr>
<td>Three categories more on Schedule F than on the questionnaire (-3)</td>
<td>26</td>
<td>1.07</td>
</tr>
<tr>
<td>Two categories more on Schedule F than on the questionnaire (-2)</td>
<td>96</td>
<td>3.93</td>
</tr>
<tr>
<td>One category more on Schedule F than on the questionnaire (-1)</td>
<td>224</td>
<td>9.18</td>
</tr>
<tr>
<td>Same category of medical debt on Schedule F and the questionnaire (0)</td>
<td>834</td>
<td>34.18</td>
</tr>
<tr>
<td>One category more on the questionnaire than on Schedule F (+1)</td>
<td>584</td>
<td>23.93</td>
</tr>
<tr>
<td>Two categories more on the questionnaire than on Schedule F (+2)</td>
<td>373</td>
<td>15.29</td>
</tr>
<tr>
<td>Three categories more on questionnaire than on Schedule F (+3)</td>
<td>79</td>
<td>3.24</td>
</tr>
<tr>
<td>Four categories more on the questionnaire than on Schedule F (+4)</td>
<td>36</td>
<td>1.48</td>
</tr>
<tr>
<td>Missing either questionnaire or Schedule F data (excluded from analysis)</td>
<td>169</td>
<td>6.93</td>
</tr>
<tr>
<td>Total</td>
<td>2440</td>
<td>100</td>
</tr>
<tr>
<td>Pay with money from a home equity loan or other line of credit (home owners only)</td>
<td>Percent</td>
<td>(SD)</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>-4</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>0</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agree to a medical payment plan with the medical provider</th>
<th>Percent</th>
<th>(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>0</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pay with a credit card</th>
<th>Percent</th>
<th>(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>0</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pay with a regular credit card</th>
<th>Percent</th>
<th>(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>0</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pay with cash, check, or debit card</th>
<th>Percent</th>
<th>(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>-1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>0</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+1</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+2</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>+3</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Title: Appendix B: Medical Bill Management, by Gap in Measures
<table>
<thead>
<tr>
<th></th>
<th>+4</th>
<th>50.0%</th>
<th>0.0%</th>
<th>22.2%</th>
<th>19.4%</th>
<th>19.4%</th>
<th>26.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
</tr>
<tr>
<td>Total</td>
<td>79.0%</td>
<td>26.0%</td>
<td>2.6%</td>
<td>25.1%</td>
<td>10.8%</td>
<td>4.5%</td>
<td>5.9%</td>
</tr>
<tr>
<td></td>
<td>(0.407)</td>
<td>(0.438)</td>
<td>(0.159)</td>
<td>(0.434)</td>
<td>(0.310)</td>
<td>(0.207)</td>
<td>(0.236)</td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td>0.0020</td>
<td>0.0000</td>
<td>0.2612</td>
<td>0.0013</td>
<td>0.0465</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
</tbody>
</table>
### APPENDIX C: MEDICAL BILL MANAGEMENT OF THOSE WHO REPORTED MORE THAN $10,000 IN QUESTIONNAIRE MEDICAL EXPENSES AND ZERO SCHEDULE F MEDICAL DEBT

<table>
<thead>
<tr>
<th>Pay with cash, check, or debit card</th>
<th>Pay with a regular credit card</th>
<th>Pay with a medical credit card</th>
<th>Something else</th>
<th>Agree to a payment plan with the medical provider</th>
<th>Pay with money from a home equity loan or other line of credit</th>
<th>Pay with money from a home equity loan or other line of credit (Home owners only)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percent</strong></td>
<td><strong>Percent</strong></td>
<td><strong>Percent</strong></td>
<td><strong>Percent</strong></td>
<td><strong>Percent</strong></td>
<td><strong>Percent</strong></td>
<td><strong>Percent</strong></td>
</tr>
<tr>
<td>All other respondents (SD)</td>
<td>73% (0.45)</td>
<td>23% (0.42)</td>
<td>2% (0.15)</td>
<td>10% (0.30)</td>
<td>23% (0.42)</td>
<td>4% (0.19)</td>
</tr>
<tr>
<td>$10,001 more reported on Questionnaire than on Schedule F (SD)</td>
<td>67% (0.48)</td>
<td>50% (0.51)</td>
<td>0% (0.00)</td>
<td>19% (0.40)</td>
<td>22% (0.42)</td>
<td>19% (0.40)</td>
</tr>
<tr>
<td>Probability &gt; F</td>
<td>0.4218</td>
<td>0.0002</td>
<td>0.000</td>
<td>0.3465</td>
<td>0.9054</td>
<td>0.0029</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0000</td>
</tr>
</tbody>
</table>
### APPENDIX D: DEFINITE CREDIT CARD DEBT REPORTED ON SCHEDULE F, BY GAP IN MEASURES

<table>
<thead>
<tr>
<th></th>
<th>Mean (standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>$15,148.75 (24950.728)</td>
</tr>
<tr>
<td>-3</td>
<td>$14,518.50 (25589.335)</td>
</tr>
<tr>
<td>-2</td>
<td>$9,754.48 (16860.425)</td>
</tr>
<tr>
<td>-1</td>
<td>$13,457.91 (20811.045)</td>
</tr>
<tr>
<td>0</td>
<td>$15,075.98 (22072.988)</td>
</tr>
<tr>
<td>+1</td>
<td>$19,892.82 (26959.325)</td>
</tr>
<tr>
<td>+2</td>
<td>$27,334.37 (34652.081)</td>
</tr>
<tr>
<td>+3</td>
<td>$28,890.91 (32613.587)</td>
</tr>
<tr>
<td>+4</td>
<td>$34,523.00 (27361.75)</td>
</tr>
<tr>
<td>Total</td>
<td>$18,837.03 (27361.75)</td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td>0.0000</td>
</tr>
</tbody>
</table>
### Appendix E: Credit Cards to Make Ends Meet, by Gap in Measures

<table>
<thead>
<tr>
<th>Percent</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(standard deviation)</td>
</tr>
<tr>
<td>-4</td>
<td>47.4%</td>
</tr>
<tr>
<td></td>
<td>(0.513)</td>
</tr>
<tr>
<td>-3</td>
<td>42.3%</td>
</tr>
<tr>
<td></td>
<td>(0.504)</td>
</tr>
<tr>
<td>-2</td>
<td>40.6%</td>
</tr>
<tr>
<td></td>
<td>(0.494)</td>
</tr>
<tr>
<td>-1</td>
<td>40.2%</td>
</tr>
<tr>
<td></td>
<td>(0.491)</td>
</tr>
<tr>
<td>0</td>
<td>52.3%</td>
</tr>
<tr>
<td></td>
<td>(0.5)</td>
</tr>
<tr>
<td>+1</td>
<td>56.5%</td>
</tr>
<tr>
<td></td>
<td>(0.496)</td>
</tr>
<tr>
<td>+2</td>
<td>65.7%</td>
</tr>
<tr>
<td></td>
<td>(0.475)</td>
</tr>
<tr>
<td>+3</td>
<td>64.6%</td>
</tr>
<tr>
<td></td>
<td>(0.481)</td>
</tr>
<tr>
<td>+4</td>
<td>75.0%</td>
</tr>
<tr>
<td></td>
<td>(0.439)</td>
</tr>
<tr>
<td>Total</td>
<td>54.5%</td>
</tr>
<tr>
<td></td>
<td>(0.498)</td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td>0.0000</td>
</tr>
</tbody>
</table>
**APPENDIX F: MEDICAL REASONS FOR FILING FOR BANKRUPTCY, BY GAP IN MEASURES**

<table>
<thead>
<tr>
<th></th>
<th>Medical or health care bills, including prescription medications</th>
<th>Medical problems experienced by you or your spouse or partner</th>
<th>Medical problems of other family members (such as children or parents)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent (standard deviation)</td>
<td>Percent (standard deviation)</td>
<td>Percent (standard deviation)</td>
</tr>
<tr>
<td>-4</td>
<td>21.1% (0.419)</td>
<td>26.3% (0.452)</td>
<td>5.3% (0.229)</td>
</tr>
<tr>
<td>-3</td>
<td>26.9% (0.452)</td>
<td>30.8% (0.471)</td>
<td>3.8% (0.196)</td>
</tr>
<tr>
<td>-2</td>
<td>22.9% (0.423)</td>
<td>29.2% (0.457)</td>
<td>8.3% (0.278)</td>
</tr>
<tr>
<td>-1</td>
<td>25.0% (0.434)</td>
<td>28.6% (0.453)</td>
<td>8.9% (0.286)</td>
</tr>
<tr>
<td>0</td>
<td>27.9% (0.449)</td>
<td>28.9% (0.454)</td>
<td>9.0% (0.286)</td>
</tr>
<tr>
<td>+1</td>
<td>25.2% (0.434)</td>
<td>31.0% (0.463)</td>
<td>10.6% (0.308)</td>
</tr>
<tr>
<td>+2</td>
<td>32.4% (0.469)</td>
<td>36.5% (0.482)</td>
<td>13.1% (0.338)</td>
</tr>
<tr>
<td>+3</td>
<td>53.2% (0.502)</td>
<td>46.8% (0.502)</td>
<td>24.1% (0.43)</td>
</tr>
<tr>
<td>+4</td>
<td>66.7% (0.478)</td>
<td>66.7% (0.478)</td>
<td>25.0% (0.439)</td>
</tr>
<tr>
<td>Total</td>
<td>28.9% (0.453)</td>
<td>31.9% (0.466)</td>
<td>10.7% (0.31)</td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0002</td>
</tr>
</tbody>
</table>