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PATIENT VALUATION OF PRIMARY CARE-BASED TREATMENT OPTIONS FOR SUBSTANCE USE AND MENTAL HEALTH DISORDERS

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Abstract

Most individuals with substance use and mental health disorders do not receive treatment. If treatment options were more attractive, treatment rates might increase. Although the advantages of novel approaches, including primary care-based treatment and collaborative care in a primary care setting, have been documented, less is known about consumers' valuation of these options. Contingent valuation methods were used to assess monetary valuation of these treatment types relative to usual care in specialty treatment using a national randomized experiment. Participants valued a primary care-based treatment visit over usual care by \$9.00 and a collaborative care visit over usual care by \$5.85.

Under-treatment for substance use and mental health disorders is a persistent challenge. Only 20% of persons needing treatment for illicit drug use, 8% needing treatment for alcohol use and 20% needing treatment for mental health disorders received treatment.^{1,2} If more attractive substance use disorder or mental health treatment options were readily available, treatment rates might increase.

Promising modes of treatment include primary care and collaborative care models. For example, primary care-based medication-assisted therapy (MAT) models are effective for treating opioid dependence.³ Moreover, extensive research has documented the clinical and cost-effectiveness of collaborative care models for treating depression in a primary care setting with care coordination features, including care management and psychiatric consultation.^{4,5} While clinical evidence on these approaches to treating drug, alcohol and mental health disorders is still emerging, surprisingly little is known about how consumers value these new treatment types. In this column, we describe how we used an economic evaluation approach to quantify in dollar terms how much consumers valued two treatment

models—primary care alone and primary care-based collaborative care—relative to usual care for treating drug, alcohol and mental health disorders.

ANALYSIS

We conducted a randomized vignette experiment embedded in a nationally-representative survey of individuals with an untreated drug, alcohol or mental health disorder. Eligible participants were screened to determine the presence of an untreated behavioral health condition and then randomized to viewing a single vignette describing: usual care in a specialty addiction or mental health treatment setting; primary care-based treatment; or collaborative care treatment in primary care. After viewing the vignette for their specific condition and treatment type, participants were asked whether they would be willing to enter treatment if it were free to them. See the Appendix for vignette examples.

Participants were also asked a single follow-up question about their willingness to enter treatment at a randomly-assigned non-zero price that depended on their initial answer. Participants who indicated they *would* enter treatment were also asked whether they would be willing to enter treatment if they had to pay a specific amount per visit (randomly assigned as \$10, \$30, or \$50). Participants who indicated they *would not* enter treatment were subsequently asked whether they would enter treatment if they were paid a specific amount per visit (randomly assigned in \$5 increments between \$5 and \$25).

We obtained each participant's stated willingness to enter treatment (yes/no) conditional on a particular price for that treatment (zero, positive or negative). Aggregating responses across participants yielded an inverse demand function for each of the three treatment models. Assuming that the inverse demand functions were linear in price, we calculated the horizontal distance between them to estimate the dollar-denominated differences in consumers' average valuation of usual care, primary care and collaborative care.

There were three steps to doing so. First, we calculated the proportion of patients willing to enter treatment at each price point. Second, we adjusted consumer demand, as measured by the simple proportions of patients willing to enter treatment conditional on price, to account for the potential influence of other factors. Third, we assumed that the adjusted inverse consumer demand curves were linear and parallel, which forced the distance between any two lines, our measure of incremental value, to be constant. Our methodological approach is described in detail in the Appendix.

We contacted 42,451 adults online, of whom 30,876 (73%) completed the untreated condition screener. We analyzed data from 2,146 individuals (drug [N=418], alcohol [N=698] and mental health [N=1,030]). Consistent with expectations, stated willingness to enter treatment was inversely related to price (Figure 1). We found that participants valued a primary care-based treatment visit over a usual care visit in a specialty setting by \$9.00 (95% CI: \$2.97 to \$15.04; $p=0.003$) and a collaborative care model visit over a usual care visit in a specialty setting by \$5.85 (95% CI: $-\$0.14$ to \$11.85; $p=0.056$). Primary care with a doctor alone was nominally valued over collaborative care involving primary care treatment with a doctor assisted by a care manager by \$3.15 (95% CI: $-\$2.82$ to \$9.13; $p=0.30$).

DISCUSSION

A 2013 White House Office of National Drug Control Policy report described the chronic care treatment approach, as traditionally employed in primary care disease management, as a “third way” to address substance use disorders,⁶ and there is broad policy interest in adoption of the collaborative care model for treating mental health conditions, for example, as part of integration efforts included under the Medicaid health home authority of the Affordable Care Act.⁷ It makes intuitive sense that patients might value primary care-based approaches over more traditional treatment due to their “whole person” focus and the possibility of reduction in stigma through delivery of services in a primary care setting. Results described here confirm that participants with untreated drug use, alcohol use and mental health disorders did, in fact, value these new treatment types over usual specialty treatment.

Although others have used similar methods to examine willingness to pay for treatment for substance use and mental health disorders,⁸ differences in study design (e.g., study population, focus on price of visit vs. treatment episode) limit direct comparisons of consumer valuation estimates. Nevertheless, one study examined demand for methadone maintenance treatment and found that consumers valued the availability of case management by an extra \$5.64 per week, which is of similar magnitude to our findings here.⁹

This information is useful for several reasons. First, our results may provide inputs for cost-benefit or cost-effectiveness analyses of these treatments. Differences in consumers’ valuations of different treatment approaches should be incorporated into evaluations taking a patient or societal perspective. Second, this information may be useful to payers projecting the effects of cost-sharing requirements in behavioral health. In recent years, overall medical care cost-sharing has increased due to both higher deductibles and higher co-payments. Conversely, the Domenici-Wellstone Mental Health Parity and Addiction Equity Act reduced cost-sharing requirements for substance use disorder and mental health to match cost-sharing for medical/surgical services.¹⁰ Third, this research suggests that financial incentives may encourage individuals to enter and, plausibly, stay in treatment. Value-based insurance design, which links cost-sharing to treatment effectiveness, has gained traction across disorders,¹¹ and our findings suggest that increasing the availability of new primary-care based treatment models alongside financial incentives could persuade more individuals to seek treatment.

There are a number of strengths of our approach. First, collecting data from a large, national survey enhances the generalizability of our findings. Second, randomly assigning participants to treatment model vignettes and to dollar amounts minimizes the risk of confounding. Third, none of the participants surveyed were currently in treatment although each met screening criteria for a drug, alcohol or mental health disorder, an important population of potential consumers who are typically overlooked in research because they are difficult to identify. Fourth, rather than the duration of treatment, we studied the decision to enter treatment, which is the critical dimension for improving rates of individuals undergoing treatment. Fifth, our study design incorporates both cost-sharing and incentive payments because both may affect the decision to enter treatment. Finally, grounding our

approach in the economic theory of consumer demand facilitates comparison of value between treatment models.

Nevertheless, our approach involves some important assumptions and limitations. Most importantly, our findings reflect consumers' stated preferences about their willingness to enter treatment in response to a hypothetical treatment scenario, which may differ from actual treatment decisions. Second, we make the simplifying assumption that the consumer demand curves are linear. In this specific case, this assumption seems plausible given the unadjusted data (Figure 1). Third, to maximize precision, we aggregated three conditions: drug abuse, alcohol abuse and mental health disorders. In practice, we anticipate that participants' valuations of treatment models would likely depend on their specific conditions. Finally, while expected treatment quality and outcomes may differ across the three conditions, participants were not provided information on these parameters.

Our results offer hope that treatment rates for drug, alcohol and mental health disorders can be raised by increasing the availability of (and consumer awareness of) primary care and collaborative care treatment models, which appeal to potential consumers somewhat more than usual care in the specialty treatment sector.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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References

1. Substance Abuse and Mental Health Services Administration. Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2014. NSDUH Series H-48, HHS Publication No. (SMA) 14-4863
2. Kessler RC, Demler O, Frank RG, et al. US prevalence and treatment of mental disorders: 1990–2003. *New England Journal of Medicine*. 2005; 352:2515–2523. [PubMed: 15958807]
3. Fudala PJ, Bridge TP, Herbert S, et al. Office-based treatment of opiate addiction with a sublingual-tablet formulation of buprenorphine and naloxone. *New England Journal of Medicine*. 2003; 349:949–958. [PubMed: 12954743]
4. Gilbody S, Bower P, Fletcher J, et al. Collaborative care for depression: a cumulative meta-analysis and review of longer-term outcomes. *Archives of Internal Medicine*. 2006; 166:2314–2321. [PubMed: 17130383]
5. Simon GE, Katon WJ, VonKorff M, et al. Cost-effectiveness of a collaborative care program for primary care patients with persistent depression. *American Journal of Psychiatry*. 2001; 158:1638–1644. [PubMed: 11578996]
6. White House Office of National Drug Control Policy. 2013 National Drug Control Strategy. Available at http://www.whitehouse.gov/sites/default/files/ndcs_2013.pdf
7. Unützer, J.; Harbin, H.; Schoenbaum, M., et al. The Collaborative Care Model: An Approach for Integrating Physical and Mental Health Care in Medicaid Health Homes. Available at <http://www.medicaid.gov/State-Resource-Center/Medicaid-State-Technical-Assistance/Health-Homes-Technical-Assistance/Downloads/HH-IRC-Collaborative-5-13.pdf>

8. Unützer J, Katon WJ, Russo J, et al. Willingness to pay for depression treatment in primary care. *Psychiatric Services*. 2003; 54:340–345. [PubMed: 12610241]
9. Bishai D, Sindelar J, Ricketts EP, et al. Willingness to pay for drug rehabilitation: implications for cost recovery. *Journal of Health Economics*. 2008; 27:959–972. [PubMed: 18207264]
10. Goplerud, E. Consistency of Large Employer and Group Health Plan Benefits with Requirements of the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008. U.S. Department of Health and Human Services; Nov. 2013 Available at <http://aspe.hhs.gov/daltcp/reports/2013/mhpaeAct.pdf>
11. Lee JL, Maciejewski ML, Raju SS, et al. Value-based insurance design: quality improvement but no cost savings. *Health Affairs*. 2013; 34:1251–1257. [PubMed: 23836741]

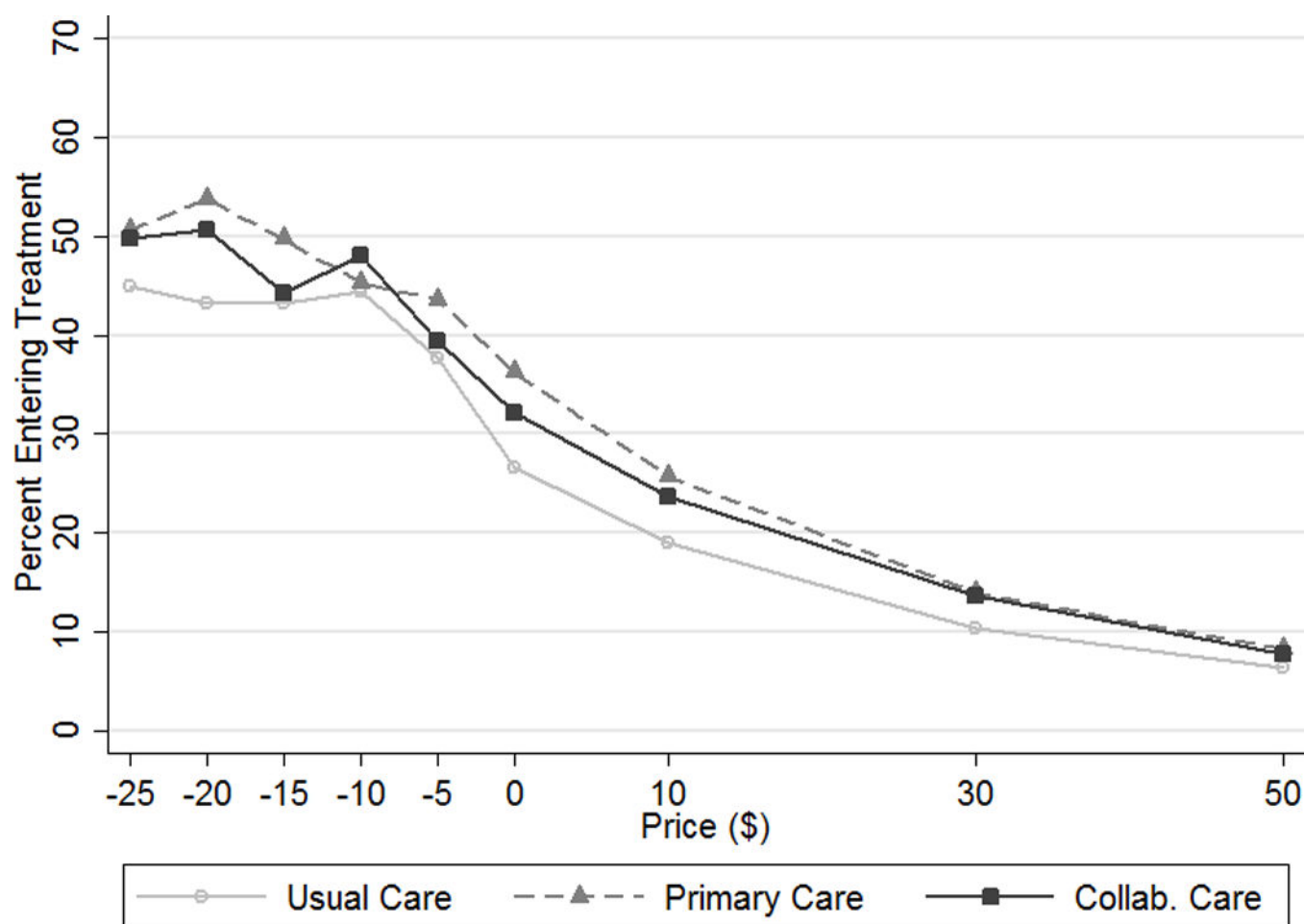


Figure 1.
Unadjusted self-reported willingness to enter treatment, by treatment type and price