



Published in final edited form as:

Psychiatr Serv. 2009 February ; 60(2): 258–261. doi:10.1176/appi.ps.60.2.258.

How Quality Improvement Interventions for Depression Affect Stigma Concerns Over Time: A Nine-Year Long Longitudinal Study

Abstract

Objective—To examine the long-term impact of two quality improvement interventions for depression on stigma concerns in primary care compared to usual care.

Method—Data are from nine-year follow-up of participants in Partners in Care, a group level randomized trial comparing those enrolled in the interventions with enhanced resources for therapy (QI-therapy) or medication management (QI-meds) on stigma concerns about friends, health insurance companies, and employers learning about histories of depression or psychiatric care.

Results—Individuals in QI-therapy were significantly less likely to report concerns about friends learning about a history of depression than those in usual care and QI-meds, and those in QI-meds were significantly more likely to have concerns about getting insurance due to a history of psychiatric care than those in QI-meds and usual care.

Conclusions—Quality improvement programs for depression can raise or lower various stigma concerns, depending on program design and resources for specific treatments.

Introduction

While treatment can improve health outcomes and quality of life for many people with mental illnesses, it might also result in unintended negative consequences if the patient is publicly labeled by their psychiatric treatment or illness history. In a sample of individuals with chronic mental health problems, for example, both perceived stigma and received services were related to quality of life, but in opposite directions.⁽¹⁾ One study of men with dual diagnoses⁽²⁾ found no change in perceptions of stigma over a year as treatment was provided. Overall, however, little is known about how the provision of evidence based mental health treatment or exposure to quality improvement programs that promote the use of such treatments affects stigma concerns over time. Therefore we present exploratory analyses of the long-term impact of two quality improvement intervention for depression in primary care, compared to usual care, on stigma concerns nine years later, hoping to stimulate further research in this area.

Method

Partners in Care (PIC) is a group-level randomized trial, comparing practice-level quality improvement interventions to enhanced usual care (written guidelines only). Two interventions were fielded: QI-meds, which featured resources to support 6–12 months of antidepressant medication management, and QI-therapy, which provided resources and incentives to use Cognitive Behavioral Therapy (CBT).⁽³⁾ Both interventions offered patient and provider education, facilitated initial patient education, routing to treatments as

Disclosures: None for any author

appropriate and local team intervention management. Patient and provider preferences for treatment were allowed for. PIC found that practice-level interventions improved patient health outcomes and quality of care, relative to usual care, over the first two years and at a five years.⁽⁴⁾ Institutional Review Board (IRB) approval for the original study was obtained from RAND and the participating healthcare organizations. The 9-year follow-up was approved by RAND and UCLA's IRBs. The QI toolkits used in the intervention are available at: http://www.rand.org/health/surveys_tools/pic.html.

Measures

Stigma Concerns

Of the 1356 individuals who completed the baseline interviews, 805 also completed the nine-year interview representing 63% of the 1269 individuals initially enrolled and still alive at 9 years. At the baseline and nine year follow-up interviews the respondents were asked the following questions: If you were applying for a job, how much difficulty do you think you would have getting the job if the employer thought you had a recent history of the following? If you were switching to a new health insurance policy, how much difficulty do you think you would have getting the policy if the insurer knew you had a recent history of the following? How much would your relationships with friends suffer if they thought you had a recent history of the following? Respondents were asked about depression and visiting a psychiatrist. The variables were dichotomized with the response categories “none” and “a little” compared to “some” and “a lot”.

Interventions Status—We created indicators for each intervention condition – QI-meds and QI-therapy, versus the control group.

Covariates—We included sociodemographic (age, gender, marital status, education level and family wealth), and clinical (chronic condition, anxiety, depression status, MCS12, and PCS12)⁽⁵⁾ variables measured at baseline as covariates in the model.

Statistical Analysis—We conducted patient-level, intent-to-treat analyses based on the intervention assignment of the clinic in which the patients were receiving care at the time of study enrollment. For the stigma variables assessed at the nine year follow-up, we estimated logistic regression models with intervention status as the independent variable, controlling for the covariates listed above. We conducted sensitivity analyses by including baseline measures of the dependent variable as an additional covariate, with no change in conclusions or substantive results. We used an F-statistic to determine whether there was an overall difference among the three intervention arms (QI-meds, QI-therapy and Usual Care) and t-statistics for pairwise comparisons of two intervention arms. We adjusted for patient clustering within clinics using a modification of the robust variance estimator, the bias reduced linearization method (BRL)⁽⁶⁾. Multiple imputations⁽⁷⁾ were used to account for item level missing data. Other nine year PIC analyses use unit imputation to adjust for unit nonresponse. Since stigma concerns were not measured at five-years, we do not employ unit imputation for this analysis.

Results

The QI-therapy group was significantly less likely to report concerns about friends learning of a recent history of depression than those in usual care (OR= .66, 95% CI=.48–.90, p=.01), while the QI-meds group was more likely to have these concerns than the QI-therapy group (OR=1.54, 95% CI=1.10–2.17). The QI-meds group was significantly more likely to report concerns about getting a new insurance plan if the insurer learned that they had visited a psychiatrist than usual care (OR=1.68, 95% CI=1.13–2.51, p=.012) and the QI-therapy

group (OR=1.42, 95% CI=1.03–1.96, $p=.040$). The QI-meds group also reported more insurance concerns about a history of depression than QI-therapy but the overall intervention test was borderline significant ($p=.052$).

Discussion

At nine years we found a statistically significant reduction in friendship concerns among individuals in the QI-therapy group, compared to usual care and QI-meds without evidence of an increase in job or insurance concerns. The QI-therapy intervention supported a treatment (CBT) that reinforced cognitive and behavioral learning, and offered education from providers and care managers. Either of these aspects of the intervention could have contributed to a reduction in friendship concerns. To our knowledge, this is the first suggestion that a QI program for depression can reduce stigma concerns about a mental health condition in the long run. From a consumer perspective, a reduction in stigma concerns could be viewed as an important primary outcome of QI. In addition, such a reduction could set the stage for future help seeking at a time of need.

We found that the QI-meds intervention increased concerns about obtaining a new insurance plan if the insurer learned of a psychiatric visit relative to usual care. Since insurers may deny new insurance plans to individuals with pre-existing conditions⁽⁸⁾ this issue merits additional study. This is especially important since the majority of individuals with treatable mental disorders do not access care and may be hesitant to do so given fears of discrimination by insurers.

There are important limitations to these findings, including use of particular healthcare systems in particular U.S sites; moderate response rates; and a lengthy follow-up period (nine years) without intermediate stigma measures. Further, this study differs from a randomized trial of treatments, in that the interventions provided opportunities for improved depression care through information and resources, rather than through direct assignment to treatment. Therefore, we cannot necessarily attribute changes in stigma in concerns to treatments the intervention provided.

Conclusion

This study has important implications for future research. Recent policy reports^(9, 10) describe stigma as the most formidable obstacle to future progress in care of mental illness. Quality improvement programs, for depression, that promote use of evidence-based psychotherapy may hold promise to reduce stigma concerns about friends learning about a depression history, while the promotion of medication in the absence of policy change may increase long term concerns about insurance.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

This research was funded by National Institute of Mental Health Grants (MHR01070260) and the UCLA-RAND Center for Research on Quality in Managed Care (MH068639-01)

References

1. Rosenfield S. Labeling Mental Illness: The Effects of Received Services and Perceived Stigma on Life Satisfaction. *American Sociological Review*. 1997; 62:660–672.

2. Link BG, Struening EL, Rahav M, et al. On stigma and its consequences:evidence from a longitudinal study of men with dual diagnoses of mental illness and substance abuse. *J Health Soc Behav.* 1997; 38:177–90. [PubMed: 9212538]
3. Wells KB. The design of Partners in Care: evaluating the cost-effectiveness of improving care for depression in primary care. *Soc Psychiatry Psychiatr Epidemiol.* 1999; 34:20–9. [PubMed: 10073117]
4. Wells K, Sherbourne C, Schoenbaum M, et al. Five-year impact of quality improvement for depression: results of a group-level randomized controlled trial. *Arch Gen Psychiatry.* 2004; 61:378–86. [PubMed: 15066896]
5. Ware JE Jr, Sherbourne CD. The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. *Med Care.* 1992; 30:473–83. [PubMed: 1593914]
6. Bell RM, McCaffrey DF. Bias reduction in standard errors for linear regression with multi-stage samples. *Survey Methodology.* 2002; 28(2):169–181.
7. Schafer, J. *Analysis of Incomplete Multivariate Data.* Chapman and Hall; London, England: 1997.
8. Wahl OF. Mental health consumers' experience of stigma. *Schizophr Bull.* 1999; 25:467–78. [PubMed: 10478782]
9. President's New Freedom Commission on Mental Health. *Achieving the promise: transforming mental health care in America. Final Report.* Substance Abuse and Mental Health Services Administration; Rockville (Md): 2003.
10. U.S. Department of Health and Human Services. U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; Rockville, MD: 1999. *Mental Health: A Report of the Surgeon General.*

Table 1

Intervention Effects on 9 year Stigma Concern Variables *

Dependent Variable **	Meds vs. UC		Therapy vs. UC		Meds vs Therapy		Difference Across Groups	
	Odds Ratio (95% CI)	P	Odds Ratio (95% CI)	p2	Odds Ratio (95% CI)	p3	F(2,41)	P
Difficulty getting a job due to depression	1.33 (.87,2.02)	.186	1.04 (.67,1.62)	.843	1.27 (.86,1.88)	.242	1.12	.335
Difficulty getting a new insurance plan due to depression	1.20 (.85,1.71)	.290	.82 (.58,1.16)	.248	1.47 (1.09,1.99)	.016	3.19	.052
Relationship suffer due to depression	1.02 (.75,1.38)	.919	.66 (.48,.90)	.011	1.54 (1.10,2.17)	.017	4.22	.022
Difficulty getting a job due to visiting a psychiatrist	1.27 (.83,1.94)	.261	1.15 (.79,1.69)	.455	1.10 (.72,1.68)	.656	.69	.506
Difficulty getting a new insurance plan due to visiting a psychiatrist	1.68 (1.13,2.51)	.012	1.19 (.81,1.74)	.375	1.42 (1.03,1.96)	.040	3.96	.027
Relationship suffer due to visiting a psychiatrist	1.27 (.82,1.98)	.275	.83 (.55,1.25)	.357	1.54 (.95,2.50)	.089	1.52	.231

* Sample of 805 who were completed 9-year follow-up. Logistic regression adjusted for baseline sociodemographic characteristics (age, gender, marital status, education level, assets), clinic measures (chronic condition, anxiety, depression status, MCS12, and PCS12), and study sites. Model adjusted for clustering effects at clinic level using the bias reduced linearization method.

** Dichotomized variable: 1=high concern (a lot or some), 0=low concern (a little or no).