



5-21-2020

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Abstract

Changing clinical practice is hard, and changing practices within larger organizations is even harder. Increasingly, policymakers are looking to implementation science—the study of why some changes prove more durable than others—to understand the dynamics of successful transformation. In this brief, we summarize the results of an ongoing community-academic partnership to increase the uptake of evidence-based practices in Philadelphia’s public behavioral health care system. Over five years, researchers found that widescale initiatives did successfully change the way care was delivered, albeit modestly and slowly. The evidence suggests that organizational factors, such as a proficient work culture, are more important than individual therapist factors, like openness in change, in influencing successful practice change. Furthermore, organizations must address staff turnover and burnout, and employees must feel supported in general in order for managers to expect them to change. In short, while practice transformation is possible—even in highly stressed and under-resourced public health settings—it requires focusing on underlying problems within organizations as well as championing new policies.

Keywords

"mental health, evidence-based practice, implementation science, behavioral health"

Disciplines

Behavioral Medicine | Clinical Psychology | Health Services Administration | Health Services Research

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TRANSFORMING MENTAL HEALTH CARE THROUGH IMPLEMENTATION OF EVIDENCE-BASED PRACTICES

Lessons learned through a community-academic partnership

Aaron Glickman, MPA, Janet Weiner, PhD, MPH and Rinad Beidas, PhD

Changing clinical practice is hard, and changing practices within larger organizations is even harder. Increasingly, policymakers are looking to implementation science—the study of why some changes prove more durable than others—to understand the dynamics of successful transformation. In this brief, we summarize the results of an ongoing community-academic partnership to increase the uptake of evidence-based practices in Philadelphia’s public behavioral health care system. Over five years, researchers found that widescale initiatives did successfully change the way care was delivered, albeit modestly and slowly. The evidence suggests that organizational factors, such as a proficient work culture, are more important than individual therapist factors, like openness to change, in influencing successful practice change. Furthermore, organizations must address staff turnover and burnout, and employees must feel supported in general in order for managers to expect them to change. In short, while practice transformation is possible—even in highly stressed and under-resourced public health settings—it requires focusing on underlying problems within organizations as well as championing new policies.

INTRODUCTION

Ideally, when careful research uncovers better ways to deliver health care, it leads to changes in practice that improve patient outcomes. But research-to-practice gaps persist because evidence-based changes must be implemented by real people in dynamic contexts. Organizational factors such as leadership, organizational culture, and climate can promote successful transformation—or stymie new initiatives.

This brief summarizes the results of an ongoing community-academic partnership designed to increase the use of evidence-based

psychosocial treatments in Philadelphia’s public behavioral health care system. Behavioral health care refers to the provision of mental health and substance use disorder prevention and intervention. As part of overall efforts to improve care for the city’s most vulnerable citizens, Penn researchers and their policymaker and payer partners gained new insights into factors associated with successful implementation of specific evidence-based psychosocial treatments. In particular, researchers analyzed how individual clinician and organizational factors affected the likelihood of use of evidence-based treatments, yielding insights as to why some initiatives “stick,” while others fail.

BACKGROUND

Mental health care transformation in Philadelphia

In Philadelphia, the City Department of Behavioral Health and Intellectual disAbility Services (DBHIDS) oversees behavioral health services for more than 700,000 Medicaid beneficiaries. DBHIDS contracts with Community Behavioral Health (CBH), a non-profit organization, to provide mental health and substance use disorder services to Medicaid recipients. [In 2018](#), 175 in-network providers in multiple sites served over 100,000 people, including more than 30,000 children and families.¹

Since 2007, Philadelphia has been at the forefront of national efforts to encourage clinicians and organizations to deliver more effective, higher quality evidence-based treatments (Box 1).² One focus has been to promote the use of cognitive behavioral therapy (CBT), which involves relatively short, directive, problem-focused sessions. In CBT, therapists identify troubling situations or current life conditions; help patients become aware of thoughts, emotions, and beliefs related to problems; identify negative behavior and thinking; and reshape those attitudes. A strong evidence base indicates that CBT is more effective than other supportive approaches most commonly used in community mental health settings. Implementing these evidence-based practices (EBPs) remains a nationwide challenge that requires substantial clinician training, financial support, and focused leadership.

With funding from the National Institute of Mental Health, University of Pennsylvania researchers tracked and evaluated Philadelphia's

implementation of EBPs, particularly for youth. They conducted [three waves](#) of interviews and data collection in 2013, 2015, and 2017. The study involved 340 clinicians at 20 clinics that contributed data to all three waves.³ By the study's end, half of the clinicians had participated in at least one EBP training initiative. The researchers applied principles from implementation science to address three crucial questions:

1. Does EBP use increase over time as a result of systemic investment in a centralized infrastructure to support EBPs?
2. What are the barriers and facilitators to implementation?
3. Which strategies increase the use of EBPs?

HOW SUCCESSFUL WAS THE INITIATIVE?

From 2013 to 2017, clinicians reported their use of CBT and psychodynamic techniques, as well as their participation in EBP trainings. Over [five years](#), use of CBT increased modestly (6%) system-wide, while use of psychodynamic techniques was unchanged. Multiple exposures to training were associated with greater use of CBT. Clinicians who participated in two trainings saw an increase of 6%, while those who participated in three or more (9.6% of the sample) had an increase of 9%.³

While these results tell us how CBT use changed, they do not tell us why some clinicians changed practice patterns and others did not. Through repeated surveys and semi-structured interviews,

Box 1. System-driven iterative approach to implementation over 13 years

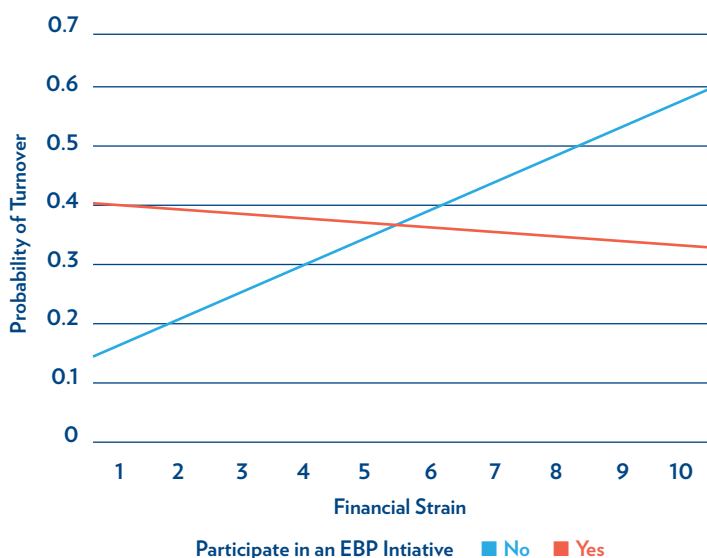


Powell, Beidas, et. al, 2016: *Adm. Policy Mental Health*

Philadelphia has taken an iterative approach to EBP implementation. In the first phase, lasting from 2007 to 2013, Philadelphia focused on large, system-wide trainings for clinicians in different types of evidence-based practices, all in the family of cognitive behavioral therapy. In 2013, DBHIDS recognized the opportunity to integrate learning across initiatives and address the underlying infrastructure challenges to EBP implementation. To do so, the city established the Evidence-Based Practice and Innovation Center (EPIC) to support organizations through a centralized infrastructure. The creation of EPIC presented University of Pennsylvania researchers the opportunity to study the determinants of successful systemic change.

At the same time, DBHIDS implemented a competitive approach to selecting organizations to participate in initiatives and began enhancing payment rates for the use of EBPs.

Figure 1



Adams, D. R., Williams, N. J., Becker-Haimes, E. M., et al. 2019: *Adm Policy Ment Health*.

the researchers looked under the hood to reveal the clinician and organizational factors that influenced the odds of practice change. In so doing, they uncovered likely correlates of success and failure for large-scale public health initiatives to promote practice change.

BARRIERS

Financial strain and turnover hamper change

In baseline interviews with 56 DBHIDS system leaders and treatment developers involved in implementation, financial constraints arose as a primary barrier to practice change. While most agency leaders recognized the long-term return on investment of a better-trained workforce, they also noted the substantial cost associated with losing staff for training days to participate in EBP initiatives. System leaders were nearly [unanimous](#) that without raising payment rates or additional funding, the implementation costs would be a substantial barrier.⁴ In Philadelphia, these insights helped drive home the need to increase reimbursement for the use of EBPs.

Even in financially stable organizations, individual clinicians can feel financial strain. When financial strain leads to turnover, it can reduce the return on investment of EBP initiatives. The turnover in the Philadelphia public mental health care system is significant: researchers found that [39% of therapists](#) interviewed in 2015 left their organization in the following year.⁵ This is [consistent](#) with [other studies](#) in public mental health systems, which have found turnover rates of 30%–60%.^{6,7} In [interviews](#) with therapists and supervisors in Philadelphia who left their jobs in 2013, financial concerns, lack

of organizational support, and feelings of “burnout” emerged as important antecedents of turnover. In Philadelphia, turnover rates at individual sites varied widely (from 0% to 67%).⁶

Controlling for other individual and organizational factors, therapists with perceived financial strain were [30% more](#) likely to leave their agency within a year as those not reporting strain. Interestingly, the effect of financial strain was moderated by therapists’ participation in city-wide EBP initiatives (Fig. 1). Financial strain was not associated with turnover among the 115 therapists who had participated in at least one initiative, while it was a strong predictor of turnover in the 132 therapists who had not participated.⁵

These findings suggest that organizations seeking to invest in new policies and programs must address high level of turnover. Furthermore, in organizations that cannot simply raise wages—a common feature in public health settings—focusing on creating more effective organizations can be a relatively cost-efficient approach to reducing staff churn. During the implementation of new policies, systems must invest time and financial resources in training workers. When those employees leave at high rates, it results in higher cost to implement change and may stall new initiatives entirely.

FACILITATORS

Organizational culture and climate can ease practice transformation

Using the same set of surveys, Penn researchers analyzed how organizational *culture* and *climate* affect the odds of successful program change. As summarized in Box 2, organizational culture

Box 2. Organizational Culture and Climate

Organizational *culture* describes the set of expectations and norms within an organization. It is measured in terms of *proficiency*, *resistance*, and *rigidity*. Proficient cultures are ones in which employees are expected to be competent and put the needs of clients first. Resistant cultures tend to be stuck in their ways and unwilling to change the way work is accomplished. Rigid cultures are highly bureaucratic and formal, in which employees must follow very specific processes to get work done.

Organizational *climate* describes the perceptions of the *environment* in which work is done and the impact that it has on employees. Climates can vary based on how *engaging*, *functional*, or *stressful* they are. In engaging climates, employees are committed to work and feel that goals are worthwhile. Functional climates are cooperative and supportive, with clear roles. Stressful environments have high levels of emotional exhaustion.

describes the way work is accomplished, and can be categorized as proficient, resistant, or rigid; organizational climate describes how the environment is perceived, and it can be characterized as engaging, functional, or stressful.

At baseline, the use of CBT by Philadelphia clinicians was correlated with both individual and organizational factors. Collectively, organizational factors accounted for [23%](#) of the variation in therapist use of CBT, compared to 16% for individual clinician factors, such as therapist age and openness to EBPs. At the organizational level, therapists in organizations that had participated in fewer years of EBP initiatives, had more resistant work cultures, and had more supportive (i.e., functional) climates were more likely to use CBT.⁸

By following organizations within the behavioral health system over time, Penn researchers gained insight into how organizational factors affect the *implementation* of new practices. Overall, clinicians working in organizations with more proficient cultures (i.e., high levels of competence and client-first orientation) had a much greater *increase* in EBP uptake than those in less proficient ones ([8% versus 2% over five years](#)). Additionally, it appears that proficient cultures can mitigate staff turnover, thereby improving the odds of successful change. The researchers found that both organizations with more proficient cultures to begin with and organizations that *improved* their proficiency experienced significantly less clinician turnover over three years.⁹ Thus, if staff turnover is a challenge to the implementation of new policies, organizations can likely reduce turnover during new initiatives by focusing on developing and fostering proficient cultures.

IMPLEMENTATION CLIMATE AND THE ADOPTION OF NEW PRACTICES

In the context of implementing new policies, most organizations have a climate for implementing change that exists alongside the pre-existing organizational culture and climate. This *implementation climate* measures how ready and willing organizations are to implement new initiatives (e.g. EBPs) and are a function of organizational priorities and leadership, educational support, professional recognition for change, financial rewards, and selection in hiring. In Philadelphia, researchers evaluated the interaction between implementation climate and overall organizational climate.

When workers felt engaged and supported (i.e., a positive organizational climate), a strong focus on the implementation of EBPs was associated with [increased](#) use of those practices. Furthermore, when middle managers increased their support for EBP implementation, the overall organizational implementation climate improved and clinician EBP use increased. However, in organizations

with poor staff engagement in general, robust support of EBPs (e.g., raises, bonuses, and recognition) did not predict uptake.¹⁰

The findings suggest that a climate for policy change is only effective when it is built on a base of support for employee development, and supervisors have substantial influence over implementation climate. Focusing on policy change without first investing in employees or increasing support from supervisors makes frontline staff less willing to engage with long-term policy changes.

Another lesson from the behavioral health experience in Philadelphia is that existing organizational culture interacts with implementation climate (i.e., openness to change) in significant ways. When Penn researchers focused on the antecedents of clinician turnover, they found that improvements in organizational proficiency and rigidity predicted increases in openness and support for adopting EBPs. Both of these improvements correlated with decreased clinician turnover. Therefore, a significant portion of the positive effect of competent organizational culture on clinician turnover was accomplished *through* improving the implementation climate.

PUTTING THE PIECES TOGETHER

The implementation of EBPs in Philadelphia's public mental health system is a case study in how individual clinician and organizational factors interact to facilitate, or hinder, practice transformation. These findings continue to inform the transformation of the Philadelphia behavioral health system, and have great relevance for other public health initiatives to promote evidence-based practice as well.

First, while widespread practice change is often slow and marginal, clinician behavior does change. However, the success of those initiatives relies on the availability of financing to support both individuals and organizations involved. Second, an individual clinician's desire to change practice is not a strong enough force to overcome structural challenges. Changing the way care is delivered requires focusing on improving the organizations that deliver care—including individual and organizational financial constraints, clinician retention, current proficiency, and work environments.

Third, it is important to attend to the underlying proficiency of the organizations expected to implement practice changes. Public health services, especially for vulnerable populations, are often delivered in highly stressful environments struggling to maintain organizational proficiency. Put another way, the initiation of new policies also requires a focus on improving overall organizational competence and adequate financial support to be successful. These improvements can mitigate threats to change—such as burnout and turnover—and improve the chances that new practices will be adopted.

NEXT STEPS

The wealth of data provided through this research demonstrates the significant value of community-academic partnership. For example, the city has designated agencies implementing EBPs and provided an enhanced payment rate for the designation since 2018. The case for those changes was bolstered by the research results. These analyses provide several insights for policymakers and program administrators:

- If staff financial strain or burnout cannot be mitigated with increased pay, communicating consistent expectations of excellence and eliminating barriers to work may reduce turnover.
- To foster change, developing organizational proficiency is as important (if not more important) than individualized training.
- Employees must feel supported in order for managers to expect them to change. Championing new initiatives without engaging employees concurrently is likely to fail.
- Even organizations that accomplish work efficiently can benefit from a continued focus on developing proficient culture.
- Widespread change in the way work is accomplished is possible within organizations, though the process is slow.

The Philadelphia experience shows that a system that is open, transparent, innovative, and continuously learning has the greatest potential to change. While it takes years to transform institutions and the people within them, administrators are capable of implementing new policies through focused leadership that addresses the existing problems within organizations while promoting new methods of getting work done.

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Since 1967, the University of Pennsylvania's Leonard Davis Institute of Health Economics (Penn LDI) has been the leading university institute dedicated to data-driven, policy-focused research that improves our nation's health and health care. Penn LDI works on issues concerning care for vulnerable populations; coverage and access to health care; improving care for older adults; and the opioid epidemic. Penn LDI connects all twelve of Penn's schools, the University of Pennsylvania Health System, and the Children's Hospital of Philadelphia through its more than 300 Senior Fellows.

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