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Implementing Effective Substance Abuse Treatments in General Medical Settings: Mapping the Research Terrain

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ABSTRACT

The National Institute on Alcohol Abuse and Alcoholism (NIAAA), National Institute on Drug Abuse (NIDA), and Veterans Health Administration (VHA) share an interest in promoting high quality, rigorous health services research to improve the availability and utilization of evidence-based treatment for substance use disorders (SUD). Recent and continuing changes in the healthcare policy and funding environments prioritize the integration of evidence-based substance abuse treatments into primary care and general medical settings. This area is a prime candidate for implementation research. Recent and ongoing implementation projects funded by these agencies are reviewed. Research in five areas is highlighted: screening and brief intervention for risky drinking; screening and brief intervention for tobacco use; uptake of FDA-approved addiction pharmacotherapies; safe opioid prescribing; and disease management. Gaps in the portfolios, and priorities for future research, are described.
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1. Introduction

Decades of investment have yielded effective behavioral, psychosocial, and pharmacological interventions to address substance use disorders (SUD) and sub-diagnostic but hazardous substance use. Despite this strong evidence, relatively few effective treatments and practices have been widely adopted or faithfully implemented within general medical settings. The quality of treatment for people with tobacco, drug, and alcohol use disorders can be improved by integrating existing evidence-based approaches into clinical settings in which high-risk populations are engaged in routine medical care.

The integration of SUD treatment into general medical settings is a topical area especially suited to implementation research. Not only is there a need to develop and test novel service delivery models that may achieve these goals, but there is a parallel need for research to develop effective implementation strategies through which evidence-based practices (EBPs) and service delivery models can be spread and sustained. This paper attempts to identify persistent gaps in implementation research in the area of integrated service delivery and suggests priority areas for implementation research needed to better integrate SUD treatment into general medical settings. These observations are offered from the perspective of program directors charged with overseeing portfolios of implementation research within three organizations that have worked to set priorities and stimulate addiction-related implementation research: the National Institute on Alcohol Abuse and Alcoholism (NIAAA), the National Institute on Drug Abuse (NIDA), and the Veterans Health Administration (VHA) Substance Use Disorder Quality Enhancement Research Initiative (SUD QUERI). The purpose of this article is to take stock of where we have been, identify well-trodden ground, and suggest new routes that NIH- and VA-funded research might take to arrive at greater service integration for SUD treatment.

An oft-cited statistic is that it takes 17 years for 14% of clinical discovery to make its way into routine practice (Balas & Boren, 2000). While some treatments prove infeasible for everyday clinical application, there are also numerous practices that stall due to ineffective dissemination or a lack of proven implementation strategies. These "leaks" in the translation pipeline are perhaps nowhere more noticeable than in hospital-based detection and treatment of substance use disorders. In the US, hospitalized patients with alcohol use disorders receive only a fraction of the recommended care for their condition (McGlynn et al., 2003), while SUDs play a prominent role in costly readmissions and overutilization of hospital services among Medicaid patients (AHRQ, 2014; Neighbors et al., 2013). At the same time, many persons with SUDs are unable or unwilling to seek treatment in specialty programs, but routinely encounter other components of the healthcare system (primary care visits, emergency departments, pharmacies). Thus, effectively identifying and addressing SUDs in general medical settings could help engage these patients, lower healthcare expenditures, and make a

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significant public health impact. This requires that we identify those treatments that might feasibly be delivered outside of specialty addiction treatment programs, and that we develop effective implementation strategies to help bridge this gap in service delivery.

Implementation science explicitly develops and tests interventions (strategies) intended to affect the adoption and sustainment of evidence-based practices and treatments in real world clinical settings. For decades the funding and treatment for SUD has been separated from that for other health conditions, making integration especially challenging (Manderscheid & Kathol, 2014). For the purpose of this article, we define general medical settings to include obstetric, pediatric, and adolescent medicine; primary care practices including family practice and internal medicine; medical services provided through Federally Qualified Health Centers; Veterans Affairs Medical Centers and clinics; as well as settings providing *de facto* primary care for patients who may not otherwise receive it, whether for acute episodes (e.g., emergency departments, trauma centers, urgent care clinics) or for chronic disease management (e.g., HIV clinics). Importantly, these settings do not include specialty addiction treatment or mental health settings.

In recent years, and largely within the context of the Affordable Care Act, Federal agencies across the US Department of Health and Human Services have increasingly been supporting research to understand the process, cost, and outcomes associated with integrating behavioral health, including SUD treatment, into general medical care. For example, the Agency for Healthcare Research and Quality (AHRQ) funds research assessing the effectiveness of services delivered in integrated care settings, including the impact of behavioral health on primary care and health outcomes. Their Academy for Integrating Behavioral Health and Primary Care (www.integrationacademy.ahrq.gov) serves as a resource for ongoing review and synthesis of the results of research on care integration being conducted across government and the private sector (e.g., AHRQ, 2014). The Center for Integrated Health Solutions (www.integration.samhsa.gov), a joint endeavor of the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Health Resources and Services Administration (HRSA), promotes the delivery of integrated primary care and behavioral health services through demonstration projects and a public repository of information on health homes, with a particular focus on safety-net providers. Meanwhile, the Centers for Medicare and Medicaid Services (CMS) has funded two rounds of Healthcare Innovations Awards to develop and test novel payment and service delivery models; these include projects to transform traditional primary care practices into medical homes, and accelerate innovation in service delivery (www.innovation.cms.gov). VHA's Health Services Research and Development (HSR&D) and QUERI programs have for many years funded research to develop and evaluate integrated care models and their implementation (e.g., VHA, 2015a). And the National Institutes of Health (NIH) contribute to this endeavor via support of health services research and implementation science. Indeed, there are concerted efforts across government to promote the implementation of integrated service delivery; in this context, NIH and VHA have been at the forefront in supporting hypothesis-driven research in the pursuit of generalizable knowledge about effective and scalable implementation strategies to achieve these ends.

Within the current policy and financing context, the US healthcare infrastructure continues to evolve, and examples of innovative and successful service integration models have begun to emerge. There is increasingly a need to subject these candidate models to broader testing, and to develop and deploy systematic implementation strategies to take effective service delivery models to scale and sustain them. Implementation science holds the promise for developing effective scale-up strategies that can leverage facilitators and overcome barriers inherent in the complex contextual environments in which services are delivered. Health services and implementation research funded by the NIH and VHA has begun to provide scaffolding for effective scale-up of integrated care models to address the substance use disorder treatment needs of patients in general medical care settings.

1.1. Research on SUD service implementation and integration at NIH

The National Institutes of Health comprises 27 Institutes and Centers, generally organized by focal disease or condition. Funding for extramural grants is accomplished principally through investigator-initiated applications; these applications are solicited via Funding Opportunity Announcements (FOAs), through which NIH program staff describe needs for research in specific topic areas. In 2005, eight of the 27 Institutes – including NIAAA and NIDA – jointly issued the first multi-institute FOA on Dissemination and Implementation (D&I) Research in Health. As is common when nurturing a new subfield, applications were initially assigned special receipt dates during alternating review cycles, and were assigned to ad hoc peer review committees ("special emphasis panels") that evaluated only D&I applications. Interest in this area has since grown to the point that as of 2014, a total of 14 Institutes and Centers were participating in the FOA, and the flow of applications was sufficient to justify a standing Center for Scientific Review study section, convening every review cycle. Summaries of research supported under this FOA have been previously published (Glasgow et al., 2012; Neta et al., 2015; Tinkle, Kimball, Haozous, Shuster, & Meize-Grochowski, 2013).

A 2012 report by the National Advisory Council on Drug Abuse reviewed the NIDA implementation research portfolio to date and made recommendations for future research and programmatic activities (NIDA, 2012). To promote implementation research on topics related to alcohol and drug treatment services, NIAAA and NIDA have incorporated D&I topics into their respective health services research program announcements. The two institutes also share a joint R34 announcement to fund pilot testing of organizational and systems interventions to support implementation trials.

Implementation research in the area of service integration has been a prominent focus of several recent FOAs. In particular, in 2012, NIDA released a Request for Applications (RFA) on the integration of drug abuse prevention and treatment in primary care settings which yielded 7 funded grants. Other major initiatives to support service integration have included release of the NIDAMed suite of tools to support physicians' identification of problem drug use, along with resources to address safe opioid prescribing for primary care patients with chronic pain (NIDA, 2015); NIAAA's release of clinicians' guides to support the screening and identification of patients with problematic alcohol use in primary care (NIAAA, 2007, 2010, 2011); and ongoing efforts to promote the implementation of evidence-based screening and brief intervention protocols to address tobacco use and risky drinking in general medical settings.

1.2. Research on SUD service implementation and integration at VHA

VHA's Health Services Research and Development (HSR&D) service funds investigator-initiated research on diverse aspects of service delivery for hazardous substance use and SUD, including but not limited to quality measurement, comparative effectiveness, variation in access and quality, and developing and testing models of behavioral healthcare integration in diverse settings. Although the landscape of implementation research within VHA is undergoing a rapid realignment, from 1998 until 2015, implementation research has largely been supported via the Quality Enhancement Research Initiative (QUERI). Historically, QUERI has been structured around mostly disease-focused Centers, including the Substance Use Disorder QUERI (SUD QUERI). The QUERI Centers have set national strategic priorities for implementation research in their focus areas, and have served a mentoring and consultative function to investigators developing implementation science proposals to be submitted to a centralized peer-review process. The Centers also directly support small implementation science projects.

The mission of the SUD QUERI is to improve the detection and treatment of Veterans with SUD and hazardous substance use. The main activities are to develop and evaluate strategies to implement evidence-