

Improving Data for Behavioral Health Workforce Planning: Development of a Minimum Data Set



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The behavioral health workforce, which encompasses a broad range of professions providing prevention, treatment, and rehabilitation services for mental health conditions and substance use disorders, is in the midst of what is considered by many to be a workforce crisis. The workforce shortage can be attributed to both insufficient numbers and maldistribution of workers, leaving some communities with no behavioral health providers. In addition, demand for behavioral health services has increased more rapidly as a result of federal legislation over the past decade supporting mental health and substance use parity and by healthcare reform. In order to address workforce capacity issues that impact access to care, the field must engage in extensive planning; however, these efforts are limited by the lack of timely and useable data on the behavioral health workforce.

One method for standardizing data collection efforts is the adoption of a Minimum Data Set. This article describes workforce data limitations, the need for standardizing data collection, and the development of a behavioral health workforce Minimum Data Set intended to address these gaps. The Minimum Data Set includes five categorical data themes to describe worker characteristics: demographics, licensure and certification, education and training, occupation and area of practice, and practice characteristics and settings. Some data sources align with Minimum Data Set themes, although deficiencies in the breadth and quality of data exist. Development of a Minimum Data Set is a foundational step for standardizing the collection of behavioral health workforce data. Key challenges for dissemination and implementation of the Minimum Data Set are also addressed.

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INTRODUCTION

A behavioral health workforce crisis was declared a decade ago by the Annapolis Coalition for Behavioral Health Workforce Development, which released a report summarizing the key human resources challenges for the field. The report stated that “workforce problems have an impact on almost every aspect of prevention and treatment across all sectors of the diverse behavioral health field.”¹ Mental health and substance use disorder services are provided by numerous workers with varied skill levels, educational background, and experience. In general, the workers are both

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too few in number and poorly distributed throughout the country, leaving many communities, predominantly rural, without a trained behavioral health provider.^{2,3}

At the same time, legislative changes over the past decade have increased demand for behavioral health services. Parity legislation, which requires mental health and substance use services to be reimbursed in comparable fashion to physical health services,⁴ along with the expansion of insurance coverage through the Affordable Care Act's inclusion of mental health and substance use disorder as an Essential Health Benefit and the expansion of state Medicaid programs, have dramatically increased the number of covered patients seeking treatment for mental health and substance use conditions.^{5–7} However, gaps in the adequacy and coverage of insurance for behavioral health services persist.^{8–10} Further, increased awareness of, and reduced stigma associated with, behavioral health services has also increased demand.¹¹

The supply of providers as a whole has not kept pace with the demand for services for several reasons, including meager reimbursement for providers.^{12,13} This imbalance has left those responsible for healthcare human resources planning at local, state, and federal levels wondering how many more workers need to be ushered into the behavioral health workforce pipeline and what the ideal mix of workers is to effectively deliver services both independently and in team-based models with primary care and other providers.¹⁴

CHALLENGES TO BEHAVIORAL HEALTH WORKFORCE PLANNING

Workforce planning efforts are hindered by a variety of factors. First, the field lacks comprehensive data that accurately describe the size, composition, and characteristics of the behavioral health workforce, so estimating current and future supply are difficult. Data are often too few or incomplete and workforce studies use varying, and often incompatible methods (e.g., different assumptions, time ranges, and inclusion criteria). A 2013 report from the Congressional Research Service attempted to enumerate selected behavioral health occupations and found that the variability in study methodology and inclusion criteria yielded vastly different workforce estimates. Clinical social workers, for example, numbered anywhere from 115,000 to 245,000 depending on whether data come from the Bureau of Labor Statistics (BLS) or the Association of Social Work Boards.¹⁵ Researchers and health workforce planners must be cognizant of study methods, including the stated occupational definition, when using workforce supply estimates.

Second, determining who should be included in the behavioral health workforce is a continuing

methodologic barrier. No consensus definition exists that describes the types of occupations and volunteer positions that contribute to behavioral health service delivery. This creates challenges for collecting data in a reliable and reproducible manner. The Health Resources and Services Administration (HRSA) and the Substance Abuse and Mental Health Services Administration (SAMHSA) identify different occupations that comprise the behavioral health workforce, in part because the definitions are used for different purposes. For example, HRSA focuses on the core behavioral health professions of psychiatrists, clinical psychologists, marriage and family therapists, clinical social workers, and psychiatric mental health nurses to identify Health Professional Shortage Areas,¹⁶ whereas SAMHSA considers a broader group of workers as part of their behavioral health workforce initiatives,¹⁷ including addiction counselors, psychiatric aides and technicians, peer support workers, and case managers, among others. Primary care providers also play a role in workforce capacity, either directly providing behavioral health services or screening and referring patients to behavioral health specialists.¹⁸ Collectively, this broad and understudied workforce plays a critical role in addressing many of the nation's key health priorities, such as management of serious mental illness and the opioid epidemic.^{19,20}

Third, not all behavioral health professions have the same data collection challenges. The core behavioral health professions, such as psychiatrists, advanced practice psychiatric nurses, and social workers, tend to benefit from more extensive workforce data collection efforts, including membership renewal data from professional organizations, BLS data, and national sample surveys fielded by government agencies, professional organizations, and university researchers. Few non-licensed behavioral health occupations, which comprise a large and growing portion of the behavioral health workforce, have Standard Occupation Classifications established by the U.S. Department of Labor; thus, they are largely unidentifiable in BLS Occupation Employment Statistics, American Community Survey, and similar national databases.^{21–25}

Fourth, although there is general recognition that the field is facing shortage, there is disagreement about discipline-specific shortage estimates. For example, HRSA released a report in late 2016 that projected a workforce shortage of approximately 250,000 workers across classifications of counselors, psychologists, social workers, psychiatrists, marriage and family therapists, nurse practitioners, and physician assistants.¹³ The statistical model estimated the shortfall of psychologists, in particular, to be approximately 57,000 workers by 2025. The American Psychological Association, however, conducted their own assessment of worker supply and is projecting a shortage closer to 5,000, in part because

their definition of a behavioral health psychologist is narrower than the definition used by the HRSA study.²⁶ This discrepancy is by no means unique and reflects the difficulties in collecting and projecting accurate supply data to address workforce capacity issues.

The focus of this article is to articulate how improving uniform definitions of the workforce along with improvements in data collection can help address many, though not all, of these challenges.

METHODS FOR STANDARDIZING WORKFORCE DATA COLLECTION: MINIMUM DATA SETS

Although it cannot address all limitations associated with behavioral health workforce data, the use of a Minimum Data Set (MDS) to collect workforce supply information has gained support across different disciplines and government agencies. An MDS is intended to collect the minimum amount of information needed about workforce composition and characteristics to inform supply and demand modeling. Under guidance from HRSA, several health professions have developed a discipline-specific MDS to facilitate the establishment of databases to collect common elements that can address questions related to worker supply, practice setting, and care provision.^{27,28} Physicians, nurses, pharmacists, physician assistants, physical therapists, occupational therapists, and dental hygienists all have an MDS, as do psychologists, substance abuse/addiction counselors, and licensed professional counselors. Nursing, in particular, has found success with MDS implementation, as 30 state nursing workforce centers currently use an MDS to collect supply data.²⁹ Similarly, SAMHSA, and earlier the National Institute of Mental Health, have a long history of supporting the development of common data elements through the Mental Health Statistics Improvement Program and the Decision Support 2000+ information system.²⁸ Adoption of an MDS within behavioral health to help unify the data elements collected across professions may be one way to address the variability in data used to project supply and demand estimates.

DEVELOPMENT OF A WORKFORCE MINIMUM DATA SET FOR BEHAVIORAL HEALTH

With support from HRSA and SAMHSA, the Behavioral Health Workforce Research Center (BHWRC) at the University of Michigan School of Public Health developed an MDS to inform workforce planning efforts for the broader behavioral health workforce.³⁰ One of the

challenges of workforce planning efforts is determining which professions comprise the behavioral health workforce and how to count them. This is because the field is a mixture of multiple professional, paraprofessional, and peer support groups, each with its own norms, standards, and training. The BHWRC, along with its Consortium partners, defined the behavioral health workforce as all workers involved in treatment or prevention of mental health conditions or substance use disorders or both. This definition includes licensed and non-licensed workers, peer support workers, and volunteers. It also includes primary care workers who may be providing behavioral health services.²⁵ The definition does not include workers in behavioral health service organizations who are not directly contributing to the provision of mental health or substance use disorder treatment or prevention services, such as clerical staff, business and human resources personnel, or maintenance staff, and it does not currently capture other professionals who are often not formally considered part of the behavioral health workforce but may provide relevant services (e.g., teachers, law enforcement personnel).

The categorical themes of the MDS are necessarily broad. Behavioral health workers can be defined along several different dimensions: the specific profession or occupation (e.g., psychiatrist); the work setting (e.g., Community Mental Health Center); the worker's education or training background (e.g., Master of Social Work degree); and the worker's job tasks or function, which may be defined by scope of practice.^{31,32} To generate an accurate estimate of supply, these characteristics should all be considered concurrently. The behavioral health workforce MDS incorporates all of these worker characteristics.

To inform the development of the MDS, empirical and gray literature related to behavioral health human resources was gathered. Specifically, data elements from the following health profession MDS instruments were reviewed and incorporated into the behavioral health workforce MDS: physicians, nurses, licensed professional counselors, psychologists, and substance use/addiction counselors.²⁷ Next, a comprehensive behavioral health workforce taxonomy of terms and occupational categories and worker characteristics was developed by the BHWRC and reviewed by partners represented on the Center's Consortium.³⁰ The draft MDS was developed using the taxonomy categories, which went through several rounds of revision.

To validate the content of the MDS, qualitative feedback was collected through key informant interviews and focus groups with approximately a dozen workforce subject matter experts and practitioners in the field, including representatives from county behavioral health agencies, as well as other national professional

organizations; the MDS data themes, elements, and question bank were revised and updated accordingly. Development of an MDS is an iterative process, with data elements being customized and refined for each behavioral health discipline. However, a core set of MDS themes emerged from the literature review and qualitative feedback; these themes are incorporated as the foundation of the MDS. In 2017, the use of MDS data elements in a survey instrument was pilot tested with nearly 2,000 behavioral health workers representing various disciplines within the workforce.

MINIMUM DATA SET DATA ELEMENTS

Following a similar structure to MDS developed for other health professions,^{33–37} the behavioral health workforce MDS structure includes five categorical data themes with

Table 1. Summary of Minimum Data Set Data Elements for Behavioral Health Workers

MDS theme	Data elements
Demographics	<ul style="list-style-type: none"> • Name • Age • Race/ethnicity • Sex and gender • Sexual orientation • Place of birth and residence • Military/veteran status • Language skills
Licensure and certification	<ul style="list-style-type: none"> • Type of job-related licenses held • Type of job-related certificates held • National Provider Identification number • State identification/registration number
Education and training	<ul style="list-style-type: none"> • Degrees obtained and years of completion • Field of study/specialty • Completion of other educational programs (e.g., internships) • Current enrollment in degree program
Occupation and area of practice	<ul style="list-style-type: none"> • Primary occupation • Area of practice
Practice characteristics and settings	<ul style="list-style-type: none"> • Employment status • Number of current employment positions • Number of hours and weeks worked per year • Employment arrangement • Use of telehealth • Employer practice setting • Hours per week spent on activities (e.g., clinical supervision, diagnosis) • Clinical or patient care provision • Employment plans

MDS, Minimum Data Set.

data elements to describe worker characteristics: demographics, licensure and certification, education and training, occupation and area of practice, and practice characteristics and settings (Table 1). It is intended to collect information directly from behavioral health workers. A set of questions based on the MDS is presented in the Appendix (available online). The MDS is modular; it is not intended to be used in its entirety for one discipline, as some data elements will not apply to some categories of workers. Further, and importantly, the MDS is not intended to serve as a standalone survey instrument; rather, it provides a suggested question bank from which survey researchers, licensing boards, and others collecting behavioral health workforce data may extract data elements specific to their population of interest to ensure the field is using consistent, standardized metrics when addressing workforce size, composition, and characteristics. The MDS will be most useful when tailored to represent workforce characteristics of each behavioral health discipline.

ALIGNING EXISTING DATA SOURCES WITH MINIMUM DATA SET ELEMENTS

In addition to providing a framework for workforce data collection, the MDS data elements can also be used for secondary data analyses. Variables in existing workforce data sets can be aligned with the MDS when applicable. The BHWRC engaged in a systematic review of publicly available behavioral health workforce data to determine the extent to which data themes proposed by the MDS were represented in existing data sets. The review yielded 29 national data sources, which tend to be administered by four types of organizations: federal government agencies, including the Office of Personnel Management Federal Employment Statistics, the Centers for Disease Control and Prevention, and the BLS; discipline-specific accrediting bodies (e.g., American Nurses Credentialing Center); professional, discipline-specific national organizations (e.g., American Association for Marriage and Family Therapy); and for-profit entities (e.g., National Center for Analysis of Healthcare Data). State-based sources are generally produced by state government agencies, health systems, discipline-specific organizations, accrediting bodies, and non-profit organizations (Appendix Table 1, available online).³⁰

Comparison of the main data themes collected by the MDS—demographics, licensure and certification, education and training background, occupational category, area of practice, and employment setting—with variables currently collected by 27 national data sources that could be accessed for analysis uncover substantial coverage gaps in current data collection efforts (Table 2). This

Table 2. Summary of National Behavioral Health Workforce Data Source Findings

MDS data element	Data element examples	Number of national data sources (n=27)
Enumeration	Total count of provider type	25
Demographics	Gender, race, ethnicity	20
Education	Highest degree attained	18
Training	Residency program	9
Licensure	Type of nursing degree	11
Certification	Peer support certification	7
Occupational category	Psychiatrist, counselor, therapist, social worker	17
Area of practice	Social work specialty area	9
Employment setting	Non-profit hospital, group practice	20

MDS, Minimum Data Set.

finding provides further justification for adoption of a standardized data collection system, as no combination of data sources provides adequate data across the field of behavioral health to construct a national behavioral health workforce monitoring system using the MDS.

The BHWRC's assessment of existing national data sources also highlighted concerns about the quality of existing behavioral health workforce data. Non-comprehensive occupation codes, self-reported data, changes in occupational classifications and methodology, and unclear weighting estimates raised concerns over the validity and reliability of existing data sources and present serious limitations to workforce staffing and projections. Perhaps in part because of the fragmented nature of the behavioral health workforce, many of the existing data are discipline-specific; no national data source currently collects information on the entire behavioral health workforce.

CONCLUSIONS

The MDS represents a collection of data elements that can improve efforts to model and estimate current and future worker supply and demand to inform behavioral health workforce planning efforts on a national, regional, and state level, as well as assess the comprehensiveness of existing workforce data sets. National data sources may be useful in providing some information on workforce size and composition, but a systematic mechanism for monitoring the workforce is still needed for evidence-based workforce planning decisions. In addition, some important data elements about the workforce may be best collected at the organizational level from employers, rather than from individual workers. These include the total number of behavioral health workers, types of populations served by the organization, and payment arrangements for service provision.

Development of the behavioral health workforce MDS is a foundational step in standardizing collection of workforce data, yet it is important to acknowledge that the MDS is no panacea to all behavioral health workforce difficulties as definitional issues and data collection barriers persist in the field. This is partly because of the fact that the field encompasses four distinct sectors: specialty, medical, social services, and self-help,³⁸ which contributes to the challenges of structuring a definition. Developing an instrument that captures accurate and standardized data across the workforce must be followed by additional resources and efforts to be useful to the field. Implementation in state and national data collection procedures is the critical subsequent step. Determining how to create a unified system for monitoring behavioral health workforce supply using state and national data is among the future priorities for the BHWRC. In general, resource and statutory barriers must be overcome before wide adoption of the MDS is possible, particularly at the state level. State licensing boards could potentially be an important user of the MDS, but often lack the human resources needed to engage in this type of data collection; state regulations also may prevent licensing boards from collecting additional information from workers. For example, workforce MDS implementation challenges are well documented in nursing. Despite support for MDS adoption, nearly half of states do not yet use a workforce MDS, and those that do cite data collection limitations.³⁹ Widespread MDS implementation may require cultivation of partnerships and development of new policies. State and federal government agencies and policy makers can advocate for the adoption of standards in data collection for human resources planning, as well as provide incentives for implementing ongoing data collection. Efforts to adopt standardized data elements can substantively benefit the field by better informing policy makers and health workforce planners about staffing patterns and

workforce needs, though it is important to recognize the lack of personnel dedicated to behavioral health workforce planning may limit a state's ability to successfully address critical workforce issues.

The behavioral health workforce crisis reported by the Annapolis Coalition has arguably worsened over the past decade. Collective action must be taken to strengthen workforce capacity in order to effectively address the growing demand for mental health and substance use disorder services across the country. The field of behavioral health is urged to adopt a workforce MDS as a first step toward generating standardized data that can better inform workforce planning efforts to improve access to and quality of care for those in need.

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