Implementing Psychological Health Data: How the Psychological Health Center of Excellence (PHCoE) Translates Data Into Research, Policy, and Practice

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Introduction

The Psychological Health Center of Excellence (PHCoE) is part of the DHA’s J-9 or Research and Development Directorate with a mission to “improve the lives of our nation’s service members, veterans, and their families by advancing excellence in psychological health care, readiness, and prevention of psychological health disorders” (PHCoE, 2018). One of the major areas of focus in executing this mission is providing program evaluation, monitoring, and metric development services and support.

In the summer of 2017, former assistant secretary of Defense for Health Affairs, Dr. Jonathan Woodson announced that “operational readiness and medical readiness will take on new meaning and will be driven in different ways by data, digitalization of health care, integration of databases, and interdisciplinary research” (MHS Communications Office, 2017a). At last year’s MHSRS conference, Dr. Sean Biggert staff told participants that “what we’re focused on ultimately at the end of the day is to make sure we have in place the ability to transition material products [and] knowledge products into clinical practice” (MHS Communications Office, 2017b).

As busy clinicians are asked to spend time inputting data into medical records, the technology to work with this big clinical data continues to advance, opening up increasing opportunities to use administrative data generated in the Military Health System (MHS) to improve practice, policy, and health services research. However, with these expanding opportunities comes the pressure to be responsible stewards of government resources, ethically and efficiently conceptualizing, analyzing, and disseminating useful findings to decision-makers.

Big Data at PHCoE

The Psychological Health Center of Excellence uses administrative data (or “big data”) generated in the course of medical encounters, which is used for the primary purpose of medical billing, to provide monitoring support to program managers, to identify trends and facilitate evidence-based decision making, and to answer questions from policymakers and Service-level leaders. By using this data source, PHCoE is able to provide stakeholders with information about psychological health and care delivery in the MHS rapidly and with minimal resources required. This presentation will detail several examples of the ways in which PHCoE has used administrative data in order to perform these key functions and will demonstrate ways this data can be used in program monitoring, evaluation, and surveillance.

Clinical Surveillance & Medical Intelligence

- Provided to the public to highlight the prevalence of mental health conditions over time in the MHS as well as utilization of care and geographic patterns in psychological health care and conditions
- Available at the PHCoE website: http://www.pdhealth.mil/research-analytics/psychological-health-numbers

Quarterly Monitoring of Primary Care Behavioral Health Program

- Provided to DoD and component Service Leads, clinic leadership, and providers to assist in staff and program management for program that treats more than 30,000 patients each quarter
- Specific program decisions made using this data include: staff and personnel management and training, monitoring of the population served, and identification of opportunities to better leverage psychological health providers in primary care

Program Monitoring

- Period prevalence graph for Active Duty Service Members with any mental health condition, over time, by Service, and by component

Program & Policy Evaluation

- Period prevalence map shows the geographic distribution of any mental health condition

Decision Support

- Case Mix Variables as Predictors of Productivity
- Provided to Primary Care Behavioral Health program Service Leads as a response to questions about how to assign internal health behavioral health consultants (IBHCs; social workers and psychologists) to maximize productivity
- Analysis revealed that the number of patients seeking treatment for conditions IBHCs specialize in treating, such as sleep, were the best predictors of IBHC productivity

Cost of Sexual Assault Care

- Provided to DoD Congress following a policy change or when considering a potential policy change, in this case, for policy that would allow Guard and Reserve Service Members to receive care in military treatment facilities following military sexual trauma or assault
- Determined the cost of care for Active Duty Service Members currently receiving such care in order to provide an estimate of the cost of the proposed policy

Conclusion

The volume of data generated through medical encounters has grown in recent years, providing a unique opportunity to utilize population-level information in a variety of new ways in a cost-effective manner. Engaging stakeholders throughout the analytic process increases scientific literacy and allows for more effective collaboration in order to improve psychological health care in the MHS. The examples detailed in this presentation illustrate the impact that big data can have on program development, policy decisions, and care delivery. Participants who gain a better understanding of what has been done can be better collaborators themselves with greater command of the resources available to them.

References