Title:
Conceptual Framework for Developing Guideline-Based Performance Measures to Evaluate Evidence-Based Practice and Enhance Data Quality
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Session Title:
Enhancing Data Quality Using Data Management Strategies, Performance Measures, and Technology to Support Evidence-Based Practice

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Data quality, Evidence-based practice and Performance measures

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Abstract Summary:
This presentation describes a conceptual framework for developing guideline-based performance measures. Through key alignments made between the development of guidelines and guideline-based performance measures, enhancements to integrating data quality were made: demonstrating the impact and value of evidence-based guideline implementation efforts.
Abstract Text:

**Purpose:** Guideline-based performance measures (GBPM) are widely used internationally to support quality improvement and quality assurance initiatives (Nothacker et al., 2016). GBPM are performance measures that are fully aligned with evidence-based practice guidelines (Grinspun, Lloyd, Xiao, & Bajnok, 2015). As healthcare organizations transform care and improve outcomes, high-quality data is critical to demonstrate the impact and value of evidence-based guideline implementation efforts (IOM, 2013; Kahn et al., 2015). Data quality begins with the source, making it paramount to identify and mitigate the risks for collecting flawed data (Strome, 2013). The purpose of this presentation is to describe a conceptual framework for developing GBPM and demonstrate how each of the six steps in the framework can be aligned with guideline development, to enhance data quality.

**Methods:** The conceptual framework for GBPM development was established based on a systematic review of 48 articles and an environmental scan of processes for performance measures development by leading national and international organizations. The resulting framework is comprised of six steps: guideline selection, extraction of recommendations, indicator selection and development, practice test and validation, implementation, and data quality assessment and evaluation. In the first step of the framework, which begins with guideline selection, GBPM are developed for guidelines that are focused on health system priorities (Grdisa et al., 2018). A preliminary scan of external data repositories is conducted to identify existing performance measures for the guideline topic. The results of this review are disseminated for stakeholder feedback, ensuring reduced reporting burden and filling in gaps for measurement. Through this process, the research questions are refined, further informing the development of GBPM. The second step is the extraction of
recommendations to identify potential measures for development. Thirdly, GBPM are
selected and developed by aligning with external data repositories and health
information data libraries. Several criteria are considered, such as the strength of
supporting evidence, feasibility to measure and monitor, and the potential to impact on
patient/client outcomes. In this process, integration of guideline development and
implementation, technology (order sets) and evaluation are considered. In the fourth
step, GBPM are internally validated through face and content validity, as well as
externally validated based on the criteria of relevance, feasibility, readability and
usability. National and international organizations participate in the external validation
process to better understand the implications of GBPM in a global context. A wide range
of external perspectives are incorporated, including an expert panel, external
stakeholders, policy members and organizations involved in quality improvement. The
fifth step of the conceptual framework is implementation, where GBPM and the
guideline are published concurrently. Organizations begin their data collection process
to evaluate evidence-based practice, and provide ongoing feedback regarding validity,
feasibility of data collection, and recommendations for any future refinements. Lastly,
step six of the framework focuses on conducting the data quality assessment and
evaluation to create a continuous cycle.

**Results:** Based on the data collected from 2012 to 2017, the GBPM were categorized
as high, moderate and low-utilization. During the GBPM refinement process, the high
and moderately utilized GBPM were further analyzed based on alignment with external
data repositories. The under-utilized GBPM were monitored based on feasibility and
relevance. Based on the analyses, GBPM were refined or retired periodically. In
addition, according to the five year guideline life cycle, the GBPM were revised or
retired by monitoring utilization.

**Conclusion:** The development of GBPM within a conceptual framework supports
evaluation of evidence-based practice and enhances data quality.