Measurement based care (MBC) refers to the systematic collection of data to monitor treatment progress, assess outcomes, and guide treatment decisions, from initial screening to completion of care. The benefits of MBC, from initial screening to monitoring of outcomes longitudinally, are widely noted.

This standardization and widespread implementation of MBC is a crucial next step for integrated primary care (IPC). Providing a flexible, evidence-based framework of care will allow IPC providers within the PCMH to monitor progress and outcomes, general functioning, and quality of life for their patients, while providing relevant information to multiple levels of stakeholders, including the patient, other treating providers, community partners, and facility leadership (Scott & Lewis, 2015; Trivedi et al., 2007). IPC administrators are encouraged to create MBC systems that can provide feedback at:

1. The patient-level, to track treatment response and inform clinical decision-making (Lambert et al., 2003; Trivedi et al., 2007);
2. The panel-level, to support coordinated, high quality care by interprofessional teams (Chaney, Bonner, Vivell, Cohen, Young, & Rubenstein, 2011; Liu et al., 2003);
3. The population level, to guide development of decision-support tools, quality improvement efforts and for administrative review and decision-making (Greenhalgh, 2009).

Below we offer step-by-step guidance for developing and implementing screening and MBC processes.

**Step 1: Identify Target Conditions with Stakeholder Input**

In order for administrators of IPC programs to identify a successful structure for screening and MBC, they must begin with identifying the precise concerns and outcomes, which are important to the multiple stakeholders in the clinic (Robinson & Reiter, 2007). Integrated care administrators would benefit from considering the input from all relevant stakeholders in this process, including but not limited to all providers within the clinic (e.g., physicians, physician assistants, nurse practitioners, RNs, LPNs, clinical pharmacists, social workers, dietitians, etc.), administrative support staff, primary care leadership, mental health leadership, patients, specialty and general mental health providers, and community partners. Creation of an initial needs assessment may assist administrators in identifying the specific conditions to be targeted. Beginning with a needs assessment of each of these stakeholders will be a critical piece for the development of buy-in across all levels of the system.
Step 2: Identify the Best Measures Validated for Your Setting

After deciding about the disorders for which the clinic wishes to screen and the disorders to be targeted in treatment by the Integrated Primary Care team, managers should review the literature to identify the specific instruments validated for screening and outcomes measurement in their setting. Considerations in selecting screening tools/outcome measures include, but are not limited to:

- Demonstrated validity and reliability for measuring symptoms of the disorder of interest, particularly within a primary care setting
- Diagnostic efficiency (e.g., the measure's sensitivity, specificity, brevity)
- Ease of scoring and interpretation
- Startup and maintenance costs (e.g., financial commitment to purchase measure/licensing fees, time required to administer, time required to train personnel)

Step 3: Create Methods to Improve Ease of Administration of Instruments and Data Extraction

The first step to ease the administration burden for individuals involved is to provide training in proper administration and use of the instruments (Robinson & Reiter, 2007). Fidelity to administration guidelines is critical for accurate data to be obtained. Some clinics have transitioned from verbal or paper administration of instruments to electronic methods of administration (e.g., tablet administration, kiosk administration, computer-based administration), which has decreased the time burden on providers. When implementing technology for measurement administration, it will be critical for staff members to be fully trained in its use so that they can answer patients’ questions.

When MBC is implemented in a system with an electronic medical record (EMR), it will be helpful to create templates for data entry if instruments are administered by paper and pencil. Templates can be designed for entry of responses to each instrument and for scoring of the instruments. Data can then be available for extraction from the EMR for utilization with individual patient feedback or for summary of panels of patient outcomes for provider and administrative review. Additionally for MBC, it will be helpful to build into the record electronic reminders that will alert providers when the repeat administration is due for a particular patient. Collaboration with IT departments and health record experts can be invaluable to make products both patient and administrator friendly for feedback review.

Step 4: Establish and Implement Standard Operating Procedures (SOPs) for Screening and Measurement-Based Care

Clinic administrators would benefit from creating SOPs to guide administration of screening and repeated measures within their clinics. SOPs should also clearly outline clinical decision points based on clinical practice guidelines for further treatment (e.g., Oslin et al., 2006; Trivedi et al., 2007). SOPs for the clinic should include the following:
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1. Training requirements for those administering the measures,

2. (Timelines for initial screening and repeated measures administration,

3. Process for administration within the normal workflow (e.g., when in the clinic appointment it will occur, what parties will be involved, and where paper instruments will be stored or required equipment will be located),

4. Reference evidence-based guidelines for all critical decision-making points of care,

5. Process for scoring of instrument and data entry (if not automated),

6. Requirements for managing positive screening results,

7. Utilization of feedback of results with the individual patient both for initial scores well as for tracking outcomes over time to guide evidence-based decision making related to treatment plans,

8. Timelines and reporting requirements for panel outcomes for stakeholders (e.g., regular reviews of outcomes with staff members, clinic administrators, and upper management)

9. Methods for monitoring provider/staff compliance with guidelines of the SOP (e.g., chart reviews, daily monitors of screening completion, etc).

Step 5: Engage in Continuous Quality Improvement Processes to Evaluate Program Implementation

A large benefit of implementation of MBC is the ability to aggregate program evaluation data to assess outcomes for a population of patients as well as for individual patients. When creating new interventions within an integrated primary care setting, it is particularly useful to evaluate whether programs are effective on a larger scale. For example, a summary from the Behavioral Health Lab allows for extraction of data for a group of patients enrolled in care management for depression within a specific period of time, allowing the ability to evaluate the effectiveness of quality improvement efforts.

In creating aggregate data summaries for program evaluation, it will be helpful to allow for extraction of data on key patient variables of interest, for example:

- Data that can assist administrators in identifying unmet care needs (e.g. positive screen rates for various mental health conditions)
- Data that can inform stakeholders about patient outcome disparities (e.g., sex, race/ethnicity)
- Data that can help define benchmarks for treatment (e.g. rates of remission by treatment, indictors of stepped-up or stepped-down care).
References


