Implementing Evidence-Based Quality Improvement and Patient Kiosks: Improving Employment Outcomes

Supported by VA HSR&D QUERI and NIMH

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EQUIP Investigators

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How to Improve Specialty Mental Health Care?

◆ Evidence-based practices often not used
   – routine outcomes much worse than expected
◆ Efforts to improve care have had limited success
◆ VA has improved care
   – a national leader for many indicators
   – but mental health has lagged
◆ Challenges
   – clinicians: often lack key competencies
   – medical records: missing data on patient preferences, needs, outcomes, and use of psychosocial services
   – policy makers: unable to evaluate the value of care
EQUIP:
Research – Operations Partnership

- Implement improved care for schizophrenia
  - 15 month clinic-level controlled trial
  - 4 VA networks (VISNs): each with 1 intervention and 1 control site
- Networks chose care targets to improve
  - competitive employment & weight
- Implementation strategies
  - implementation science, formative evaluation
  - Evidence-Based Quality Improvement (EBQI)
  - EBQI made possible with patient-facing kiosks
Returning Patients to Competitive Employment

- 90% of individuals with schizophrenia are unemployed
- Increasing employment improves patient outcomes and reduces costs
- Supported Employment (SE) is an evidence-based practice
  - found in national treatment guidelines
  - more than 15 Randomized Controlled Trials
  - employment is 59% in SE vs. 19% in usual care
- But is rarely used
  - “[Supported Employment] barely exists.”
  - “There’s also the Supported Employment program and that’s for people that can actually already work in the community off the bat.”
Design

- Clustered, clinic-level controlled trial
- Enrollment
  - 4 VA networks, 8 clinics
  - 171 staff (clinicians & administrators)
  - 801 patients
- Evaluation of both effectiveness and implementation
  - evaluate the effect (relative to usual care) of implementation on: provider competency, appropriate service use, and patient outcomes
  - evaluate processes of and variations in care model implementation and effectiveness
## EQUIP Team

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- Eran Chemerinski, MD (PI: Bronx)
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  - Helen Rasmussen, PhD

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  - Christy Gamez-Galka, PhD

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  - Wendell Jones, MD
  - Staley Justice, MSW
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  - Kirk McNagny, MD
  - Larry Albers, MD
  - David Franklin, PsyD, MPH
  - Stacey Maruska, LCSW

### Los Angeles MIRECC (Coordinating Site)
- Alexander S. Young, MD, MSHS (PI)
- Jennifer Pope, BS
- Patricia Parkerton, PhD
- Youlim Choi
- Amy N. Cohen, PhD (co-PI)
- Alison Hamilton, PhD, MPH
  - Stone Shih
  - Paul Jung
Implementation Tools & Strategies: Evidence-Based Quality Improvement (EBQI)

- Leadership support
- Clinical champion
- Quality manager
- QI Informatics support
- Provider/patient education
- Performance feedback

“infrastructure”
“priority-setting”
Routine Inquiry: Desire to Work

Patient Assessment System

- Audio, computer assisted self-interviewing
- Kiosk in waiting room for patients’ use at every visit
- Produces educational report for the patient
PAS Implementation into Workflow

Start

Patient checks in with clerk

Clerk guides patient to PAS kiosk; patient completes PAS

PAS report prints

Patient & clinician use the report

Patient brings report with them to the visit
Patient Assessment System (PAS)

- results very similar to in-person assessment
- well accepted by patients
- easy to use
- patients prefer the computer
WORKING FOR PAY
You have reported that you are not working but might like to.

WHAT YOU CAN DO
You should discuss with your doctor a referral to a new VA program that helps people find and keep jobs.

YOUR WEIGHT
Your Body Mass Index (BMI) is 35.9. That means, for your height, you are overweight. Medications you are taking for your illness could be making this worse. It is important that you take prescribed medications.

WHAT YOU CAN DO
- Talk with your doctor about switching to a medication that does not cause weight gain.
- Talk to your doctor about a referral to your local wellness program. That program can help you lower your BMI by helping you to eat a balanced diet and get enough exercise.

How you are doing with......

<table>
<thead>
<tr>
<th>Weight (in Pounds)</th>
<th>Difficulty with Depression/Daily Functioning (How much in the past week?)</th>
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<tbody>
<tr>
<td>Weight</td>
<td>Extreme difficulty</td>
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<tr>
<td>Ideal weight</td>
<td>4</td>
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<tr>
<td>2/25/2009 Today</td>
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<table>
<thead>
<tr>
<th>Problems with Psychosis (How often in the past week?)</th>
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<td>Always</td>
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<table>
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<tr>
<th>Problems with Drugs or Alcohol (How often in the past week?)</th>
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<td>4</td>
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<tr>
<td>2/25/2008 Today</td>
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What you can do
You should discuss with your doctor a referral to a new VA program that helps people find and keep jobs.
# Reports for Clinicians and Managers

## Intervention Status

<table>
<thead>
<tr>
<th>Date</th>
<th>VISN</th>
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<tbody>
<tr>
<td>1/30/2009</td>
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<td></td>
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## Supported Employment (SE)

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<thead>
<tr>
<th>Description</th>
<th>Number of Patients</th>
<th>%</th>
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<tbody>
<tr>
<td>Possible or definite interest on the PAS</td>
<td>53</td>
<td></td>
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<tr>
<td>Interest when discussed</td>
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<tr>
<td>Referred to SE</td>
<td>43</td>
<td>81%</td>
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<tr>
<td>Seen by SE</td>
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<td>4%</td>
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## Benchmark Status

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## Patients seen by SE

<table>
<thead>
<tr>
<th>Patients who want to work</th>
<th>%</th>
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<tr>
<td>Other Site</td>
<td>22</td>
</tr>
<tr>
<td>Other Site</td>
<td>19</td>
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<tr>
<td>Other Site</td>
<td>97</td>
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<tr>
<td>YOUR SITE</td>
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## Routine Monitoring for Care Managers

### Caseload Tracking Report

**Report Created on:** Wednesday, October 22, 2008, 10:20AM

**Active Patient Report for:** Amalia Bowman

<table>
<thead>
<tr>
<th>SSN</th>
<th>Name</th>
<th>Case Manager</th>
<th>Psychiatrist</th>
<th># of Care Plans</th>
<th>Most Recent Care Plan</th>
<th>Most Recent PAS</th>
<th>Date</th>
<th>Weight Issue</th>
<th>Work Issue</th>
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Evaluation Aims

- Evaluate the effect of intervention on
  - provider competency, treatment appropriateness, patient outcomes, service utilization
  - patient interviews and service use data at 0 and 12 months

- Using mixed methods, evaluate processes of and variations in care model implementation and effectiveness to strengthen implementation and to:
  - assess barriers and facilitators to implementation
  - understand how strategies and tools affect implementation
  - analyze the impact of individual care model components on treatment appropriateness
Conceptual Framework: Simpson Transfer Model

- **Stages of organizational change**
- **Validated survey measures** for each stage

**4 Action steps:**
- **Exposure**: Introduction and training
- **Adoption**: Intention to try the care model through a program leadership decision and subsequent support
- **Implementation**: Exploratory use of the care model
- **Practice**: Routine use of the care model
Formative & Process Methods

- Diagnostic evaluation
  - structure of care varied across sites
  - availability & quality of care varied across sites

- Process
  - characterized provider competencies, organizational readiness, barriers, facilitators
  - survey providers & managers at 0 and 12 months
  - interview providers & managers at 0, 6, and 12 months
  - monitor use of informatics
  - logs and minutes of implementation team meetings
  - field notes from local QI teams
Tailoring of Implementation Based on Readiness

◆ Sites A and B: more ready to change
  – no specific tailoring

◆ Site C: less ready to change
  – needs (low): heighten awareness of gaps in care; use clinical champions and educational programs
  – mission (moderate but lowest of all clinics): study staffing kept consistent; consistency of message
  – autonomy (moderate but lowest of all clinics): let clinicians help determine how to implement the care targets
Results: Summative

◆ Employment
  – at baseline, 85% of patients unemployed
    » 53% want paid employment
    » 6% receive Supported Employment
  – compared to control, implementation site patients were 2.2 times more likely to receive services (95% CI 1.1 - 4.3)
  – at intervention sites, competitive employment increased from 12% to 15%
    » the one site with good fidelity to SE significantly increased employment (p=.004)
Results: Process

- Clinician competencies
  - variable, often low, regarding employment services

- Organization
  - strong support
  - collaboration between services was difficult (nutrition, primary care wellness programs, specialty mental health)

- Managers used data to reorganize care
  - hired another Supported Employment specialist
  - trained clinical staff to provide services
  - discharged patients who were not succeeding, or not appropriate
Conclusions

- Successful research-operations partnership allowed for implementation to match VA goals, be tailored to local context, and encourage utilization
- Patient-facing kiosks made EBQI possible
- Implementation strategies and tools increased use of Supported Employment
- Formative evaluation strengthened implementation
- Process evaluation informed results


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