Performance Measures:

Getting Them Right, from Development to Incorporation in Practice and EHR’s

Frank A Ghinassi, PhD, ABPP
President and CEO
Rutgers University Behavioral Health Care
Professor, Rutgers Graduate School of Applied and Professional Psychology
Adjunct Professor of Psychiatry, Rutgers Robert Wood Johnson Medical School
Adjunct Associate Professor of Psychiatry, University of Pittsburgh School of Medicine
Turns out, it IS rocket science.

“It’s time we face reality, my friends. ... We’re not exactly rocket scientists.”
How do we define quality and the commitment to continuous performance measurement and improvement?

What have we come to expect from the individuals and the organizations who embody, measure, implement and deliver on this commitment?
Evidence and Conclusions in Psychiatric Research

• Bilsker, 1995

• Competent psychiatric/psychological practice must be based on both:
  – intuitive clinical understanding
  – utilization of scientific knowledge

• Appraisal of empirical research:
  – adequacy of methodology
  – logical basis of conclusions drawn from research data
Evidence and Conclusions in Psychiatric Research

- Bilsker, 1995

Appropriate design for a research study depends upon the specific hypothesis under test:
  - randomized control trial
  - efficacy studies
  - effectiveness studies
  - qualitative observer studies
  - patient perceptions of care
Structure

- Norquist, in IsHak, Burt and Sederer, 2002
- Most efforts of assessing quality of healthcare are based on a model outlined by Avedis Donabedian in which he identifies three domains of quality:
  - Structure
  - Process
  - Outcome
Delivery of Services

• Norquist, in IsHak, Burt and Sederer, 2002
• Concerns about healthcare delivery include:
  • Under-use of appropriate care
  • Over-use of health services that have greater risk than benefit
  • Misuse of health services
  • Effect of socioeconomic inequalities on both the delivery of care and the ability to utilize it
Priorities

• Norquist, in IsHak, Burt and Sederer, 2002
• Consumers, providers, insurers, employers, policy makers and government agencies do not all focus on the same outcome content...nor do they necessarily have the same intentions and/or goals
• Many current measures are not based on scientific evidence
• Many outcomes are outside the direct and/or indirect control of the healthcare system
Priorities

• Norquist, in IsHak, Burt and Sederer, 2002
  – Outcome interests:
    • consumers look at recovery, empowerment and continuity of care across mental health, physical health and substance abuse
    • employers look to productivity, injuries, errors and days of missed work
    • health plans look at clinical indicators, satisfaction and expenditures
    • providers look at clinical status, life expectancy, and satisfaction
    • policy makers look at expenditures and the incremental costs to society of increased health benefits
    • researchers should look at all these factors
Outcome Measurement in Psychiatry

• Norquist, in IsHak, Burt and Sederer, 2002

• Efforts to improve quality of care have focused on:
  – regulation
  – competition
  – quality improvement programs
  – economic incentives
Outcome Measurement in Psychiatry

• **Norquist, in IsHak, Burt and Sederer, 2002**
  – Inherent problems:
    • encounter data is poor at examining interpersonal aspects of care
    • consumer surveys are good at clinical symptoms and interpersonal aspects and poor at technical process
    • administrative data is good for counts and overall patterns of service and poor at content and results
Future work

• Norquist, in IsHak, Burt and Sederer, 2002
• improve meaningful measures of quality
• what interventions to use in various populations
• interventions utilized by less than highly trained personnel in tertiary centers
• appropriate time to measure expected outcome
• with chronic conditions, confounding variables occur during long term follow-up periods
• work on how to get people to use the interventions deemed to produce the best outcomes as formal continuing education programs have little effect
Future work

• Norquist, in IsHak, Burt and Sederer, 2002
• national measures must be nationally and regionally representative, actionable, evidence based and of importance to some significant portion of the population
• how to best educate the general public on how to measure quality
• how to reconcile quality with cost disadvantages
• need for EMR decision support
• balance between need to collect data and rights for confidentiality of patients
• The “Quality Measurement Industrial Complex”
  – Evidence Developers
    • Researchers, NIH, PCORI, AHRQ
  – Guideline Developers
    • Professional Associations
  – Measure Developers/Stewards
    • NCQA, TJC, CMS, Contractors, Researchers, Professional Associations, States?
  – Measure Endorsers/Recommenders
    • NQF, Measures Application Partnership (MAP)
  – Measure Users
    • CMS, States, Plans, Providers, Media, Public

Harold Pincus, MD/NYS OMH Expert Panel 4/14/2017
CMS Measures
Health Services Advisory Group (HSAG/CMS)

- Mission to Improve Healthcare
  - Healthcare quality expertise to those who deliver and receive care.
    - Tools and resources for patients, families, and caregivers to be advocates for their own health.
      - Beginning in 1979
      - advanced to become a multi-state Quality Innovation Network-Quality Improvement Organization (QIN-QIO)
      - External Quality Review Organization (EQRO)
HSAG/CMS

• Key Domains of Quality
  • 1. Safety
  • 2. Engagement
  • 3. Care Coordination
  • 4. Effective Treatment
  • 5. Healthy Living
  • 6. Affordable Care
Dedicated to improving public well-being
- quality, objectivity, and excellence to bear on information collection and analysis for our partners and clients

Considered an architect of social policy research
- conducted the first social policy experiment in the United States
- the New Jersey Negative Income Tax Experiment
- to test ways of encouraging low-income individuals to work.

Works around the globe
- federal agencies
- state and local governments
- foundations
- universities
- professional associations
- businesses

Studies and analysis have yielded information to guide decisions in wide-ranging policy areas
- health, education
- early childhood
- family support
- nutrition
- employment
- disability, and international development.
“Houston, we have a problem”

- In 1999, the Institute of Medicine (IOM) released *To Err Is Human: Building a Safer Health System*, a report that brought much public attention to the crisis of patient safety in the United States.
- In 2001, the IOM issued a second report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, which outlines six overarching "Aims for Improvement" for health care:
IOM: Crossing the Quality Chasm

1. **Safe**: Avoid injuries to patients from the care that is intended to help them.
2. **Effective**: Match care to science; avoid overuse of ineffective care and underuse of effective care.
3. **Patient-Centered**: Honor the individual and respect choice.
4. **Timely**: Reduce waiting for both patients and those who give care.
5. **Efficient**: Reduce waste.
6. **Equitable**: Close racial and ethnic gaps in health status.
Executive Summary

• Third in a series of 3 reports describing NQF's 2013-2015 measure evaluation projects for behavioral health measures

• The multiphase project is aimed at endorsing measures of accountability for improving the delivery of behavioral health services and achieving better behavioral health outcomes for the U.S. population
Executive Summary

• Phase 3 examines measures of tobacco use, alcohol and substance use, psychosocial functioning, ADHD, depression, and health screening and assessment for people with serious mental illness (SMI)

• On October 1-2, 2014, the Behavioral Health Standing Committee evaluated 13 new measures and 6 existing measures undergoing maintenance review

• Sixteen of these measures were endorsed by the Committee, one was approved for trial use, one was not recommended, and one was deferred.
Executive Summary

• **Recommended:**
  • 0108 Follow-Up Care for Children Prescribed ADHD Medication (ADD)
  • 0710 Depression Remission at Twelve Months
  • 0711 Depression Remission at Six Months
  • 0712 Depression Utilization of the PHQ-9 Tool
  • 1365 Child and Adolescent Major Depressive Disorder (MDD): Suicide Risk Assessment
  • 2599 Alcohol Screening and Follow-up for People with Serious Mental Illness
  • 2600 Tobacco Use Screening and Follow-up for People with Serious Mental Illness or Alcohol or other drug dependence
Executive Summary

- **Recommended**
  - 2606 Diabetes Care for People with Serious Mental Illness: Blood Pressure Control (<140/90 mm Hg)
  - 2607 Diabetes Care for People with Serious Mental Illness: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)
  - 2608 Diabetes Care for People with Serious Mental Illness: Hemoglobin A1c (HbA1c) Control (<8.0%)
  - 2609 Diabetes Care for People with Serious Mental Illness: Eye Exam
NATIONAL QUALITY FORUM

Executive Summary

• Approved for Trial Use:
  • 2597 Substance Use Screening and Intervention Composite

• Not Recommended:
  • 0722 Pediatric Symptom Checklist (PSC)

• Deferred:
  • 2620 Multidimensional Mental Health Screening Assessment
1. HBIPS-2 Hours of Physical Restraint Use
2. HBIPS-3 Hours of Seclusion Use
3. HBIPS-5 Patients Discharged on Multiple Antipsychotic Medications with Appropriate Justification
4. FUH Follow-up After Hospitalization for Mental Illness
5. SUB-1 Alcohol Use Screening
6. SUB-2 and SUB-2a Alcohol Use Brief Intervention Provided or Offered and SUB-2a Alcohol Use Brief Intervention 2016
7. TOB-1 Tobacco Use Screening
8. TOB-2 and TOB-2a Tobacco Use Treatment Provided or Offered and Tobacco Use Treatment

Calendar Year 2016 Data Collection
9. TOB-3 and TOB-3a Tobacco Use Treatment Provided or Offered at Discharge and the subset measure Tobacco Use Treatment at Discharge 2016

10. Transition Record with Specified (11) Elements Received by Discharged Patients (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)

11. Timely Transmission of Transition Record - Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care, w/in 24 hours

12. Screening for Metabolic Disorders, (4) measures

13. IMM-2 Influenza Immunization


15. Assessment of Patient Experience of Care

16. Use of an Electronic Health Record
Implications

• All leading to:
  – Payment based on Performance
    • In a world of imperfect measurement
    • And unclear and poorly defined risk adjustment
Plan Do Study Act
**Act**
- What changes are to be made?
- Next cycle?

**Plan**
- Objective
- Predictions
- Plan to carry out the cycle (who, what, where, when)
- Plan for data collection

**Study**
- Analyse data
- Compare results to predictions
- Summarise what was learned

**Do**
- Carry out the plan
- Document observations
- Record data
Changes to the system resulting in improvement

Modify the protocol and make it standard practice

Use the entire protocol with all patients

Modify the protocol and use it with other patients

Use part of a protocol with small group of patients and refine it

Ideas

Data
What to Improve?

- **Change the Work Environment**
  Changing the work environment can be a high-leverage opportunity for making all other process changes more effective.

- **Eliminate Waste**
  Look for ways of eliminating any activity or resource in the organization that does not add value to an external customer.

- **Improve Work Flow**
  Improving the flow of work in processes is an important way to improve the quality of the goods and services produced by those processes.

- **Customer Interface**
  To benefit from improvements in quality of products and services, the customer must recognize and appreciate the improvements.

- **Manage Time**
  Reducing the time to develop new products, waiting times for services, and cycle times for all functions in the organization.

- **Focus on Variation**
  Reducing variation improves the predictability of outcomes and helps reduce the frequency of poor results.

- **Error Proofing**
  Reduce errors by redesigning a system to make it less likely for people in the system to make errors. One way is to make the information necessary to perform a task available (and not just in one's memory) by writing it down or by actually making it inherent in the process.
• Culture of efficiency
  – from volume (fee for service culture) to a culture focused on value services (population health/best outcomes incentives)
  – Against internal, regional, state, national and international benchmarks
    • (e.g., CMS, NQF, NCQA, JC)
  – use dashboards to:
    • reduce unhelpful variations in clinical care
    • improve adherence to evidence based pharmacologic (e.g., reduce inappropriate within class poly-pharmacy) and psychotherapeutic interventions (model fidelity)
<table>
<thead>
<tr>
<th>Quality</th>
<th>Safety</th>
<th>Financial</th>
<th>Satisfaction</th>
<th>Human Resources</th>
<th>Operations</th>
<th>Medical Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Mortality</td>
<td>Serious Events</td>
<td>Cost/Case</td>
<td>Inpatient</td>
<td>Vacancy Rates</td>
<td>Length of Stay</td>
<td>Medical Record Delinquency Rates</td>
</tr>
<tr>
<td>Continuity Of Care</td>
<td>Patient Falls</td>
<td>Days in AR</td>
<td>Emergency Department</td>
<td>Turnover</td>
<td>Bed Days</td>
<td>Peer Review Cases 3B or &gt;</td>
</tr>
<tr>
<td>Total Readmits 31 days</td>
<td>AMA</td>
<td>Operating Margin</td>
<td>Ambulatory</td>
<td>Performance Evaluations</td>
<td>Diversions</td>
<td></td>
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<tr>
<td>Depression Process Measures</td>
<td>Medication Errors</td>
<td>Denials</td>
<td>ED Throughput to Admission</td>
<td>MRS</td>
<td>Admissions</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Merit Increases</td>
<td>OP Visits</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Workers Comp</td>
<td>Access To Care</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Exit Interviews</td>
<td></td>
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</tr>
</tbody>
</table>

WPIC Organizational Performance Measures

Ghinassi / WPIC / University of Pittsburgh 2007
Emergency/ Screening

• One major entry point into the UBHC system and gate keeper for Short Term Care Facilities (STCF) and the state hospitals.

• Acute Psychiatric Services (APS) in Piscataway served 1,804 individuals in FY 2016.

• Crisis and Screening in Newark served 3,312 individuals in FY2016.

• Screeners visit consumers’ homes for wellness checks; during FY2016 1,560 Individuals were served in Piscataway, 214 in Newark.

Quality Indicators

<table>
<thead>
<tr>
<th></th>
<th>Mean: 4.5/5</th>
<th>58.8% “Excellent”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family satisfaction</td>
<td>Mean: 4.7/5</td>
<td>78.3% “Excellent”</td>
</tr>
<tr>
<td>Duration</td>
<td>Mean: 6.7 hours, Median: 2.7 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range 5 min to 6.3 days.</td>
<td></td>
</tr>
<tr>
<td>Duration &lt;24 hours</td>
<td>93.3%</td>
<td></td>
</tr>
<tr>
<td>BMI</td>
<td>Mean: 25.4</td>
<td>82.7% &lt; 30</td>
</tr>
<tr>
<td>Staff Morale</td>
<td>3.9/5</td>
<td></td>
</tr>
</tbody>
</table>
Early Intervention Support Services: EISS

- Purpose is to prevent overuse of ER’s in community hospitals and avoid unnecessary hospitalization by stabilizing the consumer in the community.
- Open access, no referral needed.
- In FY2016, EISS Piscataway served 676 individuals and EISS Newark served 1,014 individuals.

### Quality Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Piscataway</th>
<th>Newark</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>Mean: 29.5; 63% &lt; 30</td>
<td></td>
</tr>
<tr>
<td>BASIS-24</td>
<td>Piscataway: Adm: 1.5/4 Disch: 1.0/4</td>
<td>Newark: Adm: 1.7/4 Disch: 1.1/4</td>
</tr>
<tr>
<td>Medication Reconciliation</td>
<td>98.8%</td>
<td></td>
</tr>
<tr>
<td>Chart reviews</td>
<td>95% compliant</td>
<td></td>
</tr>
<tr>
<td>Consumer Satisfaction</td>
<td>Piscataway: 4.6/5</td>
<td>Newark: 4.5/5</td>
</tr>
<tr>
<td>Staff Morale</td>
<td>Piscataway: 3.5/5</td>
<td>Newark: 4.0/5</td>
</tr>
</tbody>
</table>
**Inpatient Units**

- Staffed Capacity 48 (Licensed for 80): Adult: 24 beds; Child & Adolescent: 24 beds.
- Total individuals served in FY2016: adults 498, children and adolescents 375.
- Average LOS was 9.5 days for adults and 11.8 days for children and adolescent.

### Quality Indicators

<table>
<thead>
<tr>
<th>Measure</th>
<th>Adult Inpatient Unit</th>
<th>Child and Adolescent Inpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI *</td>
<td>Mean: 27.6 70.8% &lt;30</td>
<td>Mean: 23.3 85.4%&lt;30</td>
</tr>
<tr>
<td>HBIPS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screening</td>
<td>Rate: 100%</td>
<td>Rate: 100%</td>
</tr>
<tr>
<td>Restraint</td>
<td>None</td>
<td>0.1446 per 1,000 pt. hrs</td>
</tr>
<tr>
<td>Seclusion</td>
<td>None</td>
<td>0.5404 per 1,000 pt. hrs</td>
</tr>
<tr>
<td>Tobacco, Alcohol and Immunization</td>
<td>no data available yet from Press Ganey</td>
<td></td>
</tr>
<tr>
<td>BASIS-24</td>
<td>Adm: 1.5/4 Disch: 0.6/4</td>
<td>Adm: 2.4/4 Disch: 0.6/4</td>
</tr>
<tr>
<td>Re-admissions in 30days</td>
<td>3.8%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Medication Reconciliation</td>
<td>95.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>TJC National Safety Goals</td>
<td>Near or at 100%</td>
<td>(general UBHC data)</td>
</tr>
<tr>
<td>Patient/Consumer satisfaction</td>
<td>Mean: 4.2/5 SD: 0.9</td>
<td>Mean: 4.0/5 SD: 0.95</td>
</tr>
<tr>
<td>Staff morale</td>
<td>3.9/5</td>
<td>4.0/5</td>
</tr>
</tbody>
</table>

* Data from q216
Acute Partial Hospital (APH)

- APH is the most typical aftercare following Inpatient discharge.
- Provides mostly group treatment.
- Psychiatrist and Nurses are available on site.
- Served 1,594 individual consumers during FY2016.

Quality Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>Mean: 29.7 Median: 28.3 59.2% &lt; 30</td>
</tr>
<tr>
<td>BASIS-24</td>
<td>Adm: 1.2/4 Disch: 0.9/4</td>
</tr>
<tr>
<td>No Shows</td>
<td>All APH: 42.8% Piscataway APH: 39.2%</td>
</tr>
<tr>
<td>Medication reconciliation</td>
<td>96.9%</td>
</tr>
<tr>
<td>Patient/Consumer satisfaction</td>
<td>Mean: 4.2/5 SD: 0.9</td>
</tr>
<tr>
<td>Staff Morale</td>
<td>3.2/5</td>
</tr>
</tbody>
</table>
Outpatient Programs

• Provide priority care to consumers coming out of higher levels of care (Acute Psychiatric Services (APS), Early Intervention Support Services (EISS), Inpatient and Acute Partial Hospital (APH)).
• Provide medication, individual, family and group therapies.
• Evidence-based programming (e.g., CBT, MI, DBT, Trauma Informed Care)
• OP programs served 4,231 unduplicated clients in FY2016 and provided 86,801 services.

Quality Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Mean/Median/SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>29.2/28.3/61% &lt; 30</td>
</tr>
<tr>
<td>BASIS-24</td>
<td>Adm: 1.0  Disch: 0.9</td>
</tr>
<tr>
<td>No Shows</td>
<td>Initial: 44.8%  Follow-up: 22.0%</td>
</tr>
<tr>
<td>Medication reconciliation</td>
<td>87.5%</td>
</tr>
<tr>
<td>Patient/Consumer satisfaction</td>
<td>Mean: 4.4/5  Median: 5  SD: 0.8</td>
</tr>
<tr>
<td>Staff Morale</td>
<td>3.9</td>
</tr>
</tbody>
</table>
Outcomes That Matter:
Perceptions of Care
Symptom/Functioning
MHCA Consumer Survey Results by Level of Care

Note: MHCA data are for fourth quarter 2016; BASIS-24 data are for first quarter 2017
Access:
Engagement
Retention
Assess current patient and family access to care
- wait time to both ambulatory and inpatient programming across UBHC
- sustainable growth to accommodate areas where the need currently outdistances the access capability
- Assure LOS matches evidence based models of care delivery

Assess current physical plant status for ambulatory and inpatient programs
- Offering patients, consumers, clients, families, and research subjects with clean, bright, and pleasant surrounding conducive to respect and recovery
### Outpatient Show Rates

#### Median Days to Second Outpatient Appointment

Note: data are for January-March 2017
Outpatient: Consumers Staying for 12 and 24 Weeks Following Intake

Partial Programs: Admitted Consumers who stay 12 and 24 weeks

Acute Partial Programs: Admitted Consumers who stay 12 and 24 weeks

Note: Admissions from fourth quarter 2016; second appointment up to 3/31/17
Value and Efficiency Trends
Ambulatory Program Efficiency

- Benchmarks for Clinical Productivity by professional discipline and by program structure
  - Individual Productivity targets and reports, adjusted for research and teaching mission
- EHR improvements
- Workflow improvements
- Case Managers in place
- Educational modules to improve accurate coding
- Treatment plan documentation during patient sessions when possible
- Clinical note documentation workshops
- Professional staff meetings at all clinical sites with Senior Administrative and Clinical Leadership
- Use of national peer organization learning collaborative
- Volume
- Payer Mix
- Revenue cycle efficiencies
- Scheduling efficiencies (e.g., understanding show rate probabilities)
- Top of licensure practice work flow
Performance Measurement and Quality Improvement
Quetiapine Intervention Outcomes
WPIC Monthly Overall Breakdown by Medication (JULY '05 - JULY '07)
N = 1226

- Quetiapine
- Linear (Quetiapine)
Outcomes

• Reduced utilization of quetiapine
• This quality initiative had the desired impact on 25 to 38 patients per week
• Savings on average of $5,000 per month with no current evidence of other increases
• Developed a monitoring and feedback system to facilitate quality initiatives.
• Demonstrated the feasibility of the intervention method.
Antipsychotic Polypharmacy Intervention Outcomes
WPIC Inpatient Antipsychotic Polypharmacy Prescribing Trends 2007 - 2010

Percent of All Inpatients on Two or More Antipsychotics During their Inpatient Stay

- Jan-07: 20.5%
- Jan-08: 15.1%
- Jan-09: 11.3%
- Jan-10: 10.0%
The Joint Commission
Initial Candidates For Hospital Based Inpatient Psychiatric Services (HBIPS) Core Measures For Mental Health
Core Measures JCAHO

1. Assessed medical necessity for inpatient level of care
2. Assessment of risk, substance abuse, trauma and patient strengths
3. Above 4 tied to treatment plan
4. Documented attempt to obtain collateral information from outpatient team
5. Treatment outcomes specified
6. Increased sense of hope at discharge
7. Patient perceptions of treatment experience
8. Hours of (or # of people in) restraint/seclusion

9. Number of anti-psychotic medications at discharge
10. Number of psychoactive medications at discharge
11. Medication error rate
12. Follow-up call to receiving provider immediately after first post-discharge appointment
13. Patient contact post-hospital discharge
14. Discharge assessment and aftercare recommendations provided to community health provider upon discharge
15. Continuation of care preparation
Core Measures JCAHO

1. Assessment of risk, substance abuse, trauma and patient strengths completed
2. Hours of restraint use
3. Hours of seclusion use
4. Patients discharged on multiple antipsychotic medications
5. Discharge assessment and aftercare recommendations are provided to community health providers upon discharge
Telepsychiatry: Adjusting to Technology

• Provide tele-psychiatry services to 6 rural areas in the state of Pennsylvania
  – 21,000 services were provided by 7 psychiatrists in the past year

• A questionnaire was administered to individuals participating in the program prior to the first tele-psychiatry session and after the third encounter

• The questionnaire focused on three domains:
  – satisfaction with clinical services
  – technology evaluation
  – overall satisfaction with telemedicine product

• The data supports that individuals are satisfied in all three areas and that this satisfaction increases from session one to three as they continue to receive services and acclimate to both the specific clinician and the use of the technology
Was the care you received from this service as good as a regular, in-person visit?

- No, not really: 14% (Session 1), 0% (Session 3)
- Yes, generally: 36% (Session 1), 42% (Session 3)
- Yes, definitely: 50% (Session 1), 58% (Session 3)

In an overall, general sense, how satisfied have you been with the service provided today?

- Indifferent or mildly dissatisfied: 0% (Session 1), 8% (Session 3)
- Mostly satisfied: 56% (Session 1), 23% (Session 3)
- Very satisfied: 44% (Session 1), 69% (Session 3)
The QI team sent a psychiatric nurse for training in the Care Transitions Intervention (Univ. Colorado).
Then assigned her to work with individuals discharged from a 42-bed geropsychiatric unit (began 11/2009) to provide healthcare “coaching”:
- reinforcing patient-identified goals
- promoting follow-up
- assistance with problem-solving

Presentation reviews step-by-step process undertaken to:
- Train
- Implement
- provide ongoing support
- for a hospital-based care transitions team, led by:
  - nurse transitions coordinator
  - supervising psychiatrist
Transitional Care Following Psychiatric Discharge

WPIC Geropsychiatry Discharges with Highmark
(25% of total)

MH outpatient Follow-up attended within two weeks

Before

Preliminary Data

With Intervention

WPIC Geropsychiatry Discharges with Highmark
(25% of total)

Any Follow-up (med or psych) within 1 month

Before

Preliminary Data

With Intervention

1/1/05-12/31/06
4/30/07-3/31/09
10/31/09-6/30/10*
Improving the Utility of The Child and Adolescent Functional Impairment Scale (CAFAS)
Process

- Integrating CAFAS data (scores) entry into the EHR, facilitating easy and instant access to CAFAS results and profiles

- Generation of weekly report pulled from EHR noting individual cases of statistically significant rapid deterioration or improvement

- Notification received electronically by assigned clinician

- Treatment was altered upon receiving notice of CAFAS score change indicating decompensation
Outcome

Results shows lower impairment at T2

Lower Score = Less Impairment

Southside Acute Partial
n=41

Family Based MH Services
n=18
Improving treatment engagement through Motivational Incentives at the Kelly Street Narcotic Addiction Treatment Program
Motivational Incentives Project

• Total of 40 participants.
• 30% were female.
• Average age of participants is 37.
• Every 15 minutes the patients of attendance earns 1 credit toward a reward gift (no upper limit for treatment hours).
• Patients were able to cash in their points daily or save their points in order to cash in and purchase larger items.
70% showed improvement in treatment hours

30% did not show improvement since previous months
Metabolic Syndrome Tool

Efforts to implement a Metabolic Syndrome screening and monitoring document using Psych Consult
Patients with Serious Mental Illness (SMI):
- physical health conditions
- smoke
- overweight
- 25 years (mortality) earlier than their peers

Psychotropic medicines can contribute to excess weight, diabetes mellitus, and high cholesterol levels

Develop EMR tool to screen for metabolic syndrome:
- constellation of symptoms
- capture these medical issues in one snapshot
- facilitate psychiatrists to run labs, counsel, treat, and/or refer to colleagues

Deploy EMR tool and initiate QI project to capture data on the rates of its usage by a pilot team of psychiatrists

Clinical treatment notes will be reviewed for qualitative analysis
Intervention

- Result: Develop a Metabolic Syndrome CME Program and disseminate to MD’s at WPIC
  - 1 hour CME – on line video program developed by Roy Chengappa, MD et al
  - Recording and editing completed
  - CME certification
  - Released to all physicians at WPIC and other UPMC Behavioral Health Facilities
This is what's being used now, in Psych Consult, filled out during Med Management Visit.

### Metabolic Syndrome Screening

<table>
<thead>
<tr>
<th>Metric</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td>Weight (lbs)</td>
<td>150</td>
</tr>
<tr>
<td>Height (ft in)</td>
<td>5 Ft 11 In</td>
</tr>
<tr>
<td>BMI Value</td>
<td>20.92</td>
</tr>
<tr>
<td>Waist Measurement (in)</td>
<td>34</td>
</tr>
<tr>
<td>Metabolic Criteria For Waist Circumference Met?</td>
<td>No</td>
</tr>
</tbody>
</table>

### Lab Values

<table>
<thead>
<tr>
<th>Metric</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Sugar Value (mg/dl)</td>
<td>40</td>
</tr>
<tr>
<td>Triglycerides Value (mg/dl)</td>
<td>60</td>
</tr>
<tr>
<td>HDL Value (mg/dl)</td>
<td>30</td>
</tr>
<tr>
<td>LDL Value (mg/dl optional)</td>
<td>60</td>
</tr>
<tr>
<td>Total Cholesterol (mg/dl optional)</td>
<td>90</td>
</tr>
</tbody>
</table>

### Metabolic Syndrome Results

- **Criteria Met**
- **TX Alerts**
  - High Blood Pressure
  - High Triglycerides
  - Low HDL

### Additional Notes:

Patient Meets Metabolic Syndrome Criteria. Recommend Treatment Options.
Patients with *any* metabolic recording, at all
Differentiating Specific Sub-Types of Depression as a Means of Better Individualizing Treatment Planning

WPIC Adolescent Acute Partial Hospital & Intensive Outpatient Programs
Abstract

• The World Health Organization has identified Major Depressive Disorder as a leading cause of disability among Americans ages 15-44 (NIMH)

• By age eighteen, 11% of adolescents will have experienced a depressive disorder (NIMH)

• The Childhood Depression Inventory (CDI), a 27 item scale, derived from the Beck Depression Inventory, is a reliable measure for assessing depression, with a specificity of 94.4 %
  – (Timbremont, Braet, & Depression, 2004)
Quality Indicators

• Improved identification and treatment of:
  – Lethality
  – Hopelessness
  – Sleep Disorders
  – Anhedonia

• Project aims to:
  – individualize diagnostic clarity
  – Improve treatment specificity
  – Improve clinical and functional outcomes

• Measured by analysis of CDI symptom clusters

• A statistically significant improvement in adolescents’ depression status is demonstrated by:
  – A decrease in CDI severity score of 7.85 points
  – From the time of admission to the time of discharge

• Data was collected from 2011 to 2013
Previous Process

- Intake evaluation
- Adolescent attends average of 20 treatment days
- Discharged to a lower level of care
New Process

Intake Evaluation

Measure CDI on intake

Discuss with treatment team, results inform treatment plan

Adolescent attends an average of 20 treatment days with CBT & DBT groups, family therapy, and med management

CDI re-administered, adolescent evaluated for potential discharge

Discharge to lower level of care
Average CDI Scores

- Cut off for clinically depressed = 13

* Decrease by at least 7.85 in Total CDI score is clinically significant P value <.01

**Bar Chart Description**

- **Acute Partial Hospitalization**
  - Admission: 26.6
  - Discharge: 17
  - N=173

- **Intensive Outpatient**
  - Admission: 24.4
  - Discharge: 16.3
  - N=61

Note: The bar chart indicates the average CDI scores for different levels of care, with a cut-off for clinically depressed at 13. A decrease of at least 7.85 in Total CDI score is considered clinically significant with a P value <.01.
Partial Program: Outcomes

**Lethality**
- Admission: 21% Seriously thinking about it, 65% Thinking but will not act, 14% Not thinking about it
- Discharge: 3% Seriously thinking about it, 55% Thinking but will not act, 41% Not thinking about it

**Hopelessness**
- Admission: 21% Nothing will ever work out, 63% I am not sure if things will work out, 16% Things will work out O.K. for me
- Discharge: 11% Seriously thinking about it, 49% Thinking but will not act, 41% Not thinking about it

*N=173*

*Includes discharges to the inpatient unit at WPIC*
Partial Program: Outcomes

**Anhedonia**
- Admission: 13% Nothing is fun at all, 72% I have fun in some things, 15% I have fun in many things
- Discharge: 6% Nothing is fun at all, 55% I have fun in some things, 39% I have fun in many things

**Sleep**
- Admission: 40% I have trouble sleeping every night, 23% I have trouble sleeping many nights, 37% I sleep pretty well
- Discharge: 32% I have trouble sleeping every night, 50% I have trouble sleeping many nights, 17% I sleep pretty well

N=103
IOP Program: Outcomes

Lethality

- Admission:
  - Seriously thinking about it: 8%
  - Thinking but will not act: 0%
  - Not thinking about it: 80%
  - Total: 11%

- Discharge:
  - Seriously thinking about it: 18%
  - Thinking but will not act: 39%
  - Not thinking about it: 61%
  - Total: 61%

Hopelessness

- Admission:
  - Nothing will ever work out: 12%
  - I am not sure if things will work out: 71%
  - Not thinking about it: 17%
  - Total: 39%

- Discharge:
  - Nothing will ever work out: 12%
  - I am not sure if things will work out: 56%
  - Not thinking about it: 31%
  - Total: 66%

* Includes discharges to the inpatient unit at WPIC
IOP Program: Outcomes

Anhedonia

<table>
<thead>
<tr>
<th></th>
<th>Admission</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing is fun at all</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>I have fun in some things</td>
<td>24%</td>
<td>56%</td>
</tr>
<tr>
<td>I have fun in many things</td>
<td>74%</td>
<td>41%</td>
</tr>
</tbody>
</table>

N=34

Sleep

<table>
<thead>
<tr>
<th></th>
<th>Admission</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have trouble sleeping every night</td>
<td>3%</td>
<td>21%</td>
</tr>
<tr>
<td>I have trouble sleeping many nights</td>
<td>38%</td>
<td>53%</td>
</tr>
<tr>
<td>I sleep pretty well</td>
<td>44%</td>
<td>26%</td>
</tr>
</tbody>
</table>

N=34
Lessons Learned and Next Steps

• Focusing on only 4 of the CDI’s total of 27 items (15%) which most closely parallel DSM-IV MDD diagnostic criteria, may have limited the analysis and potential specificity of the treatment planning
  – DSM-IV criteria for MDD may be less descriptive for adolescents than adults

• Next Steps:
  – Gather data on all 27 CDI item responses to determine those symptoms adolescents perceive as contributing most to their depression
  – The CDI is a superior tool for measuring both the severity and specific nuance of adolescent depressions
  – Barriers – Resources required for data collection and analysis
Questions and Discussion