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Knowledge Bites Lunch ‘n’ Learn

May 8, 2019
Identifying “At Risk” Young Adults using Routine Outcome Monitoring during Acute Inpatient Hospitalization

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Knowledge Bites – Lunch & Learn, May 8, 2019
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Presentation Overview

1. Routine outcome monitoring
2. Use of BASIS-24 in young adult unit
3. Inpatient recovery trajectories
4. Identifying “at risk” patients
5. Outcome monitoring in Connect Care
Routine Outcome Monitoring (ROM)

- Evidence-based treatments don’t work for everyone
- Identify how client responding
  - Clinicians poor at detecting 5-10% who worsen in psychotherapy (Lambert, 2013)
- ROM helps individualize treatment
  - Implement stepped care
    - “Step up” when not responding
Guiding Clinical Decision-Making

**STEP 1**
IDENTIFY exected outcome trajectory

**STEP 2**
DETECT deviations from trajectory

**STEP 3**
ADAPT treatment plan based on needs
Routine outcome monitoring (ROM)

Benefits of feedback to therapists & clients:

- Improved collaboration
- Better outcomes for at-risk cases
- Increased retention in therapy
- Increased efficiency for on-track cases

❖ Outcomes better with decision-making tool
ROM in Psychiatric Inpatient Care

• Most research on outpatient psychotherapy
• Possible benefits in inpatient care:
  • Shorter stay
    • Reduce cost to system & client
  • “Step up” care for non-responding cases
    • Improve service satisfaction
    • Reduce ER visits and re-admission
  • Increase service engagement
Young Adults

• Mid-adolescence and young adulthood highest prevalence of mental disorders, with rates of 20% to 37% (Kessler et al., 1994; Kessler et al., 2005; GOC, 2006)

• Highest treatment disengagement among young adults

• Lose critical opportunity for early intervention!
Young Adult Inpatient Unit

- Young Adult Evaluation, Assessment and Reintegration Services (YAETRS), Alberta Hospital Edmonton (AHE)
  - Ages 17-26
  - Complex mental health problems
  - Average 21-day stay
  - Multidisciplinary treatment
  - Community referrals
BASIS-24

- Behavior and Symptom Identification Scale (BASIS-24; Eisen et al., 2004)
  - Subscales: Overall, depression/functioning, relationships, self-harm, emotional lability, psychosis, and substance abuse
- Symptoms/functioning during past week
- Reliable, sensitive to change (Eisen et al., 2007)

HoNOS:

BASIS-24:

Admission

Discharge

Week 1
Week 2
Week 3
Week 4+

0 days +7 days +14 days +21 days
Treatment planning with BASIS-24

- Admission
- Week 2
- Week 3
Inpatient Recovery Trajectories

- Expect overall improvement
- Do some patients respond better than others?
  - Expected 3 trajectories:
    1) Responders
    2) High distress
      - Chronic distress and/or help seekers
    3) Low distress
      - Low insight, early stage of change and/or help rejecters
Study 1 – BASIS-24 Trajectories

• **Purpose:** Identify and characterize different BASIS-24 inpatient recovery trajectories

• **Method:**
  - Archival data from YAETRS database and electronic medical records
  - Sample: 526 inpatients
  - Analyses: Latent Class Growth Analysis (LCGA)

• **Hypotheses:**
  - Expected 3 trajectories
  - Expect higher distress will predict greater service utilization
Inpatient Recovery Trajectories

Day of inpatient admission

BASIS-24 (total scores)

- High Distress (n = 46)
- Gradual Responders (n = 179)
- Fast Responders (n = 201)
- Low Distress (n = 100)
Discrepancies between Clinician & Client Report

-2.0  -1.5  -1.0  -0.5  0.0  0.5  1.0  1.5

Total Score (Z-scores)

Admission HoNOS  Admission BASIS-24

High Distress  Gradual Responders  Fast Responders  Low Distress
Gender

High Distress
- Female: 63%
- Male: 37%

Gradual Responders
- Female: 58%
- Male: 42%

Fast Responders
- Female: 45%
- Male: 55%

Low Distress
- Female: 36%
- Male: 64%

Test statistic = 16.63***
Mental Health Act Status

<table>
<thead>
<tr>
<th>Distress Level</th>
<th>Voluntary</th>
<th>Involuntary</th>
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<tr>
<td>High Distress</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>Gradual Responders</td>
<td>39%</td>
<td>61%</td>
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<tr>
<td>Fast Responders</td>
<td>26%</td>
<td>74%</td>
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<tr>
<td>Low Distress</td>
<td>12%</td>
<td>88%</td>
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</table>

Test statistic = 25.51***
Length of Stay (Days)

- High Distress: 26.2
- Gradual Responders: 22.1
- Fast Responders: 17.4
- Low Distress: 19.3

Test statistic = 13.3***
Service Satisfaction

Test statistic = 6.62***
Outpatient Appointments 6 Months Post-Discharge

Test statistic = 4.63**
ER Visits & Hospital Re-Admission

Test statistic = 8.80*

Test statistic = 8.16*
Study 2 – Decision-Making Tool

- **Purpose**: Develop and implement a BASIS-24 decision-making tool to identify “at risk” cases

- **Method**:
  - Combine responding groups to provide expected trajectory
  - Evaluate different confidence intervals for identifying “at risk” cases
  - Develop stepped care protocol for responding to “at risk” cases
  - Evaluate impact on treatment effectiveness, efficiency, satisfaction, and goal attainment
Inpatient Recovery Trajectories

- High Distress (n = 46)
- Gradual Responders (n = 179)
- Fast Responders (n = 201)
- Low Distress (n = 100)
BASIS-24 Scores Graphed over Time
Tool for Identifying “At Risk” Cases

Days since admission

“On track”

“At risk”

BASIS-24 Total score
Identification Accuracy

- **Sensitivity** = Proportion of “at risk” correctly identified
- **Specificity** = Proportion of “on track” correctly identified

- Sensitivity most important

<table>
<thead>
<tr>
<th></th>
<th>Admission</th>
<th>Day 7</th>
<th>Week 14</th>
<th>Discharge</th>
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<tr>
<td>Sensitivity</td>
<td>92%</td>
<td>90%</td>
<td>88%</td>
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<tr>
<td>Specificity</td>
<td>87%</td>
<td>87%</td>
<td>85%</td>
<td>79%</td>
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</table>
Inpatient Stepped Care Model

- **“On Track”**
  - Lowest intensity effective treatment (e.g., group programming)
  - Consider early discharge

- **High Distress “At Risk”**
  - Individual psychosocial services
  - Alternative medical treatments
  - Discharge planning

- **Low Distress “At Risk”**
  - Engagement techniques: goal-setting, motivational interviewing
  - Facilitate transition to community services
The Future of Outcome Monitoring in AHS

- Opportunities with Connect Care
  - Data capture
  - Scoring, tracking
  - Program & system data provide treatment expectations

- Clinical Outcomes in Routine Evaluation (CORE)

- Determine treatment expectations by setting type (e.g., LOCUS level)
LOCUS Level 5 & 6 – Residential/Inpatient

Days since admission

BASIS-24 Total score

“On track”

“At risk”

“At risk”
Practice Implications

- Importance of continuous monitoring
- Unusually high or low scores may indicate elevated risk
  - High scores may indicate poor treatment response
  - Low scores may indicate disengagement
- Outcome monitoring results provide warning only
  - Clinician must engage in clinical problem-solving process
Questions?

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