Clinical Pathway for the Acute Inpatient Care of Emotionally Unstable Personality Disorder

Development, Implementation and Evaluation: Royal Perth Hospital’s Experience

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Funded by the State Health Research Advisory Committee (SHRAC)
Background

- Clinical practice guidelines for EUPD published by The National Institute for Clinical Excellence (2009), and National Health and Medical Research Council (2012)

- Guidelines emphasised:
  - The importance of avoiding inpatient mental health admissions
  - When an admission is clinically indicated due to acute risk to self or others, length of admissions should be brief
Background

However:

- Patients with EUPD have been found to be one of the highest users of inpatient and emergency department services (Ansell, Sanislow, McGlashan, & Grilo, 2007; Bender et al., 2006; Hörz, Zanarini, Frankenburg, Reich, & Fitzmaurice, 2010; Zanarini, Frankenburg, Hennen, & Silk, 2004).

- An estimated 72% of patients with EUPD will require hospitalisation in the course of their treatment (Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004).

- Represent between 25% and 30% of all psychiatric admissions (Zimmerman, Chelminsiki, & Young, 2008).

- Length of hospitalisation rarely brief (Dasgupta & Barber, 2004; Nelson, 2013).

- Repeated presentations (Dasgupta & Barber, 2004; Nelson, 2013).
Rationale

- Inpatient services will have ongoing role in care of EUPD patients

- Furthermore, there has been no published research evaluating the feasibility or effectiveness of translating these guideline recommendations in the inpatient setting

Therefore, RPH embarked on an initiative to bridge the gap between evidence and practice by designing a Clinical Pathway for the acute inpatient care of patients with EUPD.
Outline

- Context
- Developing the Clinical Pathway
- Implementation & Education
- Clinical Pathway
  - Diagnosis
  - Safety Planning
  - Skills Group
  - Crisis Management Planning
  - Patient Controlled Crisis Admissions
- Evaluation
Context – Royal Perth Hospital (RPH)

- Large tertiary hospital in Perth, Western Australia

- Mental Health Unit:
  - 20 bed, non-authorised psychiatric facility
  - Staffed by a multidisciplinary team
  - In Central Business District
  - Provides services across WA, regardless of residential area (i.e., no catchment)
  - Patient mix: mood disorders, personality disorders, acute reactions, schizophrenia, substance use disorders
  - Personality disorders – 30-40% of patient mix per year, and high usage of ED services
Development of the Clinical Pathway

- Developed in four stages between June 2011 – June 2013
- Developed in consultation with representatives from each discipline
  - Stage One: Gathered evidence
  - Stage Two: Review of existing services
  - Stage Three: Iterative drafting and review of Pathway
  - Stage Four: Implementation
Two Staged Clinical Pathway:

Two-staged approach designed to balance the recommendation of brief admissions with the need to validate patient’s experience and deliver high quality care that covers all the recommendations:

1. First or Review Admission
   7-12 days

2. Patient Controlled Crisis Admissions
   1-3 days
Pathway: Stage One – *Collaboratively Determined Diagnosis*

- Communication of diagnosis to patient essential
  - To offer patient explanation for their experience, empower them to engage with own treatment and promote optimism and hope in recovery based on a link to proven treatments

- Medical Team & Clinical Psychology Training
  - Education workshops, role play of providing diagnosis in therapeutic manner, in context of formulation
  - 2 page example script in Clinician Handbook
Pathway: Stage One – Safety Planning

- Proactive strategy to ensure safety on ward
- Collaboratively developed with patient
- Step-by-step plan using prompting questions, patient’s answers recorded in their own words
- Identifies:
  - Triggers
  - Warning signs
  - Current coping strategies
  - Helpful coping strategies
  - A plan for when things escalate
- Patient and staff sign the plan to acknowledge understanding and commitment to using the plan during their inpatient stay
Pathway: Stage One – *DBT Skills Group*

- Three groups per week, 1.5hrs per Group
  - Mindfulness
  - Distress Tolerance/Affect Regulation
  - Effective Communication
- All diagnoses
- Nurse Therapist & Clinical Psychology facilitated
- Mixed Inpatients and Outpatients
- Outpatient can attend up to ~6 weeks post discharge as transition support
- Open / rolling flexible content
Pathway: Stage One – *Future hospital access*

Limitations with the traditional gatekeeper model:

- Establishes a power relation between the clinician and patient (Hoch, O’Reilly, & Carscadden, 2006; Krawitz & Watson, 2000).

- Patient feels compelled to accentuate visible distress to ensure the clinician gains an understanding and grants request for admission (McMahon & Lawn, 2011; Nehls, 2000; Strand & von Hausswolff-Juhlin, 2015).

- When admission is ‘granted’ in this way, it likely reinforces this accentuating behaviour and undermines the process of collaboration and personal accountability (Eastwick, 2005; Nehls, 1994, 2000).

- Increases the time needed to stabilise symptoms and recover from a crisis, extending the length of time in hospital.

- When denied admission, the patient’s core beliefs activated and their communication of significant distress invalidated.

- This potentially perpetuates the invalidating environments in which their disorder was likely borne (Linehan, 1987; Linehan, 1993; Nehls, 1994, 2000).
Pathway: Stage One – *Future hospital access*

- Consequently, patients may exhibit intense emotional responses (serious self-harm, aggression or hostility).

- Has the potential to perpetuate unhelpful relationships with clinicians and the service and contribute to repeated presentations until an admission is granted (McMahon & Lawn, 2011).

- This highlighted the need to consider alternatives to the traditional gatekeeper model.
Pathway: Stage One – *Patient Controlled Admission Plan*

Patient works with team to develop an extension of their safety plan, that documents steps they are to take to reduce distress and risk of suicide or self harm following discharge, including the option of presenting to ED when other resources are insufficient in reducing risk; guaranteed a bed pending availability for:

**Patient Controlled 3 Day Crisis Admission.**

- Transfers responsibility of assessing emotional state from health care services to the individual themselves – fostering self-responsibility
- Ensures patients do not have to escalate, self harm or attempt suicide to ensure admission, shifts the power differential and breaks cycle of maladaptive help seeking
- Ensures patients are less resistant to discharge through ease of admission
Pathway: Stage Two – Crisis Admissions

- By eliminating the need to engage in unhelpful behaviours to gain admission and having the understanding of hospital staff, more quickly ‘contain’ the patient and allow him/her to focus on the strategies identified that will help de-escalate the distress

  - 1 x session with clinical psychologist to conduct ‘chain analysis’ of crisis

  - 1:1 with nurses

  - Attend group therapy

  - 6 more weeks of outpatient groups if deemed necessary

  - Re connect with community providers
Evaluation - Methods

- **Design:**
  - Single-centre combined clinical audit and historical control group design

- **Historical control cohort:**
  - Collected during Stage One of Development
  - 130 patients

- **Clinical Pathway cohort:**
  - 179 patients
Evaluation - Methods

- Outcomes:
  - Length of stay
  - Hours of Psychological Therapy attended
  - Psychiatric symptomatology (admission to discharge)
  - Patient satisfaction
  - Likelihood and number of readmissions
  - Likelihood and number of presentations to ED
  - Total Bed days
Participants

<table>
<thead>
<tr>
<th></th>
<th>Historical cohort</th>
<th>Clinical Pathway cohort</th>
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</thead>
<tbody>
<tr>
<td>Number</td>
<td>130</td>
<td>179</td>
</tr>
<tr>
<td>Age (years)</td>
<td>35.5 ±12.2</td>
<td>33.7 ±11.1</td>
</tr>
<tr>
<td>Gender (% female)</td>
<td>59.1%</td>
<td>67%</td>
</tr>
<tr>
<td>Living Location (% Rural and Remote)</td>
<td>5.80%</td>
<td>5.00%</td>
</tr>
<tr>
<td>Ethnicity (% Aboriginal)</td>
<td>13.90%</td>
<td>14.50%</td>
</tr>
<tr>
<td>Self-Harm at Presentation of Index Admission (%)</td>
<td>16%</td>
<td>22%</td>
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Statistical Analysis

- Treatment effects regression

- Multilevel mixed-effects linear regression
  - To determine the group differences in changes in psychiatric symptomatology from admission to discharge

- All analyses conducted using STATA 14
<table>
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<tr>
<th>Outcome Variable</th>
<th>Average Treatment Effect</th>
<th>95% Confidence Interval</th>
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</thead>
<tbody>
<tr>
<td>Attended Psychological Therapy</td>
<td>14.83%*</td>
<td>3.39% 24.40%</td>
</tr>
<tr>
<td>Psychological Therapy Hours attended</td>
<td>2.78*</td>
<td>1.02 4.59</td>
</tr>
<tr>
<td>Length of Index Admission (days)</td>
<td>-5.16**</td>
<td>-1.91 -8.05</td>
</tr>
<tr>
<td>Readmission</td>
<td>-6.03%</td>
<td>-18.62% 2.52%</td>
</tr>
<tr>
<td>Number of Readmissions</td>
<td>-0.75*</td>
<td>-0.19 -3.81</td>
</tr>
<tr>
<td>Re-Presentation to ED</td>
<td>2.91%</td>
<td>-4.75% 16.45%</td>
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<tr>
<td>Number of Re-Presentations to ED</td>
<td>-0.10</td>
<td>-0.48 0.28</td>
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<tr>
<td>Total Bed Days of Readmissions</td>
<td>-8.22*</td>
<td>-2.10 -17.51</td>
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*p ≤ 0.05; **p ≤ 0.001.

Each outcome and treatment model contains the following covariates: Age, Gender, Ethnicity, Living Location, EUPD Primary Diagnosis, Reaction to severe stress, and adjustment disorders, Depressive Disorders, Mental and behavioural disorders due to psychoactive substance use, Physical Health Disorders, Other Personality Disorder, Neurotic (Anxiety) Disorders, Bipolar Affective Disorders, Schizophrenia, schizotypal and delusional disorders.
Sub-analysis: Patient Symptoms

- Patient symptomology was assessed on admission and prior to discharge using the BASIS-24.

- BASIS-24 Total scores:
  - Both Historical and Pathway cohort had statistically significant reductions over time
  - Symptomatology of Pathway cohort were not significantly different to Historical cohort on discharge
Sub-analysis: Patient Satisfaction

- Overall satisfaction was not significantly different between the two cohorts.

- Patients in Pathway cohort reported being more satisfied with their involvement in their treatment planning than patients in Historical cohort ($p < .005$)
### Cost Effectiveness

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<tr>
<th></th>
<th>Average Treatment Effect</th>
<th>95% Bias Corrected Confidence Intervals</th>
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</thead>
<tbody>
<tr>
<td>Length of Index Admission (Days)</td>
<td>5.16</td>
<td>1.91 8.05</td>
</tr>
<tr>
<td>Mental Health Bed days from Readmissions (Days)</td>
<td>8.22</td>
<td>2.1 17.51</td>
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<tr>
<td>Total Per Patient Bed Days Savings (Days)</td>
<td>13.38</td>
<td>4.01 25.56</td>
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<tr>
<td>Total Sample Bed Day Savings (Days)</td>
<td>2395.02</td>
<td>717.79 4575.24</td>
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<tr>
<td>Total Sample Savings (Savings)</td>
<td>$3,592,530.00</td>
<td>$1,076,685.00 $6,862,860.00</td>
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<tr>
<td>Program Investment</td>
<td>$150,000</td>
<td></td>
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<tr>
<td>Total Return on Investment</td>
<td>$3,442,530.00</td>
<td>$926,685.00 $6,712,860.00</td>
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1. Calculated based on n=179 in treatment sample and the average cost of a bed day on the RPH MHU = $1500
Discussion

The implementation of the Pathway:
- Improved outcomes for individuals with EUPD in a number of areas
  - Hours of psychological therapy
  - Length of index and readmissions
  - Symptomatology
  - Satisfaction
Implications

- Clinical implications
  - Pathway provided a consistent model, in line with evidence-base for the provision of care for individuals with EUPD during their inpatient stay
  - Increased consumers’ ability to manage within the community for longer periods of time

- Service provision:
  - Pathway allowed the MHU to take on a greater caseload within the 12 month period, therefore allowing more individuals access mental health care
Clinical Pathway: Inpatient Care of Emotionally Unstable Personality Disorder

Step 1: Admission
1. Provide prompt orientation to the ward to allow the patient to feel a sense of structure and safety, and to minimize the shocks of further accommodation of disability
2. Consider room allocation – avoid placing others whose presence may exacerbate distress or reinforce maladaptive behaviors

Step 2: Assessment
1. Complete the admission process
2. Provide medical history, psychiatric history, and family history
3. Conduct a full physical examination
4. Complete a psychological assessment
5. Complete a social and occupational assessment
6. Complete a mental status examination
7. Complete a comprehensive medication review
8. Complete a comprehensive diagnostic assessment

Step 3: Diagnosis & Formulation
1. Diagnose based on the assessment criteria
2. Develop a treatment plan

Step 4: Comprehensive Multidisciplinary Management Plan
1. Develop a comprehensive management plan
2. Implement the management plan
3. Monitor progress
4. Adjust the management plan as needed

Step 5: Communicating the Diagnosis & Management Plan
1. Communicate the diagnosis and management plan to the patient and family
2. Provide education on the illness and treatment options
3. Support the patient in making informed decisions

Step 6: Review & Revise
1. Review the management plan
2. Revise the management plan as needed

Step 7: Discharge
1. Plan for discharge
2. Provide education on follow-up care
3. Arrange for ongoing support

Step 8: Transfer of Care
1. Transfer of care

Step 9: Crisis Admission
1. Assess the need for admission
2. Develop a crisis management plan
3. Implement the crisis management plan

Appendix
1. Additional resources for patients and families
2. Additional resources for healthcare professionals
Emotionally Unstable Personality Disorder

- EUPD ICD-10 equivalent to Borderline Personality Disorder (BPD)
- Affects over 500,000 Australians, with a lifetime prevalence of 2.28% (Jackson & Burgess, 2000).
- Common experiences include:
  - Extreme and poorly controlled emotional states
  - Impulsivity
  - Tumultuous relationships
  - Self destructive behaviours (American Psychiatric Association, 2000).
- Significant functional impairments and distress due these symptoms, which are often present across their social, family and work lives (Leichsenring, Leibing, Kruse, New, & Leweke, 2011b; Skodol et al., 2005).
- As a result, individuals with EUPD often present to hospital emergency departments seeking support through an acute inpatient mental health admission