Discharge and Step-Down in Coordinated Specialty Care (CSC) for Persons with a First Episode of Psychosis

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Substance Abuse and Mental Health Services Administration
U.S. Department of Health and Human Services
• This webinar was developed [in part] under contract number HHSS283201200021I/HHS28342003T from the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The views, policies and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS.
Sustaining the Impact: Serving Young People after Early Intervention

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Concerns

- Treatment effects of coordinated specialty care/early intervention strong and robust (Correll et al., 2018)

- However, post-discharge outcomes raise serious concerns about longer-term sustainability (Gafoor et al., 2010; Nordentoft et al., 2014)

“Specialised treatment programmes for people with first-episode psychosis are cost-effective as long as the treatment continues. But the effect seems to be the result of an ongoing active treatment rather than a cure.”
-Friis, 2010

“Transitioning [young people] back to generic teams appears to undo the gains [of early intervention]. The question [the field needs] to ask is how to sustain [these gains].”
-Singh, 2010
<table>
<thead>
<tr>
<th>Domain</th>
<th>OPUS Discharge</th>
<th>OPUS Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Symptoms</td>
<td>-</td>
<td>No difference by 3 yrs post-discharge</td>
</tr>
<tr>
<td>Negative Symptoms</td>
<td>-</td>
<td>No difference by 3 yrs post-discharge</td>
</tr>
<tr>
<td>GAF (Global Functioning)</td>
<td>+</td>
<td>No difference by 3 yrs post-discharge</td>
</tr>
<tr>
<td>Proportion without outpatient contacts</td>
<td>-</td>
<td>No difference by 2-3 yrs post-discharge</td>
</tr>
<tr>
<td>Days in supported housing</td>
<td>No difference</td>
<td>OPUS group more days in supported housing 2-3 yrs post discharge</td>
</tr>
<tr>
<td>Proportion living along</td>
<td>+</td>
<td>No difference by 2-3 yrs post-discharge</td>
</tr>
<tr>
<td>Proportion in School/Work</td>
<td>Trend in favor of OPUS participants</td>
<td>No difference by 2-3 yrs post-discharge</td>
</tr>
</tbody>
</table>

Secher et al., 2014
<table>
<thead>
<tr>
<th>Domain</th>
<th>LEO Discharge</th>
<th>LEO Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Admission Rate</td>
<td>-</td>
<td>No difference by 1.5-3 yrs post-discharge</td>
</tr>
<tr>
<td>Mean Number of Hospital Bed Days</td>
<td>-</td>
<td>No difference by 1.5-3 yrs post-discharge</td>
</tr>
<tr>
<td>Domain</td>
<td>LEO Discharge</td>
<td>LEO Follow-Up</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------</td>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>Psychotic Symptoms</td>
<td>-</td>
<td>No difference by 8 yrs post-discharge</td>
</tr>
<tr>
<td>Symptomatic Remission</td>
<td>+</td>
<td>No difference by 8 yrs post-discharge</td>
</tr>
<tr>
<td>Functional Recovery</td>
<td>+</td>
<td>No difference by 8 yrs post-discharge</td>
</tr>
<tr>
<td>Suicide Attempts</td>
<td>-</td>
<td>Fewer attempts over post-discharge period (through 8 yrs post-discharge)</td>
</tr>
<tr>
<td>Completed Suicide</td>
<td>-</td>
<td>Fewer suicides over post-discharge period (through 8 yrs post-discharge)</td>
</tr>
<tr>
<td>Length of Periods of Employment</td>
<td>+</td>
<td>+ Longer periods of full time employment over post-discharge period (through 8 yrs post-discharge), but diminishing difference</td>
</tr>
<tr>
<td>Duration of Hospitalization</td>
<td>-</td>
<td>Reduced duration of hospitalization</td>
</tr>
</tbody>
</table>
Explanations and Solutions?

• Extension of services
  – Additional 1-3 years?

• “[H]eterogeneous trajectories of early psychosis require differentiation”
  – Stepped approaches from first treatment

• Better understanding/optimization of ‘active ingredients’
  – E.g. supported education/employment & associated outcomes

• Improved engagement with array of CSC components
International Extension Pilots & Trials

• OPUS II – Denmark
• Hong Kong EASY Extension
• Montreal PEPP Extension Trial (Dr. Malla)
Early Intervention in Psychosis: Is Transition to other levels of care possible?

Ashok Malla
Professor and Canada Research Chair in Early Psychosis and Early Intervention in Youth Mental Health, Department of Psychiatry, McGill University and ACCESS Open Minds (Esprits ouverts) Canada
Declarations

• I have no conflicts of Interest to declare in relation to the presentation or the original studies from which these data are derived.
• Salary support from Canada Research Chairs Program
• Research Funding (98%) from CIHR, FRSQ, NIH, GCC
• I have received honoraria for lectures on Early Intervention in Psychosis given at conferences in Europe and the USA supported by Lundbeck & Otsuka, Global
• I have provided consultation to Lundbeck and Otsuka in the last 2 years on matters related to research and practice in early psychosis
OBJECTIVES

• To review current status of early intervention (EI) service delivery to patients with a first episode of psychosis (FEP)

• To review the need to extend EI service beyond two years and effectiveness of EEI service (RCT)

• To examine issues related to transition to other levels of care following treatment of FEP in an EI service

• To present data derived from a RCT to support transition to different levels of care for FEP patients following 2 year treatment in an EI service
Early Intervention Is More Than Just Intervening Early (Malla & Norman 2001)

• Informed by and in Response to Evidence:

    *(Need to reduce delay in treatment)*

  – There is a critical period of 2-5 years following onset during which trajectories of long term outcome are defined (Birchwood 1998; Harrison et al 2001; Velthorst et al 2017) *(Need for better quality treatment)*
Two Components of Early Intervention Service in Psychosis

• Comprehensive, phase specific, evidence informed interventions provided within a positive, recovery oriented approach and mostly community focused (Moderate to high fidelity in EI Services)

• Reducing delay in treatment and providing treatment ‘Early’ (Very Low Fidelity and Uptake)
PEPP-Montréal Model of Care

Recognition & Screening

Recovery-based interventions
- Work
- School
- Relationships

Assessment

Case Manager, Psychiatrist, Psychologist
- Symptoms, side effects, quality of life, functioning, etc.

Cognition

Psychotherapy Group intervs.

Pharmacological Management

TREATMENT

Case Management (Clinical, Assertive)

CBT

Individual Family Intervention

Family Education Modules

Individual Family Intervention

Family Education Modules

CBT
Evidence for Effectiveness of SEI

• At one and at two years FEP patients treated in an SEI model show:
  – Higher rates of remission
  – Lower rates of residual positive and negative symptoms
  – Lowered rates of relapse
  – Less substance abuse
  – Better overall functioning
  – More cost effective

For review: Correl 2018; Harvey et al., 2007
Srihari et al., 2015
At Five Year Follow up

Gains achieved with SEI at two years are not maintained at 5 year follow up when patients are transferred to regular care: OPUS Trial

Bertelsen et al., 2008
Canadian (PEPP-London, Ont.) Evidence for Extending SEI for the full “Critical Period”

• Even Reduced level of SEI service offered to all patients for three additional years (5 years total) produced significantly higher rates of remission and lowered rates of hospitalization compared to the five-year outcome data of OPUS patients who only received two years of SEI treatment followed by regular care

Norman et al., 2011
“A five-year randomized parallel trial of an extended specialized early intervention vs. regular care in the early phase of psychotic disorders”
(Lutgen et al 2015; Malla et al World Psychiatry 2017)

Ashok Malla (PI)
Ridha Joober; Srividya Iyer; Thomas G Brown; Ross Norman; Eric Latimer; Norbert Schmitz; Eric Jarvis; Howard Margolese; Amal Abdel Baki; Sherezad Abadi; Sally Mustafa

Danyael Lutgens (PhD candidate)

Canadian Institutes of Health Research (CIHR 2009-2015)
(MCT 94189; Registration CCT-NAPN-18590)
• The current Randomized Controlled Trial (RCT) conducted at the Prevention and Early Intervention Program for Psychosis (PEPP-Montreal) was designed to address the question of SEI treatment length
  - *three years of extension of full SEI services following two years of SEI, compared to three years of regular care following the initial two years of SEI service.*
Extension of PEPP-Montréal Specialized

Recognition & Screening
- Recovery-based interventions
  - Work
  - School
  - Relationships

Assessment
- Case Manager, Psychiatrist, Psychologist
- Symptoms, side effects, quality of life, functioning, etc.

Cognition

Pharmacological Management

TREATMENT
- Individual Family Intervention
- Family Education Modules
- CBT
- Group intervs.

CBT

Psychotherapy Group intervs.
1. Primary level of care (Community health and social service clinics; Family Practitioner MDs)

2. Secondary level of care: External clinics (most are hospital based) with psychiatrists, often with non-physician staff (nurses, case managers, social workers, O.T. etc.) with back up of hospital beds (Tertiary level) but not an EI Service
The primary hypothesis: Individuals in the experimental group (extended SEI) will show higher rates and longer periods of remission (both positive and negative symptoms) than the control group (regular care) over the extension period of three years.
Secondary Hypotheses (select)

Individuals in the experimental group (extended SEI) will remain engaged in treatment at a higher rate and for longer period than those in the control group (regular care) over the extension period of three years.
Inclusion Criteria

• Completed 24 months of SEI service (+ - 3 months) within the McGill network of SEI services;

• Diagnosis (DSM-IV) of a psychotic disorder (Schiz. Spectrum Psychoses or Affective Psychosis);

• Age 18-35; IQ greater than 70;

• Ability to communicate fluently in English or French;

• Able to provide informed consent.
Exclusion Criteria

Exclusion:

- Under 18 years old at the time of signing consent;
- Psychotic disorder explained by a medical condition;
- Substance dependence being the primary diagnosis;
- IQ lower than 70.

Co-morbid substance abuse was not an exclusion criterion (to protect ecological validity)
Randomization of Participants

Assessed for eligibility: N=366

Not approached due to not meeting inclusion criteria (N=87): IQ=3; underage=12; diagnostic criteria=40; in another trial=2; language=2; past recruitment period=14; moved=7; other reasons=7

Total approached: N=279

Total recruited: N=220
Douglas Mental Health University Institute: 178
Jewish General Hospital: 37
Montreal University Hospital Centre: 5

Refused to sign consent (N=59)

Deported = 1; relocation out of district = 1

Randomized to EEIS (N=110)
Completed 36 month trial assessments (N=87); Mean time in trial: 133.2 weeks
Evaluable patients: N=98 for positive symptom remission; N=82 for total symptom remission

Randomized to regular care (N=110)
Completed 36 month trial assessments (N=53); Mean time in trial: 101.7 weeks
Evaluable patients: N=96 for positive symptom remission; N=72 for total symptom remission

Death=1 (unknown cause); relocation out of district=3
Study Assessments

• Evaluations and assessments at entry (randomization) and every *three* months for the entire follow up period, or until withdrawal from the study

• Assessments were blinded

• 2 consecutive missed evaluations (6 months) considered study drop out.
RESULTS
Comparison of Demographic Characteristics of the SEI and Control Groups at Baseline (Randomization)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total (n = 220)</th>
<th>Control (n = 110)</th>
<th>SEI (n = 110)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at FEP onset (years)</td>
<td>M (SD)</td>
<td>22.39 (4.42)</td>
<td>22.90 (4.66)</td>
<td>21.87 (4.12)</td>
</tr>
<tr>
<td>Age at consent signing (years)</td>
<td>M (SD)</td>
<td>25.22 (4.33)</td>
<td>25.76 (4.38)</td>
<td>24.68 (4.24)</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>n (%)</td>
<td>151 (69%)</td>
<td>76 (69%)</td>
<td>75 (68%)</td>
</tr>
<tr>
<td>Marital status (Single)</td>
<td>n (%)</td>
<td>200 (91%)</td>
<td>97 (88%)</td>
<td>103 (94%)</td>
</tr>
<tr>
<td>Education (High school or less)</td>
<td>n (%)</td>
<td>103 (47%)</td>
<td>50 (46%)</td>
<td>53 (48%)</td>
</tr>
<tr>
<td>Socioeconomic status (middle, lower middle and lower class)</td>
<td>n (%)</td>
<td>150 (87%)</td>
<td>77 (88%)</td>
<td>73 (86%)</td>
</tr>
<tr>
<td>Visible minority status: yes</td>
<td>n (%)</td>
<td>62 (39%)</td>
<td>37 (46%)</td>
<td>25 (32%)</td>
</tr>
</tbody>
</table>

No Significant Differences
Comparison of Differences Between the SEI and Control Group on Clinical Characteristics at Baseline

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total (n = 220)</th>
<th>Control (n = 110)</th>
<th>SEI (n = 110)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of untreated psychosis (DUP) (weeks)</td>
<td>M (SD) 49.33 (123.61) [Median = 11.57 weeks]</td>
<td>46.29 (92.71)</td>
<td>52.39 (148.82)</td>
<td>.716</td>
</tr>
<tr>
<td>Primary diagnosis (Schizophrenia Spectrum)</td>
<td>n (%) 143 (65%)</td>
<td>69 (63%)</td>
<td>74 (67%)</td>
<td>.500</td>
</tr>
<tr>
<td>Secondary Diagnosis (Substance Abuse/Dependence: yes)</td>
<td>n (%) 78 (36%)</td>
<td>37 (34%)</td>
<td>41 (37%)</td>
<td>.795</td>
</tr>
<tr>
<td>SAPS</td>
<td>M (SD) 6.53 (9.68)</td>
<td>6.00 (8.95)</td>
<td>7.07 (10.39)</td>
<td>.416</td>
</tr>
<tr>
<td>SANS</td>
<td>M (SD) 13.80 (11.63)</td>
<td>14.03 (12.79)</td>
<td>13.58 (10.43)</td>
<td>.784</td>
</tr>
<tr>
<td>BPRS</td>
<td>M (SD) 37.00 (10.58)</td>
<td>35.82 (10.60)</td>
<td>38.12 (10.50)</td>
<td>.118</td>
</tr>
<tr>
<td>SOFAS</td>
<td>M (SD) 59.09 (15.01)</td>
<td>61.40 (14.16)</td>
<td>57.20 (15.48)</td>
<td>.063</td>
</tr>
</tbody>
</table>
# Opinion of Research Participants Regarding Their Assigned Condition

<table>
<thead>
<tr>
<th></th>
<th>Control (n = 110)</th>
<th>Experimental (n = 110)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’m happy with the results</td>
<td>31%, n = 23</td>
<td>88%, n = 66</td>
</tr>
<tr>
<td>I’m not happy with the results</td>
<td>31%, n = 23</td>
<td>4%, n = 3</td>
</tr>
<tr>
<td>It does not matter to me where I receive services</td>
<td>37%, n = 27</td>
<td>8%, n = 6</td>
</tr>
</tbody>
</table>
PRIMARY OUTCOME:
LENGTH OF REMISSION
## Symptom Remission

<table>
<thead>
<tr>
<th></th>
<th>Positive symptom remission</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Treatment group</strong></td>
<td>31.58</td>
<td>7.06</td>
</tr>
<tr>
<td><strong>Length of treatment</strong></td>
<td>0.20</td>
<td>0.08</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Negative symptom remission</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Treatment group</strong></td>
<td>13.79</td>
<td>6.98</td>
</tr>
<tr>
<td><strong>Number of interventions</strong></td>
<td>0.25</td>
<td>0.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Positive and negative symptom remission</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Treatment group</strong></td>
<td>19.80</td>
<td>8.80</td>
</tr>
<tr>
<td><strong>Number of interventions</strong></td>
<td>0.28</td>
<td>0.12</td>
</tr>
</tbody>
</table>
Differences in Length of Positive and Negative Symptom Remission in EEIS vs Regular Care (Malla et al 2017)

<table>
<thead>
<tr>
<th></th>
<th>EEIS</th>
<th>Regular care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Symptom</td>
<td>92.5</td>
<td>63.6</td>
</tr>
<tr>
<td>Negative Symptom</td>
<td>73.4</td>
<td>43.7</td>
</tr>
<tr>
<td>Pos &amp; Neg Symptom</td>
<td>66.5</td>
<td>41.6</td>
</tr>
</tbody>
</table>

Cohen’s d = 0.65, 0.30, 0.49
Potential Confounds Tested as Covariates

• Site (specific clinic within the McGill system of EI services)
• Length of exposure to treatment
• Number of treatment interventions
• There were no differences between the two groups at the time of randomization on all other variables.
SECONDARY OUTCOME: DISENGAGEMENT
Time to Clinical Attrition: Physician Contact

Log-rank test: ($\chi^2 (1) = 8.564, p = .003$)

Mean time to clinical attrition_physician:
Control: 23.84 (CI 20.90-26.78) months
SEI: 29.90 (CI 27.97-31.84) months

Significantly different
Time to Clinical Attrition: Health Care Professional Contact

Log-rank test: \( \chi^2 (1) = 27.281, p = <.001 \)
Mean time to clinical attrition_other health care professional:
Control: 22.78 (CI 19.89-25.66) months
SEI: 31.92 (CI 30.23-33.62) months

Significantly different
Does DUP Influence the effect of EEI service on the primary outcome (length of remission)?

WHO recommends a cut-off of 12 weeks to get the most benefit!
Linear Regression Models to Test for Interaction between Treatment Condition and DUP ≤ 12 weeks (Dama et al 2019)

<table>
<thead>
<tr>
<th></th>
<th>β coefficient</th>
<th>Standard Error</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of positive symptoms remission</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment condition</td>
<td>16.28</td>
<td>9.11</td>
<td>1.79</td>
<td>0.08</td>
</tr>
<tr>
<td>DUP ≤ 12 weeks</td>
<td>-7.17</td>
<td>9.06</td>
<td>-0.79</td>
<td>0.43</td>
</tr>
<tr>
<td>Treatment condition* DUP</td>
<td>22.11</td>
<td>12.79</td>
<td>1.73</td>
<td>0.09</td>
</tr>
<tr>
<td>≤ 12 weeks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2 = 0.10$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Length of negative symptoms remission** |               |                |         |         |
| Treatment condition      | -0.98         | 9.93           | -0.10   | 0.92    |
| DUP ≤ 12 weeks           | -5.98         | 9.87           | -0.61   | 0.54    |
| Treatment condition* DUP | 30.57         | 13.77          | 2.22    | 0.03    |
| ≤ 12 week                |               |                |         |         |
| $R^2 = 0.19$             |               |                |         |         |

| **Length of total symptoms remission** |               |                |         |         |
| Treatment condition      | -5.15         | 9.81           | -0.53   | 0.60    |
| DUP ≤ 12 weeks           | -3.99         | 9.94           | -0.40   | 0.69    |
| Treatment condition* DUP | 31.20         | 13.71          | 2.28    | 0.02    |
| ≤ 12 weeks               |               |                |         |         |
| $R^2 = 0.16$             |               |                |         |         |
Linear Regression Models to Test for Interaction between Treatment Condition and DUP ≤ 12 weeks (Dama et al 2019)

**EISS**

- Average weeks in positive remission:
  - DUP ≤ 12 weeks: 98.92
  - DUP > 12 weeks: 83.97

- Average weeks in negative remission:
  - DUP ≤ 12 weeks: 86.24
  - DUP > 12 weeks: 61.66

- Average weeks in total remission:
  - DUP ≤ 12 weeks: 80.79
  - DUP > 12 weeks: 53.57

**Regular care**

- Average weeks in positive remission:
  - DUP ≤ 12 weeks: 60.53
  - DUP > 12 weeks: 67.7

- Average weeks in negative remission:
  - DUP ≤ 12 weeks: 56.66
  - DUP > 12 weeks: 62.64

- Average weeks in total remission:
  - DUP ≤ 12 weeks: 54.74
  - DUP > 12 weeks: 58.73
Potential Confounds Tested as Covariates

- Age at onset of psychosis
- Pre-morbid adjustment score
- Schizophrenia diagnosis (vs affective psychosis)
- Length of exposure to treatment
- Number of treatment interventions
- Adherence to medication
Questions Arising with Relevance to Transition of Level of Care

• It is unlikely that specialized care in an EI service can or even should be maintained for all FEP patients for five years or more

• Are there patients who can transition at different time points during the critical period? If so, to what level of care, when and who?

• How do we achieve these transitions successfully?
## TRANSFER TO OTHER SERVICES (CONTROL: REGULAR CARE)

### Transfer to other services

<table>
<thead>
<tr>
<th>Line Services</th>
<th>Percentage</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Line Services (General Practitioner; CLSC)</td>
<td>52%</td>
<td>51</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Line Services (Psychiatric)</td>
<td>48%</td>
<td>48</td>
</tr>
</tbody>
</table>

CLSC: Community Health and Social Services clinics (Primary care)
Mean time to transfer was 5.71 months (S.D. = 3.26; max = 18.03 months)
Processes Involved in Transfer to Other Levels of Care - Part 1

• Prior to randomization, patients were told that in case they were randomized to regular care we would, *a-priori*, establish if that would be primary care or secondary specialist care based on their progress over the first 21 months in the EI service (remission status and length, history of relapses, functional status prior to and during treatment, etc.) within a shared decision making with patient and family input.

• Once randomized we followed the initial decision unless circumstances had changed (e.g. patient in relapse)

• Detailed reports were prepared on each patient on multiple dimensions of their progress (clinical, social, occupational) based on data collected at PEPP-Montréal (EI service)
Processes Involved in Transfer to Other Levels of Care-Part 2

- Contact was made with the required service immediately following randomization to seek a meeting with the putative receiving service. The EI clinician attended the case discussion at the receiving service.
- For primary care level the presence of and acceptance by a family physician was confirmed.
- First meeting with the receiving service was held accompanied by the EI clinician to ensure smooth transition.
- EI clinician maintained contact with the patient until a satisfactory transition had taken place.
- During the waiting period the EI service maintained responsibility for patient’s care.
## TRANSFER TO OTHER SERVICES (REGULAR CARE)

### Transfer to other services

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Line Services (General Practitioner; CLSC)</td>
<td>46%</td>
<td>n = 51</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Line Services (Psychiatric)</td>
<td>44%</td>
<td>n = 48</td>
</tr>
<tr>
<td>Not Transferred (dropped out before transfer)</td>
<td>10%</td>
<td>n = 11</td>
</tr>
</tbody>
</table>

Mean time to transfer was 5.71 months ($S.D. = 3.26$; max = 18.03 months)
Post-hoc Analyses in Patients Transferred to Primary or Secondary Care

<table>
<thead>
<tr>
<th></th>
<th>Primary (N=51)</th>
<th>Secondary (N=48)</th>
<th>Test</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-secondary education (N, %)</td>
<td>31 (60.8%)</td>
<td>18 (39.1%)</td>
<td>$\chi^2=4.53$</td>
<td>0.03</td>
</tr>
<tr>
<td>Substance abuse (N, %)</td>
<td>20 (46.5%)</td>
<td>28 (68.3%)</td>
<td>$\chi^2=4.06$</td>
<td>0.05</td>
</tr>
<tr>
<td>SAPS (global score, mean±SD)</td>
<td>2.4±3.5</td>
<td>9.7±10.1</td>
<td>$z = -4.37$</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SANS (global score, mean±SD)</td>
<td>10.7±10.4</td>
<td>19.9±14.4</td>
<td>$t = -3.39$</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Positive symptom remission (N, %)</td>
<td>45 (88.2%)</td>
<td>26 (54.2%)</td>
<td>$\chi^2=14.15$</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Negative symptom remission (N, %)</td>
<td>32 (62.7%)</td>
<td>16 (33.3%)</td>
<td>$\chi^2=8.54$</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Total symptom remission (N, %)</td>
<td>31 (60.8%)</td>
<td>10 (20.8%)</td>
<td>$\chi^2=16.26$</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
## Post-hoc Analyses in Patients Transferred to Primary or Secondary Care

<table>
<thead>
<tr>
<th>Follow-up and outcome</th>
<th>Primary</th>
<th>Secondary</th>
<th>Test</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of treatment interventions (mean±SD)</strong></td>
<td>20.8±24.8</td>
<td>60.1±94.9</td>
<td>z =3.90</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Length of treatment (weeks, mean±SD)</strong></td>
<td>102.3±55.3</td>
<td>107.7±48.8</td>
<td>t =–0.47</td>
<td>0.64</td>
</tr>
<tr>
<td><strong>Positive symptom remission length (weeks, mean±SD)</strong></td>
<td>75.2±48.6</td>
<td>57.2±42.2</td>
<td>t =1.90</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Negative symptom remission length (weeks, mean±SD)</strong></td>
<td>73.9±47.8</td>
<td>47.0±41.6</td>
<td>t=2.52</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Total symptom remission length (weeks, mean±SD)</strong></td>
<td>66.1±46.4</td>
<td>46.9±40.6</td>
<td>t=1.66</td>
<td>&lt;0.10</td>
</tr>
<tr>
<td><strong>Positive symptom remission at any time (N, %)</strong></td>
<td>44 (86.3%)</td>
<td>24 (50.0%)</td>
<td>χ²=15.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Negative symptom remission at any time (N, %)</strong></td>
<td>33 (64.7%)</td>
<td>11 (22.9%)</td>
<td>χ²=17.49</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Total symptom remission at any time (N, %)</strong></td>
<td>31 (60.8%)</td>
<td>7 (14.6%)</td>
<td>χ²=22.32</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Extended EI service from 2 to 5 years resulted in longer length of remission of symptoms (known to be directly associated with functional outcome) compared to two years of EI followed by 3 years of regular care.

This benefit of EEI interacted with DUP. Persons with shorter DUP in the EEI condition showed greater improvement than persons with longer DUP while no significant differences were obtained between DUP groups in the control condition.
• Matched with significant care and precision, patients transferred to primary health and social care fared better than expected and better than those transferred to secondary level care (who had a worse course in the first two years)
• Patients with poorer course and outcome during the first two years may be the ones likely to need extended EI service.
• *IS THIS* Evidence for careful matching and delicately woven transition to another service may achieve successful transition to different levels of care?
• This needs further investigation
THANK YOU
MERÇİ
Who is OnTrack@BestSelf?

We are a Certified Community Behavioral Health Clinic (CCHBC) designed to provide intervention services for young adults who are experiencing psychosis.

What we do:

- OnTrack began in June of 2015 and is federally funded innovative treatment program for adolescents and young adults who recently have had unusual thoughts and behaviors or who have started hearing or seeing things that other don’t. OnTrack helps people achieve their goals for school, work and relationships.

- The OnTrack companion program began July of 2017 when BestSelf moved to a cost-based, per-clinic rate that is a fixed amount for all CCBHC services provided any given day to a Medicaid beneficiary.
Enrollment

**OnTrack:**
- Individuals between the ages of 16 and 30.
- Have recently been experiencing symptoms such as, unusual thoughts and behaviors, hearing and seeing things that others don't, or disorganized thinking
- Symptoms have been present over a week but less than 2 years.
- Are willing to work with a diverse team of healthcare professionals.

**OnTrack-Companion Program:**
- Individuals between the ages of 16 and 30.
- A primary psychotic disorder such as Schizophrenia that could last as long as long 5 years.
- Individuals may have a co-occurring mood disorder
- Individuals may have a substance abuse disorder - however, that substance abuse disorder must be managed with minimal supports. We use a harm reduction model and do provide toxicology and medication assistance (MAT).
Prior to the existence of the companion program

- 20% of Ontrack Clients needed extended treatment in OnTrack following their 2 year anniversary
- Psychotic Disorders with co-occurring affective symptoms were ineligible for CSC services
- Psychotic Disorders with longer than 24 month durations were also ineligible for CSC services
Following Availability of the Companion Program of the 51 Clients in OnTrack

- 16 Clients (31%) were referred to the companion program
  - 5 Were discharged in 2017-2018 (LOS 3.3 years)
    - 4 of these referred to other services
  - 11 Continued in the companion program (LOS 2.7 years)

- 14 Clients were discharged
  - 21% graduated
  - Other Reasons for discharge
    - 26% Moved
    - 18% Chose Another Service
    - 22% Refused Treatment
    - 4% Treatment Unlikely to Yield Gain
    - 8% Psychiatric Hospitalization
    - 22% Referred to Other Agency
Conclusions

• About 20-30% of OnTrack Clients need more than 2 years of service

• Of individuals transferred to Companion
  – 25% Can be referred to other services after about 1 year
  – 69% Continue in the companion care program at the end of FY 16-17
Stepped Care for CSC in PA: The Need and the Model

Irene Hurford, M.D.
Clinical Director, PEACE Program, Horizon House
Director, Pennsylvania Early Intervention Center
Assistant Professor of Clinical Psychiatry, Department of Psychiatry, University of Pennsylvania
### Engagement in Aftercare Services

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Aftercare Service Engagement Challenges</th>
<th>Total Endorsing Aftercare Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engaged in Mental Health Services at Follow-Up</strong></td>
<td>15</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Excessive time to be admitted to service</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excessive time to get appts. (first appt. or between appts.)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsatisfied with service/wants a different service</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NOT Engaged in Mental Health Services at Follow-Up</strong></td>
<td>9</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Not in service, would like to engage service</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was in service, withdrew b/c unsatisfactory</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Contacted</strong></td>
<td>24</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

[1] The 2 respondents “in service, withdrew b/c unsatisfactory” are also included in the 4 “not in service, would like to engage service” in the previous column.
### Participant/Family Suggestions and Comments at Follow-Up

<table>
<thead>
<tr>
<th>Suggested a PEACE extension, a PEACE step-down, or other service similar to PEACE</th>
<th>5</th>
</tr>
</thead>
</table>
| **Common Themes to Their Comments About Peace** | • would like to have continued in PEACE/struggling because there is no program like PEACE after discharged  
• loved the program  
• atmosphere was pleasant, welcoming  
• felt cared about by staff  
• accommodating/convenience/availability was great  
• appreciated art programs  
• appreciated multi-family group  
• liked working with a man  
• miss the staff/want to visit  
• doctors helpful with medication  
• program should have food, graphic design class, tutoring  
• too far away  
• would have liked to have had a better good-bye to certain staff  
• learned a lot/came a long way through participation in PEACE  
• would recommend PEACE to others |
Step 1
- Full CSC model
- Min contact every 2 wk

Step 2
- Some reduced services
  - e.g. cut OT, family therapy, case management
  - Max contact 3 times/wk, min 2 times/months

Step 3
- More reduced services
  - e.g. maintain psychopharm and booster therapy only
  - Max 3 times/mo
For an Annotated List and Links to All First Episode TA Material Click on
https://www.nasmhpd.org/sites/default/files/Overview_Links_All_FEP_TA_Products_9-28-18_0.pdf

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www.samhsa.gov
1-877-SAMHSA-7 (1-877-726-4727) 1-800-487-4889 (TDD)