A case control and follow up study of an innovations service set up to look at the feasibility of identifying, treating and improvement outcomes in ‘Hard to Reach’ Young people with multiple complex mental disorders

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**Background — 'Hard to Reach’ Young People**

- One in 10 **Young People (YP)** have a mental disorder, but only half access any services, and one fifth specialist CAMHS *(Ford et al 1999)*. Since 75% of mental disorders emerge before the age of 25, successful access to mental health services is a public health priority *(Royal College of Paediatrics and Child Health, 2003)*.

- ‘**Hard To Reach**’ YP (HTR YP), who are; considered to be a particularly vulnerable group who are at higher risk of having multiple complex needs, who often slip through the health care system and can be unwilling to engage with services *(Doherty et al 2004, Social Exclusion Unit, 2005)*

- This Innovations project 15-25 years, set up a **new multidisciplinary team** based within an inner city area, Darzi walk-in health centre, in the North East of England (from January – December 2011) and assessed whether it could identify, assess and treat this population.
Overview of Innovations Project

Procedure
1) In-depth clinical interview
2) Developmental history
3) Mini-Kid
4) Partially assessed: Multiple DNA's & discharged
7) No requirement for intensive treatment

Includes...
1) 1:1 Sessions with Young Person
2) Family Discussion/work
3) Liaison with other services
4) Medication

Outcome measures
HoNOSCA: A routine outcome measurement tool to assess behaviours, learning/physical impairments, psychological/emotional symptoms & social functioning.
CGAS: A numeric scale to rate the individual’s general functioning.
S.NASA: A semi-structured interview, assessing the needs of adolescents with complex problems.
PSQ: 16 items (12 on a 4-point Likert, 4 open ended), evaluating client satisfaction with the service.
Aims

1. To identify and compare the indices for severity, complexity, engagement and response to treatment; in a sample of HTR YP and sample who attended Community Mental Health Team (CMHT).

2. These samples were matched for; age, gender, education, socioeconomic status and date of discharge.
Hypothesis

- Retrospective work

- The HTR YP suffered from more severe and multiple mental disorders, compared to the CMHT at baseline

- The intensity and type of clinical care provided by the Innovations Project 15-25 years (to the HTR YP) is different from the standard clinical care offered by the CMHT to YP in the North East, of England during the same year (2011) (from baseline to discharge).

- The clinical change observed in: 1) mental state and 2) social functioning of the HTR YPs is greater than the clinical change observed in the CMHT cohort of YP from baseline to discharge over a maximum of twelve months.
Overview of Methods of research project

Innovations Project 15-25 (cases)
- HTR YP N=36
  - HTR YP N=31
  - HTR YP N=28
  - Attended Follow up review N=13

Initial Phase – Feasibility Study (Time point 1-2)

Phase 1 – Comparison of Demographics (Time point 2)

Phase 2 – Comparison of Service input and Outcome Measures (Time point 2)

Phase 3 – Follow up review of mental state and social function (Time point 3)

CMHT (controls)
- N=342
  - Selected Sample N=115
  - Matched Sample N=71
  - Matched Sample N=54
  - Attended Follow up review N=9
Results. Frequency of diagnoses of YP at baseline

The median number of diagnoses for the HTR YP (n=31) was 3, interquartile range 2-4, range 1-5, and CMHT (N=71) median 1, interquartile range 1-2, range 1-4.
## Results – *Baseline Scores*

*(comparison with UK reported CAMHS data)*

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>HONOSCA Mean (S.D.)</th>
<th>CGAS Mean (S.D.)</th>
<th>S.NASA Mean (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partially Assessed (N=9)</td>
<td>19.3 (9.3)</td>
<td>51 (14.6)</td>
<td>N/A</td>
</tr>
<tr>
<td>No Treatment (N=7)</td>
<td>9.9 (4.7)</td>
<td>68.3 (9.6)</td>
<td>36.4 (3.9)</td>
</tr>
<tr>
<td>Intensive Treatment (N=15)</td>
<td>23.1 (6.2)</td>
<td>44.2 (6.2)</td>
<td>55.0 (7.2)</td>
</tr>
<tr>
<td>Total (N=31)</td>
<td>19.0 (8.6)</td>
<td>51.1 (13.9)</td>
<td>49.8 (11.2)</td>
</tr>
<tr>
<td>2 Out-Patients London CAMHS (N=203)</td>
<td>11.4 (4.89)</td>
<td>53.9 (10.9)</td>
<td>N/A</td>
</tr>
<tr>
<td>South London &amp; Maudsley Tier 4 Inpatient CAMHS (N=73)</td>
<td>N/A</td>
<td>34.6 (N/A)</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Results. Comparison of baseline HoNOSCA and CGAS scores

Figure 1. HoNOSCA scores - HTR YP: CMHT 19: 11.2, t91=5.53 P<0.001

Figure 2. CGAS scores – HTR YP: CMHT 51: 58.9, t47=-2.0 P=0.05
Results. Comparison of Pre-discharge HoNOSCA and CGAS scores

Figure 3. HoNOSCA scores – HTR YP: CMHT 15.3: 8.0, t53=4.43 P<0.001

Figure 4. CGAS scores – HTR YP: CMHT 62.1: 57.9, t20=0.66 Non-significant
Results. Comparison, mean difference (change in scores over time)

Figure 5. HoNOSCA – HTR YP: CMHT 7.8: 2.3 points, t\(_{54}=4.81\) P<0.001

Figure 6. CGAS – HTR YP: CMHT 17.9: 1.7 points, t\(_{20}=-3.61\) P<0.002
## Results. Service input

<table>
<thead>
<tr>
<th>Service offered</th>
<th>Time Offered (min)</th>
<th>Attendance rate (%)</th>
<th>DNA's</th>
<th>Days awaiting 1st review</th>
<th>Medication (%)</th>
<th>CBT (%)</th>
<th>Supportive psychotherapy (%)</th>
<th>Hospital admission (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTRYP (n=31)</td>
<td>1538</td>
<td>56</td>
<td>3.9</td>
<td>13.8</td>
<td>6(13)</td>
<td>3(10)</td>
<td>19(54)</td>
<td>0(0)</td>
</tr>
<tr>
<td>CMHT (n=71)</td>
<td>518</td>
<td>69</td>
<td>2.6</td>
<td>12.2</td>
<td>41(87)</td>
<td>27(90)</td>
<td>14(46)</td>
<td>9(100)</td>
</tr>
<tr>
<td>P value</td>
<td>&lt;0.001</td>
<td>0.04</td>
<td>0.06</td>
<td>0.55</td>
<td>0.03</td>
<td>0.004</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>
## Results — *Clinical Outcomes*
(comparison with CAMHS data reported by Garralda et al 2000)

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Discharge HONOSCA Means (S.D.)</th>
<th>Change in Score (P value)</th>
<th>Change in Discharge CG (P value)</th>
<th>Change in Discharge S.NASA Means (S.D.)</th>
<th>Change in Score (P value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive</td>
<td>15.3 (8.6)</td>
<td>7.8 (&lt;0.001)</td>
<td>62.1 (14.7)</td>
<td>17.9 (&lt;0.001)</td>
<td>45.0 (11.0)</td>
</tr>
<tr>
<td>London CAMHS</td>
<td>7.79 (4.93)</td>
<td>3.61 (&lt;0.001)</td>
<td>60.9 (12.6)</td>
<td>7.03 (&lt;0.001)</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Discussion

• HTR YP baseline scores, reflected high levels of psychopathology

• The Innovations project (HTR YP) successfully identified a cohort of YP with severe mental health needs and significantly impaired social function

• Engaging the HTR YP required more people hours making the service expensive

• HTR YP received a somewhat different care package which was individually tailored to the YP
Conclusion

- HTR YP require a flexible service with a YP oriented approach that is adequately resourced. That includes an outreach capability and protected caseload for staff.

- **Next Steps:** To write up and present the results from the follow up review of this case control study, which elucidates further insight into the trajectory of mental health and social function over time, followed by these YP.
Thank you

Any questions?