Effective Ingredients in Assertive Outreach (ACT)
Tom Burns: University of Oxford
PACT - Stein & Test 1980

• Project for Assertive Community Treatment
• 126 psychotic patients in RCT of:
  – Intensive case management (ACT)
  – Treatment as usual

• Results:
  • Hospitalisation  Reduced
  • Social Functioning Improved
  • Symptoms Same/Improved
  • Employment Enhanced
  • Costs Equivocal
PACT Clinical Practice

• Low case loads 1:10
• Frequent contact (weekly to daily)
• *In vivo* (outreach to home and neighborhood)
• Daily team meetings
• Multidisciplinary work ‘whole team approach’
• Flexibility, crisis stabilization, available 24/7
• Not time limited

• Emphasis on medication
• Emphasis on survival skills and circumstances
  – Accommodation, food, money
  – Social functioning – leisure, work and substance abuse
ACT research takes off

• Over 50 studies in Meuser’s 1998 review
  – Of which >30 ACT like

• Over 90 studies in Catty 2002 review
  – Of which >60 ACT like
## ACT vs Standard Care

### Hospital Admissions


<table>
<thead>
<tr>
<th>Study</th>
<th>Treatment</th>
<th>Control</th>
<th>Peto Odds Ratio 95% CI</th>
<th>Weight %</th>
<th>Peto Odds Ratio 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audini-London</td>
<td>9 / 33</td>
<td>9 / 33</td>
<td></td>
<td>6.5</td>
<td>1.00 [0.34, 2.93]</td>
</tr>
<tr>
<td>Bond-Chicago1</td>
<td>32 / 45</td>
<td>34 / 43</td>
<td></td>
<td>8.2</td>
<td>0.66 [0.25, 1.72]</td>
</tr>
<tr>
<td>Bond-Indiana1</td>
<td>12 / 50</td>
<td>33 / 53</td>
<td></td>
<td>12.6</td>
<td>0.21 [0.10, 0.47]</td>
</tr>
<tr>
<td>Chandler-California</td>
<td>49 / 252</td>
<td>57 / 264</td>
<td></td>
<td>41.5</td>
<td>0.88 [0.57, 1.34]</td>
</tr>
<tr>
<td>Lehman-Baltimore</td>
<td>42 / 77</td>
<td>45 / 75</td>
<td></td>
<td>18.4</td>
<td>0.80 [0.42, 1.52]</td>
</tr>
<tr>
<td>Test-Wisconsin</td>
<td>15 / 75</td>
<td>26 / 47</td>
<td></td>
<td>12.8</td>
<td>0.21 [0.10, 0.45]</td>
</tr>
</tbody>
</table>

**Total (95% CI)**

- **Treatment**: 159 / 532
- **Control**: 204 / 515

Test for heterogeneity chi-square=18.78 df=5 p=0.0021  
Test for overall effect Z=3.74 p=0.00
Case Management vs Standard Care
Hospital admissions

Clinical practice extensively described

Assertive Outreach in Mental Health
A Manual for Practitioners
Tom Burns and Mike Firn, OUP

Excellent book –
available in English, Italian and Swedish
The intellectual puzzle

- No European study has replicated the reduced hospitalisation found in US ACT studies.
- UK700 and PRiSM showed no difference

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Intensive versus standard case management for severe psychotic illness: a randomised trial

Tom Burns, Francis Creed, Tom Fahy, Simon Thompson, Peter Tyrer, Ian White, for the UK 700 Group*

Lancet 1999; 353: 2185–89

- Without this surprising finding we would be no further forward in understanding ACT
Attempting to answer the question empirically:

Going beyond definitions

**BMJ**

Use of intensive case management to reduce time in hospital in people with severe mental illness: systematic review and meta-regression

Tom Burns, Jocelyn Catty, Michael Dash, Chris Roberts, Austin Lockwood and Max Marshall

*BMJ* 2007;335;336-; originally published online 13 Jul 2007;
doi:10.1136/bmj.39251.599259.55
Impact of current bed usage
Metaregression of Intensive Case management studies
Control group mean v mean days per month in hospital.
Negative treatment effect indicates reduction relative to control
Impact of model fidelity (ACT)

Measured using IFACT scale:
- process
- staffing
- treatments
Meta-regression of Fidelity v Reduction in IP days

- Total fidelity score vs mean difference

- Fitted values

- Mean difference

- Representation of data points and fitted line
M-R of Team organisation v Reduction in IP days
M-R of Team staffing v Reduction in IP days
Testing for characteristics of home-based care using cluster analysis and regression

DOI 10.1007/s00127-004-0818-5

Christine Wright · Jocelyn Catty · Hilary Watt · Tom Burns

**A systematic review of home treatment services**

Classification and sustainability

20 characteristics of home-based care
Experimental services only
60 of 90 replied, international response
Associations between common service components

- Smaller caseloads
- Regularly visiting at home
- Responsible for health and social care
- High % of contacts at home
- Multidisciplinary teams
- Psychiatrist integrated in team
Associations between service components & Hospitalisation: regression analysis

- Smaller caseloads
- Regularly visiting at home
- High % of contacts at home
- Responsible for health and social care
- Psychiatrist integrated in team
- Multidisciplinary teams
Conclusion: Effective ingredients

- Home visiting
- Integrated psychiatrist
- **Combined health and social care**
- Multidisciplinarity
- Small caseloads (1:20)
- Team organisation: not specifics of staffing
What have we learnt about research methodology?
1 – Describe control services properly

- Journals should require adequate descriptions of control services in community psychiatry trials
- We should require this too before reading them
2 – Treat both experimental and control services equally in interpretation

• RCTs require equipoise to initiate them
• Outcomes should be interpreted equally
  – Where control has same outcome but significantly ‘cheaper’ then it is superior
  – CMHTs persistently deliver equally to ACT – therefore ACT has inferior cost-effectiveness

_End of the road for Treatment as Usual studies? (2009)_
_BJPsych, 194, in press_
Conclusions 3
Research methodology

• Community Psychiatry research needs intense attention to methodology.

• Greater rigour, not flexibility, is called for in complex and ‘fuzzy’ interventions.

• Do not change essentials or test it! (CBT)

• There is no placebo control service in CP, only an active comparator service.

• International results must be tested for local context.
“When the facts change, I change my opinion. What, sir, do you do?”

John Maynard Keynes, economist
Good news and bad news

• The bad news
  – Most of that effort ensuring model fidelity was unnecessary
  – Community care models do not ensure enduring bed reductions

• The good news
  – We know better what works
  – We can get the same good results as ACT without
    • Very small case loads
    • 24 hour services
    • Highly prescriptive staffing
  – High quality assertive outreach available for more patients
Thank you for listening
And greetings from Oxford