The effectiveness and cost-effectiveness of a stepped care intervention for alcohol use disorders in primary care: A pilot study

Professor Simon Coulton
University of Kent UK
The Background

In the United Kingdom alone alcohol use disorders are responsible for.....

- 22,000 premature deaths annually
- Cost the economy £20 billion annually
- 7 million people are hazardous or harmful drinkers
- 1.1 million are dependent drinkers
There exists a wealth of evidence for interventions to address alcohol use disorders.....

- 13 meta-analyses/ systematic reviews

- 20-30% reduction in alcohol consumed

- Recent meta-analysis highlights opportunistic screening and brief intervention in primary care as the most promising
The outstanding issues

A number of outstanding questions remain....

- Efficacy versus effectiveness
- Role of primary care in delivering interventions
- The public health paradigm
- Primary care skills
The spectrum of need and associated responses...

Figure 1  A spectrum of responses to alcohol problems
Source: Rastrick et al. (2006),\(^1\) adapted from Institute of Medicine (1990).\(^2\)
The potential of stepped care.

Stepped care aims to address these questions....

- Pragmatic evaluations
- Caters for a wide range of needs
- Practical clinical algorithm
- Already accepted by primary care staff
- Intensive interventions delivered only to those who need them
- Provides shared care between generalist and specialist staff
The Study Design

Opportunistic screening

Positive

- Minimal intervention
  - 6 month Follow-up

Negative

Stepped Care

- STEP 1 Review
  - AUD Resolved
- STEP 2
  - STEP 2 Review
  - AUD Resolved
- STEP 3
  - 6 month Follow-up
  - 6 month Follow-up
The interventions

Randomisation

Minimal intervention
5 – minute directive advice on alcohol use and self-help booklet

STEP 1
AUD assessed 28 days after randomisation.
Consumption of >21 units in any one week or >10 units in any one day referred to STEP 2

STEP 2
AUD assessed 28 days after final MET session.
Consumption of >21 units in any one week or >10 units in any one day referred to STEP 3

STEP 1
40-minute session of behavioural change counseling based on motivational interviewing

STEP 2
Maximum of 4 sessions of Motivational enhancement therapy conducted by a trained therapist in the primary care centre

STEP 3
Referral to community alcohol team for specialist intervention as prescribed by the community alcohol team
The CONSORT Statement

Opportunistic screening 1794

Positive 447 (25%)
112 Consented

Minimal intervention 58

Negative 1347 (75%)

Stepped Care 54
STEP 1 Review 52
STEP 2 17 (31%)
STEP 2 Review 17
STEP 3 1 (2%)

6 month Follow-up 52 (90%)

6 month Follow-up 38 (72%)
# Baseline Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Stepped Care</th>
<th>Control</th>
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<tbody>
<tr>
<td>Age (SD)</td>
<td>41.4 (2.3)</td>
<td>42.1 (1.9)</td>
</tr>
<tr>
<td>AUDIT Score (SD)</td>
<td>13.6 (0.8)</td>
<td>13.3 (0.7)</td>
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<tr>
<td>Drinks consumed in 180 days (SD)</td>
<td>1699 (194.8)</td>
<td>1423.0 (113.3)</td>
</tr>
<tr>
<td>Drinks per drinking day (SD)</td>
<td>15.2 (1.1)</td>
<td>12.9 (0.8)</td>
</tr>
<tr>
<td>Percent days abstinent (SD)</td>
<td>37.9 (3.8)</td>
<td>36.6 (3.4)</td>
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<tr>
<td>RCQ-Action (SD)</td>
<td>0.1 (0.7)</td>
<td>0.6 (0.6)</td>
</tr>
<tr>
<td>Alcohol problems (SD)</td>
<td>5.6 (0.6)</td>
<td>4.7 (0.4)</td>
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<tr>
<td>Severity of dependence (SD)</td>
<td>8.2 (0.9)</td>
<td>8.8 (1.2)</td>
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<tr>
<td>Situational confidence (SD)</td>
<td>72.8 (18.0)</td>
<td>74.9 (17.8)</td>
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<tr>
<td>Physical Health SF12 (SD)</td>
<td>40.5 (1.0)</td>
<td>40.6 (1.0)</td>
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<tr>
<td>Mental Health SF12</td>
<td>45.6 (1.8)</td>
<td>49.2 (1.4)</td>
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Adjusted mean differences at 6 months favouring stepped care

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<tr>
<td>Drinks consumed in 180 days (SD)</td>
<td>-171.2</td>
</tr>
<tr>
<td>Drinks per drinking day (SD)</td>
<td>-1.4</td>
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<tr>
<td>Percent days abstinent (SD)</td>
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<tr>
<td>RCQ-Action (SD)</td>
<td>+1.9</td>
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<tr>
<td>Alcohol problems (SD)</td>
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</table>
The intervention costs 10 times as much to deliver than the control treatment.

Analysis of bootstrapped cost-effectiveness ratios suggest that in 818 of 1000 scenarios stepped care is less costly and more effective than minimal intervention.
In conclusion

- Stepped care in primary care is feasible
- Stepped care addresses the needs of the population in primary care
- Stepped care addresses the concerns of primary care staff
- It is associated with greater reductions in terms of alcohol use, alcohol related problems and severity of dependence
- It is associated with increased action orientated readiness to change and increased situational confidence
- It is also more cost-effective than minimal intervention and has a net cost saving of £9000 ($15000)
This study represents a pilot of stepped-care interventions. It provides evidence of potential effectiveness and cost-effectiveness...but larger scale studies are required to confirm this evidence.
The Cast list.....

Professor Simon Coulton, University of Kent
Professor Colin Drummond, Institute of Psychiatry, London
Dr Darren James, Whitchurch Hospital Swansea
Professor Christine Godfrey, University of York
Mr Steve Parrott, University of York
Dr John Baxter, GP, Swansea
Mr David Ford, University of Swansea
Dr Bruce Lervy, University of Swansea
Professor Stephen Rollnick, University of Cardiff
Professor Ian Russell, University of Swansea
Professor Tim Peters, Kings College London

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