Medical Student INtervention to Promote Effective Nicotine Dependence and Tobacco HEalthcare (MIND-THE-GAP): Feasibility randomised trial (NCT02601599) six-month results

Frank Doyle on behalf of MIND-THE-GAP team
Acknowledgements

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- Team:
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- HSE Health Promotion Office
Smoking cessation

- Smoking cessation interventions are one of the most cost-effective healthcare interventions (US Surgeon General, 2014)
- Brief smoking cessation advice with follow-up increases cessation rates in hospitalised smokers
  - Adding pharmacotherapy increases efficacy (Rigotti et al, 2012)
  - But only 30-50% recall such advice (e.g. Mellon et al 2016)
Why?

• Why not? (Sharpe et al, in press, J Smok Cess)
  – Lack of training, self-efficacy, time and resource constraints, etc

• RCT: More teaching ineffective (Ockene et al, 2015)

• Students who interact with patients have highest OSCE scores for smoking cessation (versus role-play, lecture or web-based training; Stolz et al, 2012)
  – Suggests that practical experience may be more important?
What next?

• Could medical students be trained to provide effective smoking cessation care?
  – Practice **with real patients**

• **Medical student INtervention to promote effective Nicotine Dependence and Tobacco HEalthcare: GrAduate entry Programme (MIND-THE-GAP) feasibility randomised trial** (NCT02601599)
  – Provide training
  – Change attitudes?
  – Promote motivation to quit?
Methodology

- GEM (n=70) class were trained in HSE national standard Brief Intervention for Smoking Cessation (BISC)
  - 1 day; 5As approach: theory and practice motivational interviewing
- Clinical Lecturer recruited smokers to the RCT
  - Block randomisation to allocate (random blocks)
  - Obtained baseline information
  - Chart data obtained later
Primary outcome

• Motivation to Stop Smoking Scale (MTSS; Kotz et al, 2013):

  Which of the following describes you?
  I don’t want to stop smoking
  I think I should stop smoking but don’t really want to
  I want to stop smoking but haven’t thought about when
  I REALLY want to stop smoking but don’t know when I will
  I want to stop smoking and hope to soon
  I REALLY want to stop smoking and intend to in the next 3 months
Secondary and other outcomes

- Proportion receiving cessation medications
- Self-report 7-day point prevalent abstinence rates

Other:
- Quit attempts and professional advice
- Perceived student efficacy (intervention group only)
  - Reported previously
Usual care

• May or may not have received counselling from smoking cessation officer or other HCP
  – Although probably not…?!?
Intervention

• One student randomly allocated to counsel the smokers in the intervention group
• AK emailed student, who then had to see patient within the next few days
• Student delivered intervention:
  – Brief motivational interview
  – Used guide to structure this
  – Reminder videos and training manual on moodle
  – 1-week follow-up for further support
Outcome assessment and analysis

• Telephone follow-up:
  – 3- and 6-months

• T-tests, chi-squares, logistic regression etc
  – With and without penalised imputation
  – Repeated measures (random effects) results
    • ITT and per protocol results reported in paper (Kumar et al, 2017)

• Qualitative – reported previously
Flowchart (3 months)

Assessed for eligibility = ?

Randomised = 67

Allocated to intervention = 33
Received student intervention = 32
(Drop-out = 1)

Lost to follow-up (3 months) = 13
(Unable to contact = 8)
(Incomplete data = 4)

Per protocol analysis (3 months) = 19
ITT analysis (3 months) = 33

Allocated to usual care = 34
(Died = 1)
(Drop-out = 2)

Lost to follow-up (3 months) = 8
(Unable to contact = 3)
(Died = 1)
(Incomplete data = 4)

Per protocol analysis (3 months) = 23
ITT analysis (3 months) = 34
Sample description (partial)

<table>
<thead>
<tr>
<th></th>
<th>Intervention (n=33)</th>
<th>Usual care (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>57.5 (14.6)</td>
<td>59.7 (13.4)</td>
</tr>
<tr>
<td>Men</td>
<td>66.7%</td>
<td>58.8%</td>
</tr>
<tr>
<td>Education: 3rd level</td>
<td>24.24%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Lives with smoker</td>
<td>24.2%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Charlson Co-morbidity Index</td>
<td>2.42 (1.97)</td>
<td>2.56 (1.89)</td>
</tr>
<tr>
<td>HCP quit advice in past year</td>
<td>39.4%</td>
<td>50%</td>
</tr>
<tr>
<td>Quitting discussed during adm</td>
<td>27.3%</td>
<td>32.4%</td>
</tr>
<tr>
<td>Smoking status recorded in chart</td>
<td>54.6%</td>
<td>67.7%</td>
</tr>
<tr>
<td>No. of cigs per day</td>
<td>17.6 (11.1)</td>
<td>17.2 (13.0)</td>
</tr>
<tr>
<td>Fagerstrom (FTND)</td>
<td>2.63 (1.39)</td>
<td>2.87 (1.45)</td>
</tr>
<tr>
<td>No. quit attempts in past yr</td>
<td>2.43 (1.67)</td>
<td>2.36 (2.73)</td>
</tr>
<tr>
<td>MTSS</td>
<td>4.97 (1.36)</td>
<td>4.91 (1.42)</td>
</tr>
</tbody>
</table>
## Sample description: Current attitudes

<table>
<thead>
<tr>
<th></th>
<th>Intervention (n=33)</th>
<th>Usual care (n=34)</th>
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</thead>
<tbody>
<tr>
<td>Do you think that if you gave up smoking...</td>
<td></td>
<td></td>
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<tr>
<td>...health would improve in the short-term: Yes</td>
<td>75.8%</td>
<td>76.4%</td>
</tr>
<tr>
<td>...health would benefit in the long-term: Yes</td>
<td>93.9%</td>
<td>73.5%</td>
</tr>
<tr>
<td>...you would put on weight: Yes</td>
<td>18.2%</td>
<td>14.7%</td>
</tr>
<tr>
<td>...it would be harder to handle stress in your life: Yes</td>
<td>36.4%</td>
<td>70.6%</td>
</tr>
<tr>
<td>...you would feel you had done something worthwhile: Yes</td>
<td>87.9%</td>
<td>73.5%</td>
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## Outcomes (repeated measures)

<table>
<thead>
<tr>
<th></th>
<th>3 months</th>
<th>6 months</th>
<th>Repeated measures (random effects)</th>
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<tbody>
<tr>
<td></td>
<td>Intervention (n)</td>
<td>Usual Care (n)</td>
<td></td>
</tr>
<tr>
<td>MTSS; mean (SD), number(n)</td>
<td>5.43 (1.36)</td>
<td>4.57 (1.73)</td>
<td>(\beta = .57 (-.03 to 1.18)),(p = 0.064)</td>
</tr>
<tr>
<td>Reported use of cessation medications</td>
<td>18.2%</td>
<td>14.7%</td>
<td>9.09%</td>
</tr>
<tr>
<td>7-day point prevalent abstinence rates</td>
<td>27.3%</td>
<td>5.9%</td>
<td>30.3%</td>
</tr>
<tr>
<td>Quit attempts</td>
<td>42.4%</td>
<td>29.4%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Receipt of professional quit advice</td>
<td>24.4%</td>
<td>17.7%</td>
<td>21.2%</td>
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Conclusions

• Student-delivered care a potential avenue to provision of better cessation care
  – Trends for better outcomes
  – Disappointment bias, baseline attitudes may contribute to large effect sizes

• Fully funded RCT needed to explore effectiveness
• Full paper available:

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