THE FUTURE TRENDS AND RESEARCH ON SMOKING CESSATION

HAYDEN MCROBBIE
DECLARATION OF COMPETING INTERESTS

• I provide constancy advice to the Tobacco Control Team, Ministry of Health

• I am employed as a Reader in Public Health Interventions at Queen Mary University of London

• I provide clinical consultancy to Inspiring Limited

• Over the past 15 years I have received honoraria for speaking at research symposia and received benefits in kind and travel support from, and has provided consultancy to Pfizer, Johnson & Johnson (previously Pharmacia), and GlaxoSmithKline
DIFFERENT INTERVENTIONS AT DIFFERENT STAGES

Motivation → Pre-cessation → Cessation → Maintenance

Quit Day
STRATEGIES FOR INCREASING MOTIVATION TO QUIT

• 517 smokers (63% women, 91% white) who were unwilling to quit
• Allocated to different treatment strategies delivered over 6 weeks
  1. Nicotine Patch vs. No Nicotine Patch
  2. Nicotine Gum vs. No Nicotine Gum
  3. Behavioral Reduction Counseling (BRC) via 1 face-to-face and 6 phone sessions vs. No BRC
  4. Motivational Interviewing (MI) Strategies via 1 face-to-face and 3 phone sessions vs. No MI Strategies
• After 6 weeks 25% said that they wanted to quit
• Gum and MI were more likely to promote a quit attempt

Cook et al. Identifying optimal strategies for increasing smokers motivation to quit?
OPTIMAL STRATEGIES FOR QUITTING

- 637 smokers **willing to quit**
- Used a factorial design (64 conditions in total)
  1. **Pre-quit Patch** vs. No Patch
  2. **Pre-quit Gum** vs. No Gum
  3. **Pre-quit Counseling** vs. None
  4. 8 vs. 16 Weeks of patch + gum
  5. **Intensive In-person Counseling** vs. Minimal
  6. **Intensive Phone Counseling** vs. Minimal
- **Intensive In-person Counseling** produced significantly higher initial cessation rates (p<.05)
- Intensive In-person Counseling **alone** produced higher 8-week abstinence rates than did the two intensive counseling components combined
- When Pre-quit gum **and** Intensive In-person Counseling combined, produced significantly higher 26-week abstinence rates
MAINTENANCE OF ABSTINENCE

- Aimed to identify promising adherence and maintenance intervention components
- 545 smokers
- 5 treatment factors (all had received a basic smoking cessation interventions)
  1. **Extended medication** (26 vs. 8 weeks of patch + gum)
  2. **Maintenance phone counselling** (8 calls over 6 months vs. none)
  3. **Cognitive medication adherence counselling** (corrected misconceptions about medications) 2 x 10 min sessions
  4. **Electronic medication monitor (EMM)** + feedback vs. EMM alone
  5. **Automated adherence calls** (use enough, use correctly) vs. none

- **Extended meds** boosted abstinence rates at 26 and 52 weeks
- Minimal effect of **maintenance counselling**, but better when combined with automated calls (information and reinforcement)
- Only EMM + feedback increased gum use (3.2 vs. 2.4 gum per day)
- EMM and Automated adherence calls increase abstinence rates at 4, 8 and 52 weeks
APPS FOR SMOKING CESSATION

• There are over 400 smartphone applications ("apps") for quitting smoking

• In a pilot study 196 smokers were randomised to
  1. Acceptance & Commitment Therapy (ACT) app
  2. National Cancer Institute’s Quit Guide app

• App usage: ACT participants opened their app an average of 37 times (vs. 15 for Quit Guide; p = .0001).

• 30-day point prevalence quit rates at 3-months were 13% in ACT vs. 8% in Quit Guide (OR=2.65, 95% CI=0.82-10.29)
SF 28

- SF28 designed on the basis of theory of motivation (PRIME Theory) and evidence based BCTs
- Aims to promote complete abstinence for 28 days as a launchpad for lifetime cessation

Source: www.rjwest.co.uk
Congratulations on your decision to go for the SF28 Challenge

Start Session

Please give yourself 10 minutes to go through this first session

Why 28?

Research shows that the first 28 days after the quit date are the most important: 90% of relapses happen in this period. It is the time when the nicotine withdrawal symptoms and cravings are usually at their worst.

If you can get through this period you are

Next Page

Source: www.rjwest.co.uk
Select your Quit Date

Give yourself enough time to get ready (at least 2 days) so you can read all our advice and have time to prepare yourself. Make it easy on yourself. If you are not sure:

Please select your quit date:

Tuesday, 15 Jan 2013
Wednesday, 16 Jan 2013
Thursday, 17 Jan 2013
Friday, 18 Jan 2013

Using the Toolbox

SF2R will remember where you are in your challenge. Each time you load up this App you can chart your progress and use the tools provided to keep you going.

❤️ = 1 day smoke free
⭐️ = 1 week smoke free

Next Page

Things to Remember

Withdrawal Symptoms
Temptations
Smokers
Stress & Parties

Next Page

Source: www.rjwest.co.uk
THEN

Stop Smoking Agreement

You promise not to have a puff on a cigarette after your quit date.

Your quit date:
Wednesday, 16 Jan 2013

Days to go:
1

Open Toolbox

IMPORTANT

Remember - once the quit day comes there is only one things that matters:

not a puff, no matter what!

Your Road to a Smoke Free Future

Source: www.rjwest.co.uk
TOOLBOX

Lifestyle

- Advice on adapting lifestyle to minimise exposure to smoking cues and maximising ego-strength.

Inspiration

- Motivational messages from smokers.
- Video clips of smokers who are at the same stage who went on to succeed.

Craving

- Advice on dealing with cravings.
- Distraction game.

Medication

- Advice on use of stop-smoking medicines.

Source: www.rjwest.co.uk
SF 28

• Evaluated in 2372 users, who compared to average smoker in England who is trying to stop were
  • younger (Mean age=31.5 years)
  • more affluent
  • heavier smokers
• Participants who set a quit date opened the app an average of 11.8 times
• Of those who reached their quit date, counting all those who were lost to follow up as continuing smokers, 19% reported complete abstinence for the full 28 days
HELPING SMOKERS TO HELP THEMSELVES BY BRING THE SCIENCE OF STOPPING TO SMOKERS

THE SMOKEFREE FORMULA

A REVOLUTIONARY WAY TO STOP SMOKING NOW

PROFESSOR ROBERT WEST PhD
WORLD EXPERT ON SMOKING AND ADDICTION

www.smokefreeformula.com

Source: www.rjwest.co.uk
## INGREDIENTS FOR THE SMOKEFREE FORMULA

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Rating</th>
<th>Ingredient</th>
<th>Rating</th>
<th>Ingredient</th>
<th>Rating</th>
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<tbody>
<tr>
<td>In-person support</td>
<td>★★★</td>
<td>Abrupt stop</td>
<td>★★★</td>
<td>Deep breathing</td>
<td>★★</td>
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<td>NRT (supported)</td>
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<td>Identity change</td>
<td>★★</td>
<td>Exercise</td>
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<tr>
<td>Champix</td>
<td>★★★</td>
<td>Avoiding smokers</td>
<td>★★</td>
<td>Isometric exercise</td>
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<tr>
<td>Zyban</td>
<td>★★★</td>
<td>Avoiding alcohol</td>
<td>★★</td>
<td>Mental exercises</td>
<td>★★</td>
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<tr>
<td>Cytisine</td>
<td>★★★</td>
<td>Changing routine</td>
<td>★★</td>
<td>Healthy snacks</td>
<td>★</td>
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<tr>
<td>Quitline</td>
<td>★★</td>
<td>Keep busy</td>
<td>★★</td>
<td>Go to bed early</td>
<td>★</td>
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<tr>
<td>Internet</td>
<td>★★</td>
<td>One day at a time</td>
<td>★</td>
<td>Get rid of cigs</td>
<td>★</td>
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<td>SMS support</td>
<td>★★</td>
<td>Tell others</td>
<td>★</td>
<td>Smartphone app</td>
<td>★</td>
</tr>
<tr>
<td>Book</td>
<td>★★</td>
<td>Quit together</td>
<td>★</td>
<td></td>
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<tr>
<td>E-cigs</td>
<td>★★</td>
<td>Count savings</td>
<td>★</td>
<td></td>
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<tr>
<td>Glucose</td>
<td>★★</td>
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</table>

- ★★★ Strong evidence
- ★★ Moderate evidence
- ★ Some evidence

Source: www.rjwest.co.uk
SNUS VS. GUM FOR QUITTING

• 386 smokers randomised to either Camel Snus or 4 mg nicotine gum for 12 weeks

• The end of treatment biochemically verified (CO ≤ 6 ppm) 7-day abstinence from usual brand cigarettes was
  • 22.7% in the Camel Snus group
  • 26.0% in the nicotine gum group
A NEW NRT?
LUNG AGE AS A MOTIVATOR

- 225 smokers willing to make a quit attempt in the next 30 days
- All participants had FEV1, exhaled CO, and various other measures recorded
- 120 were randomly allocated to receiving motivational feedback on their “Lung Age” as estimated by their FEV1 (Intervention group) or not (Control group, n=105).
- Participants received group smoking cessation treatment and nicotine patches
- CO validated 7-day point prevalence abstinence rates at 4-weeks were not significantly different between groups 50% vs. 52% in intervention vs. control
INTERACTIVE VOICE RESPONSE

- Smokers in primary care
- Randomized to usual care or **IVR-mediated intervention** (up to 4 calls with a bilingual tobacco treatment specialist, 6 weeks of free NRT, and referral to community resources to reduce life stressors)
- The IVR system attempted to contact 8547 patients
  - 116 (1%) were ineligible because they reported not smoking,
  - 5553 (65%) were not reached by IVR
  - 2170 (25%) declined participation
  - 708 (8%) consented and were randomized
- At 9-months 7-day point prevalence quit rate was 8.6% in the control group and 14.9% in the intervention group (p=0.02)
- Hispanics were more likely to quit than whites (p=0.008)
VARENICLINE + BUPROPION

- 506 smokers were randomized to varenicline + placebo or varenicline + bupropion

Ebbert et al JAMA 2014 311 (2)
IN HIGHLY DEPENDENT SMOKERS

- 506 smokers were randomized to varenicline + placebo or varenicline + bupropion

![Graph showing prolonged abstinence percentages at Week 12, Week 26, and Week 52 for varenicline + bupropion and varenicline + placebo.]

- OR = 1.74 (95% CI: 1.04-2.93) at Week 12
- OR = 2.76 (95% CI: 1.47-5.21) at Week 26
- OR = 2.77 (95% CI: 1.44-5.30) at Week 52

Ebbert et al. JAMA 2014 311 (2)
VARENICLINE – 2ND TIME ROUND

- Subjects were randomly assigned varenicline (N=249) or placebo (N=245)
- Both groups received brief counseling (≤10 minutes)

Gonzales et al. VARENICLINE RE-TREATMENT FOR SMOKING CESSATION IN SMOKERS WHO HAVE PREVIOUSLY TAKEN VARENICLINE: A RANDOMIZED, PLACEBO-CONTROLLED TRIAL

- OR=7.08; 95% CI: 4.34 -11.55
- OR=5.83; 95% CI: 3.25 - 10.44
- OR=9.00; 95% CI: 3.97 - 20.41
Varenicline Maintenance in People with Schizophrenia

- 247 smokers with schizophrenia or bipolar disease received standard treatment with varenicline.
- 87 (35%) were abstinent at 12 weeks and were randomised to receive varenicline or placebo up to 52 weeks.

*OR* = 4.6, (95% CI: 1.5-15.7)

*OR* = 3.4, (95% CI: 1.02-13.6)
BUPROPION VS. NRT

- Smokers seeking treatment were randomised to NRT (n=418), bupropion (n=409) or combination of both (n=244)

NRT vs. bupropion: OR=1.14 (0.834–1.56)
Combination vs. mono therapy: OR=0.89 (0.64–1.25)

6 month abstinence

Stapleton et al 2013 Addiction
REAL WORLD EFFECTIVENESS OF SMOKING CESSATION TREATMENTS

- 10,355 adults who smoked and made at least one quit attempt in the last 12 months
- Asked what methods they used to quit
- Self-reported smoking status at time of survey recorded

<table>
<thead>
<tr>
<th>Method used (N)</th>
<th>Adjusted Odds Ratio (95% CI)</th>
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<tbody>
<tr>
<td>None (5,297)</td>
<td>1.0</td>
</tr>
<tr>
<td>NRT OTC (3,128)</td>
<td>0.96 (0.81 – 1.13)</td>
</tr>
<tr>
<td>Medication on prescription + brief advice</td>
<td>1.61 (1.33 – 1.94)</td>
</tr>
<tr>
<td>Medication on prescription + behavioural support</td>
<td>3.25 (2.05 – 5.15)</td>
</tr>
</tbody>
</table>

Kotz et al Addiction 2013
CYTISINE FOR SMOKING CESSATION

- 1310 smokers randomised to 25-day course of cytisine or NRT
- Both groups were offered Quitline behavioural support

Self-reported adverse events were more common in cytisine users (Incidence rate ratio=1.67, 95% CI 1.38-2.01, p<0.001), but were generally non-serious and self-limiting.
THE FUTURE OF CESSATION

• New faster acting NRT products
• Electronic cigarettes
• Improved, evidence based behavioural support
• New ways of delivering behavioural support
• Availability of cytisine

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