

“Can skills training for health professionals lead them to greater success in helping their patients who smoke?”

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Cochrane review

Carson KV, Verbiest MEA, Crone MR, et al.
Training health professionals in smoking cessation.

Cochrane Database of Systematic Reviews
2012;(5):CD000214.

Background

Swiss context

- 2011
 - Smokers : 25% population aged ≥ 15
- 2001
 - Smokers : 33% population
- Half of smokers would like to stop
- 9000 deaths/ year due to tobacco

Framework Convention on Tobacco control, FCTC



WHO 2005

Framework Convention on Tobacco control, FCTC

Measures to reduce the demand

- Price and tax measures
- Protection from exposure to tobacco smoke
- Regulation of the contents of tobacco products
- Regulation of tobacco product disclosures
- Packaging and labelling
- Education, communication
- Ban on tobacco advertising, promotion and sponsorship
- **Smoking cessation aid**

Measures to reduce supply

Measures against

- Illicit trade in tobacco products
- Sales to and by minors
- Provision of support for economically viable alternative activities

Effective interventions for smoking cessation

- Health professionals counselling

Table 6.8. Meta-analysis (2000): Effectiveness of and estimated abstinence rates for various intensity levels of session length (n = 43 studies)^a

| Level of contact | Number of arms | Estimated odds ratio (95% C.I.) | Estimated abstinence rate (95% C.I.) |
|--|----------------|---------------------------------|--------------------------------------|
| No contact | 30 | 1.0 | 10.9 |
| Minimal counseling (< 3 minutes) | 19 | 1.3 (1.01–1.6) | 13.4 (10.9–16.1) |
| Low-intensity counseling (3–10 minutes) | 16 | 1.6 (1.2–2.0) | 16.0 (12.8–19.2) |
| Higher intensity counseling (> 10 minutes) | 55 | 2.3 (2.0–2.7) | 22.1 (19.4–24.7) |

- Group therapy
- Medications: nicotine replacement therapy, varenicline, bupropion
- Self-help: internet, mobile phone, booklets

Objectives of the review

- To determine the effectiveness of **training health care professionals** in the delivery of smoking cessation interventions to their patients
- To assess effects of training characteristics: content, intensity, delivery method

Method

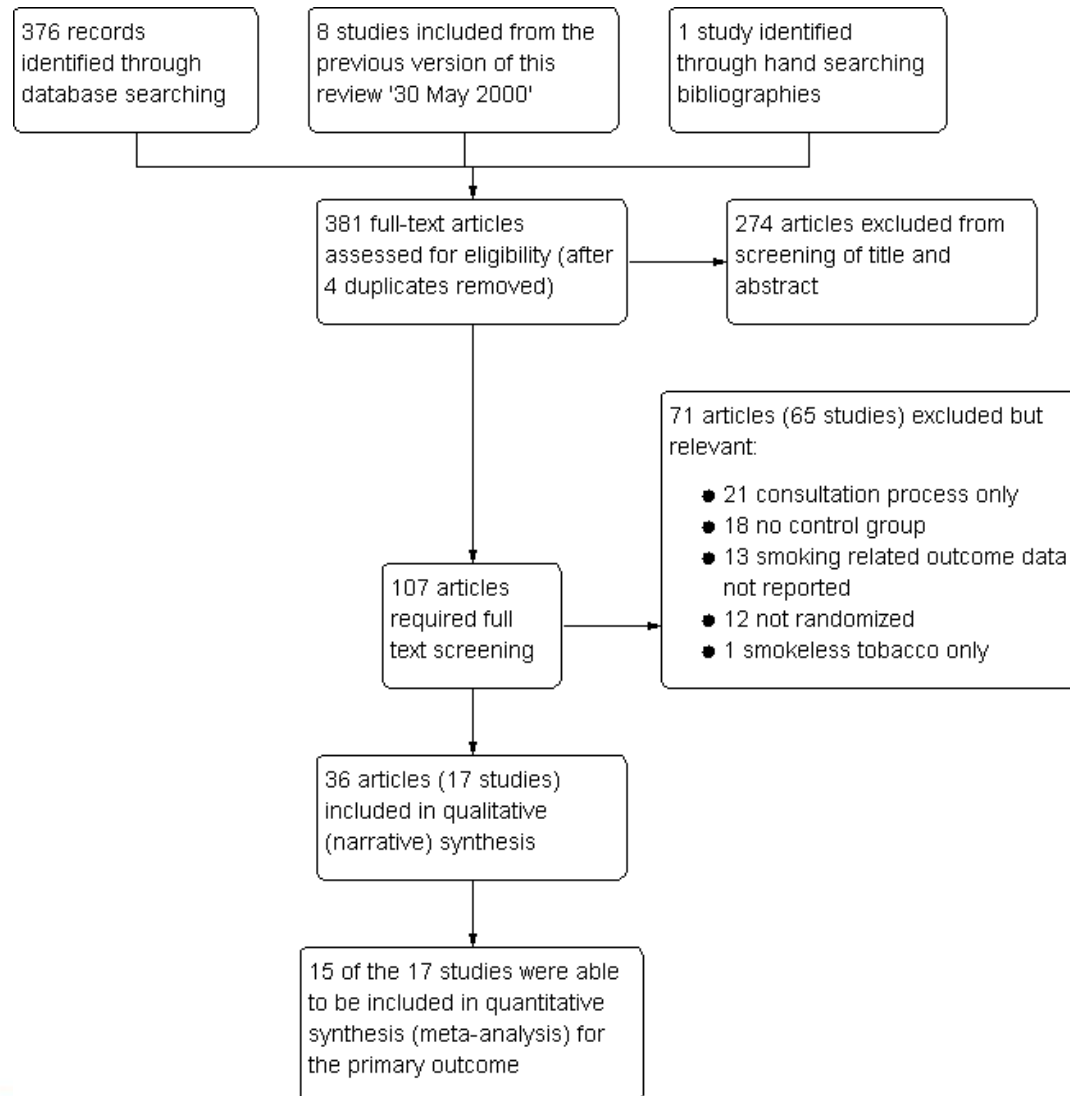
- **Population**
 - health professionals
- **Intervention**
 - smoking cessation training
- **Comparison**
 - no smoking cessation training
- **Outcome**
 - Patients smoking cessation
 - Smoking cessation interventions

Method

Selection criteria

- Randomized controlled trials
- Health professionals training in smoking cessation intervention
- Reported outcomes for patients at least 6 months after intervention

Study flow diagram



Results

17 randomized controlled trials included

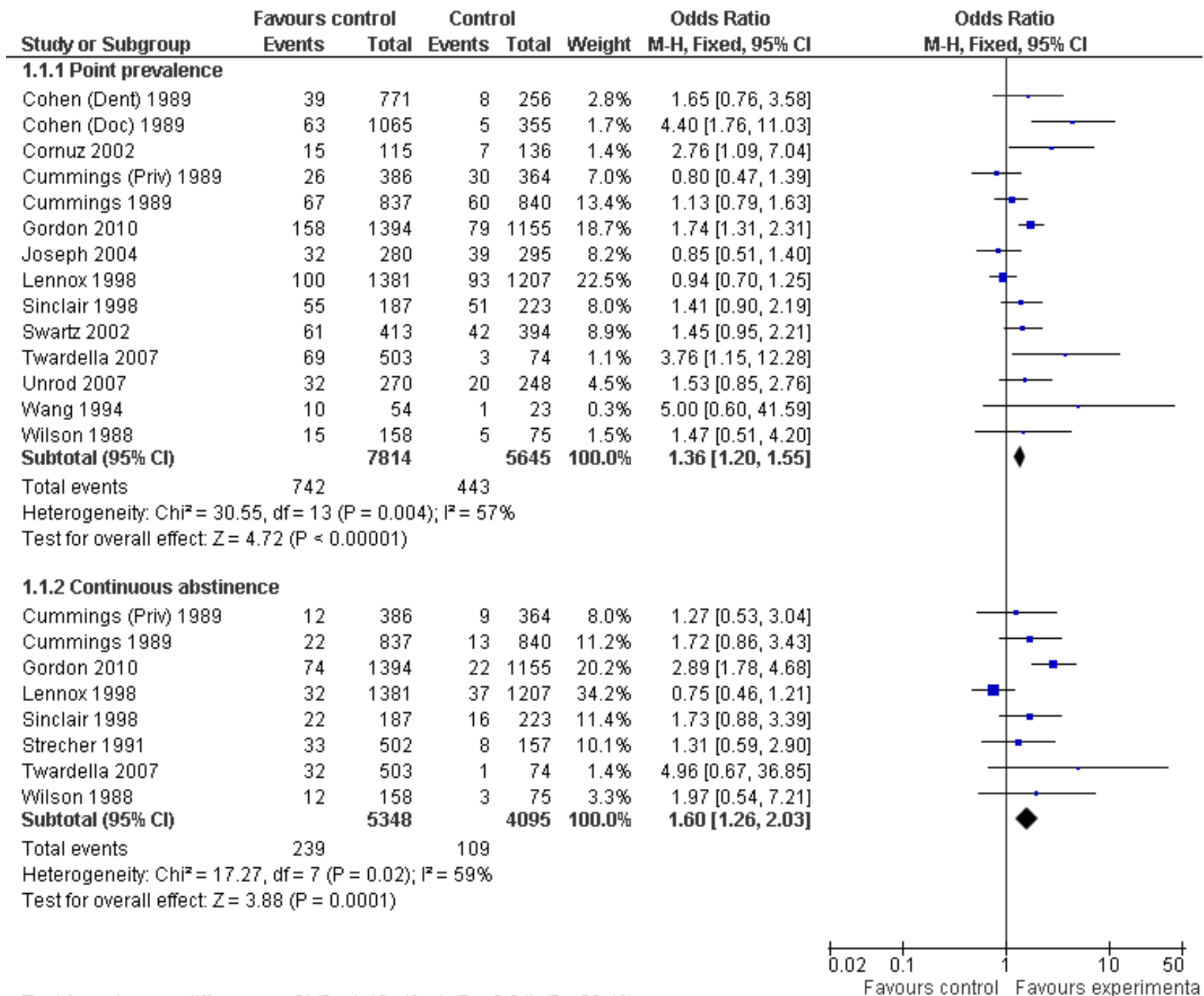
Participants

- Patients
 - 28,531 baseline 21,031 final follow-up
- Health professionals
 - 1,434 baseline 1,204 follow-up
- 11 studies with physicians (primary care and internists)
- 3 studies with a combination of health professionals including physicians, nurses, psychologists, pharmacists
- 2 studies with dentists
- 1 study with pharmacists

Outcome: patients smoking cessation

| Outcome | Odds ratio, 95% CI | No studies | Follow-up |
|-------------------------------------|--------------------|------------|----------------|
| Point prevalence smoking cessation* | 1.4 (1.2-1.6) | 14 | 6 to 14 months |
| Continuous smoking abstinence** | 1.6 (1.3-2.0) | 8 | 6 to 14 months |

- * **Point prevalence abstinence:** abstinence at a particular point in time, or during a relatively brief specified period, e.g. 7 days
 - mixture of recent and long-term quitters
- ** **Continuous abstinence:** abstinence since the quit day
 - the most rigorous measure of abstinence



Test for subgroup differences: $\text{Chi}^2 = 1.40$, $\text{df} = 1$ ($P = 0.24$), $I^2 = 28.4\%$

Outcome: smoking cessation interventions

| Outcome | Odds ratio, 95% CI | No studies |
|---|--------------------|------------|
| Counselling of smokers | 2.3 (1.6-3.3) | 14 |
| Request for follow-up appointment | 3.3 (1.5-7.3) | 7 |
| Distribution of self-help material (booklet, website,...) | 3.5 (1.9-6.5) | 9 |
| Nicotine replacement therapy | 1.6 (0.9-2.8) | 9 |

Outcome: level of training intensity

Comparison 4. Sub-group: treatment intensity - Total exposure

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|--|----------------|---------------------|----------------------------------|---------------------|
| 1 Patient asked to set a quit date | 8 | 4332 | Odds Ratio (M-H, Random, 95% CI) | 4.98 [1.79, 13.88] |
| 1.1 Duration 40 minutes to 2 hours | 5 | 2979 | Odds Ratio (M-H, Random, 95% CI) | 5.63 [0.71, 44.43] |
| 1.2 Duration >2 to 4 hours | 2 | 1102 | Odds Ratio (M-H, Random, 95% CI) | 4.70 [3.08, 7.16] |
| 1.3 Duration >4 hours | 1 | 251 | Odds Ratio (M-H, Random, 95% CI) | 3.76 [0.65, 21.65] |
| 2 Patient asked to make a follow-up appointment | 6 | | Odds Ratio (M-H, Random, 95% CI) | Totals not selected |
| 2.1 Duration 40 minutes to 2 hours | 4 | | Odds Ratio (M-H, Random, 95% CI) | 0.0 [0.0, 0.0] |
| 2.2 Duration >2 to 4 hours | 2 | | Odds Ratio (M-H, Random, 95% CI) | 0.0 [0.0, 0.0] |
| 3 Number of smokers counselled | 14 | 8531 | Odds Ratio (M-H, Random, 95% CI) | 2.28 [1.41, 3.67] |
| 3.1 Duration 40 minutes to 2 hours | 8 | 4220 | Odds Ratio (M-H, Random, 95% CI) | 3.25 [1.67, 6.33] |
| 3.2 Duration >2 to 4 hours | 3 | 2482 | Odds Ratio (M-H, Random, 95% CI) | 1.57 [0.86, 2.86] |
| 3.3 Duration >4 hours | 3 | 1829 | Odds Ratio (M-H, Random, 95% CI) | 1.29 [0.99, 1.68] |
| 4 Number of smokers receiving self-help material | 9 | 4925 | Odds Ratio (M-H, Random, 95% CI) | 3.52 [1.56, 7.91] |

Limits

- Unclear methodological design
 - Allocation concealment
 - Professionals blinding
- Varenicline and bupropion not tested

Swiss study

Cornuz J, Humair JP, Seematter L et al. Efficacy of Resident Training in Smoking Cessation. *Ann Intern Med* 2002;136:429-437

- Randomized controlled trial
- Effective training program
 - Improve quality of smoking cessation counseling (Fig. 1)
 - Increase 1-year smoking abstinence among smokers (Fig. 2)

Figure 1: Quality of smoking cessation counseling

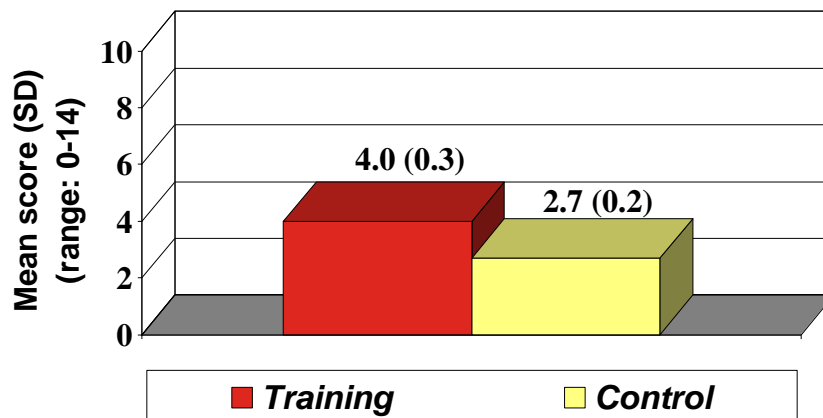
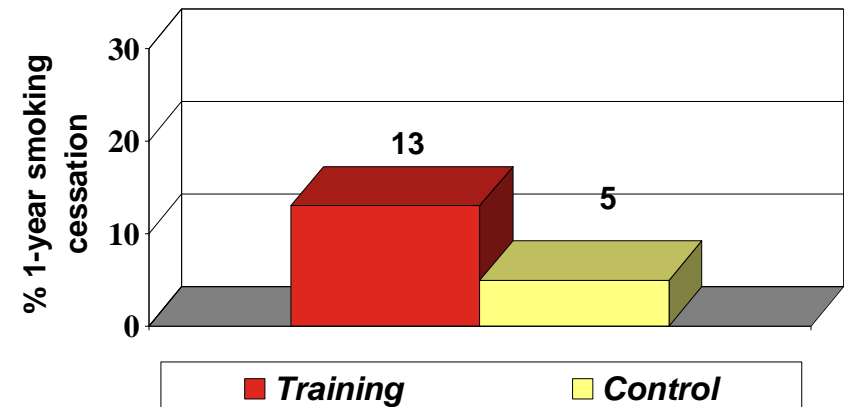


Figure 2: 1-year smoking cessation



Swiss smoking cessation training

National Program for Tobacco Control

- Effective educational programs for physicians, dentists, pharmacists and other health professionals
- For physicians
 - www.frei-von-tabak.ch
 - www.vivre-sans-tabac.ch
- **470 training sessions since 2002**
- ~ 10 000 physicians or health professionals trained since 2002

Cost-effectiveness analysis of physicians training in smoking cessation

Cost per life-year saved

- Residents
 - US\$ 25.4 for men
 - US\$ 35.2 for women
- Private practice physicians
 - US\$ 88.3 for men
 - US\$ 122.6 for women

Conclusions

Training health professionals to provide smoking cessation interventions has a measurable effect on

- point prevalence of smoking
- continuous abstinence
- professional performance

- The one exception was the provision of replacement therapy, which did not differ between groups
 - Do trained professionals prescribe nicotine replacement therapy only when it is recommended (motivated patients) ?

Conclusions

- Training 40 minutes to 2 hours was just as effective, and in some cases more so, as a duration > 2 hours
- Given the large number of smokers who consult a doctor each year (80% Swiss population), the potential public health impact of physician's advice to quit is substantial