

Reducing Tobacco Use and Secondhand Smoke Exposure: Quitline Interventions

Summary Evidence Table: Provision of Free Evidence-Based Tobacco Cessation Medications to Promote Quitline Use

| Study | Intervention | Population Characteristics | Effect Measure | Reported Baseline | Reported Effect | Value Used in Summary (95%CI) | Follow-up Time |
|--|---|--|--|---|--|--|---|
| <p>Author (Year): An et al. (2006)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> <p>Quality of Execution (Limitations): Good (1)</p> | <p>Location: Minnesota, USA</p> <p>Intervention: Proactive counseling + 8 wks of Free NRT.</p> <p>In Sept 2002 offered 8 wk supply of free nicotine patches or gum to callers who enrolled in the multisession program</p> <p>Time: Pre-NRT 9/2001-8/2002 During 9/2002-5/2003</p> <p>Comparison: Proactive counseling only</p> <p>Callers to quitline before the introduction of NRT</p> | <p>Participants selected from list of callers before and after introduction of NRT.</p> <p>>= 18 yrs, smoked >=5 cigs/day; planned to quit within 30 days; no contraindications to NRT</p> <p>Recruited Pre-NRT: N=380 NRT: N=373 Total: 753</p> <p>Completed 6 months Pre-NRT: 56.8% (216) NRT: 58.7% (219)</p> | <p>Calls to quitline (avg monthly)</p> <p>Self-reported continuous 30 day abstinence</p> <p>Self-reported 7 day point prevalent abstinence</p> | <p>Control: 155</p> <p>10%</p> <p>10.8%</p> | <p>Intervention: 679</p> <p>18.2%</p> <p>21.7%</p> | <p>Absolute difference: 524 (323 to 725)</p> <p>Relative change: 338.1%</p> <p>Absolute difference: 8.2 pct pts (3.1-13.4) P=0.001</p> <p>10.9 pct pts (5.5-16.3) P<0.001</p> | <p>6 months</p> <p>6 months</p> <p>6 months</p> |
| <p>Author (Year): Bauer et al. (2006)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> <p>Quality of Execution (Limitations): Fair (3)</p> | <p>Location: NY (Erie and Niagara Counties)</p> <p>Intervention: NRT voucher for 2 wk supply of nicotine patches or gum</p> <p>Time: July-Aug 2003</p> <p>Comparison: 515 No NRT callers from 2001 survey who had called quitline</p> | <p>Adults >=18; smoked >=10 or more cigarettes per day; residents of the 2 counties; and had no contraindications to to nicotine patch or gum.</p> <p>Recruitment via a press announcement urging smokers to call the quitline to get a voucher for a free 2-week supply of nicotine patches or gum (NRT)</p> | <p>Calls to quitline (average per month)</p> <p>Self-reported 7 day abstinence</p> <p>Risk for quitting</p> | <p>Comparison 180</p> <p>12%</p> <p>1.0</p> | <p>Intervention 4440</p> <p>21.9%</p> <p>1.77</p> | <p>Absolute Difference +4260</p> <p>Relative Change +2366.7%</p> <p>Absolute difference: 9.9 pct pts</p> <p>ARR: 1.77 (1.17-2.68)</p> | <p>4-6 months</p> <p>4-6 months</p> <p>4-6 months</p> |

| Study | Intervention | Population Characteristics | Effect Measure | Reported Baseline | Reported Effect | Value Used in Summary (95%CI) | Follow-up Time |
|---|---|--|--|--|--|--|---|
| | | 2461 received NRT vouchers 732 enrolled post 515 pre- NRT Total 1247 | | | | | |
| <p>Author (Year): Bush et al. (2008)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> <p>Quality of Execution (Limitations): Fair (2)</p> | <p>Location: Oregon, USA</p> <p>Intervention: Single counseling call + mailed quit kit + free 2-week starter supply of NRT (patch)</p> <p>Time: Oct-Dec 2004</p> <p>Comparison: Single counseling call (30 min) + mailed a quit kit</p> | <p>Quit line callers with insurance >= 18 yrs; OR residents, spoke English, smoked >=5 cigarettes/day, had a valid telephone number, had insurance</p> <p>Compared free NRT with pre-initiative (no NRT)</p> <p>Valid Phone #s (N) Pre 546 Post 1210 Total = 1756</p> <p>Completed 6 month survey (n) Pre 268 Post 614 Total = 883</p> | <p>Calls to quitline** (average per month)</p> <p>Self-reported 30 day continuous abstinence prevalence at 6 months</p> <p>Self-reported 30 day continuous abstinence at 6 months (odds)</p> | <p>Comparison 257</p> <p>8.1%</p> <p>OR: 1.0</p> | <p>Intervention 2592</p> <p>15.1%</p> <p>OR: 2.1</p> | <p>Absolute Difference +2335</p> <p>Relative Change +908.6%</p> <p>7.0 pct pts</p> <p>OR: 2.1 (1.5-3.0) P=0.0001</p> | <p>6 months</p> <p>6 months</p> <p>6 months</p> |
| <p>Author (Year): Campbell et al. (2008)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> <p>Quality of Execution (Limitations):</p> | <p>Location: Montana, USA</p> <p>Montana evaluated promotion of an enhanced quitline service benefit—4wks Montana, USA</p> <p>Intervention: 5 Proactive quitline calls were initially given to callers to the quitlines and then 6 wks of free NRT mailed if they qualified for medications</p> | <p>Smokers in Montana</p> <p>For call volume: quitline callers</p> <p>Callers to Montana Quitline who were >=18 yrs, currently smoke >=10 cigs/day, willing to quit in next 7days and will take f/u call and no contraindications for NRT</p> | <p>Calls to quitline (average per month)</p> <p>Self-reported 7 day point prevalent abstinence at 6 months</p> | <p>4 week NRT group 397</p> <p>9%</p> | <p>6 week NRT group 712</p> <p>12%</p> | <p>Absolute Difference +315</p> <p>Relative Change 79.3%</p> <p>Absolute difference: 3 pct pts</p> | <p>6 months</p> <p>6 months</p> |

| Study | Intervention | Population Characteristics | Effect Measure | Reported Baseline | Reported Effect | Value Used in Summary (95%CI) | Follow-up Time |
|--|---|---|---|---|--|--|-----------------------------------|
| Fair (4) | <p>Time: Jan-Nov 2006 (4 wk NRT) Dec 2006-June 2007 (6 wk NRT)</p> <p>Comparison: 5 proactive phone counseling (5 sessions) and 4 wks of free NRT mailed to tobacco users;</p> | Completed calls 6 mos n=314 (4wks) n=583 (6wks) | Odds of abstinence | OR: 1.0 | OR: 1.51 | OR: 1.51 (1.07-1.66) | 6 months |
| <p>Author (Year): Cummings et al. (2006a)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> <p>Quality of Execution (Limitations): Fair (3)</p> | <p>Location: New York City, USA</p> <p>Intervention: Proactive counseling + Free 6 wk course of nicotine patches + a self-help stop-smoking guide; and a list of local services for smoking cessation.</p> <p>Time: Intervention Period: Apr-May 2003</p> <p>Pre -Intervention Survey: Jan-Jul 2002</p> <p>Comparison: Proactive counseling + a self-help stop-smoking guide; and a list of local services for smoking cessation.</p> | <p>Smokers had to be at least 18 years of age, residents of NYC, not using NRT or bupropion, agree to attempt to quit in the week after the screening call, have smoked ten or more cigarettes per day for at least one year, and agree to be contacted for follow-up</p> <p>Completed 4 Mos: Intv: (1597) 884 Ctrl: (446)</p> <p>Completed 12 Mos: Intv: 581 Ctrl: 206</p> | <p>Self-reported continuous abstinence for more than 6 months And OR</p> <p>Self-reported 7-day point prevalent abstinence And OR</p> | <p>Comparison 9.2%</p> <p>22.3%</p> | <p>Intervention 27.9%</p> <p>33.2%</p> | <p>Absolute Difference +18.7pct pts OR:4.26 CI: 2.48 to 7.32</p> <p>10.9 pct pts</p> | <p>12 months</p> <p>12 months</p> |
| <p>Author (Year): Cummings et al. (2006b)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> | <p>Location: 4 studies in New York State</p> <p>Used the state’s Smokers’ Quitline to screen and register eligible smokers for the free medication</p> <p>Time: Intervention Period:</p> | <p>Control Group Period: 02/2001 Follow-up Survey done in 07/2001 (5 months after enrollment)</p> <p>Study Population: >= 18 yrs, smoked>=10 cigs/day; planned to quit within 7 days; agree to a</p> | Calls to quitline (average per month) | 252 | 316 | <p>Absolute Difference +996 Relative Change +395%</p> <p>Absolute Difference +1256 Relative Change +398%</p> | 4 months |

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|--|---|--|--|-------------------------|----------------------------|------------------------------------|-----------------|-----|--------|-----|-----|--------|-----|-----|--------|-----|-----|---|---|---|--|--|
| <p>Quality of Execution (Limitations): Fair (2)</p> | <p>Intv A: 02/17/2004-03/03/2004 Intv B: 12/30/2003-03/01/2004 Intv C: 12/30/2003-02/28/2004 Intv D: 04/02/2003-05/14/2003</p> <p>Intervention A: Proactive counseling + Stop Smoking Guide + 2 wks of Free NRT patch voucher Intervention B: Proactive counseling + Stop Smoking Guide + 1 wk of Free NRT patch Intervention C: Proactive counseling + Stop Smoking Guide + 2 wks of Free NRT patch Intervention D: Proactive counseling + Stop Smoking Guide + 6 wks of Free NRT patch</p> <p>Comparison: 515 Participants in 2001 survey calling Quitline who had received counseling support and a free cessation guide but no NRT</p> <p>IMPORTANT NOTE: Control group in this study makes it different from Miller 2005 and Cummings 2006a; this was a 2001 control.</p> | <p>follow-up phone call, no contraindications to NRT use</p> <p>Recruited GRPS</p> <table border="1" data-bbox="695 402 961 548"> <thead> <tr> <th></th> <th>Intv</th> <th>Ctrl</th> </tr> </thead> <tbody> <tr> <td>2wk Vch</td> <td>500</td> <td>515</td> </tr> <tr> <td>1wk ML</td> <td>500</td> <td>515</td> </tr> <tr> <td>2wk ML</td> <td>500</td> <td>515</td> </tr> <tr> <td>6wk ML</td> <td>834</td> <td>515</td> </tr> </tbody> </table> | | Intv | Ctrl | 2wk Vch | 500 | 515 | 1wk ML | 500 | 515 | 2wk ML | 500 | 515 | 6wk ML | 834 | 515 | <p>Self-reported 7 day point prevalent abstinence</p> | <p>240</p> <p>2208</p> <p>No NRT 9.9%</p> | <p>C 2 wk Mail 3724</p> <p>D 6 wk Mail 28852</p> <p>A 2 wk voucher 25.1%</p> <p>B 1 wk Mail 19.7%</p> <p>C 2 wk Mail 22.7%</p> <p>D 6 wk Mail 21.6%</p> | <p>Absolute Difference +3484 Relative Change +1452%</p> <p>Absolute Difference +26644 Relative Change +1207%</p> <p>Absolute difference: 15.2 pct pts</p> <p>9.8 pct pts</p> <p>12.8 pct pts</p> <p>11.7 pct pts</p> | |
| | Intv | Ctrl | | | | | | | | | | | | | | | | | | | | |
| 2wk Vch | 500 | 515 | | | | | | | | | | | | | | | | | | | | |
| 1wk ML | 500 | 515 | | | | | | | | | | | | | | | | | | | | |
| 2wk ML | 500 | 515 | | | | | | | | | | | | | | | | | | | | |
| 6wk ML | 834 | 515 | | | | | | | | | | | | | | | | | | | | |
| <p>Author (Year): Deprey et al. (2009)</p> | <p>Location: Oregon, USA Intervention:</p> | <p>Quit line callers with insurance</p> | <p>Calls to quitline (average per month)</p> | <p>Comparison 306.7</p> | <p>Intervention 2163.7</p> | <p>Absolute Difference +1856.3</p> | <p>6 months</p> | | | | | | | | | | | | | | | |

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|--|---|--|---|--|---|--|----------------|
| <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> <p>Quality of Execution (Limitations): Good (1)</p> | <p>Single counseling call + mailed quit kit + free 2-week starter supply of NRT (patch)</p> <p>Time: Pre: Mar-May 2004 Post: Oct-Dec 2004</p> <p>Comparison: Single counseling call (30 min) + mailed a quit kit</p> | <p>>= 18 yrs; OR residents, spoke English, smoked >=5 cigarettes/day, had a valid telephone number, had insurance</p> <p>Compared free NRT with pre-initiative (no NRT)</p> <p>Pre: 920 Post: 6491 Total = 7411</p> | | | | Relative Change 605% | |
| <p>Author (Year): Fellows et al. (2007)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> <p>Quality of Execution (Limitations): Good (1)</p> | <p>Location: Oregon, USA</p> <p>Intervention: Single counseling call + mailed quit kit + free 2-week starter supply of NRT (patch)</p> <p>Time: Oct-Dec 2004</p> <p>Comparison: Single counseling call (30 min) + mailed a quit kit</p> | <p>Quit line callers with insurance >= 18 yrs; OR residents, spoke English, smoked >=5 cigarettes/day, had a valid telephone number, had insurance</p> <p>Compared free NRT with pre-initiative (no NRT)</p> <p>Eligible (N): Pre 1018 Post 1574</p> <p>Enrolled (n): Pre 320 Post 639</p> | <p>Calls to quitline (average per month)</p> <p>Self-reported 30 day continuous abstinence prevalence at 6 months</p> | <p>Comparison 536</p> <p>Comparison 8.2% CI: 6.1% to 10.3%</p> | <p>Intervention 1137</p> <p>Intervention 15.7% CI: 13.7% to 17.8%</p> | <p>Absolute Difference +602</p> <p>Relative Change 112.3%</p> <p>7.5 pct pts</p> | 6 months |
| <p>Author (Year): Maher et al. (2007)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> | <p>Location: Washington, USA</p> <p>Time: Pre- Enhancement 7/2004-12/2004 During- Enhancement 1/2005-5/2005</p> <p>Intervention: 5 Proactive counseling + 8 wks of Free NRT. (Washington Benefit)</p> | <p>Study Population: 18-29 yrs; planned to quit within 30 days; no contraindications to NRT</p> <p>Total # recruited: Not stated Pre Enhancement (n): 114 During Enhancement (Post) (n): 218</p> | <p>Calls to quitline (average per month)</p> | <p>21%</p> | <p>38%</p> | <p>Calls increased dramatically among 18–29-year-old smokers during the enhancement period, and then decreased to 2004 levels after the enhancement stopped.</p> <p>Absolute difference:</p> | 3 months |

| Study | Intervention | Population Characteristics | Effect Measure | Reported Baseline | Reported Effect | Value Used in Summary (95%CI) | Follow-up Time |
|---|---|--|--|-------------------------------------|-------------------------------------|---|----------------------------------|
| <p>Quality of Execution (Limitations): Fair (4)</p> | <p>Type modalities of NRT distribution were not stated.</p> <p>Comparison: Proactive counseling only (# of sessions not clearly stated) Callers to quitline before introduction of enhancement</p> | | Self-reported 7 day continuous abstinence | | | 17 pct pts P=0.014 | |
| <p>Author (Year): Miller et al. (2005)</p> <p>Study Design (Suitability): Controlled Before and After (Greatest)</p> <p>Quality of Execution (Limitations): Fair (2)</p> | <p>Location: New York City</p> <p>Intervention: Proactive counseling + Free 6 wk course of nicotine patches + a self-help stop-smoking guide; and a list of local services for smoking cessation.</p> <p>Comparison: Proactive counseling only + a self-help stop-smoking guide; and a list of local services for smoking cessation.</p> <p>IMPORTANT NOTE: Control group in this study is different from Cummings 2006a, Also the Sample sizes are different</p> | <p>Smokers had to be at least 18 years of age, residents of NYC, not using NRT or bupropion, agree to attempt to quit in the week after the screening call, have smoked ten or more cigarettes per day for at least one year, and agree to be contacted for follow-up</p> <p>Intervention Period: 4/2/2003-5/14/2003 Post Intervention Survey: 10/31/2003-11/19/2003</p> <p>Contacted Intv: 1357; Ctrl: 174 Completed 6 Mos Intv: 1305; Ctrl: 159</p> | Self-reported 7-day point prevalent abstinence And OR | Comparison 6% | Intervention 33% | <p>Absolute Difference +27 pct pts</p> <p>AOR: 8.8 CI: 4.4 to 17.8 P<0.0001</p> | 6 months |
| <p>Author (Year): Miller et al. (2009)</p> <p>Study Design (Suitability): Individual Randomized Trial (Greatest)</p> | <p>Location: South Australia</p> <p>Intervention: Standard service (Multi-session counseling) + 75% Subsidized NRT (# of weeks supplied not stated).</p> <p>Time: Oct-Dec 2005</p> | <p>A random sample of selected from the two lowest socioeconomic quintiles of the South Australian electoral roll.</p> <p>Study Population: >=18 years; current smokers; smoked>= 10 cigarettes per day; willing to receive telephone support for</p> | <p>Calls to quitline (average per month)</p> <p>Self-reported 7 day point prevalent abstinence</p> | <p>Calls/Month 112</p> <p>25.7%</p> | <p>Calls/Month 333</p> <p>39.7%</p> | <p>Absolute Difference +221</p> <p>Relative Change +197.3%</p> <p>Absolute difference: 14 pct pts P≤0.001</p> | <p>12 months</p> <p>3 months</p> |

| Study | Intervention | Population Characteristics | Effect Measure | Reported Baseline | Reported Effect | Value Used in Summary (95%CI) | Follow-up Time |
|--|---|---|---|---|---|--|----------------|
| Quality of Execution (Limitations): Fair (3) | Comparison: Standard service (Multi-session counseling) only | quitting; and willing to participate in three follow-up interviews by phone; low SES; no contraindications to NRT use. | Self-reported 7 day point prevalent abstinence | 21.2% | 30.9% | 9.7 pct pts P≤0.001 | 6 months |
| | | Initial Sampling generated: n=111 comparison response n=249 Intervention response Due to initial limited responses, additional sampling methods were done by adding letters of invitation into free community newspapers: 150,000 copies each for intervention and comparison group. This finally produced samples below which were used in the analysis: Intervention (n): 1000 Control (n): 377 | Self-reported 7 day point prevalent abstinence | 19.1% | 22.3% | 3.2 pct pts NS | 12 months |
| Author (Year): Tinkelman et al. (2007) Study Design (Suitability): Controlled Before and After (Greatest) | Location: Ohio, USA Intervention: Proactive multi session counseling + initial 4 wks of Free NRT + extra 4 wks of NRT Quitline callers ready-to-quit offered 4 week supply of nicotine patches + proactive multi-session counseling. | Random sample of quitline callers N= 10,009 (pre-) N= 13,233 (post) Total = 23242 6 month f/u n=4657 Pre-NRT n=5715 Post NRT | Calls to quit line (average calls/month) Self-reported 7 day point prevalence abstinence | No NRT 2351 No NRT 11.2% (10.3-12.1) | Received NRT 3606 Received NRT 20.2% (19.2-21.2) | Absolute Difference +1255 P<0.0001 Relative Change +53.4% 9.0 pct pts | 6 months |

| Study | Intervention | Population Characteristics | Effect Measure | Reported Baseline | Reported Effect | Value Used in Summary (95%CI) | Follow-up Time |
|--|---|----------------------------|--|-------------------------------|---|-------------------------------|----------------|
| Quality of Execution (Limitations): Good (1) | Another 4 week supply is available if they stay in counseling Time: Jul 2005 – Apr 2006 Comparison: Multiple Proactive counseling Only Not-ready-to-quit Quitline callers Multiple proactive counseling (No NRT offered) | Total 10372 | Self-reported 7 day point prevalent abstinence (OR) Self-reported 7 day point prevalent abstinence (OR) | Pre-NRT 1.0 No NRT 1.0 | Post-NRT OR: 1.28 (1.15-1.43) NRT OR: 2.18 (1.97-2.42) | | |

Abbreviations

- Ctrl, control
- Intv, intervention
- Mos, months
- NRT, nicotine replacement therapy
- OR, odds ratio
- pct pts, percentage points
- SES, socioeconomic status