Smoking cessation among populations with lower socioeconomic status

Arnold H. Levinson, Patricia Valverde, et al
Colorado School of Public Health
University of Colorado Cancer Center
Among lower socioeconomic populations, a different story
Who are LSES populations?

- Low income
- Low educational attainment
- Disability/unemployment
- Medicaid/no insurance
- Blue-collar or service work
- Mental illness
### Estimated smoking prevalence, US 2012, spotlight on lower SES

<table>
<thead>
<tr>
<th>Income (% FPL)</th>
<th>%</th>
<th>(95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>19.7</td>
<td>(17.6, 21.9)</td>
</tr>
<tr>
<td>&lt;100</td>
<td>29.7</td>
<td>(22.6, 36.8)</td>
</tr>
<tr>
<td>100-199</td>
<td>25.4</td>
<td>(19.3, 31.4)</td>
</tr>
<tr>
<td>200+</td>
<td>13.6</td>
<td>(11.1, 16.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health insurance status</th>
<th>%</th>
<th>(95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid</td>
<td>42.6</td>
<td>(29.4, 55.8)</td>
</tr>
<tr>
<td>uninsured</td>
<td>29.0</td>
<td>(22.5, 35.5)</td>
</tr>
<tr>
<td>private</td>
<td>16.6</td>
<td>(14.1, 19.2)</td>
</tr>
<tr>
<td>Medicare</td>
<td>12.3</td>
<td>(8.5, 16.2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment status</th>
<th>%</th>
<th>(95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>disabled</td>
<td>40.1</td>
<td>(30.5, 49.6)</td>
</tr>
<tr>
<td>unemployed</td>
<td>24.7</td>
<td>(15.7, 33.7)</td>
</tr>
<tr>
<td>employee</td>
<td>20.4</td>
<td>(16.8, 24.1)</td>
</tr>
<tr>
<td>other</td>
<td>15.1</td>
<td>(12.4, 17.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>%</th>
<th>(95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;9 years</td>
<td>24.3</td>
<td>(12.6, 36.1)</td>
</tr>
<tr>
<td>9-12 years, no diploma</td>
<td>34.5</td>
<td>(24.3, 44.8)</td>
</tr>
<tr>
<td>GED</td>
<td>20.3</td>
<td>(8.8, 31.8)</td>
</tr>
<tr>
<td>HS diploma</td>
<td>25.4</td>
<td>(20.6, 30.3)</td>
</tr>
<tr>
<td>some college or post-HS</td>
<td>17.8</td>
<td>(14.4, 21.2)</td>
</tr>
<tr>
<td>college graduate</td>
<td>12.4</td>
<td>(9.1, 15.8)</td>
</tr>
<tr>
<td>postgraduate degree</td>
<td>4.5</td>
<td>(2.2, 6.7)</td>
</tr>
</tbody>
</table>

Smoking among low SES categories combined

<table>
<thead>
<tr>
<th>Low SES*</th>
<th>26.7 (23.0, 30.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>all others</td>
<td>11.8 (9.4, 14.1)</td>
</tr>
</tbody>
</table>

*poor, near-poor, Medicaid, uninsured, disabled, high school dropouts

Levinson AH. Where the U.S. tobacco epidemic still rages: Most remaining smokers have lower socioeconomic status. *J Health Care Poor Underserved* February 2017.
Social justice vs. greatest good

• Populations with elevated health problems deserve public health attention.

  • Social justice ethics: Secure a sufficient level of health for all, narrow unjust inequalities.

• At the same time, public health impact doesn’t come directly from reaching unjustly burdened groups – it requires succeeding with the greatest number of people.

• Social justice and greatest good compete for resources unless a population with an unfairly high health burden also has most of the people who bear the burden.
### Who are the majority of smokers?

<table>
<thead>
<tr>
<th>Low SES</th>
<th>smokers</th>
<th>adults</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number (millions)</td>
<td>pct (95% CI)</td>
</tr>
<tr>
<td>yes</td>
<td>34.91</td>
<td>72.2 (60.8, 83.5)</td>
</tr>
<tr>
<td>no</td>
<td>13.46</td>
<td>27.8 (21.9, 33.7)</td>
</tr>
<tr>
<td>Low-income employed (&quot;working poor&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>11.38</td>
<td>23.5 (17.0, 30.0)</td>
</tr>
<tr>
<td>no</td>
<td>37.98</td>
<td>76.5 (70.0, 83.0)</td>
</tr>
</tbody>
</table>

Levinson AH. Where the U.S. tobacco epidemic still rages: Most remaining smokers have lower socioeconomic status. *J Health Care Poor Underserved* February 2017.
The ethics are aligned

- Lower SES populations have the highest smoking rates and make up the largest number of smokers.

- For social justice and the greatest good, public health needs to focus research and programs on smoking cessation among lower SES populations.
Quick poll

• Does your organization identify lower SES smokers as a priority population?

• Does your organization have tobacco control programs or strategies targeted specifically to LSES smokers?
Review of cessation strategies for low SES smokers

• STEPP designates LSES smokers a priority population

• What are effective strategies for reducing LSES tobacco burdens?
Project aims

1. Summarize the state of knowledge

2. Identify effective strategies for LSES smoking cessation that are feasible for public health to adapt and implement
LSES and smoking knowledge review

1. Systematic search and narrative summary of published literature

2. Key informant (expert) interviews with qualitative analysis of experience-based perspectives, beliefs and suggestions
Literature categories for review

- Policy
- Cessation Intervention
- Smoking epidemiology
- Media
- Systematic Review

2495 titles/abstracts ➔ 710 full articles ➔ 262 relevant articles abstracted to REDCap database
Key informant interviews

Finding experts

- Authors from systematic search
- LSES tobacco scientists (NCI list)
- Professional network
- Colorado STEPP staff

56 experts invited → 16 participated
Key informant interview topics

Where, how to intervene in the cessation process for LSES smokers?
Overall emergent themes

- Media
- Policy
- Community initiatives
- Individual cessation support
Media
Media: Literature Findings

- Use media to promote quitline engagement, not generic cessation
- Use emotionally evocative graphics
- Portray work, family life, personalized stories
- Awareness is key
Media: Expert Recommendations

- Target the message to LSES audiences
- Identify cross-cutting themes to reach broad LSES audiences
- Support acceptance of relapse
- Use emotionally evocative graphics
- Use LSES media modes
- Catch up with technology
Policy: Literature findings

- Higher cigarette taxes consistently increase cessation among LSES smokers.
- Concerns about bigger impact on LSES income.
- But cigarette taxes have the strongest equity impact, i.e., reduce SES smoking disparity (Brown 2014)
Policy: Literature Findings, cont.

• **SHS policies: almost no study of effect on LSES cessation**
  • **One study: housing policy associated with smoking reduction, increased quit attempts**
  • **Voluntary SHS policies have negative equity impact on SHS exposure, mandatory policies have neutral equity impact on SHS exposure**
  • **Challenges: housing policy acceptability / adherence**
Medicaid coverage of NRT

- Necessary but not sufficient
- Remove barriers
  - Pre-authorization, co-pay, limit on duration, annual limit on quit attempts, lack of benefit awareness
Policy: Expert Recommendations

- Cigarette tax increase
- Policies need to make community environment smoke-free (not just housing)
- Cars, workplaces, public open spaces
Quick poll

• Does your agency have staff who know how to design and implement media and policy initiatives for LSES smokers?

• Does your agency have resources to conduct media and policy initiatives for LSES smokers?

• Would your agency use technical assistance on media and policy initiatives for LSES smokers if it were offered?
Community Initiatives
Community Initiatives: Literature Findings

• Community- and group-tailored strategies show promise
  • Community involvement from start to finish
  • Tailor mobilization and cessation support to community’s cultural, linguistic, and local needs
  • Address multiple levels (policy, social norms, individual cessation support)
Community Initiatives: Expert Recommendations

- **Create community systems of support**
- **Establish interventions in community settings:** where people work, live, receive services
- **Conduct research to improve long-term cessation outcomes** (living life without cigarettes)
Quick poll

• Does your agency have who know how to design and implement community initiatives for LSES smokers?

• Does your agency have resources to conduct community initiatives for LSES smokers?

• Would your agency use technical assistance on community initiatives for LSES smokers if it were offered?
Individual Cessation Support
Individual Cessation Support: Literature Findings

- Helpers (PNs, CHWs) can increase adherence
- Reward-based programs may have promise
- Promote and support recycling so relapsed smokers can easily restart / resume cessation and treatment
- Research to prevent post-partum relapse among LSES women
- Quitline
Individual Cessation Support: Expert Recommendations

- Improve clinical systems to use every opportunity to treat smokers ready to try quitting
- Improve access to evidence-based treatment
- Improve patient engagement by including personal touch, family involvement, cultural relevance of services from providers, helpers (PNs/CHWs), technology
Strategic Value: Community partnership

• Partner with LSES population leaders and representatives when planning, implementing & evaluating targeted smoking cessation programs

• Without community involvement & support, promising strategies are unsustainable

• Mobilize the community
Take home messages

- Lower SES smokers represent the majority of remaining smokers.
- We need to partner with LSES communities in designing and delivering tobacco control strategies.
- We need to promote and support cessation where LSES smokers live, work, play.
Take home messages

• We need to consider more than minimal support for LSES smokers throughout the cessation process
• We need to develop multi-level community-based interventions for LSES smoking cessation
• We need to learn how to normalize relapse, recycle relapsers, and support transition to life without cigarettes
Questions and discussion