Pharmacists’ perception on smoking treatment and anti-smoking counseling

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Background and purpose

The trend in current smoking rates and the national anti-smoking policies in Korea

Trend in current smoking rates

- FCTC ratifies
- Smoking cessation clinics in CHC, quit-lines, etc

- abolish tax-free cigarettes in the military

- expansion of no smoking zones
- Health promotion fund raised

- 6 carcinogens written on the package

- city ordinance for setting no smoking zones and enforcement

- Expand no smoking zones to all public places
- Warnings added
- Insert quit line on the package

- tobacco tax increase
- Expand no smoking zones to restaurants
- Smoking cessation treatment

Source: http://www.nosmokeguide.go.kr

Major anti-smoking policies (2004~)
Background and purpose

1. The health insurance support program for anti-smoking treatment by the National Health Insurance Service (NHIS) (1)
   - Began in February, 2015
   - Medical facilities prescribe smoking cessation treatment medicines or anti-smoking aids for 8~12 weeks
   - Smokers can register for this program up to 3 times a year since 2017
   - In each registration, beneficiaries can obtain up to six times of counseling and 4 weeks of prescription.
   - For the first two counseling, beneficiaries pay 20% of out-of-pocket payment but no more out-of-pocket payments thereafter. Any paid out-of-pocket payments will be returned upon the completion of the program.
### Background and purpose

**Physician service and counseling (NHIS 80% support, out-of-pocket 20%)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Smoking cessation only</th>
<th>Smoking cessation concomitantly provided with other medical services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>NHIS</td>
</tr>
<tr>
<td>First visit</td>
<td>22,830</td>
<td>18,330</td>
</tr>
<tr>
<td>Follow-ups</td>
<td>14,290</td>
<td>11,590</td>
</tr>
</tbody>
</table>

- Medical Aid beneficiaries and low-income group (lower 20%) do not pay OOP.

**Fees for pharmacy (dispensing, explaining the usage and other matters about medicines)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Smoking cessation treatment medicines</th>
<th>Smoking cessation aids</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>NHIS</td>
</tr>
<tr>
<td>Pharmacy fees</td>
<td>8,100</td>
<td>6,500</td>
</tr>
</tbody>
</table>

- Medical Aid beneficiaries and low-income group (lower 20%) do not pay OOP.

Source: http://www.nosmokeguide.go.kr/lay2/S1T53C349/contents.do
1. The health insurance support program for anti-smoking treatment by the NHIS (2)

- Contents of support and procedure of use

**Contents of support**
- Professional care and counselling of a doctor for 8~12 weeks
- Subsidies for medicines
- Out-of-pocket payment returns to those who complete the program (6 times of outpatient visits or 56 or longer days of prescription)

**Procedure of use**
- Outpatient visit ➔ Registration for smoking cessation treatment program ➔ physician service and counseling ➔ prescription or counseling form for smoking cessation aids ➔ pharmacy visit ➔ Purchase of smoking cessation medicine or aids
2. The roles of community pharmacies in anti-smoking counseling and smoking cessation treatment (1)

- Cost-effectiveness of anti-smoking services in pharmacy (ICER): cold turkey <nicotine patch<bupropion<nicotine gum

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Cost ($)</th>
<th>Incremental Cost ($)</th>
<th>Effect</th>
<th>Incremental Effect</th>
<th>Average Cost-Effectiveness ($)</th>
<th>Incremental Cost-Effectiveness ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No program</td>
<td>138</td>
<td>-</td>
<td>0.03</td>
<td>-</td>
<td>4597</td>
<td>-</td>
</tr>
<tr>
<td>Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold turkey</td>
<td>190</td>
<td>52</td>
<td>0.25</td>
<td>0.22</td>
<td>760</td>
<td>236</td>
</tr>
<tr>
<td>Nicotine patch</td>
<td>344</td>
<td>206</td>
<td>0.25</td>
<td>0.22</td>
<td>1376</td>
<td>936</td>
</tr>
<tr>
<td>Nicotine gum</td>
<td>409</td>
<td>271</td>
<td>0.25</td>
<td>0.22</td>
<td>1636</td>
<td>1232</td>
</tr>
<tr>
<td>Bupropion</td>
<td>391</td>
<td>253</td>
<td>0.25</td>
<td>0.22</td>
<td>1564</td>
<td>1150</td>
</tr>
</tbody>
</table>

*Average cost-effectiveness is the expected cost/quit.

The roles of pharmacies in Korea are limited to dispensing medications.

The purpose of this study was to survey on the perceptions of the current anti-smoking counseling and smoking cessation treatment and to suggest how to expand the roles of community pharmacies.
Methods

• Development of the questionnaires
  – Three authors in academia with backgrounds of public health or clinical pharmacy and three authors who are acting pharmacists developed the first draft
  – A pilot test was performed on 7 community pharmacists and the questionnaires were modified accordingly.
Methods

• Data collection
  – Period: June 5 ~ September 9, 2019
  – Survey method: On-line self-administered survey through google survey
  – Invitation to participation: Through various SNS pharmacist communities (e.g., KPA board members, KPA community medicine safety center, Seoul PA, Daejon PA, Jeonnam PA, Korea Society of Community Pharmacy, Pharmacists for Healthy Society, Alumni of School of Pharmacy in Dukseong Women’s University, Neol Peom Pharmacy Assoc., etc)
  – 316 pharmacists participated in the survey
Methods

• Frequency analysis using Excel
1. Basic characteristics of the sample

**Gender**
- Males: 107 (34%)
- Females: 208 (66%)

**Age**
- 20’s: 20 (6.3%)
- 30’s: 89 (28.2%)
- 40’s: 73 (23.1%)
- 50’s: 108 (34.2%)
- 60’s: 26 (8.2%)

**Representative or employed**
- Representative: 96 (31%)
- Employed: 218 (69%)

**Types of pharmacy**

<table>
<thead>
<tr>
<th>Type</th>
<th>Dispensing pharmacy near hospital</th>
<th>Dispensing pharmacy near clinic</th>
<th>Sales pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>44</td>
<td>226</td>
<td>45</td>
</tr>
<tr>
<td>%</td>
<td>14.0%</td>
<td>71.7%</td>
<td>14.3%</td>
</tr>
</tbody>
</table>
2. Anti-smoking counseling activities in the past year (1)

Types of counseling activities (n=316)

- Safe Pharmacy counseling: 5.7%
- None: 7.6%
- Sales of programs aids: 25.6%
- Other counseling: 45.6%
- Sales of general aids: 64.2%
- Dispensing prescription drugs: 77.5%

Initiating person (n=296)

- Pharmacist: 70.90% (210)
- Patient: 29.10% (86)

* Safe Pharmacy: Pharmacy-based health promotion program of Seoul Metropolitan City which provides comprehensive drug history management, smoking cessation counseling, and suicide risk gatekeeper service
* Other autonomous anti-smoking counseling: suggestion of quitting smoking, motivation, or maintenance of quitting smoking
2. Anti-smoking counseling activities in the past year (2)

**Preparation time for counseling** (n=248)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 min</td>
<td>29%</td>
</tr>
<tr>
<td>1-3 min</td>
<td>19%</td>
</tr>
<tr>
<td>3-5 min</td>
<td>31%</td>
</tr>
<tr>
<td>5-10 min</td>
<td>15%</td>
</tr>
<tr>
<td>&gt;10 min</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Duration of counseling** (n=246)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 min</td>
<td>9%</td>
</tr>
<tr>
<td>1-3 min</td>
<td>5%</td>
</tr>
<tr>
<td>3-5 min</td>
<td>37%</td>
</tr>
<tr>
<td>5-10 min</td>
<td>32%</td>
</tr>
<tr>
<td>&gt;10 min</td>
<td>5%</td>
</tr>
<tr>
<td>other</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Time for data keeping**

<table>
<thead>
<tr>
<th>Time</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t record</td>
<td>40</td>
<td>17.9%</td>
</tr>
<tr>
<td>&lt;1 min</td>
<td>34</td>
<td>15.2%</td>
</tr>
<tr>
<td>1~3 min</td>
<td>46</td>
<td>20.5%</td>
</tr>
<tr>
<td>3~5 min</td>
<td>69</td>
<td>30.8%</td>
</tr>
<tr>
<td>5~10 min</td>
<td>32</td>
<td>14.3%</td>
</tr>
<tr>
<td>other</td>
<td>3</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

Total: 224 (100.0%)
Results

3. Demands of education and training for anti-smoking counseling

![Pie chart showing perceived competencies for anti-smoking counseling]

(n=302)

1st Priority of education for anti-smoking counseling

<table>
<thead>
<tr>
<th>Description</th>
<th>1st priority (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Knowledge in the benefits of quitting smoking and the harms of smoking</td>
<td>109</td>
</tr>
<tr>
<td>2) Counseling skills to motivate those who do not have will to quit smoking</td>
<td>140</td>
</tr>
<tr>
<td>3) Counseling skills to help those who started quitting to maintain quitting</td>
<td>104</td>
</tr>
<tr>
<td>4) Knowledge in the usage of smoking cessation treatment medicines and their side effects</td>
<td>96</td>
</tr>
<tr>
<td>5) Skill to assess the level of nicotine dependency</td>
<td>48</td>
</tr>
<tr>
<td>6) Counseling skills to cope with withdrawal symptoms</td>
<td>91</td>
</tr>
</tbody>
</table>
4. Perceptions on the NHIS support program for smoking cessation treatment (1)

Lifetime participation

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>203</td>
<td>100</td>
</tr>
<tr>
<td>%</td>
<td>67</td>
<td>33</td>
</tr>
</tbody>
</table>

Perceived pharmacists’ roles

- Counseling for withdrawal symptoms: 56.1%
- Referrals to CHC, medical facilities, etc: 43.9%
- Advisor to physicians for their prescriptions: 40.1%
- Counseling for maintaining quitting smoking: 73.1%
- Monitoring the side effects of medicines: 65.6%
- Explaining the usage and side effects of medicines: 88.7%
4. Perceptions on the NHIS support program for smoking cessation treatment (2)

**Satisfaction about the program** (n=213)

- Very unsatisfied: 3.8%
- Unsatisfied: 29.6%
- Neither satisfied nor unsatisfied: 51.2%
- Satisfied: 14.6%
- Very satisfied: 0.9%

**Reasons of satisfaction** (n=95)

- Expansion of pharmacists’ roles: 35.8%
- Enhanced satisfaction of patients: 31.6%
- Pharmacy reliability strengthened: 25.3%
- Other: 4.4%
- Profitability: 3.2%

**Reasons of dissatisfaction** (n=114)

- Unacceptance of counseling initiated by a pharmacist: 36.0%
- Complexity of the coding system of NHIS: 34.2%
- Low compensation: 26.3%
- Other: 1.8%
- Too much time required: 1.8%
5. Reasons of not providing anti-smoking services

**Reasons of not participating in NHIS program** (n=119)

- No physicians near who participate in the program: 45.4%
- Complicated administrative procedure: 26.9%
- Other: 14.2%
- Low compensation: 10.1%
- Problems in the NHIS coding system: 3.4%

**Reasons of not providing in any anti-smoking services (%)** (n=100)

- Other: 27
- Lack of personnel: 22
- Lack of knowledge for counseling: 21
- Don’t feel counseling necessary: 14
- Low compensation: 16

* Other (n=17): ‘don’t know about the program’ or ‘No prescriptions from the clinics’

* Other (27): No inquiring customers, no opportunities, lack of time, smoking is a matter of personal decision
• Limitation of the sample
  – Considering the fact that about 20% of medical facilities participate in the NHIS program, 67% of participation rate in our sample is very high (not representative).

→ Higher selection rate of active pharmacists
→ relatively more acceptable to innovations in pharmacy practice
Discussion and conclusions

• Duration of anti-smoking counseling
  – 89% spend less than 5 min for preparation; 63% spend less than 5 min for counseling; 84.4% spend less than 5 min for record keeping

→ In summary, less than 15 min in total is needed for each counseling
→ ‘lack of time’ as the reason of not providing counseling is a minor opinion
→ However, two or more pharmacists are needed to provide both dispensing and counseling at the same time (reason of not doing counseling: 22% said ‘lack of personnel’)

Discussion and conclusions

• Capacity building of pharmacists’ anti-smoking counseling skills is necessary
  – 44% perceived lack of competence (only 14% satisfied in their competence)
  – High demands on training for counseling skills to motivate or maintain smoking cessation

→ NHIS provides on-line counseling education program only for physicians. Separate on-line counseling education program for pharmacists is needed.
Discussion and conclusions

- Perceptions of pharmacists on the NHIS smoking cessation treatment program (1)
  - Apart from the traditional pharmacists’ role of ‘explaining the usage and the side effects’ (88.7%), they perceive other roles, too, including ‘counseling for maintaining quitting smoking’ (73.1%), ‘monitoring the side effects’ (65.6%), ‘counseling for withdrawal symptoms’ (56.1%), ‘referral to other service’ (43.9%), and ‘advising physicians about medicines’ (40.1%).

  → Among others, monitoring the side effects and advising physicians about medicines are high priorities for patient safety and continuous smoking cessation.

  → Physician-pharmacist collaboration system is necessary
Discussion and conclusions

- Perceptions of pharmacists on the NHIS smoking cessation treatment program (2)
  - Higher dissatisfaction rate (33.4%) than satisfaction rate (25.5%)
  - The #1 reason of dissatisfaction was ‘Unacceptance of counseling initiated by a pharmacist’ (36%), while the #1 reason of satisfaction was ‘expansion of pharmacists’ roles’ (35.8%)

→ Need to accept program registrations from pharmacy

→ Smokers of higher nicotine dependency should be referred to a clinic for treatment, but pharmacists should be able to provide smoking cessation counseling using nicotine replacement medicines to those of lower nicotine dependency.