Cigarette warning labels

David Hammond PhD
July 102012

Health warnings
Cigarette packs as mass media
Warning Labels stopped you from having a cigarette.

<table>
<thead>
<tr>
<th></th>
<th>Wave 1</th>
<th>Wave 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Second level
Third level
Fourth level
Fifth level
“Our final communication vehicle with our smoker is the pack itself. In the absence of any other marketing messages, our packaging...is the sole communicator of our brand essence.”

M. Hullit, Philip Morris; 1994

Do pictorial health warnings “work”?

Health warning messages on tobacco products: a review

David Hammond

ABSTRACT

Objective To review evidence on the impact of health warning messages on tobacco packages.

Data sources Articles were identified through electronic databases of published articles, as well as relevant grey literature using the following keywords: health warning, health message, health communication, label and labelling in conjunction with at least one of the following terms: smoking, tobacco, cigarette, product, package and study selection and data extraction. Relevant articles available prior to January 2011 were screened for six methodological criteria. A total of 94 original articles met inclusion criteria, including 22 quantitative studies, 16 qualitative studies, 5 studies with both qualitative and quantitative components, and 1 review paper. Canada (n=16), USA (n=29), Australia (n=18), UK (n=13), The Netherlands (n=11), France (n=3), New Zealand (n=2), Mexico (n=2), Brazil (n=2), Belgium (n=1), other European countries (n=10), Hungary (n=1), Malaysia (n=1) and India (n=1).

Results The evidence indicates that the impact of health warnings depends upon their size and design whereas obvious, text-only warnings appear to have little impact. Prominent health warnings on the face of packages serve as a prominent source of health information for smokers and non-smokers, can increase health knowledge and perceptions of risk and can promote smoking cessation.

The evidence also indicates that comprehensive warnings are effective among youth and may help to prevent smoking initiation. Pictorial health warnings that elicit strong emotional reactions are significantly more effective.

Conclusions Health warnings on packages are among the most direct and prominent means of communicating with smokers. Large warnings with pictures are significantly more effective than smaller, text-only messages.

US Health warnings

Warning: Cigarettes are addictive.

WARNING: Tobacco smoke causes fatal lung disease in nonsmokers.

WARNING: Quitting smoking now greatly reduces serious risks to your health.

WARNING: Cigarettes cause strokes and heart disease.

WARNING: Smoking can kill you.

WARNING: Smoking during pregnancy can harm your baby.

WARNING: Tobacco smoke can harm your children.

WARNING: Cigarettes cause fatal lung disease.
Health warnings reach non-smokers.

“43% of never-smokers” in the UK say that the health warnings have persuaded them not to start smoking.”

“approximately 60% of non-smokers could recall a specific warning on UK packs.”


Reach

Pictorial warnings and literacy
Reach

- Pictorial warnings and literacy

SES & Disparities

“Younger respondents, the less-educated respondents and manual workers… appear to be slightly more likely to perceive health warnings on tobacco packs as being effective.”


 пенкор

* Pictorial warnings promote cessation.

- 57% of Australian smokers reported that the labels have made them think about quitting.
- 34% say the warnings have helped them to try to quit.

Motivation to quit

92% of US smokers who intend to quit cite health concerns as motivation.


Health Warning Content
Quit lines
Warning Labels stopped you from having a cigarette.

<table>
<thead>
<tr>
<th>Wave</th>
<th>Percentage</th>
<th>Canada</th>
<th>Australia</th>
<th>US</th>
<th>UK</th>
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<tbody>
<tr>
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<tr>
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<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
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<tr>
<td>3</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
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<td>4</td>
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<td>30%</td>
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<td>30%</td>
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</tr>
<tr>
<td>5</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
</tr>
</tbody>
</table>

After

Before

Health warnings can reduce brand appeal.


Health warnings can reduce brand appeal.

“...more than 90% of Canadian youth agreed that make smoking seem less attractive.”

Rotation matters

2002

2004

2008

Size

80% Uruguay (80% of front and back)
75% Canada (75% of front, 75% of back)*
65% Mauritius (60%, 70%)
65% Mexico (30%, 100%)
60% Philippines (60%, 60%)*
60% Australia (30%, 90%)
60% New Zealand (30%, 90%)
60% Cook Islands† (30%, 90%)
56% Belgium (48%, 63%, incl. border)
56% Switzerland (48%, 63%, incl. border)
55% Thailand (55%, 55%)
54% Turkey (65%, 43%, incl. border)
52% Finland (45%, 58%, incl. border) †
52% Ireland (45%, 58%, incl. border) †
52% Kyrgyz Republic (52%, 52%)†
50% Albania (50%, 50%)†
50% Bolivia (50%, 50%)
50% Brunei (50%, 50%)

Message content matters

Warning Labels stopped you from having a cigarette.

<table>
<thead>
<tr>
<th>Wave 1</th>
<th>Wave 2</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Australia</td>
<td>US</td>
</tr>
</tbody>
</table>

23%

Second level

Third level

Fourth level

Fifth level

Message content matters

Warning Labels stopped you from having a cigarette.

1-800-QUIT-NOW

Warning: Cigarettes are addictive.

Warning: Tobacco smoke causes fatal lung disease in nonsmokers.

Warning: Quitting smoking now greatly reduces serious risks to your health.

Warning: Cigarettes cause strokes and heart disease.

Warning: Smoking can kill you.

Warning: Smoking during pregnancy can harm your baby.

Warning: Cigarettes cause fatal lung disease.

Warning: Cigarettes cause cancer.

Warning: Tobacco smoke can harm your children.

Warning: Cigarettes are addictive.

 smoking kills
Increasingly graphic message content

Uruguay

2008

2009

2012

Message content

Canada 2012
FDA “proposed” warnings

7 Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Mode</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>Face-to-face</td>
<td>2010</td>
</tr>
<tr>
<td>United States</td>
<td>Web</td>
<td>2010</td>
</tr>
<tr>
<td>China</td>
<td>Face-to-face</td>
<td>2011</td>
</tr>
<tr>
<td>Germany</td>
<td>Web</td>
<td>2012</td>
</tr>
<tr>
<td>India</td>
<td>Face-to-face</td>
<td>In field</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Face-to-face</td>
<td>In field</td>
</tr>
<tr>
<td>South Korea</td>
<td>Web</td>
<td>2013</td>
</tr>
</tbody>
</table>
## Health Warnings

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction</td>
<td>Smoking is a deadly addiction.</td>
</tr>
<tr>
<td>Aging</td>
<td>Smoking causes aging of the skin.</td>
</tr>
<tr>
<td>Death</td>
<td>Smoking kills.</td>
</tr>
<tr>
<td>Emphysema</td>
<td>Smoking causes emphysema.</td>
</tr>
<tr>
<td>Gangrene</td>
<td>Smoking causes gangrene.</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>Smoking causes heart disease.</td>
</tr>
<tr>
<td>Impotence</td>
<td>Smoking causes impotence.</td>
</tr>
<tr>
<td>Lung Cancer</td>
<td>Smoking causes lung cancer.</td>
</tr>
<tr>
<td>Mouth Cancer</td>
<td>Smoking causes mouth cancer.</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>Smoking causes harm to your baby.</td>
</tr>
<tr>
<td>Quitting</td>
<td>Quit now.</td>
</tr>
<tr>
<td>Secondhand Smoke</td>
<td>No smoke-free air in your environment.</td>
</tr>
<tr>
<td>Stroke</td>
<td>Smoking causes stroke.</td>
</tr>
<tr>
<td>Throat Cancer</td>
<td>Smoking causes throat cancer.</td>
</tr>
<tr>
<td>Toxicity</td>
<td>Cigarette smoking causes toxic effects.</td>
</tr>
</tbody>
</table>

## Adaptation of Health Warnings

**THE SMOKE FROM YOUR CIGARETTE HARMS PEOPLE AROUND YOU**

**WARNING:** Smoking can kill you.

“I never thought smoking would make me impotent. I feel so embarrassed.”

SMOKING IS A DEADLY ADDICTION

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Luke
Age 36
Picture warnings rated as more effective than text \( (p<.001) \)

- 89% rated pictorial warnings more effective

Graphic health warnings rated as most effective \( (p<.001) \)
Graphic warnings

EXCEPTTERNAL graphic warnings more effective than INTERNAL graphic warnings  (Beta=0.6 p<.001)

“Lived experience”

WARNINGS depicting experience of OTHERS rated as more effective than experience on SELF  (p<.001)

- 77% rated experience of “others” more effective than “self”.
“Lived experience”

Warnings depicting experience of OTHERS rated as more effective than experience on SELF \( (p<.001) \)

- 77% rated experience of “others” more effective than “self”.

Adding testimonial information increased effectiveness \( (p<.001) \)

- 89% rated testimonial warnings more effective.
Health Warning Themes

Testimonial

Contains a personal narrative or story, including personal information, including name and age.

Testimonial

Australia 2012
Symbolic warnings rated least effective

- **SMOKING IS A DEADLY ADDICTION**
- **SMOKING CAUSES IMPOTENCE**
- **SMOKING KILLS**
- **CIGARETTE SMOKE CONTAINS TOXIC CHEMICALS**

### Content

**Defensive avoidance?**

- Fear-arousing information may increase likelihood of defensive avoidance.

- Measures of attention allocation (e.g. Reaction times & EEG measures)

> “Policy makers should....be reluctant to introduce cigarette warning labels and should instead focus on more effective interventions and policies.”  Ruiter & Kok, 2005 p.329

Post-implementation

Avoidance
One third of Canadian smokers made an attempt to avoid the warnings....

…but they were just as likely to say the warnings increase intentions to quit and to engage in cessation behaviour.”

Post-implementation

Message recall
“...what specific health warning messages can you remember?”


Content
Limits of “graphic” content?
### Integration of efficacy messages

<table>
<thead>
<tr>
<th>Content</th>
<th>Cessation Inserts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quitline number</strong></td>
<td><img src="image" alt="Quitline number" /></td>
</tr>
<tr>
<td><strong>Supportive statement</strong></td>
<td><img src="image" alt="Supportive statement" /></td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td><img src="image" alt="Website" /></td>
</tr>
</tbody>
</table>

Links with other media channels

![Image](https://www.nytimes.com/2012/03/01/business/us-judge-rejects-gruesome-cigarette-labels.html)

Industry legal challenge

**The New York Times**

**U.S. Judge Strikes Down F.D.A. Cigarette Labels**

By STEPHANIE STROM  
Published: February 29, 2012

A federal judge on Wednesday declared unconstitutional a Food and Drug Administration requirement that tobacco companies prominently display graphic warning labels on cigarette packages.

Judge Richard J. Leon of the United States District Court in Washington ruled that forcing the companies to use the labels, which show staged images like a man breathing smoke out of a tracheotomy hole in his neck and a mouth punctured with what appear to be cancerous lesions, violated their free speech rights under the First Amendment.
Industry legal challenge

**Fact vs. emotion**

“That the images were unquestionably designed to evoke emotion...further undercuts the Government's argument that the images are purely factual and not controversial.

Moreover, it is abundantly clear from viewing these images that the emotional response they were crafted to induce is calculated to provoke the viewer to quit, or never to start, smoking: an objective wholly apart from disseminating purely factual and uncontroversial information. “


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Associate Professor at the University of Waterloo

**Grant/Contract Funding:**
- U.S. National Institutes of Health
- U.S. National Cancer Institute
- Canadian Cancer Society, others

**Consultant/Paid Speaker/Advisory Committees:**
- Health Canada
- World Health Organization
- CDC Consultant
- European Commission

**Tobacco litigation:**
- Expert Witness in tobacco litigation (Canada, USA, UK)
- Provided comments to TFK & DOJ lawyers for preliminary injunction
Warning Labels stopped you from having a cigarette.

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Second level
Third level
Fourth level
Fifth level

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