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Institute of Epidemiology and Social Medicine
Measuring Tobacco Control

from the general population perspective

- Input – Outcome
- Current study
- Surveillance system
Second Purpose

- Our contribution to ENSP
- Smoking prevention activities
# Smoking prevention

<table>
<thead>
<tr>
<th>Input</th>
<th>Intermediate</th>
<th>Outcome</th>
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| Generalized intervention  
Tax increases  
Regulations  
Product characteristics  
Advertising, sponsoring | | |
| Individualized intervention  
Tailored approaches, e. g. Motivational Interviewing  
Stages of change | | |
## Smoking prevention

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| Generalized intervention  
  Tax increases  
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  Advertising, sponsoring | Anti-smoking climate among the general population | Decisional Balance  
  Pros and Cons |
| Individualized intervention  
  Tailored approaches, e. g.  
  Motivational Interviewing  
  Stages of change |                                                                                       |
| Resources  
  Staff  
  Pressure groups  
  Finances |                                                                                       |
Want to quit

(Boyle et al, 2000)

Sweden
Finland
Poland
UK
Greece
Germany

severely dependent
less severely dependent
males females

(Boyle et al, 2000)
Decisional balance
Smoking abstinence

Pros
- health
- money

Cons
- nervous
- weight gain
Smoking prevention

Input

- Generalized intervention
  - Tax increases
  - Regulations
  - Product characteristics
  - Advertising, sponsoring

- Individualized intervention
  - Tailored approaches, e.g.
  - Motivational Interviewing
  - Stages of change

- Resources
  - Staff
  - Pressure groups
  - Finances

Intermediate

- Anti-smoking climate among the general population
- Decisional Balance
  - Pros and Cons

Outcome

- Motivation
  - Stages, processes of change
## Smoking prevention

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<td>Generalized intervention&lt;br&gt;• Tax increases&lt;br&gt;• Regulations&lt;br&gt;• Product characteristics&lt;br&gt;• Advertising, sponsoring</td>
<td>Anti-smoking climate among the general population</td>
<td>Tobacco use&lt;br&gt;Sales, smoker rates</td>
</tr>
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<td>Individualized intervention&lt;br&gt;• Tailored approaches, e.g.&lt;br&gt;• Motivational Interviewing&lt;br&gt;• Stages of change</td>
<td>Decisional Balance&lt;br&gt;Pros and Cons</td>
<td>Tobacco attributable morbidity and mortality</td>
</tr>
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<td>Resources&lt;br&gt;• Staff&lt;br&gt;• Pressure groups&lt;br&gt;• Finances</td>
<td>Motivation&lt;br&gt;Stages, processes of change</td>
<td></td>
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**Stages of change**
- Precontemplation
- Contemplation
- Preparation
- Action
- Maintenance

**Motivational Interviewing**
- Empathy
- Exploration
- Experimentation
- Evaluation
- Empowerment
Smoking and lung cancer (incidence) in California

Barnoya & Glantz (2004)

- per capita consumption tobacco
- lung cancer

Barnoya & Glantz (2004)
Tobacco-attributable Mortality

European country

Germany

Death cases per year total

0 5 10 15 20 %

- tobacco
- tobacco and alcohol
Smoking prevention

**Input**
- Generalized intervention
- Tax increases
- Regulations
- Product characteristics
- Advertising, sponsoring
- Individualized intervention
- Tailored approaches, e.g.
  - Motivational Interviewing
  - Stages of change
- Resources
  - Staff
  - Pressure groups
  - Finances

**Intermediate**
- Anti-smoking climate among the general population
- Decisional Balance
  - Pros and Cons
- Motivation
  - Stages, processes of change

**Outcome**
- Tobacco use
  - Sales, smoker rates
- Tobacco attributable morbidity and mortality

**Monitoring**
Monitoring

- Are the input factor strong enough to act on intermediate factors?
- Is there proof of an outcome?
- Population impact
Study 1
Development of a Measurement tool for Activities in Tobacco Control in European countries MATOC

- Goal: Development of a short instrument
- Data from 10 EU-member states and 7 accession countries
- 142 experts
- 31 items
- Next step: general population data
Study 2
Telephone survey in European countries

- Sweden or Finland, Greece, Poland, UK, Germany
- N= 700 per country, random sample, age 15 - 59
- 30 minute interview
Telephone survey in European countries

- Knowledge about tobacco control: taxing, product information, advertising, smoking cessation aids, smoking restrictions, media support
- Attitudes towards Tobacco control
- Decisional balance, stages of change
## Partners

<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>René Thyrian, Ulrich John</td>
<td>University of Greifswald, Institute of Epidemiology and Social Medicine</td>
</tr>
<tr>
<td>Greece</td>
<td>Evangelos Polychronopolous, Maria Pilali, Demosthenes Panagiotakos</td>
<td>Harakopio University, University of Athens Medical School, Hellas Cancer Society</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Marc Willemsen</td>
<td>Dutch Foundation of Smoking and Health, STIVORO</td>
</tr>
<tr>
<td>Poland</td>
<td>Krzysztof Przewozniak</td>
<td>Witold Zatonski, Center of Oncology Warsaw</td>
</tr>
<tr>
<td>UK</td>
<td>Robert West</td>
<td>University College London, Tobacco Research, Health Behaviour Unit</td>
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</tbody>
</table>
Thank you!

www.medizin.uni-greifswald.de/epidem
Population impact

Outcome * n target population

Proportion Proportion
<table>
<thead>
<tr>
<th>Service</th>
<th>Effect</th>
<th>Participation</th>
<th>PI*</th>
</tr>
</thead>
<tbody>
<tr>
<td>School programs</td>
<td>0.0</td>
<td>.95</td>
<td>0.0</td>
</tr>
<tr>
<td>Courses</td>
<td>0.30</td>
<td>0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>Self help manuals</td>
<td>0.15</td>
<td>0.05</td>
<td>0.075</td>
</tr>
<tr>
<td>NRT</td>
<td>0.30</td>
<td>0.03</td>
<td>0.09</td>
</tr>
<tr>
<td>NRT + advice</td>
<td>0.10</td>
<td>0.30</td>
<td>0.03</td>
</tr>
<tr>
<td>Community programs</td>
<td>0.01</td>
<td>0.80</td>
<td>0.008</td>
</tr>
<tr>
<td><strong>Expert system</strong></td>
<td><strong>0.24</strong></td>
<td><strong>0.75</strong></td>
<td><strong>0.18</strong></td>
</tr>
</tbody>
</table>

* Population impact

Velicer, 2003