The underreporting of occupational diseases

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**Underreporting of OD**

- Despite the existence of mandatory reporting laws in many industrialised countries, the underreporting of occupational diseases (OD) to public health authorities is widespread.
- Timely and complete reporting is fundamental to establish a successful surveillance of occupational health conditions.
- Knowing the extent and variety of OD enables better acquisition and allocation of resources to prevent and treat them efficiently.
Underreporting of OD: possible reasons

- For physicians:
  - lack of awareness regarding reporting requirements
  - time and effort involved in reporting
  - lack of benefits from reporting

- For workers:
  - lesser severity disorders
  - lack of knowledge on reporting and compensating system
  - lack of individual benefits
  - fear of losing their job
Increasing the reporting of OD

- Underreporting is an old problem
- There is no known single intervention that has been used to address the problem
- Some decades ago already, Tizes and Pravda proposed a computerised automatic dialing system “programmed so that it would dial physicians periodically to remind them of their obligation to report diseases” (Health Service Reports 1972;87:633-7)
Interventions to increase the reporting of OD (1)

- At society or individual level, the intervention might increase the reporting rate of OD by improving the knowledge, the motivation and/or the benefits to report
- Legislative interventions could act to force the physician to report OD and to trigger the worker to refer his condition to a physician
- Surveillance system could actively collect data regarding diseases with a probable occupational origin, increasing the number of notifications
Interventions to increase the reporting of OD (2)

- Informative strategies (e.g. education materials) are designed to change physician’s performance and behaviour.

- Communication campaigns could also be directed to workers and they might work increasing their awareness regarding the possible occupational origin of their disease.

  ➢ This kind of intervention is aimed at persuading the workers to refer their symptoms to the general practitioner or to the occupational physician.
OD and the Italian Society of Occupational Medicine (SIMLII)

- Underreporting of OD will be one of the chapters of a book edited by the Italian Society of Occupational Medicine
- Other aspects treated in the book:
  - Time trends
  - Surveillance systems
  - Causality
  - Medico-legal problems
  - Compensation
  - Socio-economic costs
  - Burden of OD
Underreporting of OD is an important issue worldwide. Because of underreporting, the figures are often not reliable even within a country. The collection of reliable data is essential for public health officials to plan intervention programs and allocation of resources. To our knowledge, there are no previously published reviews that have evaluated the effect of interventions for increasing the reporting (or reducing the underreporting) of OD.
Reporting rates: all production sectors – Italy 2007-2011

![Graph showing occupational diseases reporting rates for various Italian regions from 2007 to 2011. The x-axis represents the years 2007 to 2011, while the y-axis shows the rate per 100,000 workers. The graph includes data for different regions such as Piemonte, Valle D’Aosta, Lombardia, Liguria, Bolzano - Bozen, Trento, Veneto, Friuli Venezia Giulia, Emilia Romagna, Toscana, Umbria, Marche, Lazio, Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicilia, and Sardegna.]
Reporting rates: industry and services – Italy 2007-2011
Occupational diseases: reporting rates
Agricultural sector – Italy 2007-2011

Reporting rates: agricultural sector – Italy 2007-2011

Occupational diseases: reporting rates
Agricultural sector

Year
2007 2008 2009 2010 2011
Rate per 100,000 agricultural workers

Piemonte
Valle D'Aosta
Lombardia
Liguria
Bolzano - Bozen
Trento
Veneto
Friuli Venezia Giulia
Emilia Romagna
Toscana
Umbria
Marche
Lazio
Abruzzo
Molise
Campania
Puglia
Basilicata
Calabria
Sicilia
Sardegna
<table>
<thead>
<tr>
<th>Disease/site</th>
<th>Italy</th>
<th>Abruzzo</th>
<th>Chieti</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musculoskeletal disorders</td>
<td>6,585</td>
<td>1,758</td>
<td>1,179</td>
</tr>
<tr>
<td>Neurologic diseases/sense organs</td>
<td>734</td>
<td>190</td>
<td>112</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>254</td>
<td>41</td>
<td>21</td>
</tr>
<tr>
<td>Malignancies</td>
<td>64</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Cardiovascular diseases</td>
<td>56</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Digestive system</td>
<td>32</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Mental disorders</td>
<td>13</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Other/unknown</td>
<td>201</td>
<td>36</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7,971</td>
<td>2,040</td>
<td>1,346</td>
</tr>
</tbody>
</table>
Chieti vs Italy

- 11,000 agricultural workers in the province of Chieti
- In 2011 the reporting rate of OD $\approx 12,000$ per 100,000 workers-year
- 850,000 agricultural workers in Italy [ISTAT data]
- In 2011 7,971 OD occurred in agricultural workers were reported in Italy
- If the reporting rate in Italy had been the same of the province Chieti, 100,000 OD would have been reported among agricultural workers
OD expected in Italy

- Regional rates show extreme variability
- We estimated the number of expected OD in Italy based on the highest observed regional rate

- In 2007 the highest rate was registered in Umbria (Abruzzo excluded)
- In 2011 the highest rate was registered in Marche (Abruzzo excluded)
In 2007 28,933 OD were reported (46,177 expected)
OD expected in Italy – based on reporting rates of Marche

In 2011 46,558 OD were reported (70,546 expected)
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Thank you for your attention!