AUTOMATED EXTERNAL DEFIBRILLATORS IN THE WORKPLACE: A VITAL NEED? A BELGIAN EVALUATION STUDY

INTRODUCTION
- Few studies exist on the presence and use of Automated External Defibrillators (AEDs) in workplaces
- Data collection on AED installation and use on a national level is needed

AIM OF THE STUDY
To describe the presence (1) and use (2) of AEDs at Belgian workplaces from 01/01/2012 to 31/12/2014

METHODS
Questionnaire
- Self-constructed online 37-item questionnaire
- Consisting of:
  • General characteristics
  • Information about AED presence, characteristics and use
  • Information about the organization of first aid procedures
- Sent by associations of occupational physicians and prevention advisors to their members
- Completed by occupational physicians and prevention advisors in Belgian companies

Data analysis
Descriptive statistics and logistic regression

RESULTS
767 companies (52% industrial and 48% administrative activities) participated

<table>
<thead>
<tr>
<th>1. Is an AED present in the company?</th>
<th>YES 48.8% (n=374)</th>
<th>NO 51.2% (n=393)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence depends on (significance level p&lt;.05):</td>
<td>OR (95% CI)</td>
<td></td>
</tr>
<tr>
<td>Number of persons present in a company</td>
<td>2.31 (1.44-3.71)</td>
<td></td>
</tr>
<tr>
<td>0-49: reference category</td>
<td>2.28 (1.44-3.63)</td>
<td></td>
</tr>
<tr>
<td>50-99</td>
<td>2.04 (1.28-3.25)</td>
<td></td>
</tr>
<tr>
<td>100-199</td>
<td>4.46 (2.82-7.55)</td>
<td></td>
</tr>
<tr>
<td>200-499</td>
<td>1.4 (1.1-1.9)</td>
<td></td>
</tr>
</tbody>
</table>

| Presence does not depend on (p=NS): | OR (95% CI) |
| Type of activity (industrial versus administrative) | 1.1 (0.9-1.5) |
| Expected ambulance response time (median 10 min, interquartile range 8-15 min) | 1.0 (0.9-1.1) |

2. Was the AED used?
- In how many companies was the AED used to shock? 21/374
- How many times was the AED used to shock? 49 times in 21 companies
- How many of the 49 victims survived? 35/45 survived (4 missing data)
- What was the age of the youngest victim? 39 years old

DISCUSSION
> Companies with a higher number of persons present and companies with risks that may lead to heart problems have more often an AED on-site.
> Six percent of the companies with an AED used it once or more during the period 01/01/2012 - 31/12/2014.
> The use of an AED in persons of ≥39 years old was reported to be successful in 78% of the cases.

Authors: M Kalaai1, P Calle2, L Braeckman3
1 Mensura Occupational Health Services, Belgium
2 Department of Internal Medicine, UGent, Belgium
3 Department of Public Health, Occupational and Environmental Medicine, UGent, Belgium