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Title: EWTD – Systematic review for evidence based decision making
SUMMARY REPORT - October 2011

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Mari Cruz Rodriguez Juareno, Consol Serra, Ewan B. Macdonald, Evangelia Demou, Sergio Vargas Prada, Ritva Aro Helimaki, Pedro Gustavo Reis, Kaveh Sanati, Alenka Skerjanc
European Working Time Directive
Systematic review for evidence based decision making

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UEMS Section of Occupational Medicine

Mari Cruz Rodriguez Juareno, Consol Serra, Ewan B. Macdonald, Evangelia Demou, Sergio Vargas Prada, Ritva Aro Helimaki, Pedro Gustavo Reis, Kaveh Sanati, Alenka Škerjanc
UEMS OM Section’s Meeting,
Lake Bled, 24.09.2011
Do long working hours (eg. more than 48 hours per week) increase morbidity and mortality in doctors?

Search on the evidence in PubMed and list of references of reviewed articles (June 2011)

2,892 citations

Filters applied to PubMed search strategy (types study, publication)

352 titles/abstracts

Screening of title and, if needed, abstract.

59 full papers (42 from electronic search + 17 from additional references*)

Quality assessment, inclusion criteria.

8 included studies

*From referents lists of 42 initially assessed papers
Available scientific evidence on the health problems associated with long working hours:

Synthesis of the evidence.

<table>
<thead>
<tr>
<th>Health outcome</th>
<th>Degree of evidence*</th>
<th>Magnitude of the association**</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Injuries</td>
<td>++</td>
<td>+++/+++</td>
<td>Barger 2005; Fisman 2007; Ayas 2006</td>
</tr>
<tr>
<td>b) Mood disorders</td>
<td>+/++</td>
<td>+/+(?)</td>
<td>Firth Cozens 2001; Smith 2006; Zare 2004; Zahrai 2011; Sargent 2009</td>
</tr>
<tr>
<td>c) Burnout</td>
<td>+</td>
<td>-</td>
<td>Sargent 2009</td>
</tr>
<tr>
<td>d) General health</td>
<td>+</td>
<td>-</td>
<td>Zahrai 2011</td>
</tr>
</tbody>
</table>

* Strong evidence (+++): consistent results in more than 2 studies of high quality; Moderate evidence (++): consistent results in one high quality study and one intermediate, or between some studies of intermediate quality; Insufficient evidence (+): identification of only one study or inconsistent results across studies; Evidence of no association (-): consistent results of a non association two or more studies.
The first systematic review on the effects of long working hours on physicians’ health

LIMITATIONS OF THE REVIEW

1. The search was restricted to indexed journals
2. Lack of control of confounding variables
3. Lack of analysis of modifying factors (attitudes, motivation, job requirements and demands, organizational climate, work satisfaction, lifestyle ...)
4. Lack of evidence of a dose-response relationship
5. Heterogeneousness of included studies
6. The evidence is limited to working more than 60 hours
Despite limitations, the currently available evidence raises concerns about the risks to health and safety of long working hours in physicians.

Other issues such as patient safety and sleep deprivation have been planned to be addressed by the group shortly.

Some of the group considers that short periods of up to 60 hours per week can be safe, provided that there are adequate rest breaks and sleep, that shift patterns meet best practice, and the doctor works in a supportive psychosocial environment.
Based on this systematic review of the best available scientific evidence, the UEMS Section of Occupational Medicine (Lake Bled, Slovenia, 24th September 2011) agreed that **there are no scientific grounds for regulating doctors’ hours separately from other professional groups.**

Also, that **there is a growing body of scientific evidence suggesting that long working hours increase morbidity and mortality in the general population and the available research to date about long working hours in doctors points in the same direction.**

Unfortunately **it is not possible at this stage to set a number of hours safe for the health of doctors, but there is no scientific evidence either for saying that this number of hours should be different than those set for other professions.**
Thank you very much for your attention …

UEMS Section of Occupational Medicine