The influence of age on the incidence of work-related ill-health

Annemarie Money, Melanie Carder, Martin Seed, Ana Barradas, Matthew Gittins, Raymond Agius & van Tongeren, M
Background

- Ageing population structure
- By 2035, those aged 65+ = \(\frac{1}{4}\) of total population
- Falling birth rates
- Increasing life expectancy rates
  - men 65yrs today → 19 years
  - women 65yrs today → 21 years
- Shortage of workers & economic imperative
• Policy response included measures – default retirement age (DRA) abolished, increasing pension age, legislating against age discrimination

• Financial problems – falling annuity rates, end of final salary pension schemes etc.

  Effect on early withdrawal from paid employment

  Extension of working lives – number of older workers in employment now is at record high (30%)
• ‘Good’, ‘safe’ work is good for us

• Financial, physical, social benefits of extending working lives

• Diversity of older working population
  – ‘Healthy survivors’
  – ‘Second careerists’
  – ‘Trapped workers’

• Many ‘push’ and ‘pull’ factors that impact on choice to remain in work.
• Relationship between ageing, health and work = complicated
  Physical health (strength, vision, hearing, cardiovascular)
  Cognitive function
  Co-morbidity and ↑ number of workers needing support to remain in work

• Myths about older workers
  – More ill-health
  – More accidents
  – More sickness absence
Aims and Method

• To look at the incidence of work-related mental, musculoskeletal, skin and respiratory ill-health by age group.

• The Health and Occupation Research (THOR) network – UK-wide series of surveillance schemes enabling physicians (clinical systems specialists, occupational physicians (OPs) and general practitioners (GPs) to report cases of WRIH seen during their clinical practice.

• THOR schemes –
  – Mental – GPs and OPs
  – Musculoskeletal – GPs and OPs
  – Contact dermatitis – dermatologists
  – Asthma – chest physicians

• Relative incidence rate ratios: standardised for age and sex using UK Labour Force Survey (LFS) as denominator
### Results

- 23,677 actual cases (78,314 estimated) cases of WRIH included in analysis

<table>
<thead>
<tr>
<th>Sex</th>
<th>Contact dermatitis reported by dermatologists (EPIDERM)</th>
<th>Asthma reported by chest physicians (SWORD)</th>
<th>Musculoskeletal disorders reported by occupational physicians (OPRA)</th>
<th>Mental ill-health reported by occupational physicians (OPRA)</th>
<th>Musculoskeletal disorders reported by general practitioners (THOR-GP)</th>
<th>Mental ill-health reported by general practitioners (THOR-GP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male</strong></td>
<td>2627 (39%)</td>
<td>917 (73%)</td>
<td>2180 (61%)</td>
<td>2633 (40%)</td>
<td>2046 (61%)</td>
<td>857 (41%)</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>4119 (61%)</td>
<td>347 (27%)</td>
<td>1401 (39%)</td>
<td>3968 (60%)</td>
<td>1306 (39%)</td>
<td>1254 (59%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age group</th>
<th>Contact dermatitis reported by dermatologists (EPIDERM)</th>
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<tbody>
<tr>
<td>16-24</td>
<td>1551</td>
<td>62</td>
<td>148</td>
<td>187</td>
<td>384</td>
<td>149</td>
</tr>
<tr>
<td>25-34</td>
<td>1630</td>
<td>225</td>
<td>632</td>
<td>962</td>
<td>620</td>
<td>414</td>
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<tr>
<td>35-44</td>
<td>1396</td>
<td>312</td>
<td>1003</td>
<td>1874</td>
<td>892</td>
<td>607</td>
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<tr>
<td>45-54</td>
<td>1263</td>
<td>350</td>
<td>1154</td>
<td>2371</td>
<td>907</td>
<td>611</td>
</tr>
<tr>
<td>55-64</td>
<td>710</td>
<td>289</td>
<td>604</td>
<td>1142</td>
<td>506</td>
<td>310</td>
</tr>
<tr>
<td>65+</td>
<td>96</td>
<td>25</td>
<td>29</td>
<td>33</td>
<td>37</td>
<td>14</td>
</tr>
<tr>
<td>Median age (age range)</td>
<td>36 (16-93)</td>
<td>46 (17-76)</td>
<td>45 (16-75)</td>
<td>46 (17-75)</td>
<td>42 (16-86)</td>
<td>43 (17-71)</td>
</tr>
</tbody>
</table>

| Total actual (estimated) | 6761 (15759) | 1264 (2661) | 3583 (19973) | 6606 (34458) | 3352 | 2111 |
IRRs and 95% confidence intervals (where applicable) by age group for total and male / female musculoskeletal (OPRA / THOR-GP)

**OPRA 2006-2018**

**THOR-GP 2006-2018**
IRRs and 95% confidence intervals (where applicable) by age group for total and male / female mental ill-health (OPRA / THOR-GP)

**OPRA 2006-2018**

![Incidence rate ratio (IRR) plot for OPRA 2006-2018](image)

**THOR-GP 2006-2018**

![Incidence rate ratio (IRR) plot for THOR-GP 2006-2018](image)
IRRs and 95% confidence intervals by age group for total and male / female occupational asthma (SWORD)
IRRs and 95% confidence intervals by age group for total and male / female contact dermatitis (EPIDERM)
Other sources of data....

• HSE Self reported work-related illness:
  – Musculoskeletal highest incidence in 45-54 and 55+ categories, and both are statistically significantly higher than average across all persons
  – Mental ill-health – highest incidence in 25-34 group lowest incidence in oldest age group – statistically significantly lower than average across all persons.
Summary

• IRRs increase with age up to a certain point (mainly 45-54 age group) then decrease with increasing age, with the exception of contact dermatitis.

• Working populations = survival populations - ‘Healthy worker effect’

• Exemplified by musculoskeletal results? vulnerability increases with age – declining general fitness, gradual onset of osteoarthritis etc., combined with the healthy worker effect.
Patterns emerging in initial investigations, but not sure why exactly; for example asthma IRRs highest in older age group? Contact dermatitis in younger females – hairdressers / beauticians??

Myth of higher incidence of occupational disease in older workers - often due to long latency diseases, especially respiratory?
Next steps….Changes over time… sickness absence / injury data

• Trends analysis looking at changes over time within age groups: regroup to 55+ category
• Analysis of sickness absence data: 3390 (53%) of the cases reported have data on absence from work. This accounts for 82,621 total days lost (mean number of days lost = 24.9).
• Injury data – 879 (14%) of THOR-GP cases reported as a work injury.
Questions?

Thank you