



A job exposure matrix addressing hand exposure to wet work

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Aim

To create a **JEM** for **wet work**.

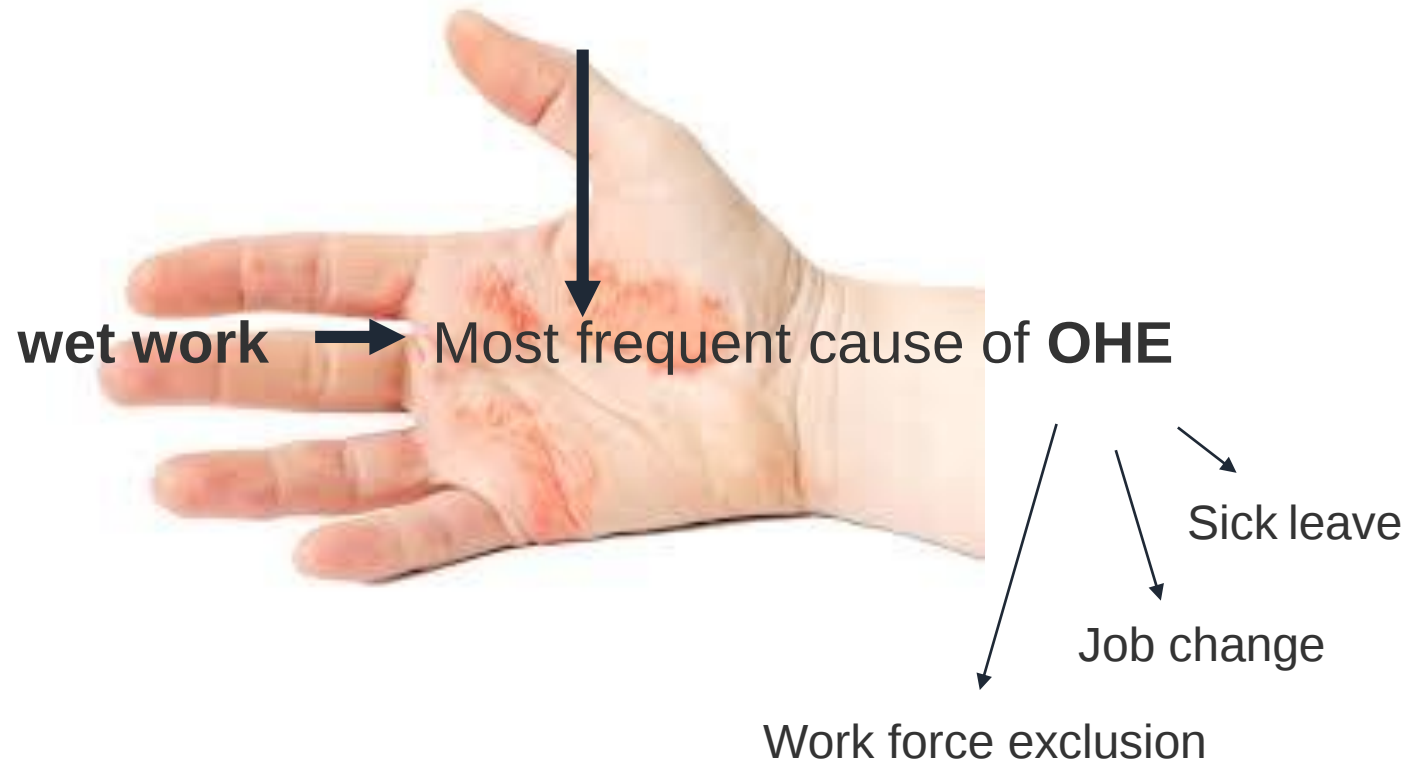
Why?

Extent of wet work as an irritant exposure in different professions **is unknown**

How?

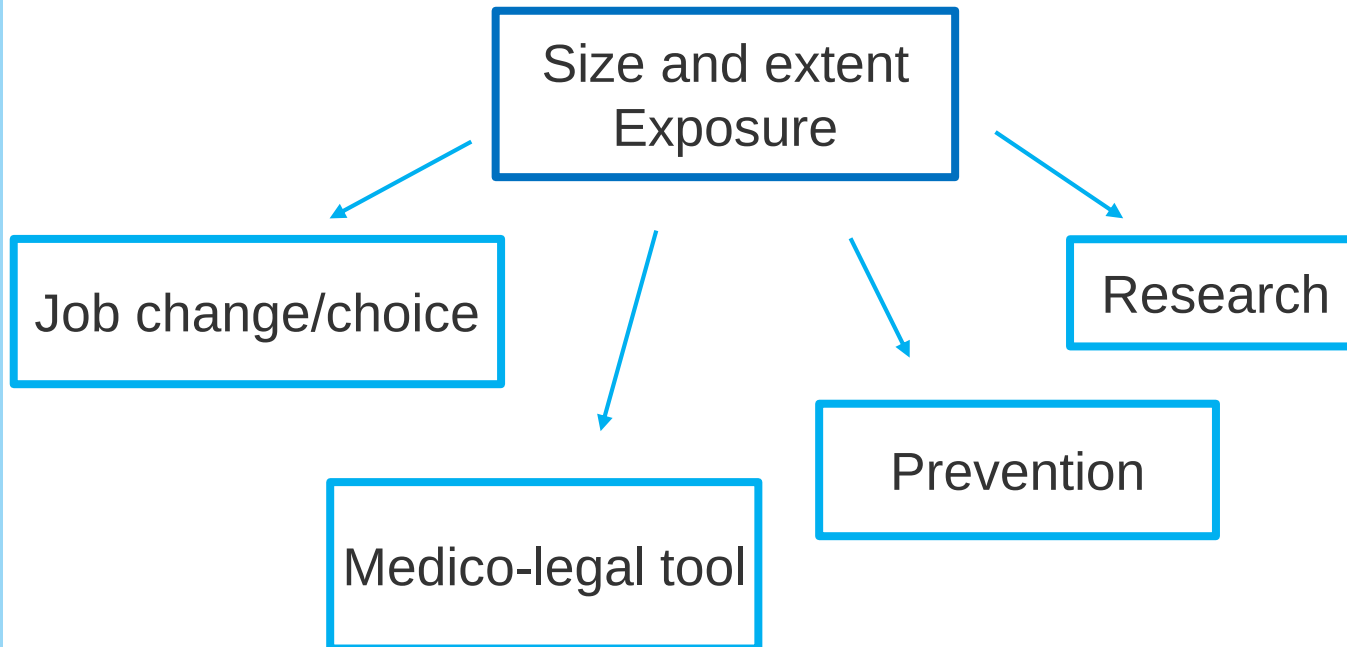
Explore and **quantify** → JEM

Why wet work?



Diepgen and Coenraads 1999
Vindenes et al. 2017
Carøe et al. 2018

Why JEM?



What is "wet work"?

Wet hands/wearing gloves ≥ 2 hours
and/or
washing hands ≥ 20 times

(Jungbauer et al. 2004; Flyvholm and Lindberg 2006; Diepgen et al. 2015).



What do we know so far?

Environmental factors > genetic predisposition

(Bryld et al. 2004; Lerbaek et al. 2007).



High-risk occupations for OHE

(Skoet et al. 2004).

hairdressers

health care workers

bakers

kitchen workers

butchers

cleaners

Laboratory technicians

Population selection

“Danish Work Environment Cohort Study” 2000, 2005, 2010

“To which extent do you have **wet** or moist **hands** during your working hours?”



“Is your skin exposed to protective **gloves** made of plastic or rubber?”



Almost all the time”	7 hours
“3/4 of the time”	6 hours
“1/2 of the time”	4 hours
“1/4 of the time”	2 hours
“Seldom/very little”	0.1 hours
“Never”	0 hours



*“To which extent do you have **wet** or moist **hands** during your working hours?”*



*“Is your skin exposed to protective **gloves** made of plastic or rubber?”*



Response rate

2000 = 75%

2005 = 86%

2010 = 48%



n = 18,092

Professions = 98





*“To which extent do you have **wet** or moist **hands** during your working hours?”*



*“Is your skin exposed to protective **gloves** made of plastic or rubber?”*



“Total wet work” =
the maximal value of either
of the two



JEM-estimates

**Exposure measurement = ≥ 2 hours
total wet work/day**

Probability of ≥ 2 hours
total wet work/day

Proportion of the profession
 ≥ 2 hours total wet work/day

High exposure group $\geq 50\%$ of responses
Moderate exposure group 25-49% of responses
Low exposure group $< 25\%$ of responses

Example

High exposure
group $\geq 50\%$ of
responses

Cleaners



94% say they have
 ≥ 2 hours total wet work/day

Moderate exposure
group 25-49% of
responses

Machine tool operators



48% say they have
 ≥ 2 hours total wet work/day

Low exposure group
<25% of responses

Mechanical engineering technicians



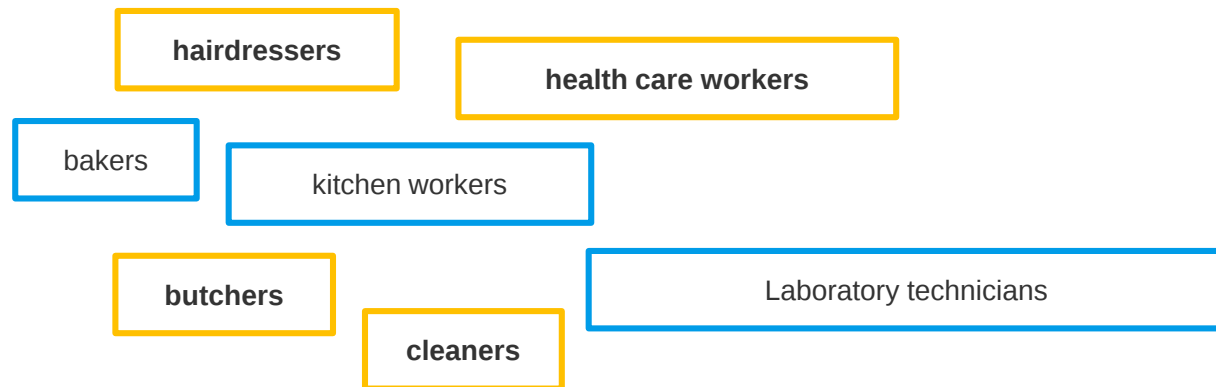
11% say they have
 ≥ 2 hours total wet work/day



Results

Total wet work

cleaners (domestic, office and hotel cleaning), **butchers** and fishmongers, cooks, **beauticians** (hairdressers, barbers, related work) and **health care workers** (home based personal workers, dentists, dental assistants).



Results

Gender



♀ OR=1.78, CI=1.60-1.99 (adjusted for age and profession)

Conclusion



Main wet work professions previously categorized as wet work professions, were confirmed (cleaners and beauticians)

Few new (butchers and fishmongers)



Women are more at risk than men

JEM is a useful tool →
health outcomes, job counselling, medico-legal tool, research



What next?

