

DOC*X – Danish Occupational Cohort

A research resource in Occupational Medicine

DOC*X – Consortium

2015 – 2019:

Danish Working Environ. Research Fund: 7.15 million DKK

Danish Cancer Society: 0.8 million DKK

Participants:

- Occupational and Environmental Medicine, Bispebjerg Hospital
- Danish Ramazzini Centre – Aarhus, Herning
- Danish National Research Centre for the Working Environment
- Department of Biostatistics, Copenhagen University
- Danish Cancer Society
- Statistics Denmark

DOC*X – why?

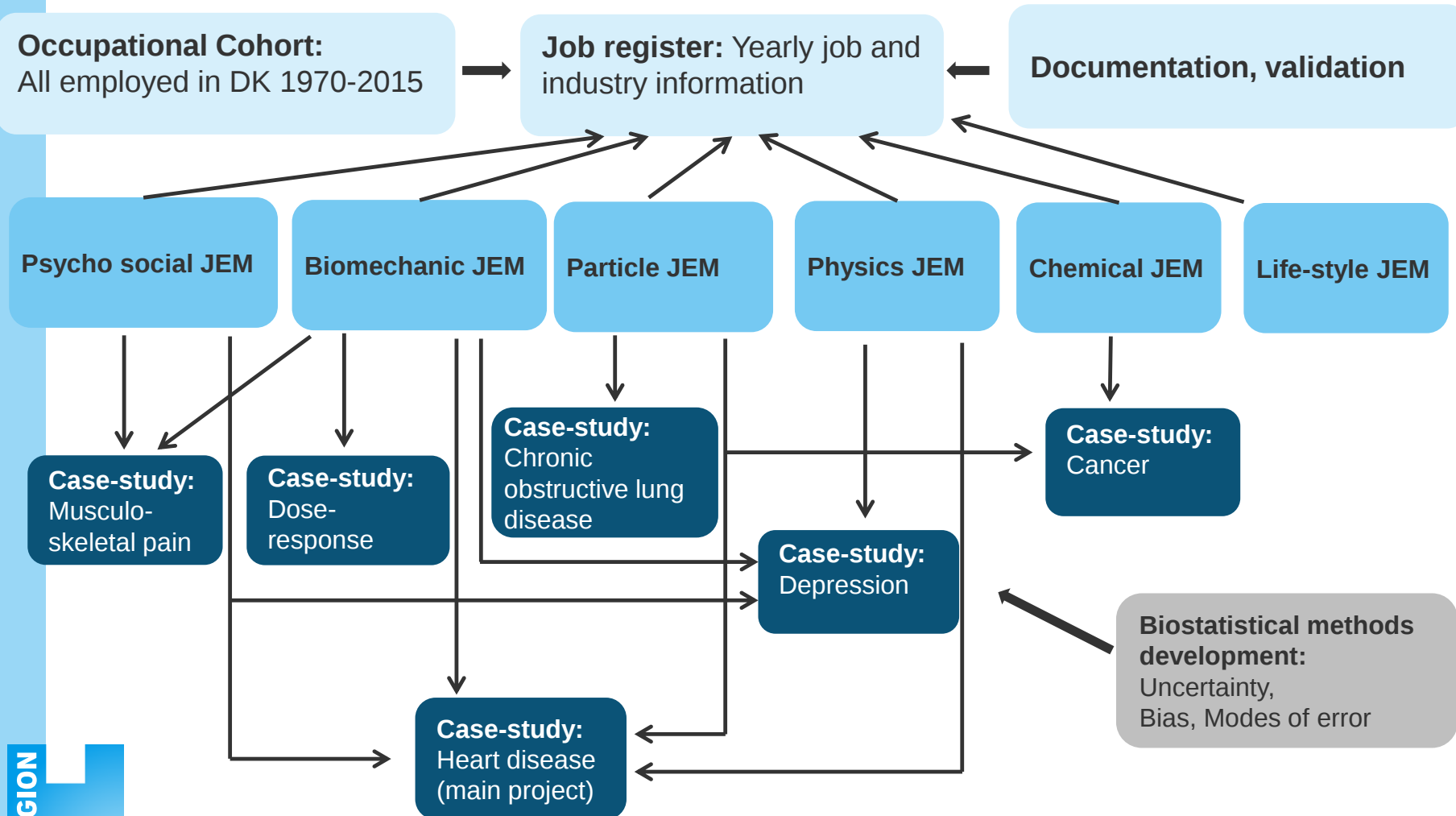
Raison d'être: To expand on possibilities for register-based epidemiological research in occupational health

The Danish administrative and health registers ([and individual level linkage](#)) are unique sources for epidemiological research

- Occupational health often lacks exposure descriptions
- JobExposureMatrices may bridge this gap

Aim: To establish an nationwide register-based occupational cohort with integrated exposure descriptions via JEMs as an open research resource

DOC*X



DOC*X – Job register

- Combination of:
 - Census 1970:
 - Last actual Danish census from 1970, self-report
 - Labour market classification module 1976 – 2015:
 - Tax registers, income, administrative registers, education, unemployment insurance, companies

DOC*X – Job register

Employed in Denmark (1970) 1976 - 2015 (update)

- From 16. year to latest year of employment
- 2.0 to 2.9 million persons yearly
- Yearly registration of employment
 - Employee, self-employed, unemployed
 - 6.4 million unique persons
 - 115 million observations
- Around 80 % have a valid jobcode in DISCO-88

DOC*X – Job register validation

- Various surveys with information on jobtitle.
- Agreement with register-based information.
- Time specific validation

DISCO-88	1991-1994		2004	
	n	Sensitivity (%)	n	Sensitivity (%)
0	10	90.0	83	90.4
1	155	56.8	994	33.3
2	665	78.0	2258	71.4
3	557	68.4	2487	67.0
4	411	77.1	1130	68.0
5	274	72.3	1630	80.7
6	11	54.5	61	57.4
7	255	79.6	1150	77.0
8	98	64.3	974	54.1
9	228	72.4	1015	52.3

Job Exposure Matrices

- Biomechanics

- Heavy lifting, Standing / Walking, Vibrations, Elevated arms, Repetitive movements, Ergonomic demands



- Chemical agents

- Diesel exhausts, formaldehyde, Organic solvents



- Particles

- Dust: Organic, Inorganic, Wood, Fumes, Vapour

- Physical

- Light, Noise

- Psycho-social factors

- Demand / Control / Jobstrain, Violence / Threats



- Life-style

- Alcohol / Smoking / BMI / Leisure time physical activity / Diet



DOC*X – Projects

Carried out at hosted platform at Statistics Denmark

- Protocol approved by DOC*X board (and SD)
- Protocol / application to Bispebjerg Hospital
 - [Statistics Denmark project application](#)
 - Protocol
 - Population
 - Data specification (“need to have” principle)
- Bispebjerg Hospital keeps contact with DS and makes data extracts.

DOC*X – Project database at Statistics Denmark

Primary database:

Job register

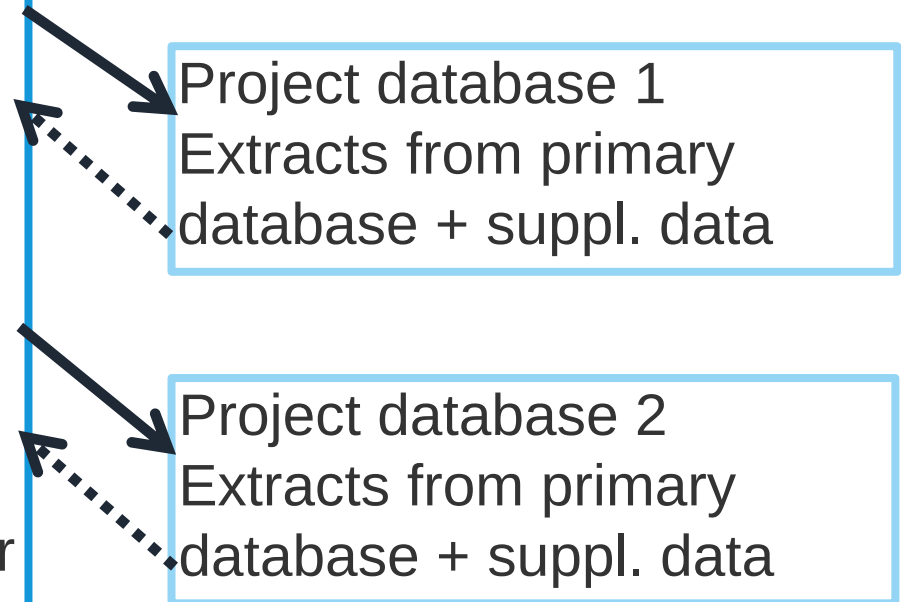
Source data

Further data

Job Exposure Matrices

Bispebjerg as administrator

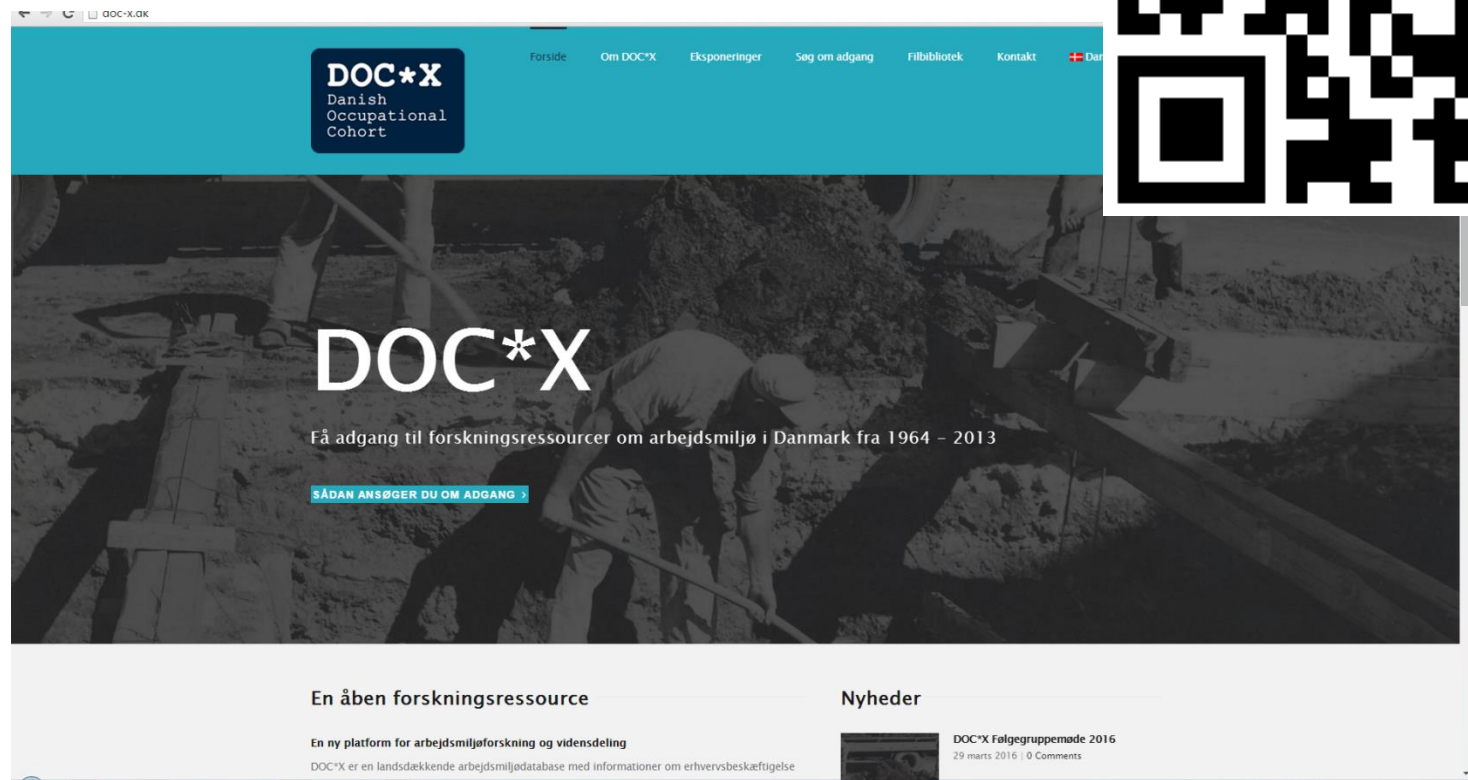
Project databases:
One for each project
Each institution is accountable



Summary

- The DOC*X database is established
- Unified coding of jobs by DISCO-88
- Inventory of Job Exposure Matrices
- Cooperation on research in Occupational health is encouraged

doc-x.dk



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