

The Health and Occupation Research Network:

*35 years of occupational disease
data in the UK*

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MacDonald and Harrington (1981) Early detection of Occupational Hazards. *J. Soc. Occup. Med.* (1981) 31,93-98

“So far as we are aware, routine statistics of the type now available have never been responsible for the discovery of any new occupational disease”

“the detection of occupational hazards has often, perhaps usually, depended on astute clinical observation”



- The THOR network collects data occupational diseases, work related ill health and sickness absence, in order
 - To determine trends on occupational disease over time
 - Identify emerging issues
- Established in 1989
- THOR database holds ~130,000 cases of work-related diseases

THOR

The Health & Occupation Research network

SWORD

1989 - present

Surveillance of Work-related
and Occupational Respiratory Disease

Chest Physicians

EPIDERM

1993 - present

Occupational Skin Surveillance

Dermatologists

OPRA

1996 - present

Occupational Physicians Reporting Activity

Occupational Physicians

THOR-GP

2005 - present

THOR in General Practice

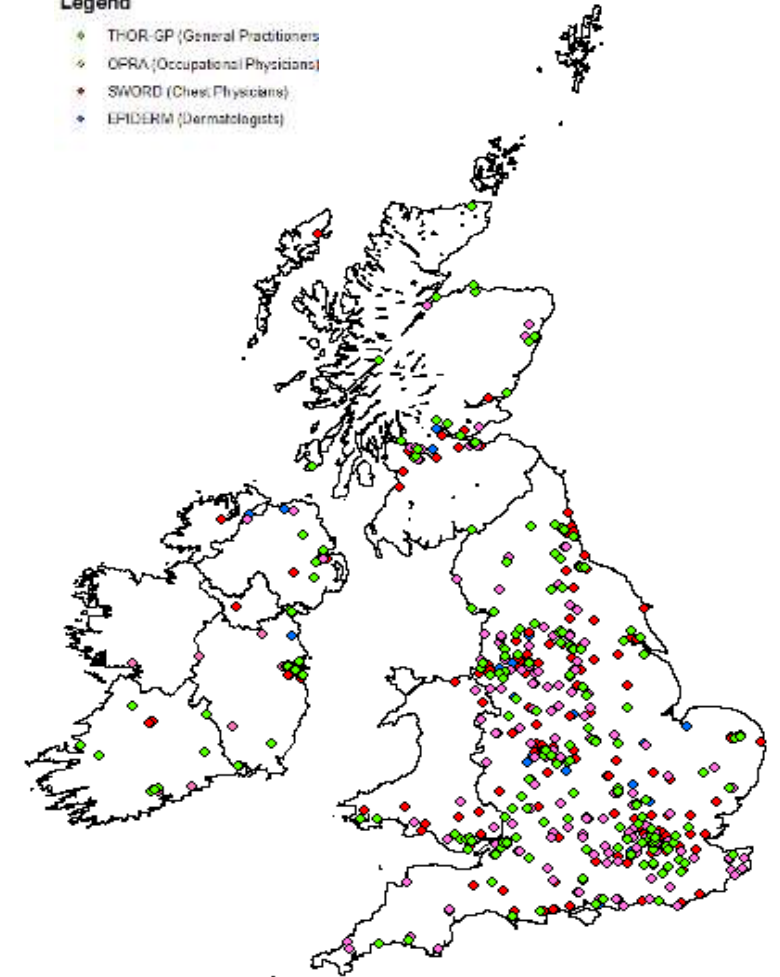
General Practitioners

Number of reporters	SWORD	EPIDERM	OPRA	THOR-GP
2024 (core, sample)	339 (31, 308)	100 (17, 83)	140 (17, 123)	108 (0, 108)

Number of cases	SWORD	EPIDERM	OPRA	THOR-GP
Cases – Actual (Estimated)	221 (475)	63 (262)	96 (789)	6
Diagnoses – Actual (Estimated)	244 (519)	68 (299)	129 (1041)	7

Legend

- ◆ THOR-GP (General Practitioners)
- ◆ OPRA (Occupational Physicians)
- ◆ SWORD (Chest Physicians)
- ◆ EPIDERM (Dermatologists)



THOR reporting

- Physicians participate on either a monthly basis (core reporters) or for one randomly selected month per year (sample reporters)
- Report cases seen during their usual clinical practice that they believe to have been 'caused or aggravated by work'
- Reporting online using REDCAP
- Data collection includes
 - Demographic information
 - Employment - occupation & industry
 - Suspected causal agent/task/event
 - Sickness absence (GPs)
 - Patient referrals (GPs)

Surveillance of Work-Related & Occupational Respiratory Disease
A constituent scheme of The Health and Occupation Research network (THOR)

SWORD

Please record below the number of NEW cases first diagnosed by you during _____ to be a disease or illness *caused* by work
IT IS IMPORTANT THAT YOU DO NOT INCLUDE ANY CASE FIRST DIAGNOSED BEFORE OR SINCE THE MONTH IN QUESTION

<p>A Asthma due to sensitisation - A1 <input style="width: 40px;" type="text"/></p> <p style="padding-left: 20px;">Irritation (RADS) - A2 <input style="width: 40px;" type="text"/></p> <p>B Inhalation accidents <input style="width: 40px;" type="text"/></p> <p>C Allergic alveolitis <input style="width: 40px;" type="text"/></p> <p>D Bronchitis/emphysema <input style="width: 40px;" type="text"/></p> <p>E Infectious disease <i>e.g. ornithosis, Q fever, TB, legionella</i> <input style="width: 40px;" type="text"/></p>	<p>F Non-malignant pleural disease predominantly plaques - F1 <input style="width: 40px;" type="text"/></p> <p style="padding-left: 20px;">predominantly diffuse - F2 <input style="width: 40px;" type="text"/></p> <p style="padding-left: 20px;">asbestos related pleural effusion - F3 <input style="width: 40px;" type="text"/></p> <p>G Mesothelioma <input style="width: 40px;" type="text"/></p> <p>H Lung cancer <i>- Partly or wholly work-related</i> <input style="width: 40px;" type="text"/></p> <p>I Pneumoconiosis <input style="width: 40px;" type="text"/></p> <p>J Other - <i>e.g. rhinitis, byssinosis etc.</i> <input style="width: 40px;" type="text"/></p> <p style="padding-left: 20px;">1.....</p> <p style="padding-left: 20px;">2.....</p>
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I have nothing to report
Reason (optional).....

Initials..... **Date**.....

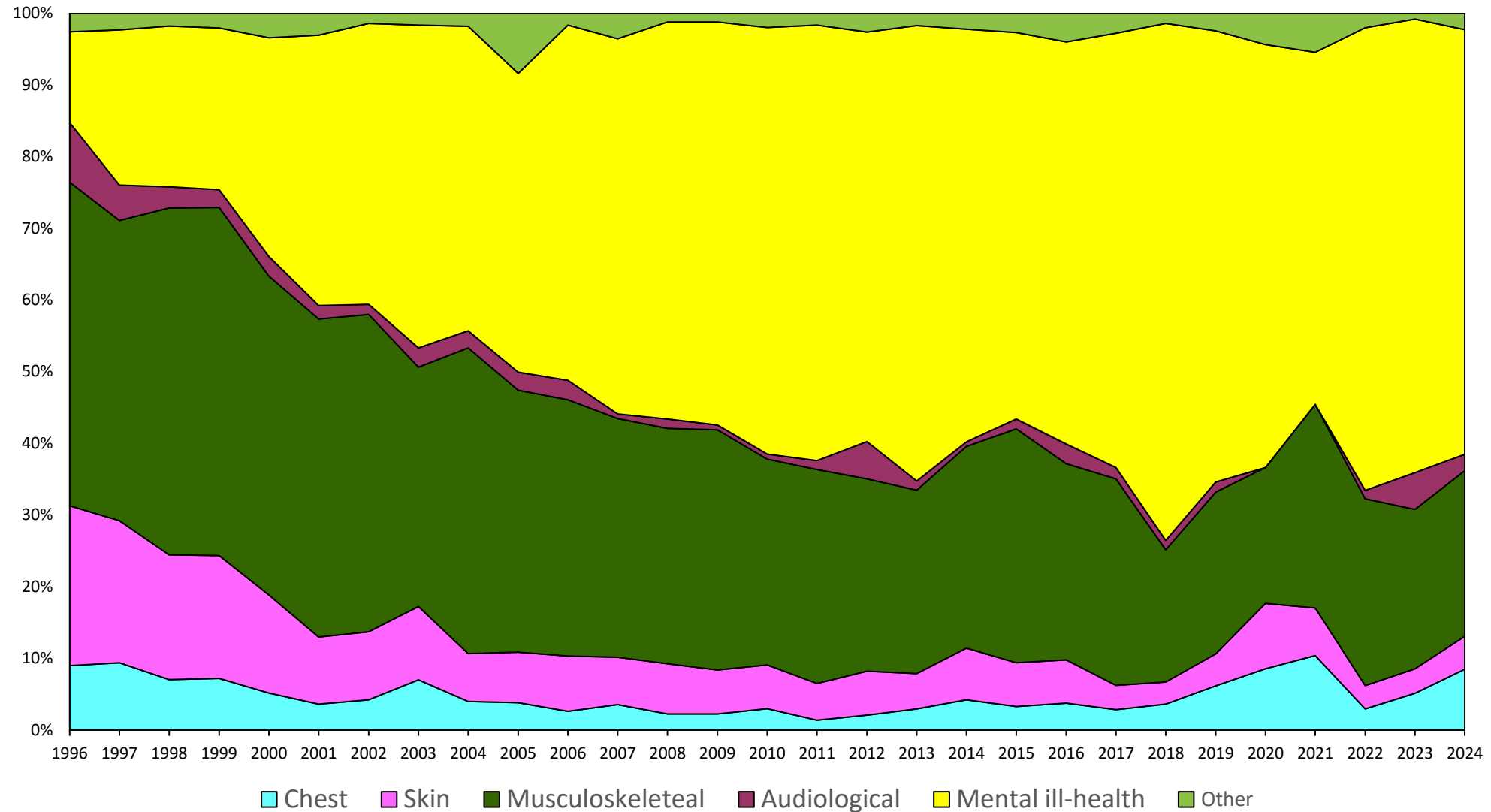
Please give the diagnosis and other brief details for each reported case overleaf

THOR, Centre for Occupational & Environmental Health, The University of Manchester, Block C, 4th Floor, Ellen Wilkinson Building, Oxford Road, Manchester, M13 9PL. Tel: 0161 275 7103 www.medicine.manchester.ac.uk/ocel/research/thor

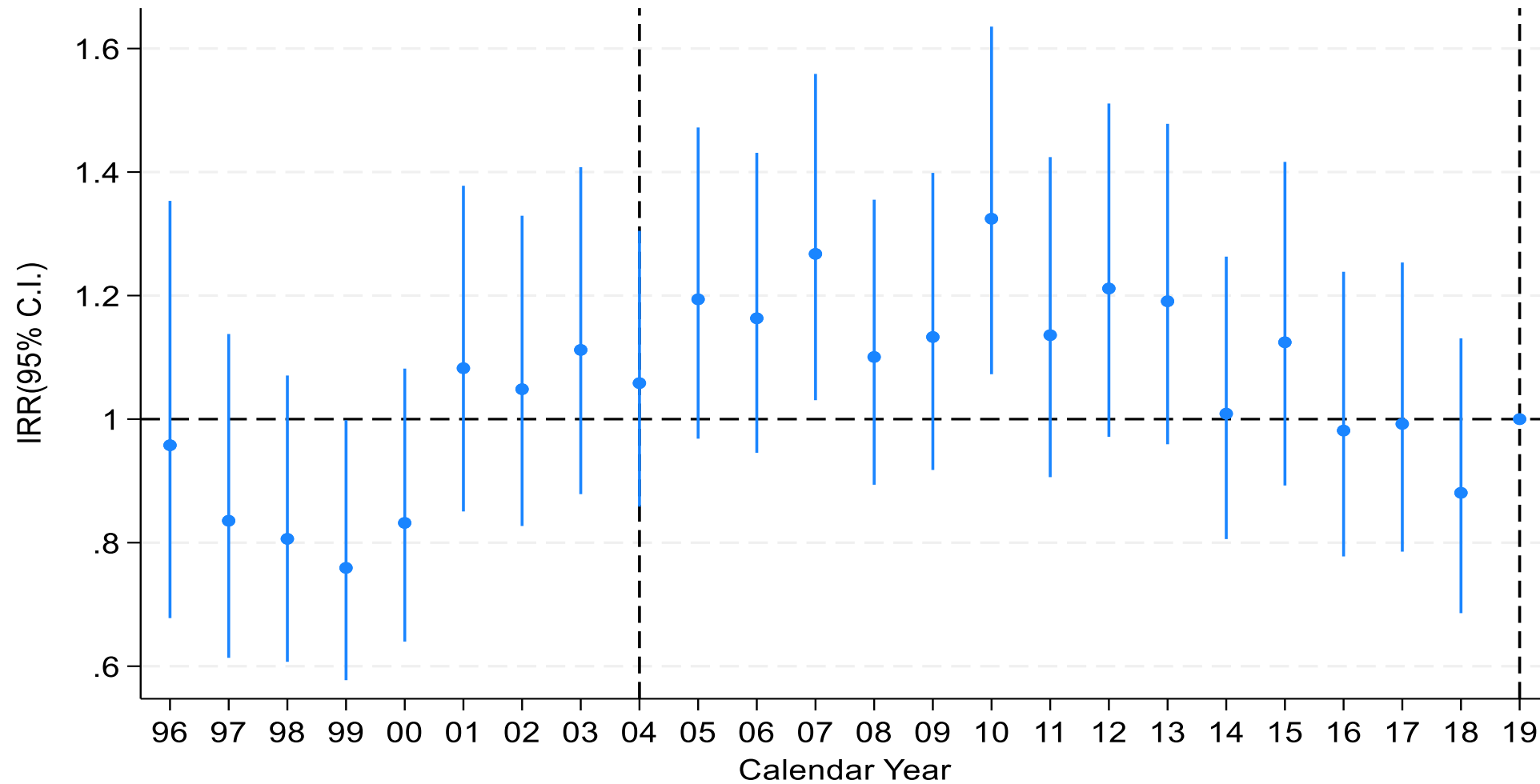
Work-Related Stress reporting in THOR



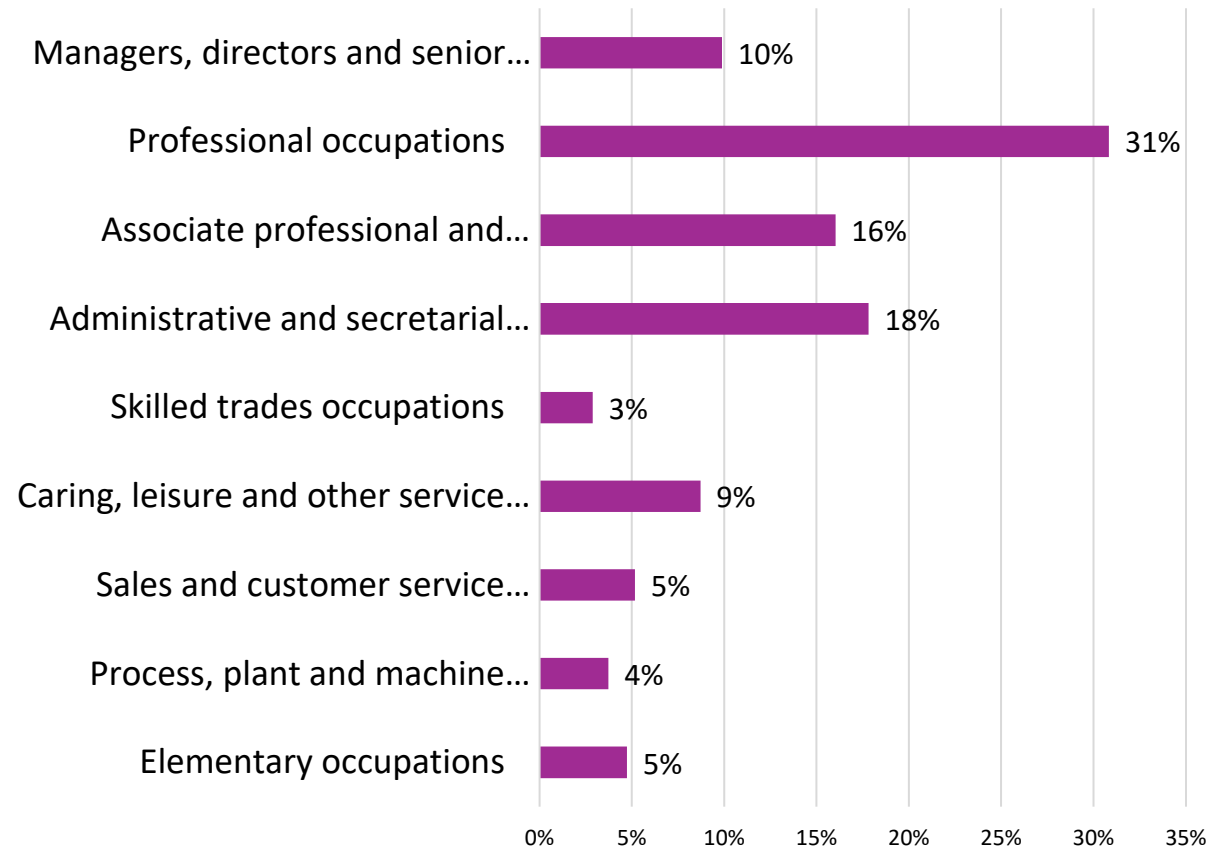
OPRA data relative contribution by diagnostic category and year



Trends in Work-Related Stress in OPRA



Mental-ill Health Occupations



Occupations

Nurses – 9%

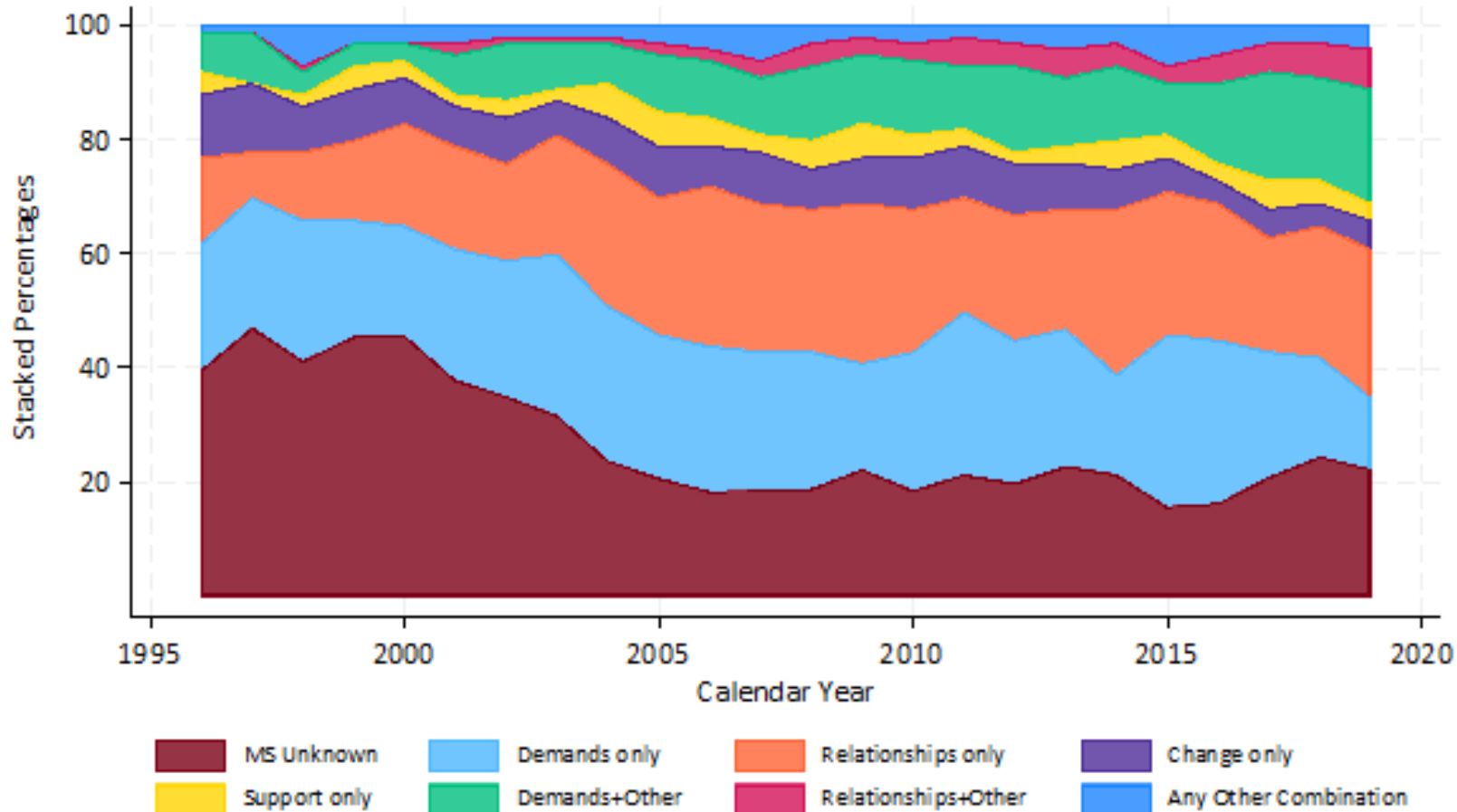
Teachers – 5%

Other administrative occupations n.e.c – 4%

Medical practitioners – 4%

Local government administrative occupations – 3%

Relative trends of reported Management Standard domains



HSE Management standards (introduced 2004)

Demands – this includes issues such as workload, work patterns and the work environment

Control – how much say the person has in the way they do their work

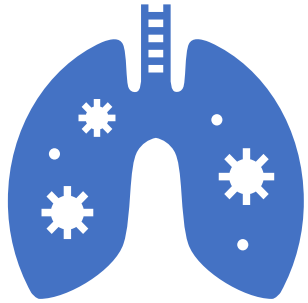
Support – this includes the encouragement, sponsorship and resources provided by the organisation, line management and colleagues

Relationships – this includes promoting positive working to avoid conflict and dealing with unacceptable behaviour

Role – whether people understand their role within the organisation and whether the organisation ensures that they do not have conflicting roles

Change – how organisational change (large or small) is managed and communicated in the organisation

- THOR / OPRA reporting confirms the epidemic of work-related stress and mental ill health
- Strong increase in WRS in early 2000, after 2004 the trends plateaued and evidence of reduction in reporting
- Data were only presented up to 2019 due to uncertainties provided by the pandemic
- Most frequently reported issues are related to excessive demands, and problems in relationships at work (with ~20% reported WRS case not linked to any of the MS domains)



ILD (pneumoconiosis) caused by inhaling respirable crystalline silica (RCS)



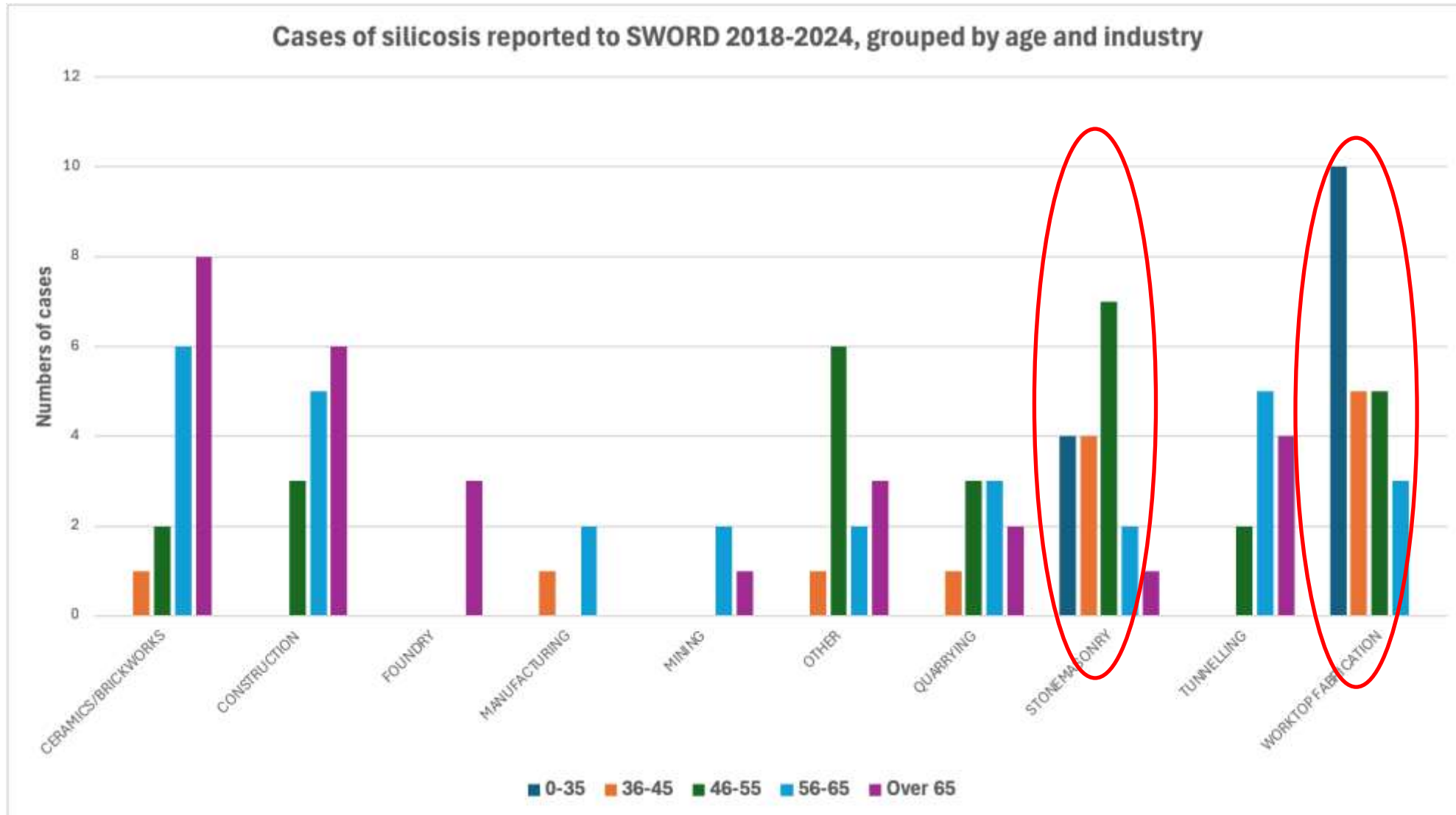
Crystalline silica (free silicon dioxide) is most abundant mineral in Earth's crust



Silicosis cases reported to SWORD 1996 - 2024

Reporting period	1996 – 2017	2018 – 2024
N	203	112
Mean cases per year, n (SD)	9.3 (3.6)	16.3 (7.7)
Age, years (range)	61.4 (24-89)	55.5 (24-89)
Sex, male (%)	197 (97)	108 (95)

Silicosis cases – by industry and age



Artificial or engineered stone



- Used in kitchens and bathroom surface fabrication, fire surrounds

Short report

Artificial stone silicosis: a UK case series

Johanna Feary ^{1,2} Anand Devaraj,^{1,3} Matthew Burton,⁴ Felix Chua ⁵
 Robina K Coker ^{1,6} Arnab Datta,⁷ Richard J Hewitt ⁵ Maria Kokosi,⁵
 Vaslis Kouranos,⁵ Carl Jonathan Reynolds,^{1,6} Clare L Ross,⁶ Veronica Smith,⁸
 Katie Ward ^{1,6} Melissa Wickremasinghe,^{1,6} Joanna Szram^{1,2}

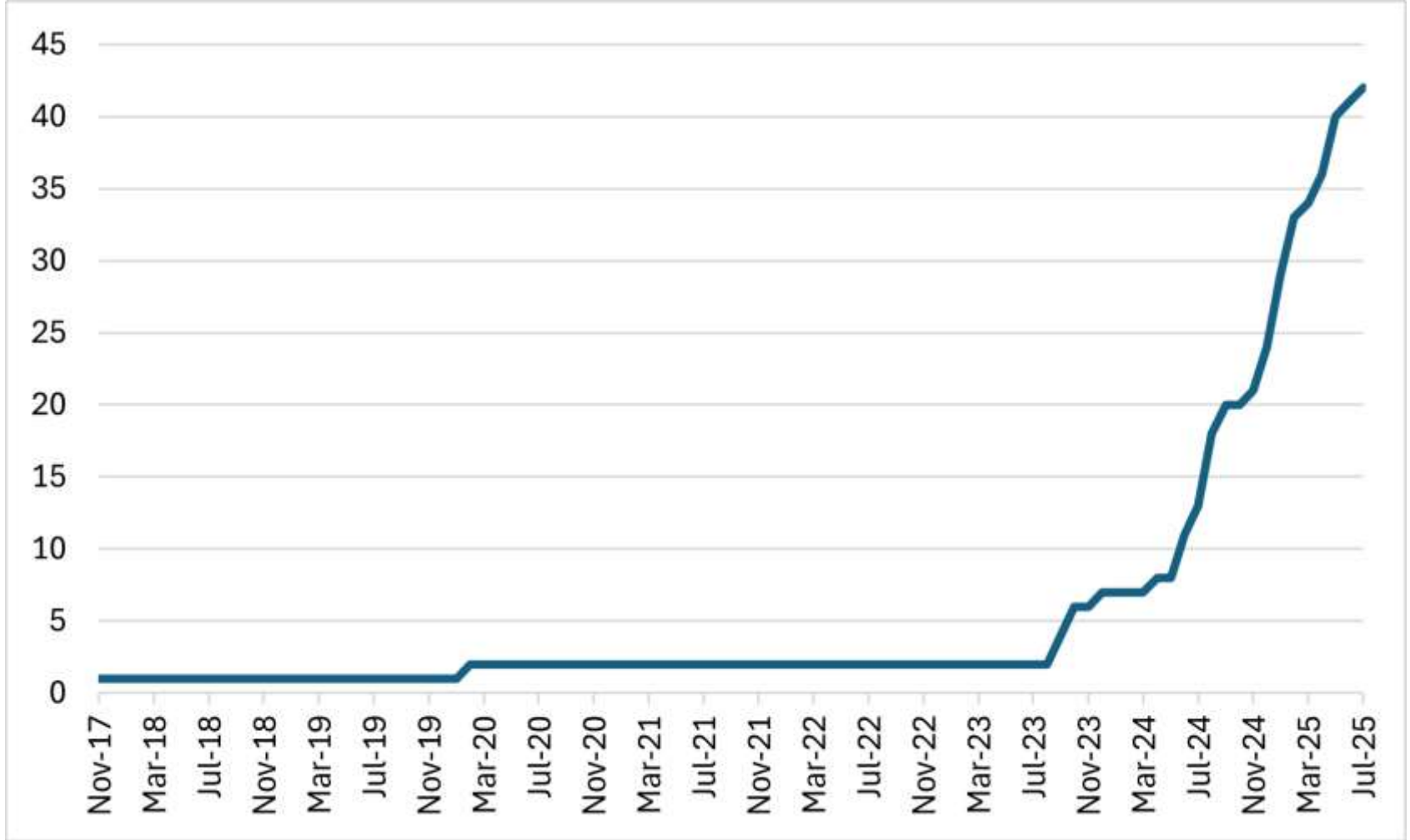
ushed rock or

ement +/-

- brand names include Silestone, Caesarstone.

May have RCS content (>90%).

Case reported to SWORD related to working with Engineered Stone



Silicosis reporting in SWORD

- Silicosis continues to be an important occupational health problem (and is underreported)
- Increase in silicosis cases in worktop fabricators over the last 2 years (partly because physicians are encouraging the colleagues of those with silicosis to be examined)
- Mean age of reported cases has declined, with cases with age <35 reported (stonemasons and worktop fabricators)

Summary

- THOR reporting scheme provides a unique data source of medically verified cases of work-related diseases in the UK
- Data is used to
 - Inform HSE annual statistics
 - Determine trends in disease cases over time and by agent, sector and industry
 - Identify sentinel cases (cases of interest)
- Reporting declined during the COVID pandemic and working hard to get back up to pre-pandemic levels.

Acknowledgements

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- THOR Team



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Occupational
Physician

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