The Health and Occupation Research (THOR) network

Newsletter December 2019

With another year coming to an end, we can reflect again on a very successful year for THOR, with more than 1188 cases reported in 2019 by 942 physicians to the various schemes in UK and Ireland, and with 3 papers published. In November, Dr Jenny Hoyle delivered a brilliant Lane Lecture on the impact that SWORD has had over 30 years of existence. If you missed it, you can find a link to Jenny's presentation in the newsletter.

Within this newsletter we highlight the risk of developing dermal and respiratory symptoms from using cleaning agents. Cleaning agents are proving to be a stubborn cause of respiratory disease in the UK, with little or no evidence of a declining trend over the years, in contrast with many other causes of respiratory disease. This clearly highlights the need for further efforts to try to reduce exposures to these products.

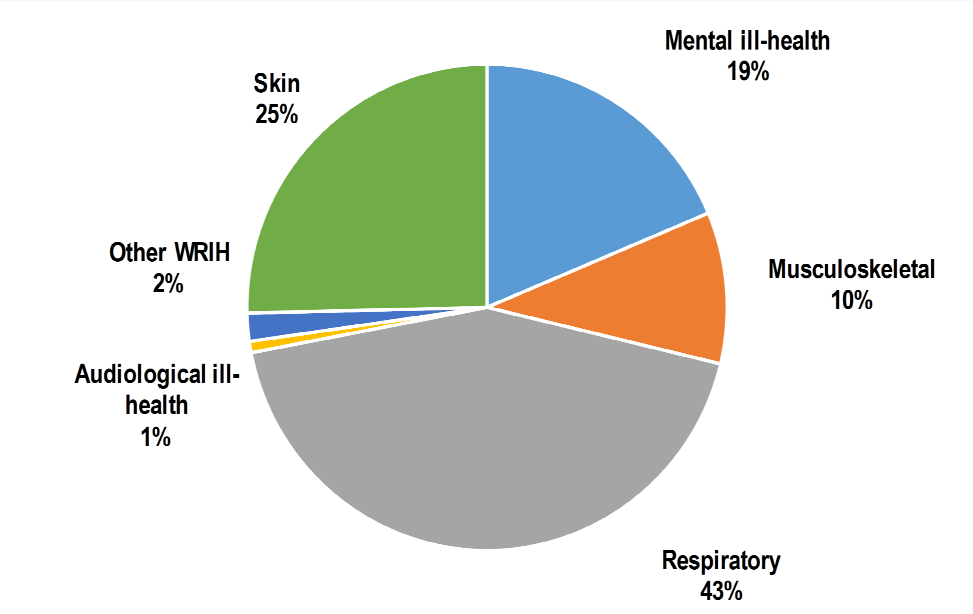
I hope that you enjoy reading this newsletter.

Festive Greetings and hope you all have a wonderful 2020!

Inside this newsletter:

Summary of all cases reported to THOR July—September 2019

Scheme	Cases	Diagnoses
OPRA	77	81
EPIDERM	63	67
SWORD	88	107
THOR-GP	13	15
Total	**241**	**270**



Themes emerging from THOR – Dr Martin Seed and Sewon Lee

In recent years there have been regular case reports of both dermatitis and occupational asthma caused by cleaning processes and agents used in healthcare. In this quarter there was a case reported to THOR-GP of hand dermatitis in a doctor attributed to handwashing, and 12 of the 29 cases of irritant contact dermatitis reported to EPIDERM were attributed to hand hygiene within healthcare.

From a respiratory perspective there was a SWORD report of asthma due to sensitisation in a healthcare laboratory manager attributed to 'cleaning agent' and an OPRA report of occupational asthma in a healthcare domestic attributed to a chlorine based detergent used to clean and sanitise surfaces. When the commercial product name is given in the report, as in the latter case, it is possible to speculate further on specific chemicals that might be responsible. Inspection of the product's Safety Data Sheet (SDS) revealed that in addition to releasing chlorine, a respiratory irritant, the cleaning product also contains three compounds which are predicted to have respiratory sensitisation potential using the QSAR model available at COEH: (URL: http://www.coeh.man.ac.uk/asthma/register.php) sodium dichloroisocyanurate; sodium n-lauroyl sarcosinate and adipic acid. Cases of occupational asthma attributed to adipic acid have been described in the literature.

In order to identify cleaning products used by workers and their potential respiratory hazardous chemical ingredients, we are developing a database of cleaning and disinfecting products used in UK hospitals. Product and chemical information are extracted from the NHS supply chain catalogue that lists all products used in UK hospitals with their SDS . Furthermore, we are in the process of developing an 'app' for collecting data on exposure to cleaning products and hazardous chemicals and with potential to alert healthcare workers to respiratory hazardous chemicals. This research is conducted by Sewon Lee who is a PhD student at COEH, supervised by Prof Martie Van Tongeren, Dr Andy Povey, and Dr Martin Seed. If you are interested in learning more about this project or if you are interested in collaborating with us, please contact Sewon Lee at sewon.lee@postgrad.manchester.ac.uk or Martie van Tongeren (martie.j.van-tongeren@manchester.ac.uk).

22% Healthcare

22% Construction

19% Manufacturing

Summary of all cases reported to THOR July—September 2019

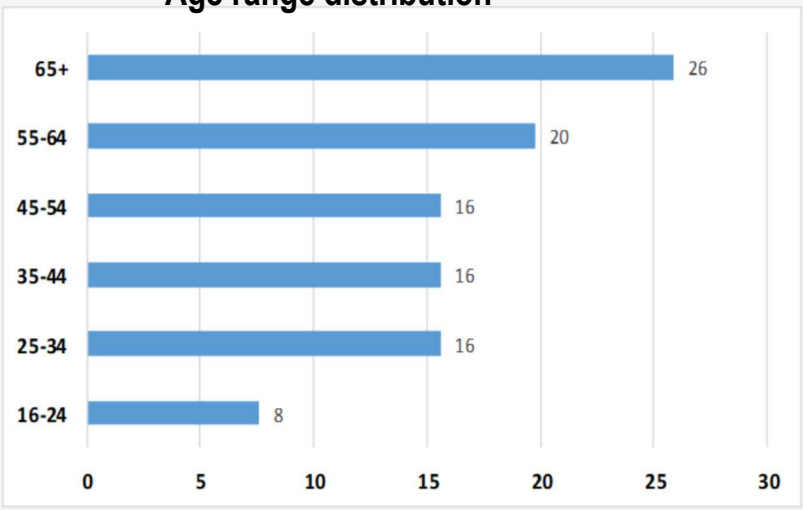
Most frequently reported occupations

17% Skilled construction and building trades

12% Skilled metal and electrical trades

10% Process, plant and machine operatives

Age range distribution



43% of skin disease cases were reported as **irritant contact dermatitis**

27% of all respiratory cases were reported as **occupational asthma**

41% of mental ill-health cases were related to **interpersonal relationships**

67% of all musculoskeletal cases were related to **hand/wrist/arm**

Case of the quarter

Many thanks this quarter to Dr Glenda Hill (Consultant Dermatologist) and Dr Dalia Saidely Alsaadi (Dermatology Registrar) at Wrexham Maelor Hospital for submitting the following report which describes a case of aquagenic wrinkling of the palms (AWP).

We present a case of a 23 year old patient who changed her career as a beauty therapist due to wrinkling and fissuring of the skin on her palms. She had noticed that when her hands were wet for repeated and prolonged periods of time whilst using oils and water for facials, her palmar skin would become sore and swollen, with prominent wrinkling. On further questioning, it was noted that similar exacerbations would occur when her palms sweat and she reported noticing prominent wrinkling of her palms on both short (2 – 5 minutes) and prolonged immersion in water since the age of 16. If her hands had prolonged contact with water, she often developed cracking in the finger web spaces and central palms. She had a history of axillary and popliteal fossa eczema as a teenager, and still suffers with occasional hand eczema. Interestingly, her mother also has a history of marked wrinkling of the palms on contact with water, as well as atopic eczema.

Based on this history, a diagnosis of aquagenic wrinkling of the palms (AWP) was made. Given the history of potential occupational exposures and some eczematous changes, she was patch tested to the British standard, medicament, steroid, and acrylate series; all of which were negative.

Since AWP is strongly associated with cystic fibrosis (CF), the patient went on to have both genetic testing and a sweat test which excluded CF in her case.

This case highlights the importance of being mindful of such rare dermatoses which may present to patch test clinic given potential exacerbations with both personal and occupational exposures.

Events — Lane Lecture 2019

This years Lane Lecture was held on the 5th of November and it was a great success!

The lecture was presented by Dr Jenny Hoyle with a talk entitled '30 years of SWORD: forging the links between research and practice to produce impact'.

http://research.bmh.manchester.ac.uk/epidemiology/COEH/aboutus/lectures/

Next year's Lane Lecture will be delivered by Professor Nicola Cherry in November 2020!

Recent Publications from THOR

Zhou, A. Y.; Agius, R.; Seed, M.; Carder, M.; Money, A.; van Tongeren, M. **Sentinel approach to detect emerging causes of work-related respiratory diseases**; Occupational Medicine 'in press'

A reminder that we operate a data enquiry service for our reporting physicians, funding bodies, members of the public, research institutions and other interested parties. Below are just some of the requests we have answered to date in 2019.

HSE	Non-HSE
Cases of skin and respiratory disease within the rail industry	Occupational dermatitis attributed to acrylates
Respiratory disease attributed to aspergillus	Vitiligo cases
Occupational Asthma attributed to spices / seasoning	Pneumoconiosis attributed to cement / concrete
Respiratory disease caused by TIG/MIG welding	Ill-health in waste recycling workers
Allergic alveolitis due to metal working fluids	Occupational asthma in plasterer technicians
Allergic contact dermatitis due to glove use or rubber accelerators in healthcare	Neurological disease in meat/animal-related industries
SWORD cases attributed to diacetyl	Sarcoidosis in dental technicians

We hope you enjoy this quarter's newsletter—if you have any further questions about any of our schemes, then please get in touch via one of the contacts listed below — we are always happy to hear from you.

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EPIDERM / SWORD	Laura.byrne@manchester.ac.uk	0161 275 7103
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