

## THOR ROI

The Health and Occupation Research network in the Republic of Ireland

Centre for Occupational and Environmental Health

The University of Manchester

<http://research.bmh.manchester.ac.uk/epidemiology/COEH/research/thor/schemes/ireland>

**Dr Annemarie Money, Dr Melanie Carder, & Prof Martie van Tongeren**

**September 2018**

**INTERIM REPORT, covering the reporting period: April to June 2018**

Dear colleague,

I am pleased to enclose the latest Interim Report of THOR-ROI, summarising the data that were collected between April and June 2018. I would like to thank you for your continued support.

We hope that you find the information and the Beck report in this interim report useful and informative. We are currently reviewing the format and content of the interim reports and we are very interested in receiving your feedback. Please get in touch if you have any suggestions.

The Lane Lecture this year will be delivered by Professor John Cherrie on Tuesday 6 November. John is a good friend, colleague and mentor and one of the top scientists in the UK in the field of Occupational Health and Exposure Science. The title of his lecture is "Exposome and Work". If you would like to attend the lecture as well as the reception, please email Ms Debbie Woods (email address: [LaneLecture@manchester.ac.uk](mailto:LaneLecture@manchester.ac.uk)).

Best wishes



Martie van Tongeren

Professor of Occupational and Environmental Health

## **BACKGROUND**

Chest physicians and dermatologists in the Republic of Ireland (ROI) have been reporting voluntarily to The Health and Occupation Research network (THOR-ROI) since January 2005, whilst occupational physicians have been reporting since January 2007. The THOR-GP scheme in the ROI enables general practitioners with an interest in occupational medicine to report, and its data collection commenced in January 2015. This document provides a brief update of the cases reported during the inclusive period April to June 2018. The practice within all the THOR schemes is to work on an approximate three month lag to enable thorough data cleaning procedures to be carried out. This should not be viewed as a 'stand alone' document but as a supplement to previous interim quarterly reports and 'substantive' annual reports (the most recent of which was submitted in June 2018).

## **OVERVIEW OF CASE REPORTS**

### **OPRA-ROI**

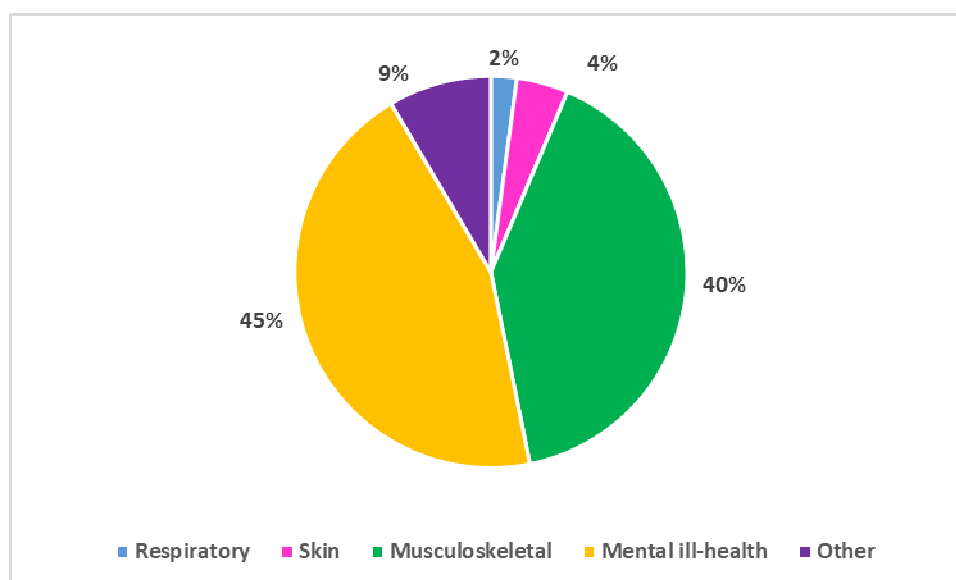
The 29 occupational physicians currently reporting to OPRA-ROI returned 45 case reports (47 diagnoses) of work-related ill-health (WRIH) during the second quarter of 2018, taking the total number of cases returned by OPs since the scheme commenced in 2007 to 1736.

Thirty four (76%) of cases were reported in females and the age range (all cases) was 18 to 61 years (mean age = 45 years).

The largest proportion of diagnoses was reported under the mental ill-health category 21/47 (45%) (Figure 1) and comprised 15 diagnoses of work-related stress, 4 diagnoses of 'other' psychiatric problems (e.g. adjustment reaction) and 2 diagnoses of anxiety/depression. The precipitating events (as recorded by the physicians) associated with the mental ill-health cases included bullying, work load excess, assault, interpersonal relationships, role change, changes at work, traumatic events at work, and management issues.

OPs reported 19 musculoskeletal disorders this quarter, the number of diagnoses per anatomical site are as follows; back/neck (9), shoulder (5), hand/wrist/arm (3), ankle/foot (1), and 1 'other' musculoskeletal disorder (specified as chest). The tasks and movements associated with the musculoskeletal cases (as recorded by the physicians) included accidents, manual handling, ergonomics, assault, gripping and twisting.

There were 2 skin cases reported by OPs this quarter, both diagnosed as irritant contact dermatitis attributed to wet work, 1 case in a nurse and the other a midwife. 1 case of work-related respiratory disease was also reported, diagnosed as 'other' and specified as 'persistent cough' attributed to chemical dust in a healthcare assistant. In addition to the main categories of WRIH, OPs reported 4 cases of 'other' WRIH this quarter specified as burn in a process operative, concussion in a dental professional, assault in a nurse, and commuting affecting wellbeing in a nurse.



**Figure 1 Proportion of diagnoses of work-related ill-health by major diagnostic category reported to OPRA-ROI (April-June 2018)**

Health and social care remains the most frequently reported industry sector (89%) for cases reported by OPs this quarter; the remaining cases were reported in public administration and defence, land transport and manufacture of pharmaceutical products. Most frequently reported occupations included nurses (9 cases), care assistants and home carers (7 cases) and nursing auxiliaries (7 cases).

## EPIDERM-ROI

The 13 dermatologists currently reporting to EPIDERM-ROI returned 7 cases of work-related skin disease for the second quarter of 2018 (total ever cases = 489).

All of the cases were diagnosed as allergic contact dermatitis. 4/7 (57%) of the cases were reported in males and the mean age (all cases) was 33 years (age range = 26-47 years). The industry sectors reported were health and social care (4 cases – doctor (2), care assistant, physiotherapist; all cases attributed to thiuram and carbamates), other personal service activities (2 cases – beauticians, attributed to acrylates), construction (1 case – labourer, attributed to thiuram and chromate).

## **SWORD-ROI**

5 cases (2 with a dual-diagnosis) of work-related respiratory disease were reported by chest physicians between April and June 2018 (total ever cases reported = 199). 80% of the cases were reported in males with a mean age (all cases) of 55 years (age range 47-64 years).

The cases were diagnosed as follows:

- bronchitis / emphysema (2 cases) both reported in coal miners attributed to coal/rock/slate dust, oil smoke.
- inhalation accident, with a co-diagnosis of asthma due to sensitisation (2 cases), 1 reported in an electrician attributed to smoke and irritant gases and 1 reported in a general operative attributed to glues and solvents.
- pneumoconiosis (1 case) reported in a foundry labourer attributed to silica.

## **THOR-GP-ROI**

The 22 general practitioners enrolled into the GP reporting scheme in the ROI\* returned 1 case of work-related ill-health during the second quarter of 2018 (total cases reported to date = 31). The case was reported under the mental ill-health category and was specified as work-related stress and physical exhaustion in a lawyer, the precipitating event recorded for the case was workplace stress.

## **BECK REPORT**

We are most grateful to Dr Mark Wilkinson for this quarter's 'Beck Report', which provides a commentary for cases of work-related skin disease reported to the UK THOR and THOR-GP schemes this quarter. Although this is based on skin cases reported to the UK schemes and not ROI, we hope it is still of interest to you.

### **THE BECK REPORT**

Amongst the cases reported to EPIDERM this quarter were 2 dentists with an unusual presentation of allergy to amalgam that resulted in a facial dermatitis from airborne exposure during removal of fillings. Typically, mercury within dental amalgam is the contact allergen. Whilst we sometimes see patients concerned about mercury toxicity, the days of the 'mad hatter' are gone. Invented in the mid-17th century, "carroting" was used in the manufacture of felt for men's hats. Rabbit skins were treated with a dilute solution of mercuric nitrate and the skins were dried in an oven where the thin fur at the sides turned orange. The fur was separated from the skin and blown onto a colander and treated with hot water before being passed

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\* Unlike the other ROI schemes where physicians report cases every month, GPs participate on a 'sample' basis, i.e. just for 1 randomly assigned month per year

through wet rollers to produce the felt. When mercury containing ointments were used to treat syphilis in the 18th century the salivation induced and blackening of the teeth was used as confirmation by the physician that the patient was complying with treatment! [1] However, sensitisation can occur and cause clinical disease. Most often a reaction to the organic mercurial, thiomersal, will indicate sensitisation following exposure to this used as a preservative in vaccines during childhood and not be relevant. However, mucosal exposure to amalgam in the mouth can cause oral lichen planus and replacement of the filling with composite result in resolution [2]. More rarely, oral lichen planus has been described as an allergic reaction to gold in dental crowns [3].

I was interested to see the beautician allergic to lauryl and decyl glucoside present in hand wash and shampoo. Glucosides are less irritant non-ionic surfactants used in cosmetics including baby shampoo and products for sensitive skin. Many 'natural' personal care companies use them because they are plant-derived and biodegradable. They are often used as an alternative to sodium lauryl sulphate which has had a bad press amongst consumers as a potential irritant – although in reality the irritancy of a product is often related to the combination of ingredients and their relative concentrations. In the dermatological world, glucosides have been increasingly recognised as causing contact allergy to the extent that in 2017 they were the American Contact Dermatitis Society allergen of the year! [4] Perhaps preferable to use SLS?

Allergy to the preservative methyl isothiazolinone does now seem to be reducing amongst consumers, so I was interested to see the industrial chemist involved in the manufacture of liquid fertiliser allergic to methyl, methylchloro, octyl and benz-isothiazolinones in plant and seaweed emulsions. Laboratory studies suggest that these chemicals may cross react provided there is sufficient exposure [5]. Although in practice, clinical data suggest that methylisothiazolinone cross reacts predominantly with octylisothiazolinone [6]. Irrespective we need to remember that these other isothiazolinones are widely used in an industrial context and are not so well regulated as in cosmetics. The same individual was also allergic to the preservative methyldibromoglutaronitrile banned by the EU from cosmetics in the 'noughties' but still used in industry again highlighting the difference in regulation.

Quirk this quarter was the school manager who developed a facial dermatitis after a plug-in air freshener squirted over her. Proven to be allergic to fragrance she required oral steroids to settle the eruption. An unnecessary exposure in an occupational context that could easily be avoided and highlighted in a recent publication from EPIDERM [7].

[1] Mercury. Baxter PJ and Iqisu H In: Hunter's diseases of occupations. Baxter PJ, Aw TC, Cockcroft A, Durrington P, Harrington JM Eds Hodder & Stoughton (London) 2010: 214-220

- [2] The role of patch testing in the management of oral lichenoid reactions. Suter VG, Warnakulasuriya S. J Oral Pathol Med. 2016; 45: 48-57
- [3] Contact allergy to gold in patients with oral lichen lesions. Ahlgren C, Bruze M, Möller H, Gruvberger B, Axéll T, Liedholm R, Nilner K. Acta Derm Venereol. 2012; 92: 138-43.
- [4] Alkyl Glucosides: 2017 "Allergen of the Year". Sasseville D. Dermatitis. 2017; 28: 296
- [5] Cross-reactivity between methylisothiazolinone, octylisothiazolinone and benzisothiazolinone using a modified local lymph node assay. Schwensen JF, Menné Bonefeld C, Zachariae C, et al. Br J Dermatol. 2017; 176: 176-183.
- [6] Patterns of concomitant allergic reactions in patients suggest cross-sensitization between octylisothiazolinone and methylisothiazolinone. Aalto-Korte K, Suuronen K. Contact Dermatitis. 2017; 77: 385-389.
- [7] UK trends of allergic occupational skin disease attributed to fragrances 1996-2015. Montgomery RL, Agius R, Wilkinson SM, Carder M. Contact Dermatitis. 2018; 78: 33-40.

**Dr Mark Wilkinson, Consultant Dermatologist, Leeds General Infirmary**

## REMINDER OF HOW WE CAN HELP YOU

We would again like to take this opportunity to encourage THOR-ROI reporters to contact us if they would like to present THOR-ROI or THOR-UK data at future meetings; simply email [Annemarie.money@manchester.ac.uk](mailto:Annemarie.money@manchester.ac.uk)

## CHANGES TO HOW WE SEND FUTURE REPORTS

As of January 2019, in an effort to make both financial and environmental savings, only those participating physicians who have supplied us with an email address will receive the quarterly interim and annual reports. Please ensure either Laura or Susan has your email address so that we can continue to keep you informed about the schemes you report to.

## THOR CONTACTS

Many thanks for your continued support of THOR-ROI, please contact us (Table 1) if you have any queries or data requests.

**Table 1 THOR Contact details**

Scheme	email	Phone
<b>EPIDERM and SWORD</b>	<a href="mailto:Laura.byrne@manchester.ac.uk">Laura.byrne@manchester.ac.uk</a>	+44 (0)161 275 7103
<b>OPRA and THOR-GP</b>	<a href="mailto:Susan.taylor@manchester.ac.uk">Susan.taylor@manchester.ac.uk</a>	+44 (0)161 275 5531
<b>Data Requests / Enquiries</b>	<a href="mailto:Annemarie.money@manchester.ac.uk">Annemarie.money@manchester.ac.uk</a>	+44 (0)161 275 8492