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Work-related skin diseases in Norway may be underreported: data from 2000 to 2013

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Background
Little is known about the occurrence of work-related skin diseases in Norway (approximately 5 million inhabitants and 2.65 million employees as of 2014) as compared with other Scandinavian countries (1–3).

The Norwegian Work Environment Act of 1977 mandates that Norwegian physicians report confirmed or suspected work-related diseases to the Norwegian Labour Inspectorate (NLI) Registry. The main purpose of the mandatory reporting is to prevent ongoing exposures of employees at their workplaces (4).

We therefore aimed to identify how many cases of work-related skin diseases have been reported to the NLI Registry, and to describe trends in reporting over the past decade.

Material and Methods
Our study is a descriptive, register-based study based on the reports of work-related skin diseases for the period 2000–2013. The NLI Registry for work-related diseases includes cases of suspected or confirmed work-related skin diseases (diagnoses coded according to the International Classification of Diseases; version 9 before 2005 and version 10 thereafter) and information on occupation, exposures (European Occupational Disease Schedules exposure codes), and demographic variables.

The NLI Registry does not include data from the Norwegian offshore petroleum sector, as the Petroleum Safety Authority has jurisdiction over the offshore workers and has a different system for registration of work-related diseases (4).

Results
We identified 3142 cases of skin diseases out of all 41181 notifications (ranked third among all notified diseases).

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Fig. 1. Number of notified work-related skin diseases by year, 2000–2013. NOA, abbreviation in Norwegian for ‘Work Environment Surveillance for Norway’; RAS, abbreviation in Norwegian for ‘Register for work-related diseases’.
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Figure 2. Occupations by sex for notified work-related skin diseases 2000–2013. NOA, abbreviation in Norwegian for ‘Work Environment Surveillance for Norway’; RAS, abbreviation in Norwegian for ‘Register for work-related diseases’.

Discussion

The substantial decline in the total number of annual notifications, including work-related skin diseases, over the past decade is noteworthy. For the period from 2002 to 2010, 286 cases of occupational skin diseases were reported to the Association of Norwegian Private Insurance Companies registry of occupational injuries, representing ~15% of the skin conditions reported to the NLI for the same period of time (5).

A simplified reporting system, with regular follow-up, was tried out during a 2-year-period (1994–1995) in Oslo; only 24% of the work-related skin diseases reported here were also reported to the NLI registry (6).

It seems plausible that the decline in the number of notifications might be attributable to considerable underreporting. Underreporting of work-related conditions is a universal phenomenon that undermines the findings of register-based studies (7). In a survey covering 14 European countries (not including Norway), only Finland and Luxembourg replied that underreporting of occupational diseases was not considered to be a cause for concern in their countries (8). As suggested earlier, underreporting in the general population may be partly influenced by barriers to reporting that are present at each stage, from the diagnosis and management of these diseases until the official reporting registries (9). Other reasons may include employees’ beliefs that their health problems are ordinary consequences of their job, or that their symptoms are not serious enough (10), physicians failing to diagnose or assess the work-relatedness of health problems, lack of reporting prioritizing because of high total workload or few incentives (11), and lack of knowledge about reporting requirements among employers, employees, and physicians (9–11). These factors have not been systematically examined in Norway, but,
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Fig. 3. The work exposure factors most commonly notified for work-related skin diseases, 2000–2013. NOA, abbreviation in Norwegian for ‘Work Environment Surveillance for Norway’; RAS, abbreviation in Norwegian for ‘Register for work-related diseases’.

on the basis of experience, they may also be of importance here (10, 11).

This register is incomplete, because the notified cases may not reflect the true number of patients with the disease, and mild cases of short duration may be missed (12). Nevertheless, the most frequently reported exposure factors and occupations were similar to those in Denmark and Finland (1, 13).

Data from the European Working Conditions Survey 2005 showed that levels of skin exposure to chemical products and irritants were lower in Norway (13%) than in Sweden (16%) and Finland (23%), but higher than in Denmark (10%) (14). It would therefore be expected that the number of reported work-related skin diseases would be at least similar in Norway and Denmark. Nevertheless, 2000 new cases of occupational skin disease are reported annually in Denmark, and the number of cases reported has increased since 2008, reaching 2660 in 2011 (15). Hence, a reduction in the level of chemical and irritant skin exposures in Norway is less likely to be a plausible explanation for the decline in the number of notifications.

In Norway, the notification form for work-related conditions does not include information on severity and the consequences for sick leave and job loss. Together, the absence of more detailed information limits our ability to comment on the severity of the reported work-related skin diseases. Further studies focusing on the consequences of work-related skin exposures for the sick leave of the general working population of Norway are warranted.

There has been a paucity of Norwegian studies focusing on skin diseases caused or worsened by occupational exposure during the last 20 years (16). Underreporting of work-related skin diseases may hamper research and prevention on these conditions, in that they will not be highly prioritized by work and health authorities. Therefore, actions must be taken in order to reduce underreporting and to increase research activity within occupational dermatology in Norway.

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