Perspective on new evidence showing injury under-reporting among precarious workers

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Surveillance data are essential to identify and target prevention for all public health activity, including occupational safety and health. Accurate and timely surveillance data are needed to identify new hazards, monitor prevention activity, plan interventions and to evaluate the efficacy of these interventions. All occupational health specialists need to understand the limitations of the surveillance data available to them in order to make the best use of the data in their work.

The inadequacies of the surveillance system for nonfatal work-related injuries and illnesses in the USA have been well documented.[1] On the other hand, some European countries with their national compensation programmes (eg, the Nordic countries) and labour force surveys (eg, UK) have been looked to as models to follow to improve non-fatal work-related injury and illness surveillance.[1] The paper by Kreshpaj *et al* in this current issue[2] and the previous recent publication from the same authors[3] show the Swedish system has deficiencies in providing accurate surveillance data that, not surprisingly, are even greater in precarious workers without job security. The Swedish studies used capture–recapture methodology to look at overlap between two databases: Information System on Occupational Injuries (ISA), that has data on work-related injuries and illnesses reported by employers; and data from the AFA, a mutual insurance company, which mainly insures employees covered by collective bargaining agreements and receives reports from individual employees. The previous study from the same authors concluded that the official Swedish statistics which are based on employer reporting missed 25% of non-fatal work-related injuries and illnesses.[3] Kreshpaj *et al* paper in this current issue showed that the magnitude of missing occupational injuries was 50% greater in precarious workers as compared with all workers.[2] Given the limitations of the Kreshpaj *et al* analysis, which required the exclusion of non-unionised workers and the self-employed, the magnitude of the true under-reporting is certainly larger. Although there are many differences in the systems to count work-related injuries and illnesses in the various European countries, there is no reason why the underreporting identified in Sweden is not emblematic of problems throughout all the European countries.

The most comprehensive system for an occupational condition in the USA and possibly worldwide is the system for acute traumatic fatalities, the Census for Fatal Occupational Injuries (CFOI). CFOI is a multisource system that relies on sources such as death certificates, employer reports, police reports and newspaper articles. In this multisource system, the cases must be identified from at least two of the multiple sources and are then combined into a single database. In 1992, when CFOI was initiated in the USA, it had the immediate effect of doubling the number of acute traumatic fatalities each year that were identified as compared with the previous system which relied on employer reporting of acute traumatic fatalities.[1]

Many countries have recognised the inadequacy of relying on a single source such as workers' compensation or employer reporting for an occupational injury and illness surveillance system and include other sources such as worker

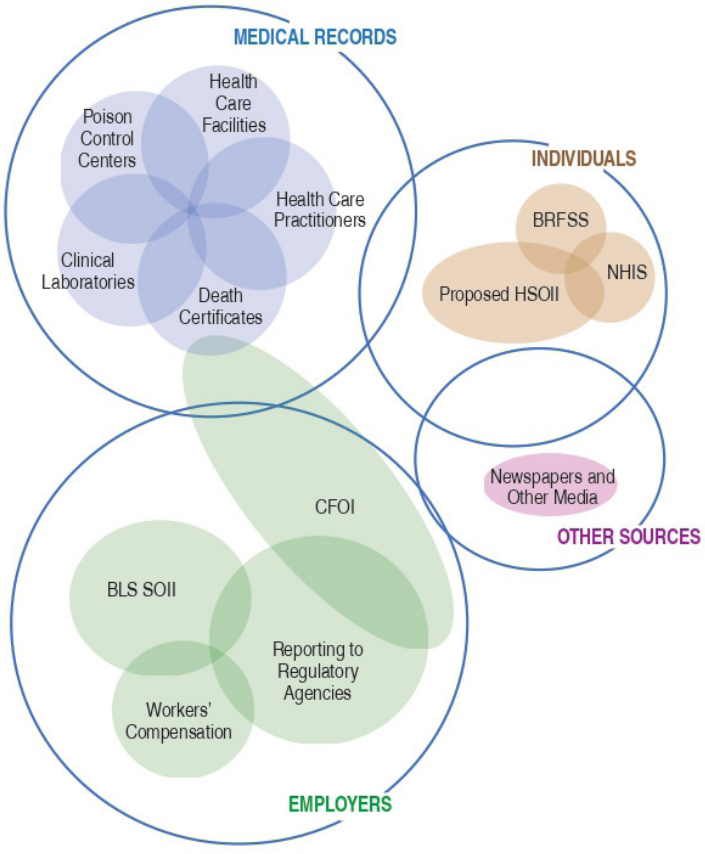

Figure 1 Current possible overlaps in data sharing from the major sources of data used in USA for occupational injury and illness surveillance. The size of inner circles does not represent relative importance of the source. The census of fatal occupational injuries is the only system to use data from multiple sources and is illustrated by the overlaps. Other sources may overlap, but it is uncertain whether there is overlap because of confidentiality. BRFSS, behavioural risk factor surveillance system; BLS SOII, Bureau of Labour Statistics Survey of Occupational Injuries and Illnesses; CFOI, Census for Fatal Occupational Injuries; HSOII, Health Survey of Occupational Injuries and Illnesses; NAS, National Academies of Sciences, Engineering and Medicine; NHIS, National Health Interview Survey. (Reprinted with permission from NAS[1]).

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surveys and healthcare practitioners reporting as part of their surveillance.[4–6] It is important not only to have multiple sources to identify non-fatal conditions but also to present the data in a format that combines the data from multiple sources so as to understand the true burden or work-related injuries and illnesses. So, for example, the official Swedish occupational injury statistics are based on the employer reporting to ISA and the reports that are only found in the AFA data base, another 12% of cases, are not included in the official Swedish statistics.

Having a multisource such as CFOI for non-fatal conditions would be ideal. The National Academies of Sciences, Engineering and Medicine (NAS) report identified three major sources for injury/illness surveillance: (1) medical records, (2) employers and (3) worker surveys. An ancillary source was newspaper articles. Figure 1 from the NAS report shows how these sources can overlap, although the degree of overlap in the Figure was not meant to quantitate the amount of overlap but rather just demonstrate where overlap occurs. The surveillance of non-fatal occupational injuries in the state of Michigan illustrates the utility of a multisource system where the data cannot only be analysed on an industry wide basis but also used for individual enforcement inspections.[7 8]

Institution of multisource surveillance, although an important improvement, in of itself will not correct all problems with undercounts. Workers with job insecurity or immigration issues will be hesitant about any involvement with any injury reporting and might only be identified if the injury is of sufficient severity to require hospital or emergency department care. Even in that situation workers with precarious status may not report the true circumstances under which the injury occurred. In addition, surveillance for occupational disease particularly for chronic multifactorial disease such as cancer and chronic obstructive pulmonary disease, have additional challenges that are focused on inadequate physician training and recognition of work-related disease that is an even greater issue for linking occupational exposures with diseases that occur after retirement.

Given the importance of surveillance data in their work, occupational health and safety practitioners should be advocates for comprehensive surveillance systems. Having comprehensive systems that include strong data analysis components and widespread access to the data that allows both case based, and industry-wide intervention is important to improve prioritisation and evaluation of prevention activity as well as to ensure that work-related conditions receive their appropriate share of public health funding and individual workers are appropriately compensated.

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