Insight into the outcomes of sharps injury legislation: The US experience and its lessons for Europe

Endocrinologist Dr Kenneth Strauss, director of safety in medicine at the European Medical Association and global medical director at BD, discusses healthcare worker safety.

A decade after the United States of America passed the Needlestick Safety and Prevention Act (NSPA), the European Council issued a Directive on sharps injury prevention (Council Directive 2010/32/EU). The 2010 Directive was initiated as a means of combating the estimated one million sharps injuries occurring in the European Union each year. All EU member states were mandated to incorporate the Directive into national law by 11 May 2013.

The application of the EU Directive was arguably a milestone moment in ensuring healthcare worker safety in Europe. Its level of implementation varies across Europe, with some member states failing to meet the initial deadline and some struggling to strictly enforce the Directive. In order to ensure the success of the Directive, it is important that all medical and surgical personnel are aware of, and comply with, the legislation that has come into force as a result.

As more than 10 years have passed since the introduction of the NSPA, Europe can benefit from looking to the US and acknowledging the impact of the Act. Such activity will help to manage expectations of the outcomes of the EU Directive, and aid the avoidance of any false reassurances where possible.

The US context

The NSPA required the Occupational Safety and Health Administration (OSHA) to adopt the Bloodborne Pathogens Standard to incorporate the law’s requirements. A recent study published within Infection Control and Hospital Epidemiology has attempted to measure the effect of the NSPA. Having analysed injury data from 85 hospitals, it revealed a swift reduction in injury rates. There was a drop of greater than one-third in 2001, and the decrease was sustained through to 2005. Prior to the passing of the NSPA, during the period 1995-2000, 13,377 percutaneous injuries were recorded, as opposed to 5,379 during the post-NSPA period, 2001-2005.

It may be suggested that the adoption of safety-engineered medical devices (SEMDs) contributed to the drop in percutaneous injuries following the NSPA. Strong enforcement by the OSHA is also deemed to have had an effect. The number of OSHA citations for violations of the Bloodborne Pathogens Standard more than doubled in the years following passage of the NSPA. Similarly, the dollar amount of related penalties increased from a total of $22,000 in 2001 to $180,200 in 2005. It may be suggested that the threat of citations and monetary penalties may well have accelerated hospital compliance, resulting in a reduction in injuries. Should EU member states strictly hold non-compliant healthcare organisations to account, they may also hope to see a significant reduction in injuries. Depending on the legislation of each member state, enforceable violations could include, for example, failing to introduce SEMDs where reasonably practicable to do so, and failing to include procedures for documenting and reporting incidents. The enforcement of such consequences seems an effective way of asserting the importance of compliance in the minds of directors. It must be remembered that the Directive applies to all those at risk of injury.

Training and communication

This also serves to highlight that appropriate education, training and communication of the reasons for the change appear to be vital to ensuring the effectiveness of introducing SEMDs, especially as some devices require manual activation in order for their safety mechanisms to work. The EU Directive states that employers and workers’ representatives should be included in consultation on the choice and use of safe equipment, and identify together how best to carry out training, information and awareness-raising processes.

For example, in 2010, the American Nurses Association (ANA) re-launched its safety campaign “because even 10 years after the legislation passed, there are still many nurses who don’t realise they have rights and that there are tools available that prevent these injuries”, Healthcare employers now have a duty to ensure that staff have access to up-to-date and innovative technology that fully supports their right to safety. It has also been argued that “there is stagnation out there, in that new sharps-safety devices aren’t embraced enthusiastically because busy, overworked staff can’t cope with anything new, even if they would be safer for doing so”. All education and training should be made easily available, clear, and be regularly reinforced.

Enforcement action

It is unlikely that SEMDs alone contributed to all in percutaneous injuries followed by the NSPA. Strong enforcement by the OSHA is also deemed to have had an effect. The number of OSHA citations for violations of the Bloodborne Pathogens Standard more than doubled in the years following passage of the NSPA. Similarly, the dollar amount of related penalties increased from a total of $22,000 in 2001 to $180,200 in 2005. It may be suggested that the threat of citations and monetary penalties may well have accelerated hospital compliance, resulting in a reduction in injuries. Should EU member states strictly hold non-compliant healthcare organisations to account, they may also hope to see a significant reduction in injuries. Depending on the legislation of each member state, enforceable violations could include, for example, failing to introduce SEMDs where reasonably practicable to do so, and failing to include procedures for documenting and reporting incidents. The enforcement of such consequences seems an effective way of asserting the importance of compliance in the minds of directors. It must be remembered that the Directive applies to all those at risk of injury.

The protection healthcare workers deserve

On 2 December 2013, the European Biosafety Network held its 47th Summit at the Polish Parliament in Warsaw. Members of the European Biosafety Network and attendees at the Summit have worked for many years to help achieve legislative requirements, and their goal now is to ensure that the EU Directive is effectively applied so that all workers in Europe finally receive the protection that they deserve. One of the overarching messages from the event is that there is a need for consistency of practices and messaging throughout all healthcare organisations in all member states. Introducing protection measures, risk assessment policies, training, information, awareness raising and communication, monitoring response and follow up are all important elements to be implemented in order to effectively ensure safety.

Results from a recent survey of European nurses conducted by the European Federation of Nurses Associations (EFN) show that, although the EU Directive has improved practice in the workplace, in reality a lack of an explicit ban on recapping, risk assessments, access to safety devices and of education and awareness raising are still major problems that need to be addressed.

Europe’s medical community needs to learn from the US’s experience, and ensure that it doesn’t fall into complacency now that legislation has been introduced. With the continued collaboration of all European safety, medical and nursing organisations, the current problems can be addressed and the issue of biosafety can in the future hopefully cease to exist.

Full references and sources for this article can be found online at www.nationalhealthexecutive.com

opinion@nationalhealthexecutive.com

“Sharps injuries can have an extremely damaging effect on those injured, which can include healthcare workers and patients.”

into a syringe after use; shielded or retracting catheters used to access the bloodstream for intravenous administration of medication or fluids; intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a needle that is housed in a protective covering, blunt needle needles; and plastic (instead of glass) capillary tubes; as well as safety insulin pen needles and retractable lancets for blood testing.

In the US the uptake of SEMDs was low prior to the NSPA, and injury rates changed little in the years prior to the legislation. An increase in uptakes followed the NSPA, as did a reduction in injuries. Nevertheless, the amount of injuries attributable to SEMDs increased from 10% during 2001-2005 to 20% in 2001 and up to 45% by 2005. One should note, however, that this increase does not necessarily represent a contradiction due to the fact that any time a medical sharp is used, a risk of injury exists. If all medical sharps were safety-engineered, then SEMDs would account for 100% of sharps injuries. A complete uptake of SEMDs would not necessarily eliminate sharps injuries, although it seems they would be significantly minimised.

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