In the United States, the annual cost burden was estimated as somewhere between $118 million to $591 million; in the United Kingdom it is approximated to be £500,000 (US$919,117.65) per the National Health Service” Kunishima et al (2019).

Abstract:

BACKGROUND: Needlestick injury (NSI) is one of the most burdensome professional hazards in any medical setting; it can lead to transmission of fatal infectious diseases, such as hepatitis B, hepatitis C and human immunodeficiency virus. In the United States, the annual cost burden was estimated as somewhere between $118 million to $591 million; in the United Kingdom it is approximated to be £500,000 (US$919,117.65) per the National Health Service.

METHOD: This is the first published paper on the national cost burden of NSIs in Japan. A systematic literature review was conducted to review previous study design in global studies and to extract parameter values from Japanese studies. We conducted abstract searches through PubMed and the Japan Medical Abstracts Society (Ichushi), together with grey literature and snowball searches. A simple economic model was developed to calculate cost burden of NSIs from a societal perspective over a one-year time horizon. We assumed all NSIs are reported and perfect adherence in post NSI management that presented in the labour compensation scheme. Local guidelines were also referenced to extract resource utilization. Lastly, a deterministic sensitivity analysis was conducted and a scenario analysis which
considered a payer perspective was also included.

RESULT AND CONCLUSION: The national cost burden of in-hospital NSIs is estimated as ¥33.4 billion (US$302 million) annually, based on an average cost per NSI of ¥63,711 (US$577) and number of NSIs at 525,000/year. 70% of the cost is due to initial laboratory tests, followed by productivity loss, estimated at 20% of the total cost. Cost of contaminated NSIs remains at 5% of the total cost. Change in number of NSIs significantly influences outcomes. Variation in post-exposure management practices suggests a need for NSI specific National guidelines and holistic labour compensation scheme development in Japan.

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