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SHEFFIELD OCCUPATIONAL HEALTH SERVICE: INTRODUCTION OF SAFER NEEDLES AND ITS IMPACT ON NEEDLESTICK INCIDENTS (Re-audit February 2023)

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Background:

Exposure of healthcare workers to patient blood and body fluids is a recognised occupational hazard. The Health and Safety (Sharp Instruments in Healthcare) Regulations (2013) were formulated to reduce needle-stick injuries (NSI); all NHS trusts served by Sheffield's Occupational Health Service (SOHS) introduced safer-sharp devices between 2013 and 2016.

Aims:

A re-audit was undertaken to establish whether safer-sharp systems and change in practice made any difference with regard to NSI.

Methods:

Data were derived from incidents reported 01/01/2022 – 01/01/2023 and compared to data from 01/04/2016 – 31/03/2017 and 01/01/2009 – 01/01/2010, with a focus on number, type of sharps, incident circumstances and staff group. Statistical analysis was performed using chi-square tests.

Results:

There were 582 contamination incidents in 2022/23 compared to 494 in 2016/17 and 490 in 2009/10. Contrary to expectation, the incidence of hollow-bore sharps NSI was not significantly reduced (56% of cases in 2022/23 vs. 54% in 2016/17), and there were 135 cases of safer sharps being used with 105 NSIs despite guard activation. Dental hospital incidents increased (from 8% to 14% of all incidents). The majority of staff affected were nurses/paramedical (46% compared to 24% doctors, 14% dental, including students, 8% other students, 8% non-clinical).

Conclusion:

Introduction of safer sharps does not appear to have reduced the incidence of NSIs. Increased incidents due to inappropriate disposal of sharps may need to be addressed but confounding factors cannot be excluded, so larger multi-centre studies are recommended. Awareness, education and vigilance should be the mainstay of prevention.

References:

1. Health and Safety (Sharp Instruments in Healthcare) Regulations 2013: Guidance for employers and employees
<http://www.hse.gov.uk/pubns/hsis7.htm>
2. RR914 - An evaluation of the efficacy of safer sharps devices: Systematic review (2012)
<http://www.hse.gov.uk/research/rrhtm/rr914.htm>