

2010 EPINet Report: Needlestick and Sharp-Object Injuries

International Healthcare Worker Safety Center
University of Virginia

Reporting period: Jan 01, 2010 to Dec 31, 2010

- Facility where incident occurred: ALL
- Type facility where occurred: ALL
- 3. Dept where incident: ALL
- 4. Home/Employing department: ALL
- Type of facility where occurred: ALL
- 3. Dept where incident occurred: ALL
- 4. Home/Employing department: ALL
- 5. Job category: ALL
- 6. Where the injury occurred: ALL
- 7. Injured worker was original user: ALL
- 9. Was it contaminated? ALL
- 10. Original purpose of sharp item: ALL
- 11. How the injury occurred: INCLUDES injuries occurring before device was used
- 12. Type of device: ALL
- Device: ALL
- 17. Dominant hand of HCW: ALL
- 13. Was item a "safety design"? ALL

Hospital & rate information:

- Total # hospitals contributing data = 32 (9 teaching, 23 non-teaching)
- Total # injuries reported: 883
- Average daily census (ADC), all hospitals combined: 4395
- Percutaneous injury (PI) rate, all hospitals: 20.09 per 100 occupied beds
- **Teaching hospitals:** total PIs =649; total ADC=3258; PI rate= 19.92 per 100 occupied beds
- **Non-teaching hospitals:** total PIs=234; ADC=1137; PI rate=20.59 per 100 occupied beds

5. What is the job category of the injured worker?

1 Doctor (attending.staff) specialty	118	13.5%
2 Doctor (intern/resident/fellow) specialty	51	5.8%
3 Medical student	25	2.9%
4 Nurse	348	39.7%
5 Nursing student	6	0.7%
6 Respiratory therapist	23	2.6%
7 Surgery attendant	90	10.3%
8 Other attendant	7	0.8%
9 Phlebotomist/ Venipuncture/ IV team	43	4.9%
10 Clinical laboratory worker	15	1.7%
11 Technologist (non lab)	36	4.1%
12 Dentist	1	0.1%
14 Housekeeper	19	2.2%
15 Other, describe	71	8.1%
16 Paramedic	7	0.8%
17 Other student	4	0.5%
18 C.N.A./H.H.A.	12	1.4%
19 Laundry worker	1	0.1%

Total records: 877

6. Where did the injury occur?

1 Patient room/ward	305	34.7%
2 Outside patient room	7	0.8%
3 Emergency department	68	7.7%
4 Intensive/Critical care unit	31	3.5%
5 Operating room/Recovery	301	34.3%
6 Outpatient clinic/Office	37	4.2%
8 Venipuncture center	2	0.2%
9 Dialysis facility	1	0.1%

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10 Procedure room	44	5.0%
11 Clinical laboratories	14	1.6%
12 Autopsy/Pathology	5	0.6%
13 Service/Utility area	11	1.3%
14 Other, describe	40	4.6%
16 Labor and delivery room	10	1.1%
17 Home-care	2	0.2%

Total records: 878

7. Was the source patient identifiable?

1 Yes	820	93.5%
2 No	25	2.9%
3 Unknown	18	2.1%
4 N/A	14	1.6%

Total records: 877

8. Was the injured worker the original user of the sharp item?

1 Yes	588	67.7%
2 No	263	30.3%
3 Unknown	5	0.6%
4 N/A	13	1.5%

Total records: 869

9. The sharp item was:

1 Contaminated	786	90.9%
2 Uncontaminated	40	4.6%
3 Unknown	39	4.5%

Total records: 865

10. For what purpose was the sharp item originally used?

1 Unknown/not applicable	36	4.1%
2 Injection, intramuscular/subcutaneous	251	28.9%
3 Heparin or saline flush	1	0.1%
4 Other injection into IV injection site or port	19	2.2%
5 To connect IV line	3	0.3%
6 To start IV or setup heparin lock	52	6.0%
7 To draw a venous blood sample	100	11.5%
8 To draw an arterial blood sample	27	3.1%
9 To obtain a body fluid or tissue sample	9	1.0%
10 Fingerstick/heel stick	11	1.3%
11 Suturing	181	20.9%
12 Cutting	55	6.3%
13 Electrocautery	6	0.7%
14 To contain a specimen or pharmaceutical	4	0.5%
15 Other, describe	92	10.6%
16 To place an arterial/central line	13	1.5%

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17 Drilling 8 0.9%
 Total records: 868

11. Did the injury occur?

1 Before use of item	19	2.2%
2 During use of item	335	38.6%
3 Between steps of a multi-step procedure	98	11.3%
4 Disassembling device or equipment	29	3.3%
5 In preparation for reuse of reusable instruments	11	1.3%
6 While recapping a used needle	31	3.6%
7 Withdrawing a needle from rubber or other resistance	12	1.4%
8 Other after use, before disposal	163	18.8%
9 From item left on or near disposal container	5	0.6%
10 While putting the item into the disposal container	36	4.2%
11 After disposal, stuck by item protruding from disposal container	7	0.8%
12 Item pierced side of disposal container	2	0.2%
13 After disposal, item protruding from trash bag or inapp container	11	1.3%
14 Other, describe	64	7.4%
15 Restraining patient	4	0.5%
16 Device left on floor, table, bed or other inappropriate place	40	4.6%

Total records: 867

12. Which device caused the injury?

1 Disposable syringe	295	35.4%
2 Pre-filled cartridge syringe	31	3.7%
3 Blood gas syringe (ABG)	14	1.7%
4 Syringe, other type	4	0.5%
5 Needle on IV line	3	0.4%
6 Winged steel needle	31	3.7%
7 IV catheter stylet	30	3.6%
8 Vacuum tube blood collection holder/needle	13	1.6%
9 Spinal or epidural needle	4	0.5%
10 Unattached hypodermic needle	2	0.2%
11 Arterial catheter introducer needle	5	0.6%
12 Central line catheter introducer needle	3	0.4%
14 Other vascular catheter needle	5	0.6%
15 Other non-vascular catheter needle	1	0.1%
28 Needle, not sure what kind	15	1.8%
29 Other needle, describe	45	5.4%
30 Lancet	7	0.8%
31 Suture needle	177	21.2%
32 Scalpel, reusable	26	3.1%
33 Razor	1	0.1%
35 Scissors	6	0.7%
36 Electro-cautery device	5	0.6%
37 Bone cutter	3	0.4%

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38 Bone chip	1	0.1%
40 Microtome blade	4	0.5%
41 Trocar	4	0.5%
44 Fingernails/Teeth	3	0.4%
45 Scalpel, disposable	15	1.8%
46 Retractors, skin/bone hooks	5	0.6%
47 Staples/Steel sutures	2	0.2%
48 Wire (suture, fixation, guide wire)	13	1.6%
49 Pin (fixation, guide pin)	4	0.5%
50 Drill bit/Bur	1	0.1%
51 Pickups/Forceps/Hemostats/Clamps	6	0.7%
58 Sharp item, not sure what kind	5	0.6%
59 Other sharp item, describe	36	4.3%
60 Medication ampule	1	0.1%
61 Medication vial	1	0.1%
63 Pipette, glass	1	0.1%
65 Specimen/Test tube, glass	2	0.2%
66 Capillary tube	1	0.1%
78 Glass item, not sure what kind	1	0.1%
79 Other glass item, describe	2	0.2%

Total records: 834

13. If the item causing the injury was a needle or sharp medical device, was it a "safety design" with a shielded, recessed, retractable, or blunted needle or blade?

1 Yes	348	42.8%
2 No	402	49.4%
3 Unknown	63	7.7%

Total records: 813

13a. If yes, was safety mechanism activated?

1 Yes, fully	31	9.6%
2 Yes, partially	81	25.2%
3 No	209	64.9%
4 Unknown	1	0.3%

Total records: 322

13b. If yes, did the injury happen?

1 Before activation	167	53.2%
2 During activation	97	30.9%
3 After activation	49	15.6%
4 Unknown	1	0.3%

Total records: 314

14. Location of the injury:

Arm	21	2.5%
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Back	1	0.1%
Foot	1	0.1%
Front	2	0.2%
Hand, left	493	57.7%
Hand, right	333	39.0%
Leg	3	0.4%
Total records:	854	

15. Was the injury?

1 Superficial-little or no bleeding	511	59.3%
2 Moderate-skin punctured, some bleeding	306	35.5%
3 Severe-deep stick/cut, profuse bleeding	44	5.1%
Total records:	861	

16. If injury was to the hand, did the sharp item penetrate?

1 Single pair of gloves	578	67.6%
2 Double pair of gloves	186	21.8%
3 No gloves	91	10.6%
Total records:	855	

17. Dominant hand of the injured worker:

1 Right-handed	762	90.3%
2 Left-handed	82	9.7%
Total records:	844	