Data Brief:
Sharps Injuries among Hospital Workers in Massachusetts: Findings from the Massachusetts Sharps Injury Surveillance System, 2020

Massachusetts Department of Public Health AUGUST 2022

Since 2001, hospitals licensed by the Massachusetts Department of Public Health (DPH) have been required to report data on sharps injuries among workers to the Department annually (MGL Chapter 111 §53D) and to use sharps with engineered sharps injury prevention features (SESIPs). Data have been collected from all DPH licensed hospitals since 2001. This report includes data on sharps injuries that occurred during 2020.

The Massachusetts Sharps Injury Surveillance System is intended to provide information to assist Massachusetts hospitals and hospital workers in targeting and evaluating efforts to reduce the incidence of sharps injuries and the associated human and economic costs. For a more comprehensive description of the system, please see: Sharps Injuries among Hospital Workers in Massachusetts, 2004: Findings from the Massachusetts Sharps Injury Surveillance System.

Data Highlights and Prevention Measures

- Compared to 2019, 11% fewer sharps injuries were reported in 2020. The extent to which the COVID-19 pandemic impacted injury reporting is unknown, however national data indicates that rates for all work-related injuries decreased in 2020.[1]
- Activating the sharps injury prevention feature accounted for 11% (279) of all injuries. This highlights the need for hands-on training on the use of the various sharps injury prevention mechanisms to ensure that clinicians are familiar with how to effectively deploy the sharps injury prevention feature.
- For the first time, the proportion of sharps injuries involving SESIPs (48%) was greater than the proportion involving non-SESIPs (44%). It is important to note this positive shift may be due to the impact of COVID-19 rather than changes in procurement and an increased use of devices with sharps injury prevention features.
- Suture needles represented 20% (530) of all sharps injuries which is 16% lower than the previous year. Sharps injuries in operating rooms represented 43% (1,117) of all sharps injuries which is 19% lower than the previous year. Nonetheless, these injuries represented a substantial proportion of all injuries. Continued efforts are needed to ensure practices such as use of neutral zones, verbal cuing, and use of devices with sharps injury prevention features are in place. Alternative methods of closure, such as staples and glues, should be explored.

Impact of the COVID-19 Pandemic on Sharps Injuries

- Given the fluctuations in patient volume by department and two high-volume surges in cases and hospitalizations in 2020[2], and the impact of COVID-19 on healthcare worker staffing, it is difficult to assess if the decrease in sharps injuries is the result of a true decrease in the number of events, or a decrease in the sharps injury reporting. On March 10, 2020, Massachusetts declared a state of emergency and subsequently ordered that hospitals and ambulatory surgery centers postpone or cancel any nonessential, elective, invasive procedures on March 15, 2020.[3] Beginning in May 2020, DPH authorized the provision of increased in-person services for acute hospitals and non-hospital providers through a phased re-opening approach.[4] Throughout the Commonwealth, hospitals functioned at high occupancy levels due to the number of patients admitted for COVID-19 treatment. Restrictions on elective procedures in addition to patients voluntarily postponing procedures and overall wellness visits, along with the surges in COVID-19 cases, likely impacted the types of procedures performed and devices used. These factors likely impacted the incidence of sharps injuries.

[1] Bureau of Labor Statistics (BLS). U.S. Department of Labor. Employer-reported workplace injuries and illnesses – 2020. November 2021. https://www.bls.gov/news.release/pdf/osh.pdf
[2] Massachusetts Health Policy Commission (HCP). Impact of COVID-19 on the Massachusetts Health Care System: Interim Report. April 2021.https://www.mass.gov/doc/impact-of-covid-19-on-the-massachusetts-health-care-system-interim-report/download
[3] Commonwealth of Massachusetts. Executive Office of Health and Human Services. Order of the Commissioner of Public Health. March 15, 2020. https://www.mass.gov/doc/march-15-2020-elective-procedures-order/download
[4] Commonwealth of Massachusetts. Executive Office of Health and Human Services. Health and Human Services Reopening Plans and Guidance. https://www.mass.gov/lists/reopening-health-and-human-services-in-massachusetts

Key Definitions and Methods

Sharps injury (also referred to as an exposure incident): An exposure to blood or other potentially infectious materials as a result of an incident involving a contaminated sharp device that pierces the skin or mucous membranes. An injury with a clean sharp or device (before use) through contaminated gloves or other contaminated mediums is also considered a sharps injury. An injury involving a clean device without any contact with infectious materials is not considered an exposure incident.

Sharps device: Any object that can penetrate the skin or any part of the body and result in an exposure incident, including but not limited to needle devices, scalpels, lancets, broken glass, and broken capillary tubes.

Population under surveillance: All health care workers in acute and non-acute care hospitals licensed by DPH, as well as any satellite units (e.g., ambulatory care centers) operating under a hospital license.

Surveillance Period: Calendar year 2020.

Sharps injury rates: Numbers are the counts of sharps injuries, while sharps injury rates indicate the probability or risk of a worker sustaining a sharps injury within the surveillance period. Rates were calculated by dividing the number of sharps injuries among all workers by the number of licensed beds, and by dividing the number of sharps injuries among employees of acute care hospitals by the number of full-time equivalent employees in those hospitals. Confidence intervals (CI) are presented for each rate. Trends in annual rates were modeled using both negative binomial and joinpoint regressions. Negative binomial regression was used to model the overall trends of these rates from 2002 to 2020. Joinpoint regression was used to identify any changes in the trends over the same period. Both rates and numbers of injuries must be considered when targeting and evaluating prevention efforts. A large hospital may have many workers who sustain sharps injuries but the rate of injury may be low. Conversely, in a smaller hospital, relatively few workers may sustain sharps injuries but the risk may be high.

Sharps with engineered sharps injury protections (SESIPs): Needle devices and non-needle sharps used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with built-in sharps injury prevention features or mechanisms that effectively reduce the risk of an exposure incident.

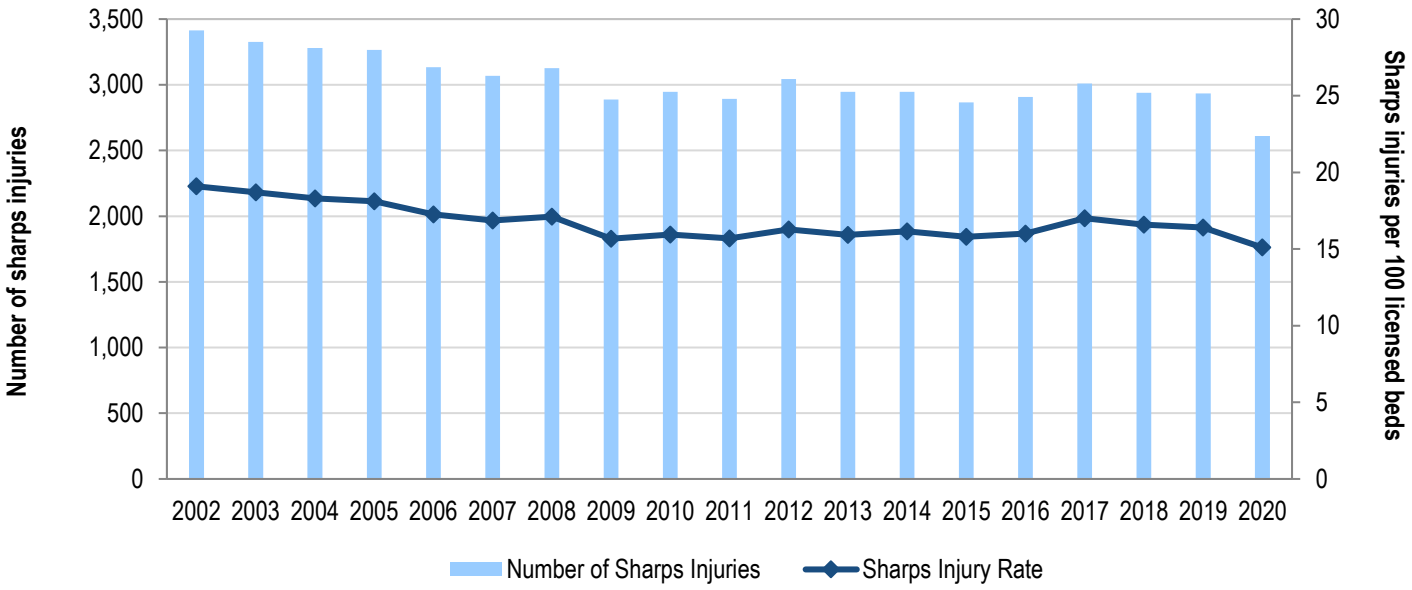
Findings

Table 1. Number and rate of sharps injuries among hospital workers by hospital characteristics, Massachusetts, 2020

	Number of Hospitals	Number of sharps injuries	Rate per 100 licensed beds	95% CI
Hospital size				
Small (< 100 licensed beds)	27	143	9.4	7.9 – 11.0
Medium (101-300 licensed beds)	47	849	10.3	9.6 – 11.0
Large (>300 licensed beds)	15	1,619	21.3	20.3 – 22.4
Service Type				
Acute care	71	2,555	17.6	16.9 – 18.3
Non-acute care*	18	56	2.0	1.5 – 2.5
Teaching Status				
Teaching	16	1,575	24.7	23.4 – 25.9
Non-teaching	73	1,036	9.5	8.9 – 10.1
Total	**89**	**2,611**	**15.1**	**14.5 – 15.7**

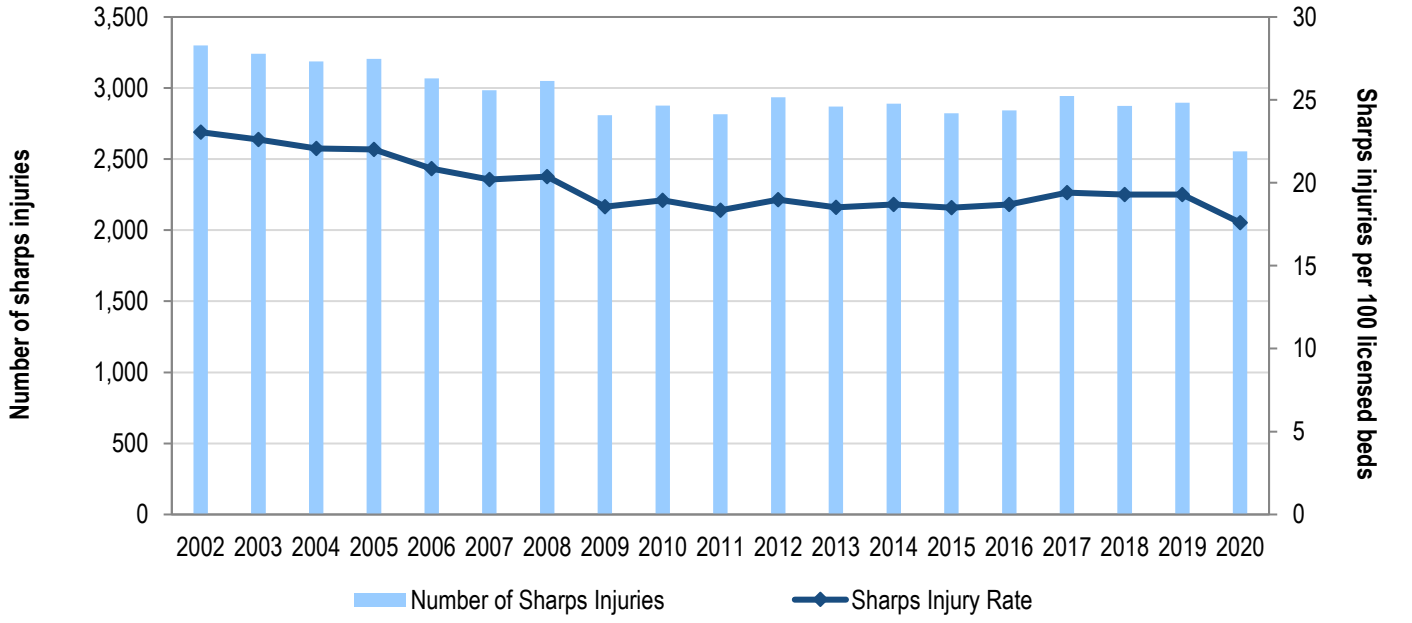
*Non-acute care hospitals include chronic care and rehabilitation facilities.

Figure 1. Number and rate of sharps injuries per licensed beds among all workers in acute and non-acute care hospitals, Massachusetts, 2002-2020



The sharps injury rate for all hospitals combined decreased significantly between 2002 and 2009. The average annual percent change in the sharps injury rate between 2002 and 2009 was -2.50 ($p<0.01$). However, the average annual percent change from 2009 to 2020 was 0.21 ($p=0.38$), indicating the rate remained relatively steady over that time period.

Figure 2. Number and rate of sharps injuries per licensed beds among all workers in acute care hospitals only, Massachusetts, 2002-2020



The sharps injury rate for acute care hospitals decreased significantly between 2002 and 2010. The average annual percent change in the sharps injury rate between 2002 and 2010 was -2.69 ($p<0.01$). However, the average annual percent change from 2010 to 2020 was -0.01 ($p=0.96$), indicating that the rate remained relatively steady over that time period. When looking at the rate of sharps injuries among employees of acute care hospitals by full time equivalents (FTEs), the rate significantly decreased between 2002 and 2009 with an average annual percent change of -4.97 ($p<0.01$). Between 2009 to 2018 the rate remained relatively steady (average annual percent change = -0.41 ($p=0.11$)), while from 2018 to 2020 the rate significantly decreased with an average annual percent change of -8.09 ($p<0.01$).

Table 2. Sharps injuries by worker and incident characteristics and hospital size, Massachusetts hospital workers, 2020

	All Hospitals 89 hospitals		Hospital Size					
			Small 27 hospitals		Medium 47 hospitals		Large 15 hospitals	
	N	%	N	%	N	%	N	%
Work status of injured worker	**2,611**	**100**	**143**	**100**	**849**	**100**	**1,619**	**100**
Employee	2,262	87	128	90	727	86	1,407	87
Non-Employee practitioner	223	9	4	3	87	10	132	8
Temporary / Contract worker	65	2	6	4	17	2	42	3
Student	61	2	5	3	18	2	38	2
Occupation	**2,611**	**100**	**143**	**100**	**849**	**100**	**1,619**	**100**
Nurse	1,054	40	62	43	390	46	602	37
Physician	954	37	44	31	215	25	695	43
Technician	380	15	22	15	158	19	200	12
Support Services	115	4	6	4	46	5	63	4
Dental staff	9	<1	1	1	1	<1	7	<1
Other medical staff	58	2	5	3	20	2	33	2
Other / Unknown / Not answered	41	2	3	2	19	2	19	1
Department where injury occurred	**2,611**	**100**	**143**	**100**	**849**	**100**	**1,619**	**100**
Operating and Procedure rooms	1,117	43	57	40	312	37	748	46
Inpatient units	606	23	29	20	232	27	345	21
Emergency Department	285	11	18	13	106	12	161	10
Intensive Care Units	230	9	5	3	70	8	155	10
Outpatient areas	159	6	18	13	36	4	105	6
Laboratories	41	2	1	1	17	2	23	1
Other / Unknown / Not answered	173	7	15	10	76	9	82	5
Device involved in the injury	**2,611**	**100**	**143**	**100**	**849**	**100**	**1,619**	**100**
Hypodermic needle/syringe	949	36	51	36	332	39	566	35
Suture needle	530	20	31	22	128	15	371	23
Winged-steel needle	197	8	12	8	77	9	108	7
Scalpel blade	180	7	9	6	44	5	127	8
Vacuum tube collection holder/needle	86	3	7	5	37	4	42	3
Glass	32	1	0	0	8	1	24	1
Dental device or item	10	0	0	0	2	0	8	0
Other hollow bore needle	253	10	12	8	93	11	148	9
Other / Unknown / Not answered	374	14	21	15	128	15	225	14
Procedure for which the device was	**2,611**	**100**	**143**	**100**	**849**	**100**	**1,619**	**100**
Injection	822	31	41	29	289	34	492	30
Suturing	549	21	33	23	130	15	386	24
Blood procedures	348	13	21	15	134	16	193	12
Line procedures	264	10	17	12	96	11	151	9
Making the incision	226	9	12	8	58	7	156	10
To obtain body fluid or tissue sample	47	2	2	1	18	2	27	2
Dental procedures	11	<1	1	1	1	<1	9	1
Other / Unknown / Not answered	344	13	16	11	123	14	205	13

Table 3. Sharps injuries involving hollow-bore devices by device type and occupation, Massachusetts hospital workers, 2020

Occupation	Total		Hollow Bore							
			Hypodermic Needle/Syringe		Winged-Steel Needle		Vacuum Tube Collection Set		Other Hollow Bore	
	N	%	N	%	N	%	N	%	N	%
Nurse	876	100	596	68	101	12	42	5	137	16
Physician	292	100	210	72	8	3	3	1	71	24
Technician	210	100	73	35	78	37	36	17	23	11
Support services	39	100	20	51	2	5	4	10	13	33
Dental staff	1	100	1	100	-	-	-	-	-	-
Other medical staff	45	100	35	78	4	9	1	2	5	11
Other / Unknown / Not answered	22	100	14	64	4	18	-	-	4	18
Total	**1,485**	**100**	**949**	**64**	**197**	**13**	**86**	**6**	**253**	**17**

Table 4. Sharps injuries involving solid-bore devices by device type and occupation, Massachusetts hospital workers, 2020

Occupation	Total		Suture Needle		Scalpel		Glass		Other/ Unknown	
	N	%	N	%	N	%	N	%	N	%
Physician	662	100	398	60	107	16	7	1	150	23
Nurse	178	100	52	29	31	17	17	10	78	44
Technician	170	100	68	40	32	19	6	4	64	38
Support services	76	100	4	5	1	1	2	3	69	91
Dental staff	8	100	1	13	-	-	-	-	7	88
Other medical staff	13	100	2	15	4	31	-	-	7	54
Other / Unknown / Not answered	19	100	5	26	5	26	-	-	9	47
Total	**1,126**	**100**	**530**	**47**	**180**	**16**	**32**	**3**	**384**	**34**

Table 5. Sharps injuries by SESIP by hospital size: all devices and excluding suture needles, Massachusetts hospital workers, 2020

	All Hospitals 89 hospitals		Hospital Size^ Small 27 hospitals		Medium 47 hospitals		Large 15 hospitals	
Sharps Injury Protections	N	%	N	%	N	%	N	%
All devices	**2,611**	**100**	**143**	**100**	**849**	**100**	**1,619**	**100**
SESIP	1,260	48	67	47	452	53	741	46
Non-SESIP	1,136	44	62	43	324	38	750	46
Unknown/Not answered	215	8	14	10	73	9	128	8
Devices excluding suture needles	**2,081**	**100**	**112**	**100**	**721**	**100**	**1,248**	**100**
SESIP	1,258	60	67	60	451	63	740	59
Non-SESIP	627	30	32	29	202	28	393	31
Unknown/Not answered	196	9	13	12	68	9	115	9

^Hospital size: small= <100 licensed beds; medium=101-300 licensed beds; large=>300 licensed beds

Figure 3. Sharps injuries by device and SESIP, Massachusetts hospital workers, 2020

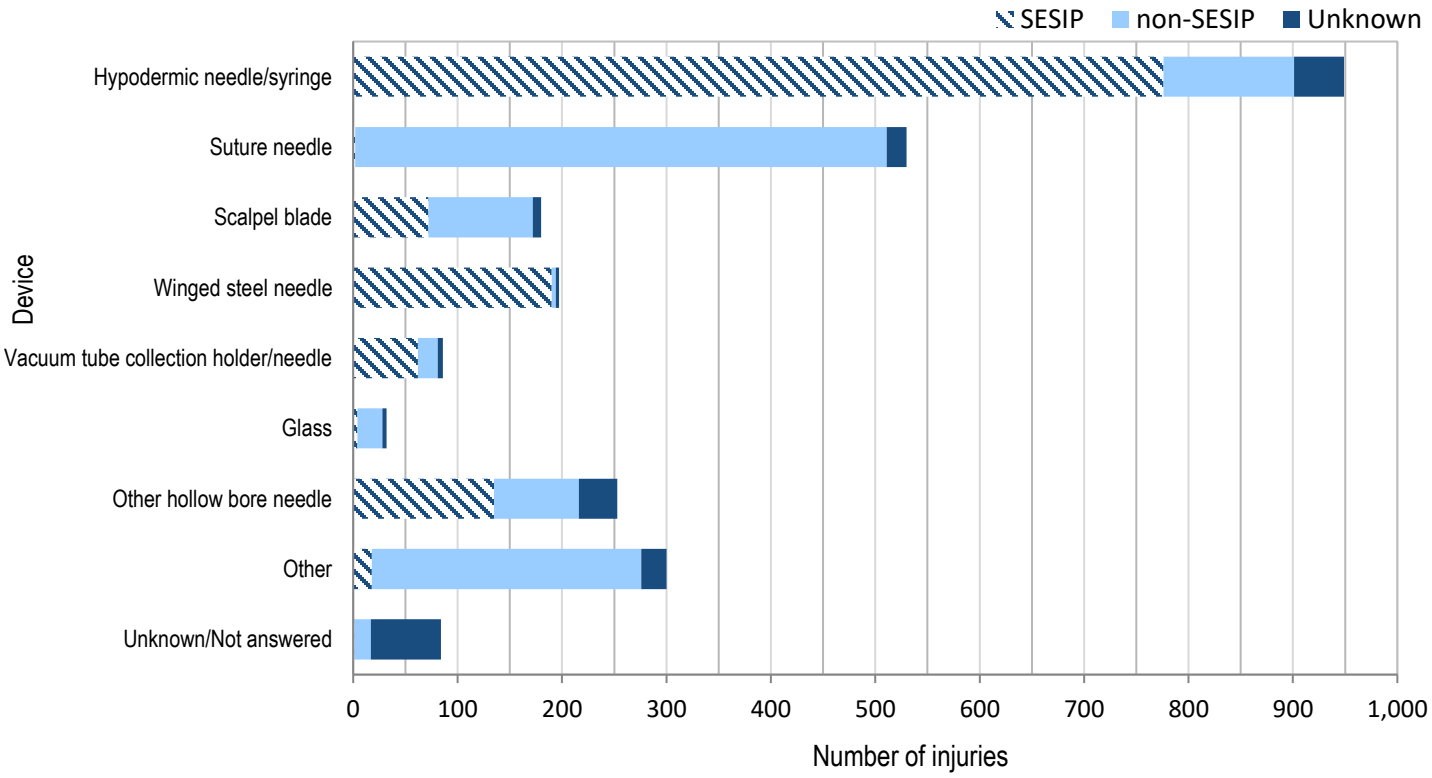


Table 6. Sharps injuries by procedure and SESIP, Massachusetts hospital workers, 2020

Procedure	Total		SESIP		Non-SESIP		Unknown	
	N	%	N	%	N	%	N	%
Injection procedures	**822**	**100**	**670**	**53**	**117**	**10**	**35**	**16**
Subcutaneous injection	630	100	530	42	79	7	21	10
Intramuscular injection	149	100	128	10	13	1	8	4
Other injections	43	100	12	1	25	2	6	3
Blood procedures	**348**	**100**	**288**	**23**	**37**	**3**	**23**	**11**
Percutaneous venous puncture	250	100	225	18	15	1	10	5
Percutaneous arterial puncture	49	100	41	3	4	0	4	2
Finger stick / Heel stick	34	100	13	1	15	1	6	3
Other blood procedures	15	100	9	1	3	0	3	1
Line procedures	**264**	**100**	**188**	**15**	**64**	**6**	**12**	**6**
To insert peripheral IV/set up heparin lock	118	100	113	9	2	0	1	0
Other line procedures	116	100	62	5	47	4	7	3
To insert central line	30	100	11	1	15	1	4	2
Other procedures	**1,177**	**100**	**116**	**9**	**917**	**81**	**145**	**67**
Total	**2,611**	**100**	**1,260**	**100**	**1,136**	**100**	**215**	**100**

Table 7. Sharps injuries by inclusion in prepackaged kit and hospital size, Massachusetts hospital workers, 2020

	All Hospitals 89 hospitals		Hospital Size^ Small 27 hospitals		Medium 47 hospitals		Large 15 hospitals	
	N	%	N	%	N	%	N	%
Device included in prepackaged kit								
Yes	529	20	30	21	228	27	271	17
No	1,854	71	98	69	545	64	1,211	75
Unknown/Not answered	228	9	15	10	76	9	137	8
Total	**2,611**	**100**	**143**	**100**	**849**	**100**	**1,619**	**100**

^Hospital size: small <101 licensed beds; medium =101-300 licensed beds; large >300 licensed beds

Figure 4. Sharps injuries involving devices from prepackaged kits by device and SESIP, Massachusetts hospital workers, 2020

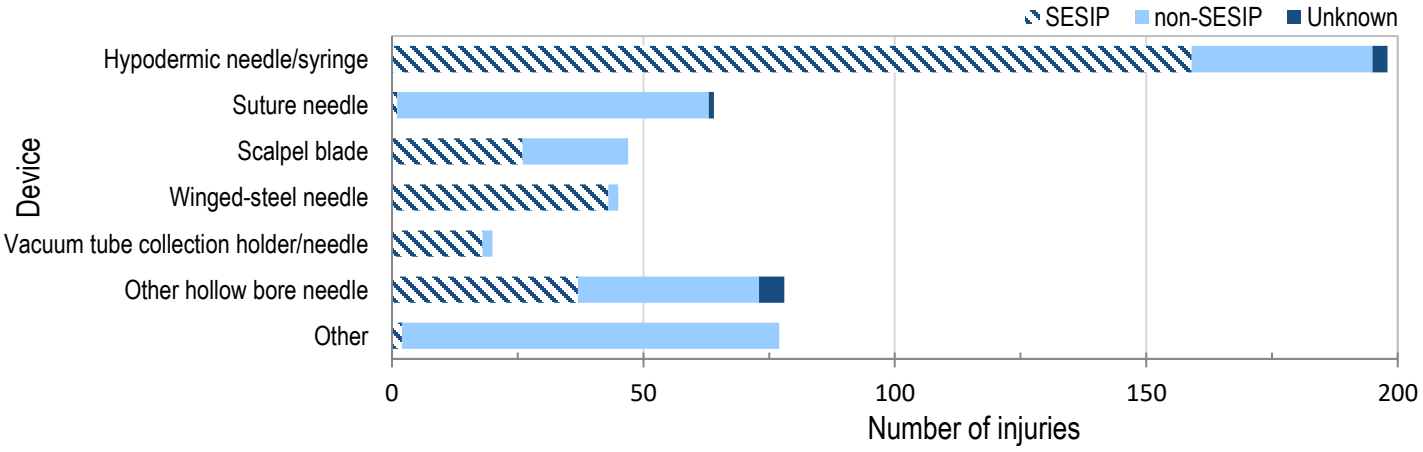


Table 8. Sharps injuries among hospital workers by when and how the injury occurred by hospital size, Massachusetts, 2020

	All Hospitals 89 hospitals		Hospital Size^ Small 27 hospitals		Medium 47 hospitals		Large 15 hospitals	
	N	%	N	%	N	%	N	%
Before use of the item	**22**	**1**	**0**	**0**	**3**	**<0**	**19**	**1**
During use of the item	**1,282**	**49**	**72**	**50**	**412**	**49**	**798**	**49**
Manipulate needle in patient	299	11	21	15	112	13	166	10
Suturing	298	11	16	11	62	7	220	14
Patient moved and jarred device	275	11	16	11	115	14	114	9
Collision with worker or sharp	208	8	11	8	73	9	124	8
Handle/pass equipment	60	2	4	3	14	2	42	3
Access IV line	14	1	1	1	2	0	11	1
Other / Unknown / Nonclassifiable	128	5	3	2	34	8	121	15
After use, before disposal	**966**	**37**	**52**	**36**	**317**	**37**	**597**	**37**
Activating injury protection mechanism	279	11	9	6	96	11	174	11
Handle/pass equipment	218	8	11	8	67	8	140	9
During clean-up	184	7	12	8	60	7	112	7
Collision with worker or sharp	95	4	10	7	21	2	64	4
Recap needle	59	2	5	3	23	3	31	2
Sharps injury prevention mechanism not activated	20	1	1	1	12	1	7	<0
Device malfunction	10	<1	1	1	3	<0	6	<0
Other / Unknown / Nonclassifiable	101	4	3	6	35	11	63	11
During or after disposal of item	**293**	**11**	**19**	**13**	**102**	**12**	**172**	**11**
During sharps disposal	120	5	9	6	39	5	72	4
Improper disposal	159	6	10	7	60	7	89	5
Collision with worker or sharp	8	0	0	0	1	<0	7	<0
Other / Unknown / Nonclassifiable	6	<1	0	0	2	2	4	2
Unknown / Not answered / Nonclassifiable	**48**	**2**	**0**	**0**	**15**	**2**	**33**	**3**
Total	**2,611**	**100**	**143**	**100**	**849**	**100**	**1,619**	**100**

^Hospital size: small<100 licensed beds; medium 101-300 licensed beds; large >300 licensed beds

Table 9. Sharps injuries involving select devices without sharps injury prevention features but for which SESIPs are widely available, by when the injury occurred, Massachusetts hospital workers, 2020

Device	Total		When the Injury Occurred									
			Before use		During use		After use, Before Disposal*		During or after Disposal*		Unknown/ Non-classifiable	
	N	%	N	%	N	%	N	%	N	%	N	%
Hypodermic	125	100	-	-	44	35	69	55	12	10	-	-
IV Stylet	28	100	2	7	12	43	7	25	7	25	-	-
Vacuum Tube Collection Holder	19	100	-	-	4	21	10	53	5	26	-	-
Winged-Steel Needle Holder	4	100	-	-	1	25	1	25	2	50	-	-
Total	**176**	**100**	**2**	**1**	**61**	**35**	**87**	**49**	**26**	**15**	**-**	**-**

*SESIPs offer protection during the period after use. Injuries presented in this table that occurred after use (n=136) can be considered "preventable adverse events" – events that could have been prevented with the use of SESIPS.

Table 10. Sharps injuries by occupation (detailed), Massachusetts hospital workers, 2020

	N	%
Nurse	**1,054**	**40**
RN or LPN	927	36
Patient care technician	43	2
Nurse assistant	34	1
Nurse practitioner	28	1
Nurse anesthetist	12	<1
Nursing student	9	<1
Nurse midwife	1	<1
Physician	**954**	**37**
Intern/Resident	375	14
Physician	237	9
Fellow	98	4
Physician Assistant	84	3
Surgeon	74	3
Medical student	41	2
Anesthesiologist	38	1
Radiologist	7	<1
Technician	**380**	**15**
OR/Surgical technician	178	7
Phlebotomist	113	4
Respiratory therapist/ Technician	27	1
Radiologic technician	25	1
Clinical lab technician	16	1
Emergency department technician	7	<1
Morgue technician	2	<1
Anesthesia technician	1	<1
Other technician	11	<1
Support Services	**115**	**4**
Housekeeper	60	2
Central supply	35	1
Safety/security	11	<1
Attendant/orderly	3	<1
Maintenance	2	<1
Laundry staff	1	<1
Other	3	<1
Other Medical Staff	**58**	**2**
Medical assistant	55	2
Physical Therapist	1	<1
Other medical staff	2	<1
Dental Staff	**9**	**<1**
Dental assistant/tech	5	<1
Dentist	2	<1
Dentist hygienist	1	<1
Dental student	1	<1
Other	**40**	**2**
Pharmacist	9	<1
EMT/paramedic	9	<1
Researcher	9	<1
Clerical/administrative	1	<1
Other student	11	<1
Other	1	<1
Unknown/Not Answered / Non-classifiable	1	<1
Total	**2,611**	**100**

Table 11. Sharps injuries by department (detailed), Massachusetts hospital workers, 2020

	N	%
Operating and Procedure Rooms	**1,117**	**43**
Operating room	848	32
Labor and delivery	79	3
Radiology	53	2
Hematology/oncology	39	1
Cardiac catheterization laboratory	38	1
Phlebotomy room	35	1
Endoscopy/bronchoscopy/cystoscopy	11	0
Dialysis	3	0
Other procedure room	11	0
Inpatient Units, other than ICU	**606**	**23**
Medical/surgical ward	543	21
Obstetrics/gynecology	24	1
Pediatrics	18	1
Psychiatry ward	10	<1
Nursery	10	<1
Patient room, ward unspecified	1	<1
Emergency Department	**285**	**11**
Intensive Care Units	**230**	**9**
Intensive care unit	208	8
Post anesthesia care unit	22	1
Outpatient Areas	**159**	**6**
Ambulatory care clinic	95	4
Physician's office	20	1
Dental clinic	10	<1
Home health visit	7	<1
Other outpatient areas	22	1
Community health center	5	<1

	N	%
Laboratory	**41**	**2**
Histology/pathology	11	<1
Clinical chemistry	5	<1
Microbiology	4	<1
Morgue/autopsy room	3	<1
Blood bank	1	<1
Other laboratory	13	<1
Laboratory, unspecified	4	<1
Other Areas	**172**	**7**
Central sterile supply	41	2
Rehabilitation unit	28	1
Dermatology	20	1
Exam room	18	1
Anesthesia	13	<1
Pain clinic	10	<1
Long term care	6	<1
Hospital grounds	5	<1
Pharmacy	3	<1
Central trash area	3	<1
Ambulance	3	<1
Detox unit	2	<1
Other Location	20	1
Unknown/Not Answered	**1**	**<1**
Total	**2,611**	**100**

Table 12. Sharps injuries by device (detailed), Massachusetts hospital workers, 2020

	N	%
Hypodermic needles/syringe	**949**	**36**
Hypodermic needle attached to a disposable syringe	834	32
Prefilled cartridge syringe	67	3
Hypodermic needle attached to IV tubing	23	1
Unattached hypodermic needle	15	1
Hypodermic needle attached to a non-disposable syringe	6	<1
Hypodermic needle, unspecified	4	<1
Suture Needle	**530**	**20**
Curved suture needle	501	19
Straight suture needle	24	1
Suture needle, unspecified	5	<1
Other Hollow Bore Needles	**253**	**10**
IV Stylet	126	5
Huber needle	44	2
Biopsy needle	20	1
Spinal or epidural needle	16	1
Hollow bore needle, unspecified	40	2
Other type of hollow bore needle	7	<1
Scalpel Blade	**180**	**7**
Winged Steel Needle	**197**	**8**
Winged steel needle attached to a vacuum tube collection holder	124	5
Winged steel needle	64	2
Winged steel needle attached to IV tubing	9	<1
Vacuum Tube Collection Holder/Needle	**86**	**3**
Vacuum tube collection	44	2
Phlebotomy needle (other than steel needle)	42	2
Glass	**32**	**1**
Specimen / Test / Vacuum tube	20	1
Medication ampule / Vial / IV	5	<1
Capillary tube	1	<1
Slide	1	<1
Other glass item	5	<1
Dental Device or item	**10**	**<1**
Dental bur	4	<1
Dental pick	3	<1
Dental explorer	2	<1
Scaler/curette	1	<1
Other	**290**	**11**
Wire	39	1
Lancet	36	1
Electrode	35	1
Retractor	29	1
Scissors	25	1
Forceps	19	1
Drill bit	14	1
Pin	11	<1
Staple	10	<1
Trocar	8	<1
Cutting blade other than scalpel	7	<1
Bone cutter	7	<1
Bone chip/chipped tooth	6	<1
Bovie electrocautery device	6	<1
Tenaculum	2	<1
Razor	2	<1
Rod	1	<1
Other needle	4	<1
Other type of sharp object	29	1
Unknown/Not Answered	**84**	**3**
Total	**2,611**	**100**

Table 13. Sharps injuries by procedure (detailed), Massachusetts hospital workers, 2020

	N	%		N	%
Injection	**822**	**31**	**Line Procedures**	**264**	**10**
Subcutaneous injection	630	24	To insert a peripheral IV line or set up a heparin lock	116	4
Intramuscular injection	149	6	Draw blood from central or peripheral IV line or port	42	2
Epidural/spiral anesthesia	24	1	Other injection into IV site/port	32	1
Injection, unspecified	12	<1	To insert a central IV line	30	1
Other injection	7	<1	To insert an arterial line	20	1
Suturing	**549**	**21**	Draw blood from arterial line	8	<1
Suturing	539	21	To connect IV line	7	<1
Suture removal	10	<1	To flush heparin/saline	1	<1
Blood Procedures	**348**	**13**	Line procedure, unspecified	2	<1
Percutaneous venous puncture	250	10	Other line procedure	6	<1
Percutaneous arterial puncture	49	2			
Finger stick / heel stick	34	1			
Blood procedure, unspecified	5	<1			
Draw blood from umbilical vessel	5	<1	**Dental Procedures**	**11**	**<1**
Dialysis / AV fistula site	4	<1	Oral surgery	5	<1
Other blood procedure	1	<1	Hygiene	3	<1
			Dental drilling	1	<1
Making the Incision	**226**	**9**	Dental procedure, unspecified	1	<1
Making the incision	198	8	Other dental	1	>1
Cauterization	5	<1			
Surgical procedure, unspecified	3	<1	**Other**	**208**	**8**
Other surgical procedure	20	1	To obtain lab specimens	36	1
			Drilling	24	1
To Obtain Body Fluid or Tissue Sample	**47**	**2**	Transferring blood/body fluid to another container	10	<1
			Shaving	2	<1
			Other procedure	136	5
			Unknown/Not answered	**136**	**5**
			Total	**2,611**	**100**

For all tables presented, percentages may not total 100% due to rounding.

Resources

MDPH OHSP....https://www.mass.gov/service-details/needlesticks-and-other-sharps-injuries-among-healthcare-workers

CDC Sharps Safety for Healthcare Settings: Workbook and Teaching Tools……...www.cdc.gov/sharpssafety

NIOSH Preventing Needlesticks and Sharps Injuries……..www.cdc.gov/niosh/topics/bbp/sharps.html

OSHA Bloodborne Pathogens and Needlestick Prevention……www.osha.gov/SLTC/bloodbornepathogens

5/27/22