

Quotes from Nurses



Security and safety probably being first and foremost. The staff are going into environments that we have no control over and sometimes they're going into lovely homes and patients that we really don't have concerns about...

...and in other circumstances you have patients that are involved in illegal activity and the housing situations are located in very questionable neighborhoods, it might be dark, there might be no light, there might be people looking either to rob somebody...there are all kinds of security issues that crop up periodically.

The patient was very combative and the hemodialysis needle that was placed in her arm, punctured through her skin into my hand.

[Homes can be] cluttered to the point that there is no place to put even a cup. Things are boxed, boxes are piled up, you've seen it. Blankets are piled up.... there isn't a pathway to walk. So there's no clean surface area to work from...

We drive miles and miles everyday.

Improving Safety for Nurses in Homecare

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Project SHARRP funding:
National Institute for Occupational Safety & Health
\$2 million dollars - 4 year grant

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SHARRP Study Objectives:

through survey, focus groups, interviews

1. Estimate rates of SIs & BBF exposure among HHC workers
2. Identify main risk factors for SIs & BBF exposures
3. Describe use & effectiveness of safety devices
4. Assess degree & reasons for not reporting SIs & BBF exposures

Introduction: safety issues among HHC nurses



- Many occupational hazards in HHC:
 - Personal safety and security (violence)
 - Musculoskeletal disorders
 - Long-distance driving
 - Bloodborne pathogens exposure
 - Other
- Most hazard exposure assessment studies come from hospitals; still limited data from HHC

HHC Advantages

Flexibility/ independence	<ul style="list-style-type: none">• accommodates family responsibilities
	<ul style="list-style-type: none">• work not restricted within four walls
Long-term patient relationships	<ul style="list-style-type: none">• see patients' health progress
	<ul style="list-style-type: none">• learn to know patients and families
Gratitude by the patients	
Diversity of nursing	<ul style="list-style-type: none">• patients, diagnoses, and environments
	<ul style="list-style-type: none">• teach/support patients to improve their lives
	<ul style="list-style-type: none">• multi-tasked work duties
Patient's choice bears importance	<ul style="list-style-type: none">• patient chooses to be cared for at home
	<ul style="list-style-type: none">• position of power, to die comfortably
Cost-effectiveness of healthcare	

HHC Challenges

Detailed paperwork	<ul style="list-style-type: none">• medicare billing, insurances, payment reimbursements
	<ul style="list-style-type: none">• paperwork often continues at home
Long-distance driving	
Emotional attachment	<ul style="list-style-type: none">• patient dies
Insensitive or moody patients/ family members	
High patient workload	
Isolation	<ul style="list-style-type: none">• situations where a clinician lacks skills or needed medical supplies
Time constrains and productivity pressures	
Salary	

HHC Work Hazards (non-bloodborne pathogens)

General security/ personal safety concerns	<ul style="list-style-type: none">• unsafe neighborhoods
	<ul style="list-style-type: none">• violent or unstable patients/ family members
	<ul style="list-style-type: none">• clinician out in the field alone• work during dark hours
	<ul style="list-style-type: none">• slippery walkways, clutter, unsafe stairs, lighting, fire hazards
	<ul style="list-style-type: none">• entering an unknown place
	<ul style="list-style-type: none">• pets (dogs, birds, cats)
Rapid work pace	<ul style="list-style-type: none">• rushing a work task• uncontrollable situations
Hygiene issues	<ul style="list-style-type: none">• insects, rodents, in-door air
Lack of work stations	<ul style="list-style-type: none">• sharps use
Heavy lifting/ moving	
Allergies/ irritations	<ul style="list-style-type: none">• latex gloves

Personal safety & security

- Four types of violence [McPhaul & Lipscomb, 2007; BLS, 2006]
(1) criminal intent; (2) customer/client; (3) co-worker; (4) family memb.
- MNA violence survey (n=172)
 - 2/3 study population → serious/ very serious problem
 - 1/2 study population → punched at least once during the past two years
- Large EU violence study [Estryn-Behar, 2008]
 - Uncertainties in patient treatments
 - Night shifts
 - Time pressures
 - Heavy physical loads

Personal safety & security in Homecare (HC)

Abuse & violence experienced by HC workers and
association to depression [Geiger-Brown et al, 2007]

- Mental health impact
- Secondary trauma: witnessing abuse/ violence
- 20% → 1 or more abusive event past 6 months
 - ✓ From clients more than relatives
- 18% → verbal abuse 12% → criticism
- 5% → 1 or more violent event past 6 months
- 8% → witness neglect (sometimes to always)
by the family to client
 - ✓ 3% → verbal abuse
 - ✓ <1% → physical abuse
- Abuse, violence, and secondary trauma clearly associated with depression

Personal safety & security: Interventions

- Environmental design & security technology [McPhaul et al, 2008]
 - Prevented violent incidences in facility-based settings
 - Impossible or difficult in homecare
- Suggested prevention measures [Anderson, 2008; Sylvester & Reisener, 2002; Fazzone, 2000; Fitzwater & Gates, 2000; Jarell, 1997]
 - Agency admission criteria, patient compliance form
 - Employee safety tip sheet, “code language”
 - Programs by security or local law enforcement agencies
 - Escorts
 - Cars with agency logos
 - Identify patient care issues & safety risks
 - ✓ Home assessment by social worker or nurse before assignments
 - ✓ Nurse visit at the time of patient’s arrival at home

MSDs in homecare

Challenges

- Lack of work space [Project SHARRP]
- Patient lifts & transfers [Jarell, 1997]
 - ✓ Non-adjustable beds
 - ✓ Limited space
 - ✓ Lack of work space
 - ✓ Equipment and assistance to lifting and moving
 - ✓ Response to a patient's fall

MSDs in homecare

PATH technique* & lumbar motion monitor in HHC [Dybell, 2000]

- 30 home health aides
- Care to patients with greater disabilities
 - ✓ more frequent non-neutral trunk postures
 - ✓ tasks with larger dynamic motion values

HHC claims in West Virginia's workers compensation system in 1995-1996 [Myer & Muntaner, 1999]

- Overexertion 47% of all claims from HHC workers
- Falls 16%

PATH* study in hospitals & nursing homes [Boyer, 2008]

- Patient care and healthcare support jobs → high physical workloads
 - ✓ Heavy manual handling of patients and equipment
 - ✓ Frequent trunk flexion and twisting
 - ✓ Dynamic upper extremity demands
 - ✓ Prolonged work day
 - ✓ Evening and night shifts

*PATH technique = posture, activity, tools, handling

MSDs: Interventions

Small assistive solutions [Parsons, Galinsky, Waters; 2006]

- re-arranging furniture to maximize work area
- remove or tape down rugs, cords
- portable seat lifts
- grab bars
- bathtub seat, raised toilet seat, hand-held shower head
- non-slip mats (around sink, toilet, tub)

Larger devices [Parsons, Galinsky, Waters; 2006]

- reclining and sit-to-stand seat
- mechanical lifting devices: hoists
- inflatable bathtub/sink
- electric hospital bed

Long-distance driving

- Homecare clinicians drive long distances
- Reliable vehicle often required for employment
- 2006 BLS data on fatal occupational injuries
 - 17 fatalities for healthcare support occupations
 - ✓ Nursing, psychiatric, home health aides
 - ✓ 41% highway accidents (18% homicides)
- Motor vehicle accidents → most common occupational fatality among women [BLS, 2007]

Long-distance driving: Interventions

Driving safety [Anderson, 2008]

- Maps, GPSs → neighborhood familiarity
- Seatbelts
- Doors, sunroofs closed & locked at all times
- Pull over and use hands-free devices for calls
- Drive slowly and away from aggressive drivers
- Car in good repair: properly inflated tires, gas
- Keep emergency supplies
- Avoid leaving valuables visible in the car

Sharps Injuries and Blood Contacts in HHC

Sharp disposal or management	<ul style="list-style-type: none">• injuring others through trash, lack of containers, overfilled containers, poor container design
	<ul style="list-style-type: none">• poor disposal technique by patient or clinician
	<ul style="list-style-type: none">• patients leaving sharps around in the house
Patient moving when clinician uses a sharp	
Wound care	<ul style="list-style-type: none">• dressing change/ disposal, bed sores, irrigation, deep wound, debridement
Certain medical conditions/ treatments	<ul style="list-style-type: none">• lancets, blood-draw, IV lines, insulin syringes
	<ul style="list-style-type: none">• incidents with blood drawing equipment
	<ul style="list-style-type: none">• incidents with IV equipment
	<ul style="list-style-type: none">• pulling needle out from a vein when the tourniquet is tight
	<ul style="list-style-type: none">• amputations, bleeding tumors

Sharps Injuries and Blood Contacts in HHC (cont')

Patient falls and bleeds	
Malfunctioning/ ineffective safety sharp device	
Clutter/ lack of work space	
Recapping habits	
Exposure of health aides	<ul style="list-style-type: none">• bathing a patient, encountering sharps when housekeeping
Incidents in hospice	<ul style="list-style-type: none">• bleeding out before dying - not enough time to put gloves on
Glove issues	<ul style="list-style-type: none">• no glove use during blood work, slippery gloves
Carrying sharp supplies in nursing bag	<ul style="list-style-type: none">• traveling with sharps (e.g. disposal container opens)
Different sharp supply vendors	<ul style="list-style-type: none">• educating clinicians• different products for a same medical procedure

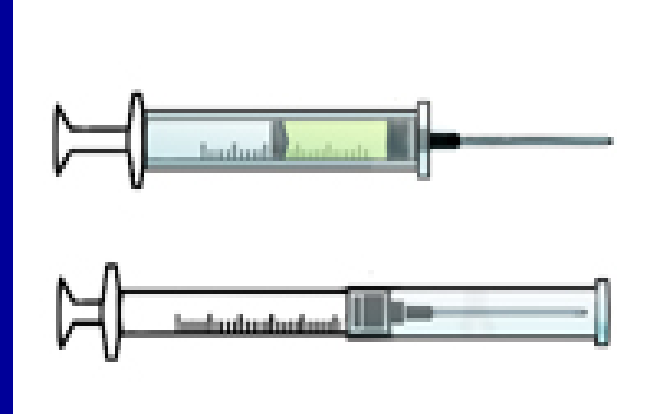
SHARRP Survey

- Self-administered
- Questions: Closed-ended & open-ended text
- 30 minutes or less to complete
- 8 Agencies (26 sites): return by mail or “mini-fair”
 - 75% Response Rate
- 2 Unions: return by mail
 - 54% Response Rate
- **Overall Response 69%**

Case definitions

- Sharps Injuries (SI)
 - Ever in HHC career?
 - How many in past 12 months?
 - Detailed information on most recent SI

- Blood & Body Fluid (BBF) exposure
 - Ever in HHC career?
 - How many in past 12 months?
 - Detailed information on most recent BBF exposure



Study Population (N = 1,225)

	Nurse n=787	Aides n=282	Other n=154
	%		
Female	96	98	91
White	96	77	94
Employment status			
Full-time	56	44	42
Part-time	33	47	47
Per Diem	12	7	11

Study Population (N = 1,225)

	Nurse n=787	Aides n=282	Other n=154
	Mean		
Age	48	47	47
Years in HHC	11	11	10
Work hours/week	34	30	31

Prevalence of SI & BBF Exposure

<u>Ever</u> in HHC Career	Nurse n=787	Aides n=282	Other n=154
	%		
Sharps Injury	35	6	5
Blood/Body Fluid Exposure	15	7	3

Annual incidence rate

Injuries/exposures during the past 12 months, per 100 FTE

	Nurses (n=787)	Aides (n=282)
Sharps injuries	5.1	1.0
Other blood/body fluid exposures	6.3	6.4

The SI rate (injuries per 100 FTE) HHC nurses vs. hospital nurses

SHARRP HHC nurses	5.1
Hospital staff, Massachusetts *	5.6
Hospital staff, North Carolina*	3.9
Nursing, inpatient, North Carolina*	6.9
Geriatric nurses, Pennsylvania**	10.3
Pediatric nurses, Pennsylvania **	7.4

* Data gathered by surveillance system. MA data: **Kim H. et al.** APHA annual meeting, Boston MA, 2006. NC Data: **Dement J. et al.** AJIM 2004; 46:637-48.

** Data gathered by survey. **Clarke SP et al.** Infection Control & Epidemiology 2007; 28: 473-78.

Sharps Injury: what & when?

		Nurse n=275	Aide n=18
		%	
Device or item:	Hollow bore needle	71	61
	Cutting blades	26	17
	Glass	3	6
When SI occurred:	Before use	8	6
	During use	8	6
	After use & before disposal	58	44
	During or after disposal	25	44

Sharps injury: contributing factors

Risk factors in most recent SI:

Nurse **Aide**
n=275 **n=18**

%

Work environment factors

Clutter conditions	22	28
Lack of working space	22	11
Distractions from others	18	17

Patient characteristics

Aggressive patient	11	6
Uncooperative patient	9	0
Difficulty communicating w/ patient	8	0

Work organization factors

Time pressures	24	6
Long work days	11	6
Too many patient assignments	11	11

Use and availability of sharps with safety features

(Nurses; n=787)

	Yes	No
	%	
Employer provides sharps with safety features	89	4
Currently using sharps with safety features	85	9
Currently using sharps without safety features	39	54
Used a sharp with safety feature without training	30	64

<i>Reasons for not always using sharps with safety features:</i>	%
More difficult than a standard device	26
Safety feature does not work well	24
Takes more time	7

Procedures using sharps *without* safety features

(Nurses; n= 787)

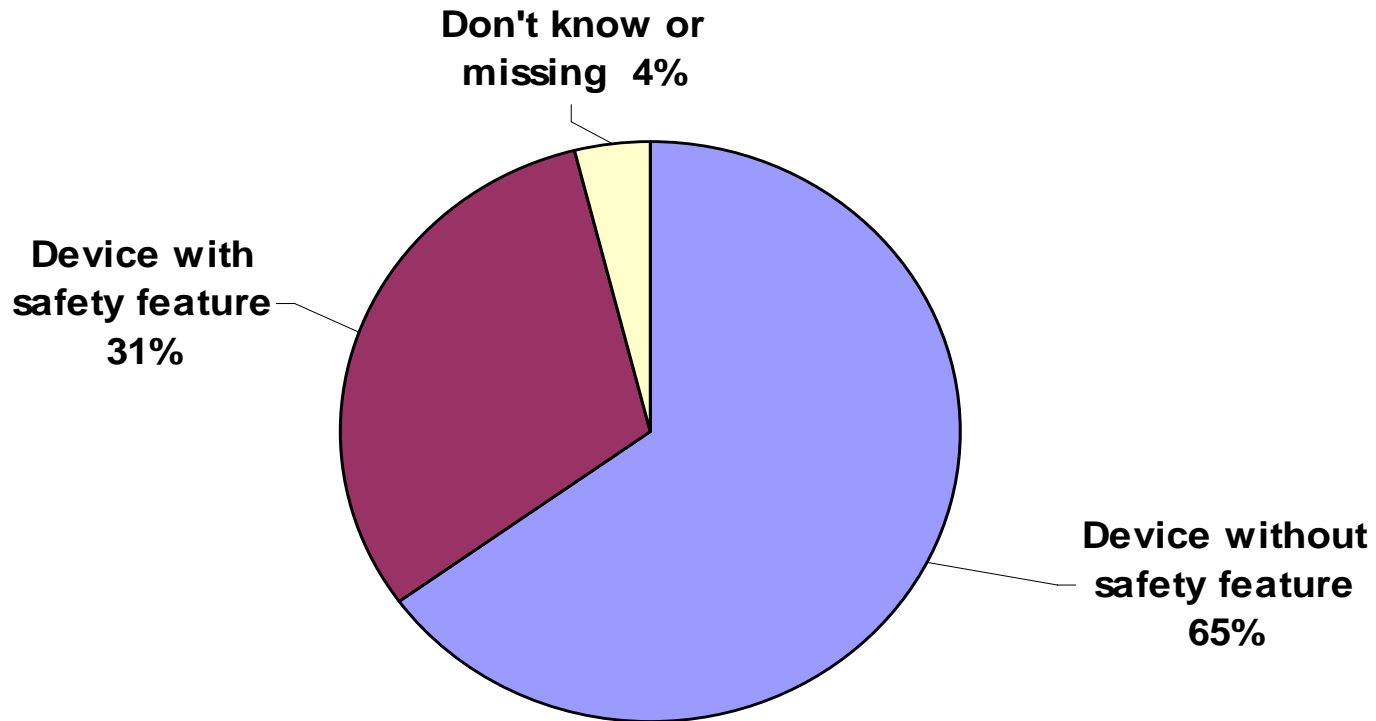
%

Injecting medication	63
Blood drawing	44
Finger/heel stick	42
IV line access/deaccess	16

Role of safety devices in SI

**Sharps injuries: Did the medical device
have an integral safety feature?**

**Data from Massachusetts home healthcare nurses, 2001-2007;
most recent sharps injury reported (n=124)**



Source: Massachusetts Nurse Advocate, Vol 79 (8), October 2008,
available at: <http://www.massnurses.org/files/file/News/newsletter/2008/Oct.pdf>

Role of safety devices in SI

Data from Massachusetts home healthcare nurses, 2001-2007:
most recent SI reported (n=124).

- 65% of the SIs involved a sharp device without a safety feature:
 - ✓ of these cases, 66% of nurses believed a safety feature might have prevented the injury.
- 28% of the SIs involved devices with a safety feature, however, the nurse reported the safety feature failed.

Reporting of SIs

Safety Device Use in Sharps
Injuries Among Home
Healthcare Nurses During
2001-2007

(n=124)

Did you report?

When did
you report?

YES (75%)

71% < 30 min

19% < 2 hrs

6% < end of shift

3% > end of shift

Reporting of SIs

Safety Device Use in Sharps
Injuries Among Home
Healthcare Nurses During
2001-2007

(n=124)

Did you report?

When did
you report?

YES (75%)

NO (25%)

Why didn't
you report?

71% < 30 min

19% < 2 hrs

6% < end of shift

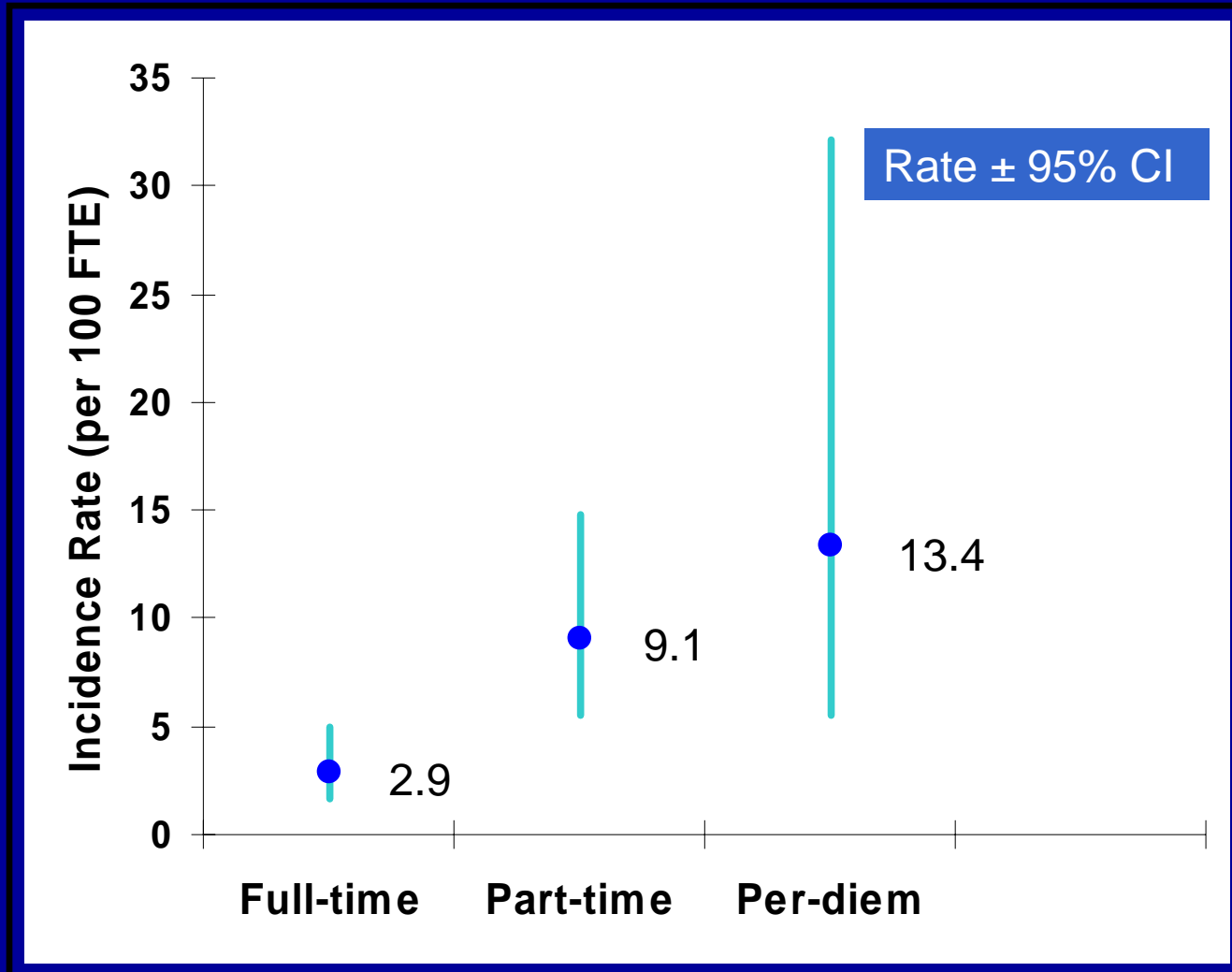
3% > end of shift

74% Low risk of
infection

29% No time

29% Blame/shame

Employment Status of RNs and Sharps Injuries



* Injuries during the past 12 months, per 100 FTE among nurses

Risk of SI increased:

- 2 times in those who reported that *“I believe patient care comes before employee safety in my workplace”* (safety climate)
- 2.5 times for those who reported they were *“somewhat satisfied”* or *“not at all satisfied”* with their current HHC job, compared to those who reported they were *“satisfied”*

BBP: Interventions

- Sharps with engineered safety features
- Employee education
- Patient education
- Policy measures

Summary

- Invisible yet growing industry
- Various research methods: a much fuller picture of the nature of home healthcare work
- Self-blame and injuries
- Employment status matters in occupational injuries
- Interventions
 - Eliminate/ minimize hazards
 - Preserve or enhance positive work aspects

Thank you!

There is not magic recipe for safety in home health care. But the major ingredients need to be employee awareness and agency commitment to the staff.

- Sylvester & Reisener, 2002
Journ Nurs Qual 17(1)