Infection prevention and control in homecare settings: Results of an observation and interview study

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Introduction

- Infections are a significant cause of rehospitalisation in patients discharged from hospital who are receiving home care in the USA
  - Approximately 18% of unplanned admissions (Shang et al, 2015)
- There is a lack of research into infection control and prevention in community/home care settings internationally

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Aim

- To assess home care nurses' infection control practices and barriers/facilitators to effective infection prevention and control in a home care agency
  - Part of a wider programme of research on infection prevention and control in home care settings

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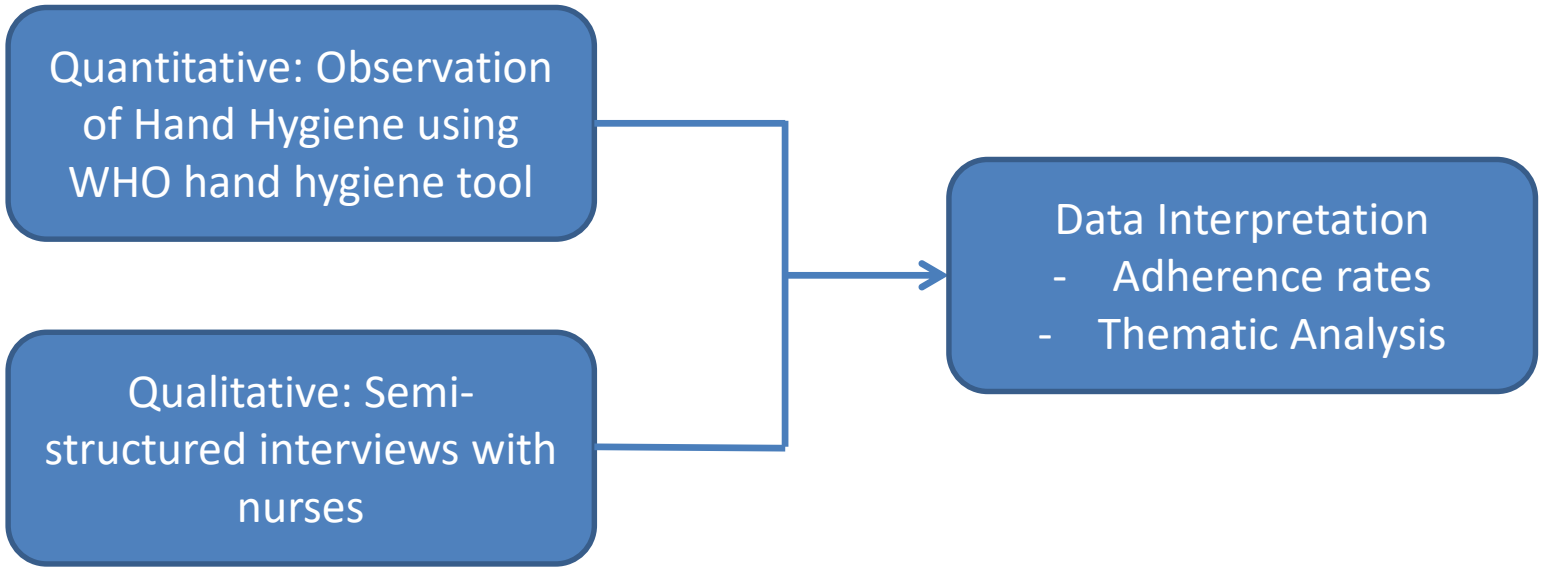
Methods

- Concurrent mixed methods study design



- 50 home care nurses from one Home Health Care Agency in NYC
- Observed for 8 home care visits
  = 400 observations and 50 interviews

Nurse Demographics (N=50)	% (n) or mean (range)
Age	47.4 (25-69)
Gender	
Female	90% (45)
Male	10% (5)
Race	
Black or African American	48% (24)
White	26% (13)
Asian	18% (9)
Other	8% (4)
Qualifications	
LPN/LVN	8% (4)
Associate Degree in Nursing	14% (7)
Bachelor's Degree in Nursing	66% (33)
Masters in Nursing	12% (6)
Years as a Nurse	19.31 (1.5-44)
Years as a Nurse in Home Care	12.91 (0.25-26)

Patient Demographics (N=389)	% (n) or mean (range)
Age	73.6 (23.9-106.3)
Gender	
Female	59.9% (233)
Male	40.1% (156)
Race/Ethnicity	
Black or African American	26.9% (104)
White	40.6% (157)
Hispanic	25.3 % (98)
Asian	7.5 % (29)
Native American or Pacific Islander	0.5 % (2)
Living Condition	
Alone	38.8% (151)
With Others	57.8 % (225)
Congregate Living	3.3 % (13)

Missing data n=11

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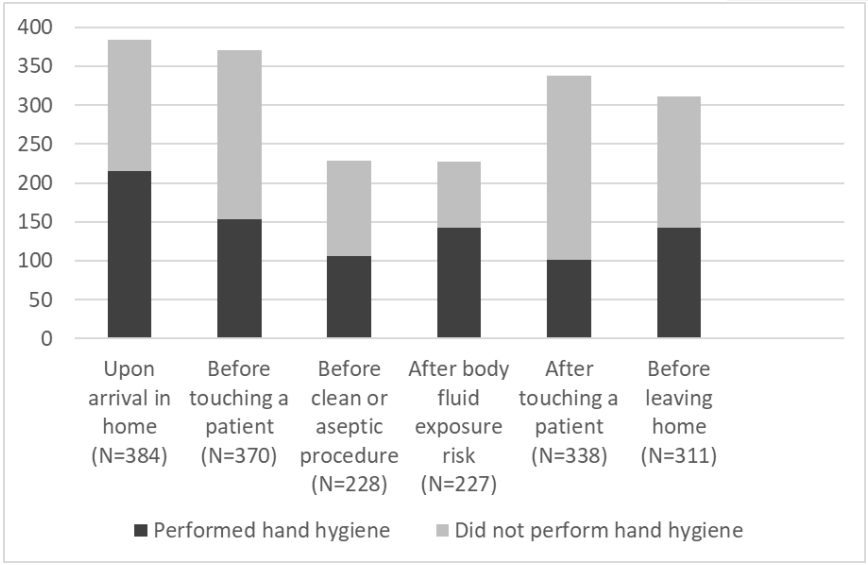
Results

Hand Hygiene Compliance Opportunity	% Compliance (Number Opportunities)
Overall Adherence Rate	**46.2%**
Upon Arrival	56.1% (216)
Before Touching Patient	41.0% (161)
Before Clean or Aseptic Procedure	46.5% (113)
After Body Fluid Exposure Risk	62.7% (153)
After Touching Patient	29.8% (108)
After Touching Patient Surroundings	41.9% (18)
Before Access Clean Compartment Nursing Bag	51.1% (24)
Before Leaving Patient's Home	45.7% (166)



Results

Three key themes from analysis:

- How nurses assessed a patient's risk of infection
- Intervention strategies to mitigate risk of infection
- ***Barriers and facilitators to infection control practices and behaviours***

Lack of available information

"You may miss that whole MRSA thing. But you can kind of tell if a person has a chronic wound and just kind of ask them, oh, "what kind of wound?" And you could tell by the type of antibiotic they've been on, because the discharge summary usually tells you what kind of antibiotics they received in the hospital. Certain antibiotics are for MRSA, so that's a big one. Yeah. There's been times you didn't know and the patient tells you, so then you have to get the equipment over there as soon as possible." [ID202]

Workload and time pressures

"No one's there to monitor them. And so sometimes a matter of rushing. I can see that they could be rushing…they have maybe more cases and they're spending more time on cases because where they may take two to three hours to do a start of care. And if they have three to four of those a day, I can see them rushing through someone they're working and just taking shortcuts." [ID690]

"Sometimes you feel so pressured by time that you can't follow it to the T because it is more time-consuming." [ID211]

Continuity of Care

"*When the nurses switch too often. When it's not just one, or two, or three nurses seeing the patient. When it's a different nurse every day. That's really something that happens often… That's the kind of people who are at the most risk of infection, I think, because a nurse is not acquainted with an environment, maybe something may contribute to breach of sterility [ID213]*

"Sometimes it's my patient that the nurses have been covering for me, if they work on a weekend and a patient needs to be seen, or it's a case that needs to be opened for me. And time to time, I hear patients say, "Oh, that nurse didn't wash their hands."" [ID200]

The importance of context

“I just try and-- sometimes you can’t even wash your hands because the sink is piled high with dishes and fruit flies, and ***so you just do the best you can****. [ID205]*

“I can't do anything about hygiene. I can't clean the patient's floors.[ID215]

“If the environment is nice and clean and spacious, then, yeah, it's easy to practice infection control. If it looks like a hurricane went through it, then, right, you can only do your best.” [ID214]

Discussion

- Previous research has highlighted that home care nurses self-reported a high-rate of compliance with infection control practices (Russell et al, 2018)
- Our study highlights actual compliance with hand hygiene practices is low
- The context of home care practice and the patient's environment are important factors that impact on nurses' infection control behaviours

References

Russell D, Dowding DW, McDonald MV, Adams V, Rosati RJ, Larson EL, Shang J. Factors for compliance with infection control practices in home healthcare: findings from a survey of nurses' knowledge, and attitudes toward infection control. *American Journal of Infection Control. 2018*. Volume 46, Issue 11, 1211 - 1217

Shang J, Larson E, Liu J, Stone P. Infection in home health care: Results from national Outcome and Assessment Information Set data. *American Journal of Infection Control.* 2015;43(5):454-459.

And of Interest:

Shang J, Russell D, Dowding D, McDonald M, Murtaugh C, Liu J, Larson E, Sridharan S, Brickner C. A Predictive Risk Model for Infection-Related Hospitalization among Home Healthcare Patients. *Journal for Healthcare Quality.* **In press**

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