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Evaluation of Compliance to the "5 Moments of Hand Hygiene" Among Nurses in Pretoria Hospitals

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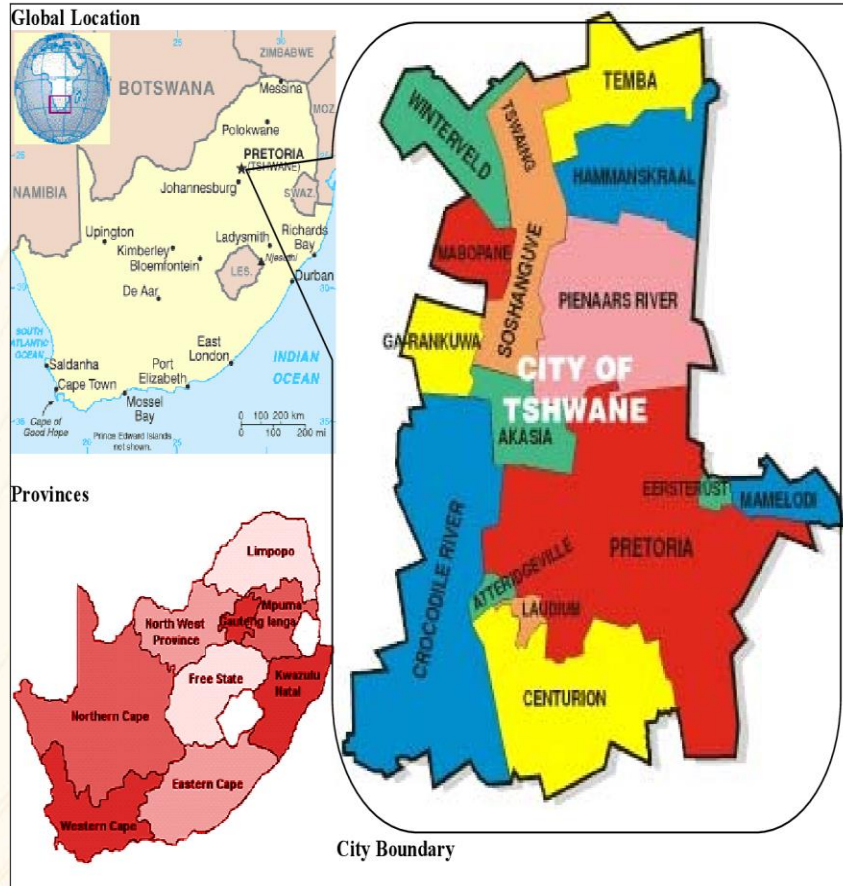
Background

- Imagine a situation where nurses move in between multiple wards in a day with inadequate hand hygiene.
- HAIs rates a constant challenge [1,2]
- **Carbapenem–Resistant Enterobacteriaceae** is prevalent in Pretoria hospitals [2,3]
- Non-standardized compliance measurement across all hospital platforms





Research context



- Population: 3,2 million
- 34 Acute hospitals
 - 7 public
 - 27 private/independent
- Tertiary healthcare centers for adjacent provinces
- Moon lighting healthcare workers





Site Characteristics

Research site	Hospital type	WHO Hand Hygiene Self-Assessment Framework Level (Score)
Hospital B	<ul style="list-style-type: none">• Tertiary care facility with ICU & specialised services (Cardiology)• Private company owned	Advanced (377,50)
Hospital D	<ul style="list-style-type: none">• Tertiary care facility ICU & specialised services (Neurosurgery & Trauma)• Private company owned	Intermediate (365)
Hospital K	<ul style="list-style-type: none">• Secondary-level health care facility without ICU.• Government facility (Public)	Intermediate (282,50)





Research purpose

To describe the compliance to the 5 moments of hand hygiene among nurses in selected Pretoria hospitals.





Methods

- A quantitative survey with longitudinal design.
- Covert observation method was used over six weeks.
- The observations took place in 25 wards inclusive of 4 critical care units.
- All categories of nursing were included in the observation provided any of the ‘5 moments of hand hygiene’ was present.

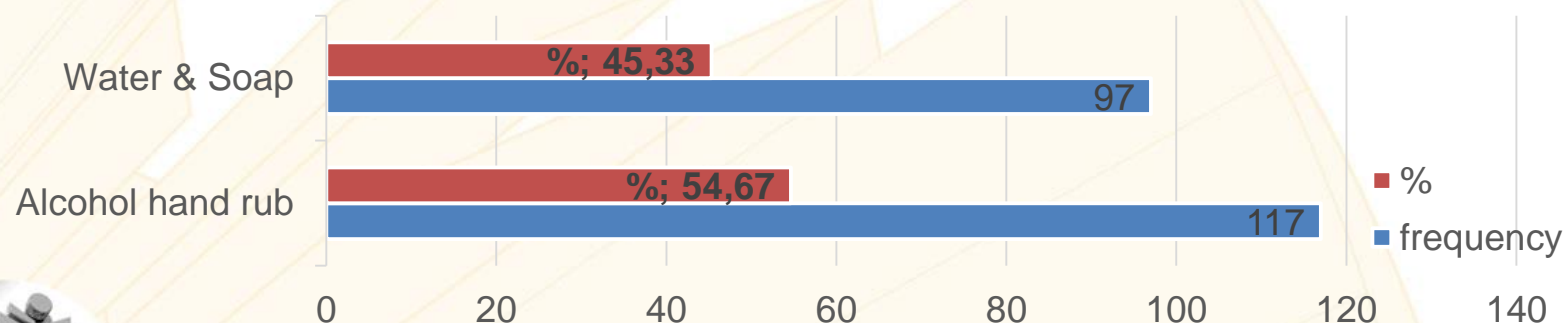




Results

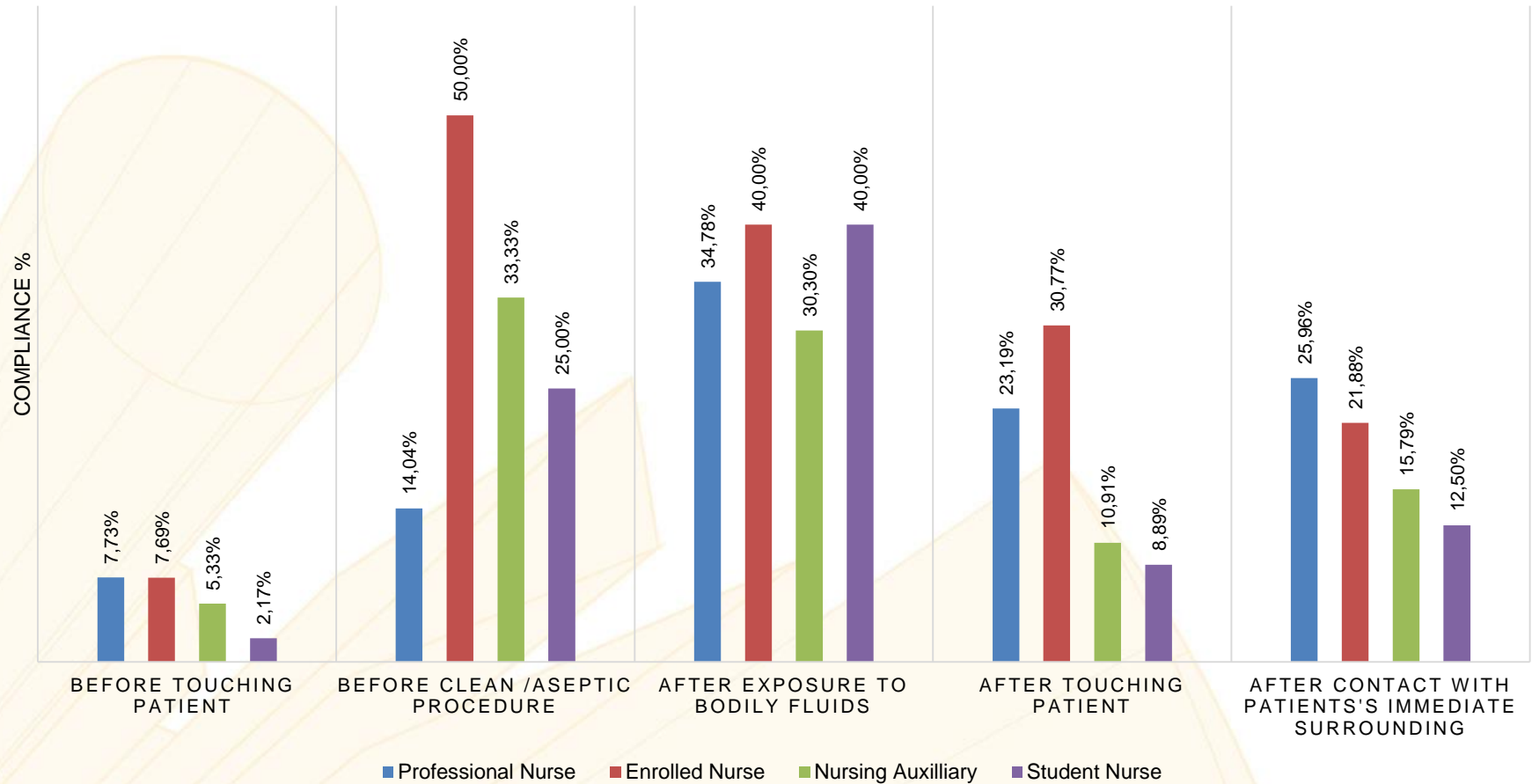
- 1358 direct covert observations of hand hygiene compliance were conducted.
- 214 (15,76%) compliant

Ward type	Number (%) observed	Number (%) compliant
ICU	435 (32,03)	118 (27,13)
Wards	923 (67,97)	96 (10,40)



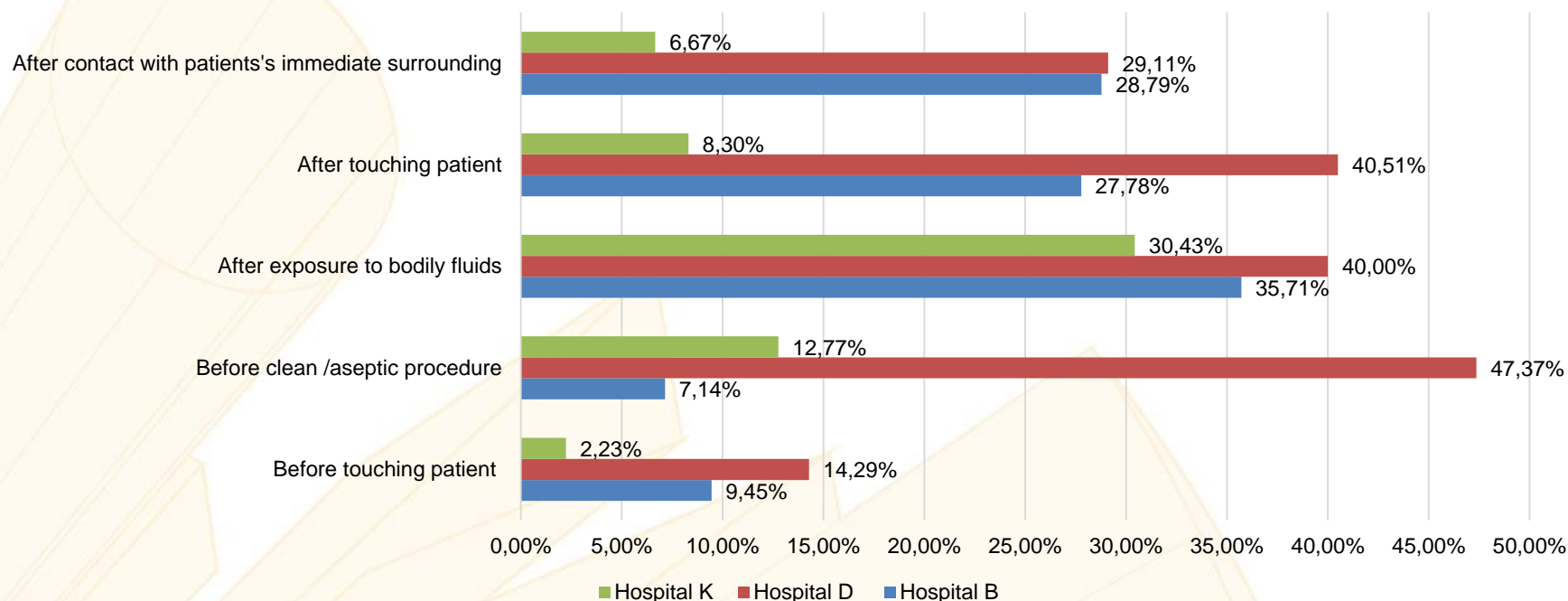


Observed compliance





Compliance in Private vs Public hospital



ANOVA: f- test 5,180514 > f-crit 5,987378 p-value
0,063139 (>0,05)





Discussions

- Overall compliance was low as 15,76% which was similar to that of developed and developing countries [5-8]
- The moments aimed at protecting patient (i.e. before touching patient & before clean/ aseptic procedure) had the lowest compliance.
- No significant difference in compliance between nursing categories and hospital types.
- Alcohol hand rub was used more than hand washing with water and soap as globally indicated [1] but still suboptimal.





Conclusion

- Nurses in this study had low compliance to the 5 moments of hand hygiene.
- Patient safety is of concern as moments aimed for patient safety have lowest compliance.
- Even though wards had more observations, their compliance was the lowest.
- There is a need for research on a national level on the uptake of WHO guidelines which will inform intervention for all facilities.
- In the COVID pandemic era, this low compliance to hand hygiene could lead to nurses being infected or spreading the infection through unclean hands in the point of care.





References

1. Dramowski A. Infection prevention and control: A guide for healthcare workers in low-resource settings. Cape Town: Bettercare; 2014.
2. Dramowski A, Aucamp M, Bekker A, Mehtar S. Infectious disease exposures and outbreaks at a South African neonatal unit with review of neonatal outbreak epidemiology in Africa. *Int J Infect Dis.* 2017;57:79–85.
3. Brink A, Coetzee J, Clay C, Corcoran C, Greune J Van, Deetlefs JD, et al. F ORUM The spread of carbapenem-resistant Enterobacteriaceae in South Africa : Risk factors for acquisition and prevention. 2012;102(7):599–601.
4. Mbelle NM, Feldman C, Sekyere JO. Pathogenomics and Evolutionary Epidemiology of Multi-Drug Resistant Clinical *Klebsiella pneumoniae* Isolated from Pretoria , South Africa. *Sci Rep [Internet].* 2020;1–17. Available from: <http://dx.doi.org/10.1038/s41598-020-58012-8>





References

5. WHO Guidelines on Hand Hygiene in Health Care: a Summary First Global Patient Safety Challenge Clean Care is Safer Care. 2009.
6. El-saed A, Noushad S, Tannous E. American Journal of Infection Control Quantifying the Hawthorne effect using overt and covert observation of hand hygiene at a tertiary care hospital in Saudi Arabia. AJIC Am J Infect Control [Internet]. 2018;46(8):930–5. Available from: <https://doi.org/10.1016/j.ajic.2018.02.025>
7. Belela-anacleto ASC, Kusahara DM, Peterlini S, Ang M, Pedreira MLG. Australian Critical Care Hand hygiene compliance and behavioural determinants in a paediatric intensive care unit : An observational study Observation 1 : direct observation of HH compliance – 405 Intervention 2 : second educational session / verification. 2019;32:21–7.
8. GU O. Five Moments for Hand Hygiene: A Study of Compliance among Healthcare Workers in a Tertiary Hospital in South East Nigeria. Community Med Public Heal Care. 2015 Dec 23;2(2):1–4.





Questions

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