

Health Worker and Family Caregiver Hand Hygiene in Bangladesh Healthcare Facilities: Results from a Nationally Representative Survey

Hornig L, Unicomb L, Alam M, Halder A, Ghosh PK, Shoab A, Opel A, Islam K, Luby S

Background

In healthcare facilities, hand hygiene affects patient care, health worker safety, and infection control, but research and policy are lacking in many low-income countries.^{1,2} We present a nationally representative study on hand hygiene infrastructure and behavior in healthcare facilities in Bangladesh.

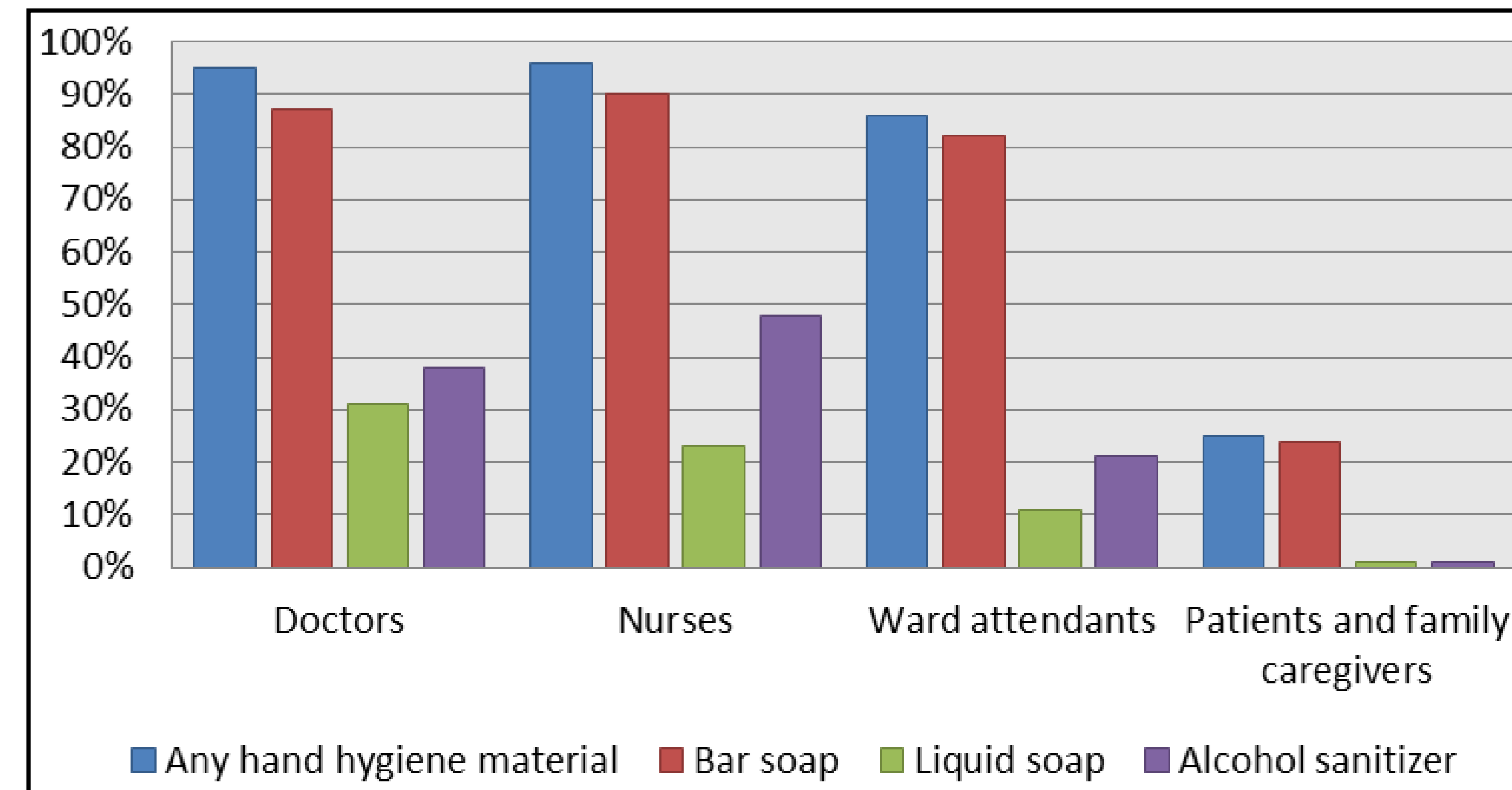
Methods

- The 2013 Bangladesh National Hygiene Baseline Survey examined water, sanitation, and hand hygiene across households, schools, restaurants, food vendors, traditional birth attendants, and healthcare facilities.³
- 100 rural and urban clusters were selected with probability proportional to size sampling using National Household Census data.
- In each cluster, we chose 8-9 facilities for hand hygiene infrastructure surveys.
- In each cluster, we chose 1 facility for 5 hours of structured observations of hand hygiene behavior on one inpatient ward.

Results

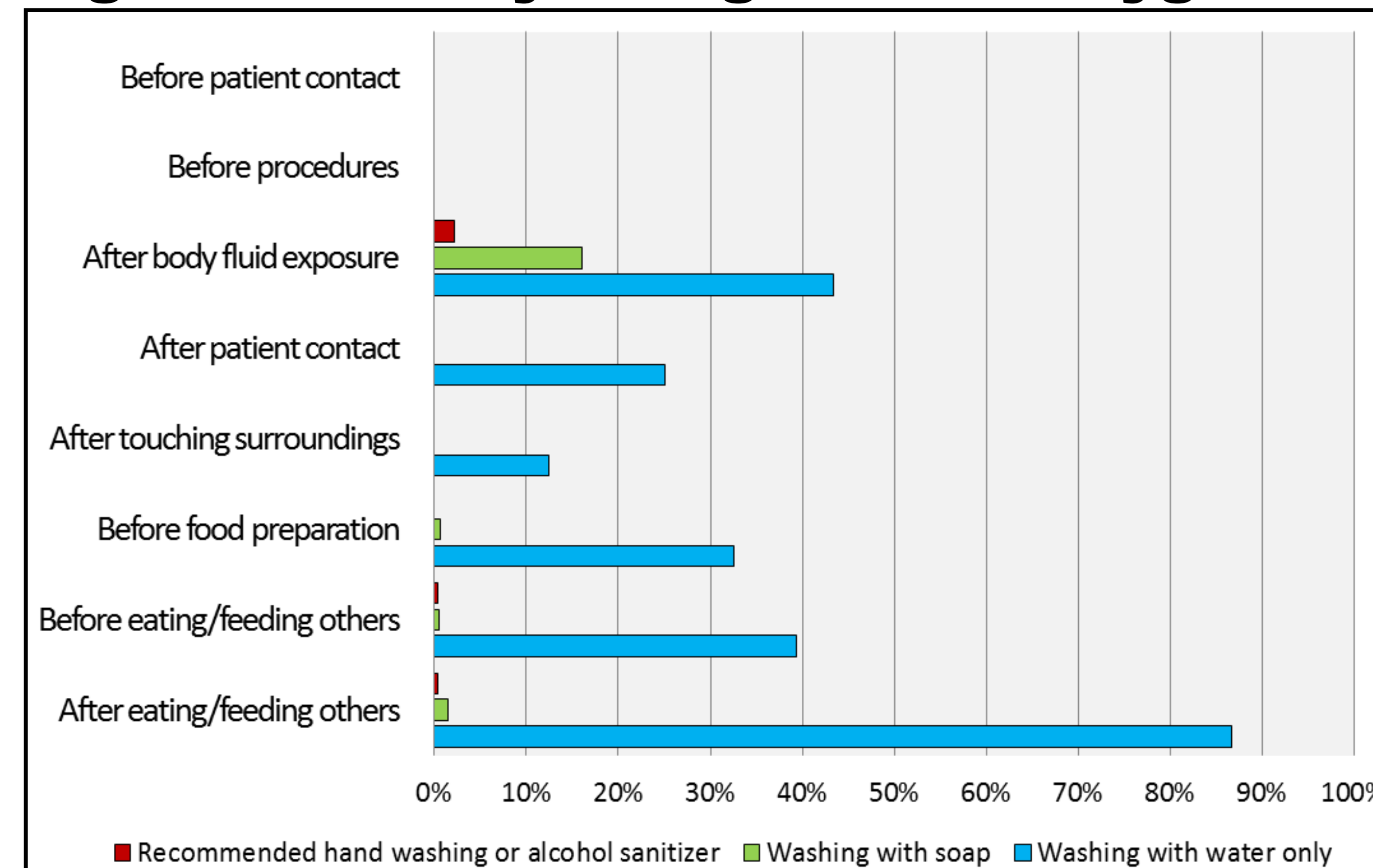
- A total of 875 facilities were surveyed: 432 rural and 443 urban; 136 government and 739 independent, private, or NGO.
- Over 90% of hand washing locations had water, but hand hygiene materials varied widely (Figure 1).
- Bar soap was most available to all users. When available, mean bar soap quantity was 2.6 grams (standard deviation 12.1).

Figure 1: Available hand hygiene materials



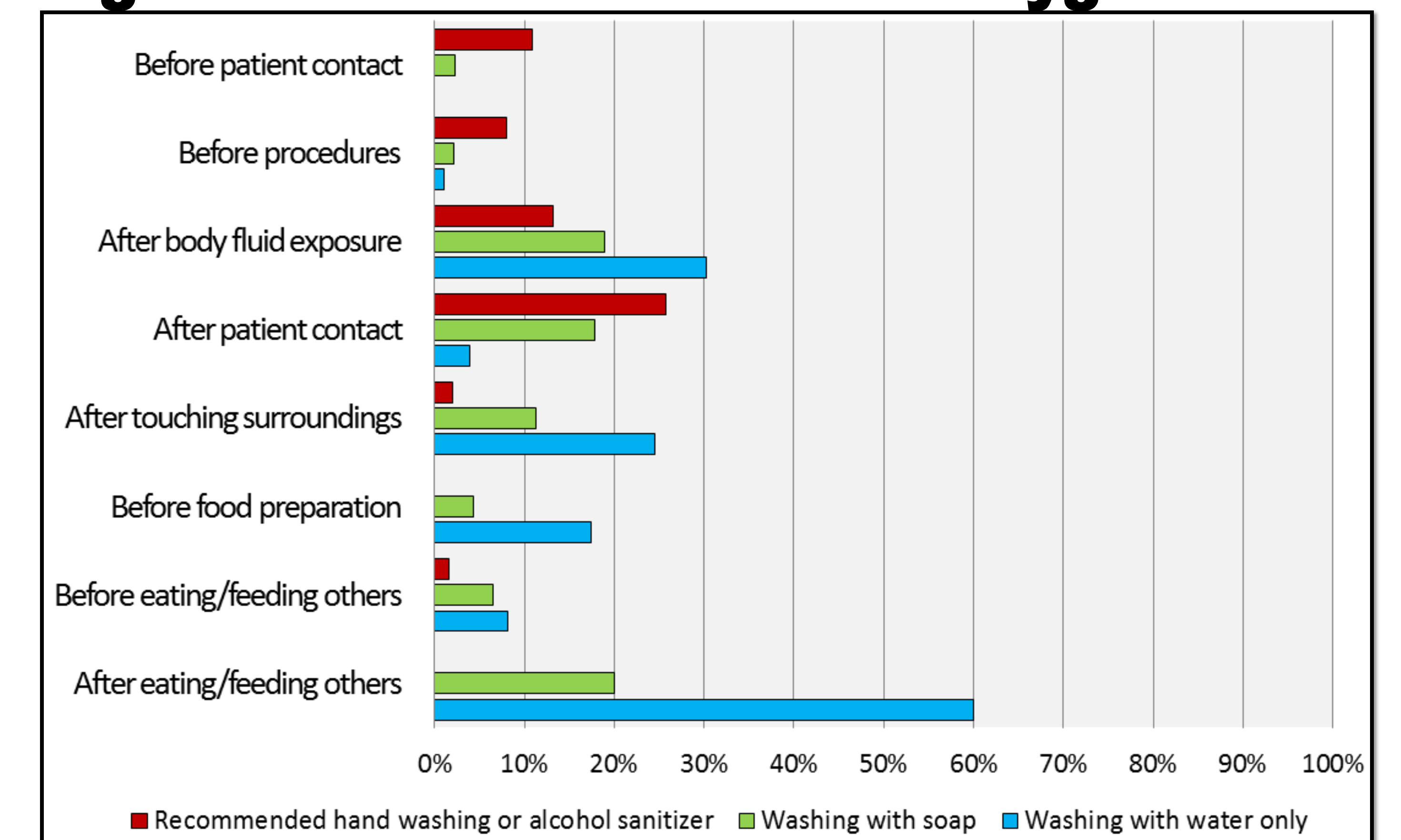
- For health workers, 86-96% of hand washing locations had hand hygiene materials. Soap was available at 82-87% of locations and alcohol sanitizer at 21-48%.
- For patients and family caregivers, 25% of hand washing locations had any available hand hygiene materials.
- Observers noted 4676 hand hygiene opportunities (Figures 2 & 3). We defined 'recommended' washing as using both hands with soap then drying by air or clean cloth.

Figure 2: Family caregiver hand hygiene



- Family caregivers used recommended hand hygiene in 1% of opportunities, usually washing hands with only water (48%) but infrequently using soap (3%)..
- Health workers used recommended hand washing or alcohol sanitizer in 9% of opportunities, most commonly *after* contact with patients (26%) or body fluid (13%) than *before* patient contact (11%).

Figure 3: Health worker hand hygiene



Conclusion

- In Bangladesh healthcare facilities, hand hygiene materials are often available for health workers, but not patients or family.
- Hand hygiene is better among health workers than family caregivers and *after* patient care.
- Increasing supplies and providing education about patient care-related hand hygiene could result in improved care and infection control.

References

1. Pittet, D. *et al.* Infection control as a major World Health Organization priority for developing countries. *Journal of Hospital Infection* **68**, 285–292 (2008).
2. WHO. *Water, sanitation and hygiene in health care facilities: Status in low- and middle-income countries and way forward.* 35 (2015).
3. Alam, M. *et al.* *Bangladesh National Hygiene Baseline Survey Preliminary Report.* (2014) available at www.wateraid.org/~media/Publications/bnhbs.pdf.