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Minimum Sample Size for Hand Hygiene Compliance Monitoring:

Evidence-Based Recommendations for Provincial Reporting

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IPAC Canada National Education Conference 2026

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Acknowledgements

This work was completed in collaboration with PICNet's Provincial IPC Surveillance Working Group

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Grateful to IPC colleagues across BC health authorities and partner organizations for their input and data contributions.

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The Problem We Set Out to Solve

We all audit hand hygiene compliance. But how many observations does it take before that rate reflects real practice?

- **Commissioned by:** The Provincial Hand Hygiene Working Group (PHHWG)
- **Question:** What is the minimum number of hand hygiene observations needed for reliable performance monitoring and reporting?

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Our Approach

Three evidence streams:

1. What the literature and guidelines say (WHO, published studies)
2. What other Canadian jurisdictions do (policy scan + partner outreach)
3. What BC facilities are currently collecting (local audit data, 2024/25)

Goal: Recommendations that are statistically sound, operationally realistic, and drive meaningful improvement.

What the literature and guidelines say

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The right number of observations depends on what you're auditing for:

Purpose of auditing	Typical minimum
Performance Monitoring	~200 observations per unit/period (WHO, Leapfrog)
Quality Improvement (QI)	12–15 per subgroup, repeated frequently

- Performance monitoring needs enough observations to make reliable comparisons over time and across sites
- QI auditing needs frequent, smaller samples – a different tool for a different job

Pragmatic threshold for performance monitoring

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- Thresholds across the literature range widely, depending on context
- **200 observations per reporting unit per period is the widely-cited threshold for performance monitoring**
  - This provides approximately 80% power to detect meaningful differences in compliance rates

More observations ≠ better data:
Without rigorous, standard methods, a bigger sample just gives you more of the same bias

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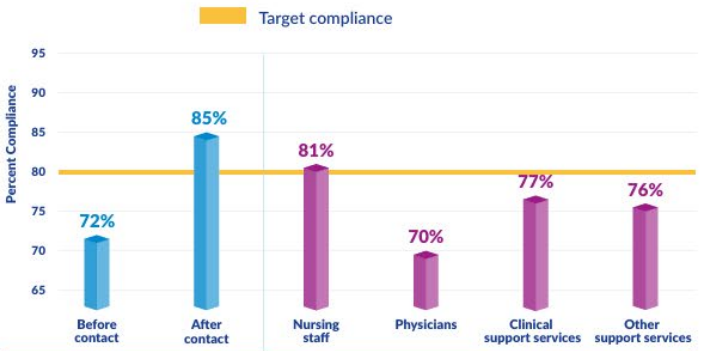
What other Canadian jurisdictions do

- **Minimum thresholds and contexts vary across Canada (50–500)**
  - Some provinces have formal minimums for performance monitoring, others emphasize QI
- **Public reporting varies**
  - 5 provinces publish regularly – most reporting is internal
- **Some jurisdictions have recently lowered thresholds for feasibility**
  - We found one Canadian health authority recently changed from 200 to ~105 observations per unit per quarter

Current reporting in BC

Improving hand cleaning compliance among health care workers is key to reducing health care-associated infections. Reporting on compliance provides transparency to the public and assists health care facilities in quality improvement.

Hand cleaning compliance in acute care facilities by moment of contact and health care worker, Q3 of 2025/26



HIGHLIGHTS

Overall provincial hand cleaning compliance:
80% in acute care
81% in long-term care

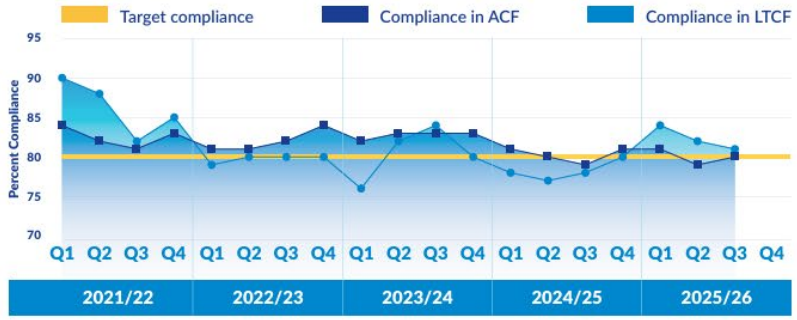
72% compliance **before contact** with the patient

85% compliance **after contact** with the patient/patient environment

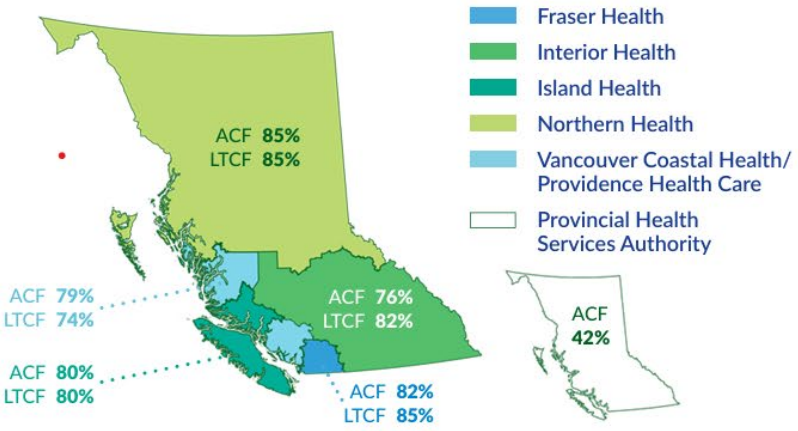
Hand cleaning compliance was **lowest for physicians at 70%**

Comparisons across health authorities and facility types should be avoided due to potential observer bias, Hawthorne effect, and variations in audit methods.

Provincial hand cleaning compliance among health care workers in acute care facilities (ACF) and long-term care facilities (LTCF) by quarter and year, 2021/22 – 2025/26



Hand cleaning compliance by health authority, Q3 of 2025/26



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Clearing the bar:
Meeting a 200-observation minimum in BC

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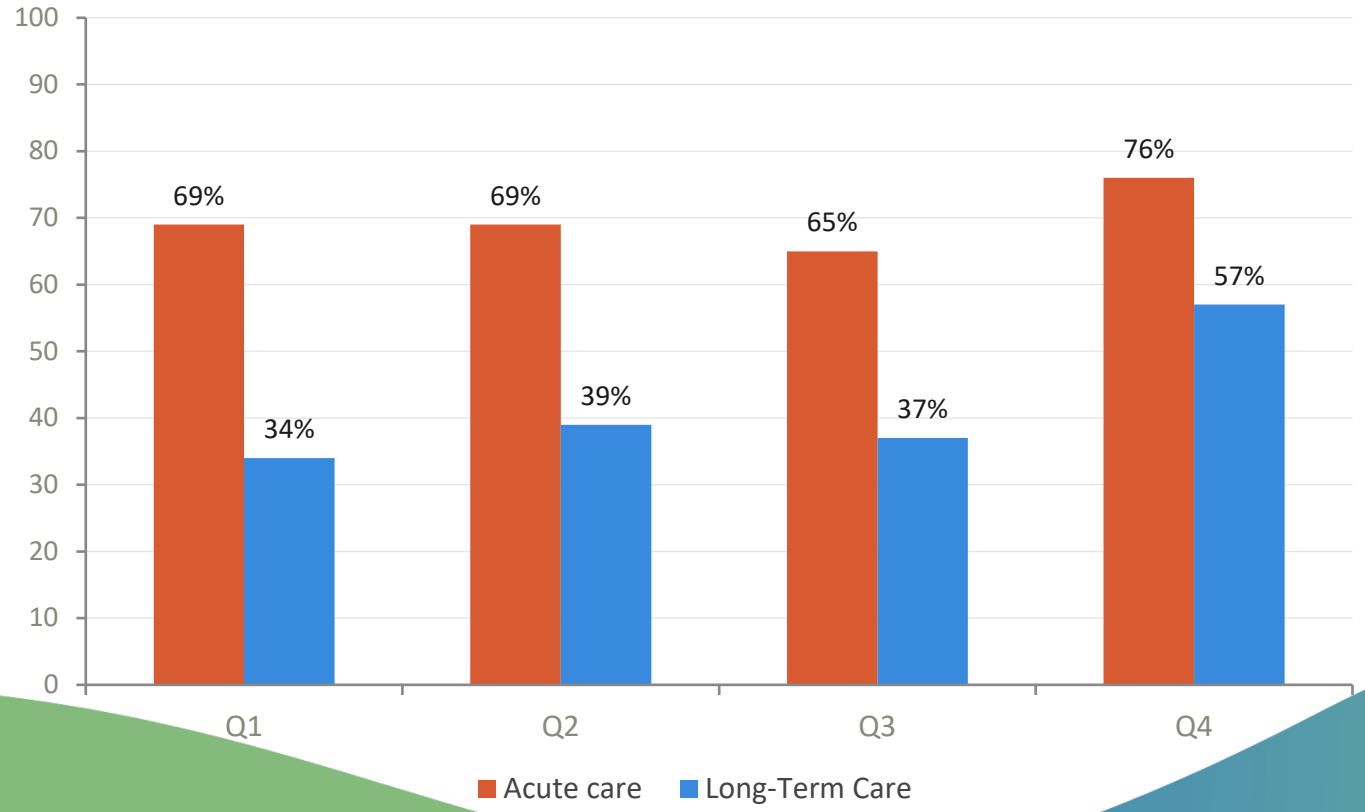
- **Provincial and health authority**-level reporting currently **exceeds** 200 observation minimums

- However, many BC **facilities struggle** to meet a quarterly 200-observation minimum

Facility-level minimum attainment by quarter, 2024/25



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What we recommended for performance monitoring: Why it makes sense for practice

Health authority level reporting		
Acute care	**≥200 obs / quarter**	Provincial reporting: ≥1,200 obs / quarter
Long-term care	**≥200 obs / quarter**	Provincial reporting: ≥1,200 obs / quarter
Facility level reporting		
≥200 obs / fiscal year		Enables • Annual facility-level reporting • Representative HA and provincial rates

For all levels: samples must cover the full range of care settings, provider groups, shifts, and moments of care.

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Quality over quantity

More observations don’t necessarily make auditing better.

Three things make audit data count:

Consistent methods

Results only travel across time and place when methods stay the same.

Clear purpose

Auditing should answer a specific question, not just generate volume.

Right level

Enough observations at the level you’re looking at to draw reliable conclusions.