

EVALUATING AN APPROACH TO IMPROVING RESPIRATORY OUTBREAK OUTCOMES IN RETIREMENT HOMES

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DESCRIPTION

The Humber River Health (HRH) Infection Prevention and Control (IPAC) Hub oversees nine Retirement Homes (RHs) focused on respiratory illness season preparedness. The initiative brought together IPAC Leads and key partners, including the Retirement Homes Regulatory Authority and the Ontario Retirement Communities Association, to enhance regulatory compliance, outbreak management, and readiness for the 2024/2025 respiratory illness season. The HRH IPAC Hub implemented longitudinal surveillance and collaborated closely with RHs to deliver targeted education, virtual and on-site support, and IPAC audits aimed at evaluating changes in outbreak frequency, case burden, hospitalization rates, mortality rates, and outbreak duration comparing the 2024/2025 season to the 2023/2024 season.

OBJECTIVE

Evaluate the impact of IPAC Hub initiatives on respiratory outbreak frequency and severity in Retirement Homes.

ACTIONS TAKEN

The HRH IPAC Hub conducted ongoing surveillance and documentation of outbreak data for the 2023/2024 and 2024/2025 seasons. Education sessions for IPAC Leads and staff were complemented by weekly Community of Practice meetings with an emphasis on respiratory preparedness. Targeted on-site audits of personal protective equipment use, hand hygiene, and environmental cleaning were conducted, with real-time feedback. Figure 1 is an example of an environmental services audit where Glo Germ was employed to determine if surfaces were being cleaned properly through a follow-up audit. These multifaceted actions aimed to reduce outbreak occurrence and enhance preparedness throughout the respiratory illness season.

Unit:	Auditor:	Date/Time:	Room #	Room #	Room #	Room #	Room #	Room #	Room #	Room #	Room #
#	High Touch Area	Score	Score	Score	Score	Score	Score	Score	Score	Score	Score
1	Light Switches										
2	Tables: Overbed, bedside & dressers										
3	Bed: Rails / Head & foot of bed										
4	Bed adjustment buttons and call bell										
5	Chairs/Wheelchair/Walker										
6	Door knobs										
7	Washroom: Soap & towel dispenser										
8	Washroom: Sink, faucets										
9	Washroom: Grab bar										
10	Washroom: Toilet handle and seat										

Score	Fluorescence	Interpretation
1	Fluorescence seen	NO/POOR CLEANING
0	No Fluorescence	COMPLETE CLEANING

Figure 1. Example of Environmental Services Cleaning Audit Completed after Glo Germ is applied to multiple surface areas at a RH audited by an HRH IPAC staff member. If fluorescence is seen, there is a lack of sufficient cleaning practice and if no fluorescence is seen, cleaning was done effectively.

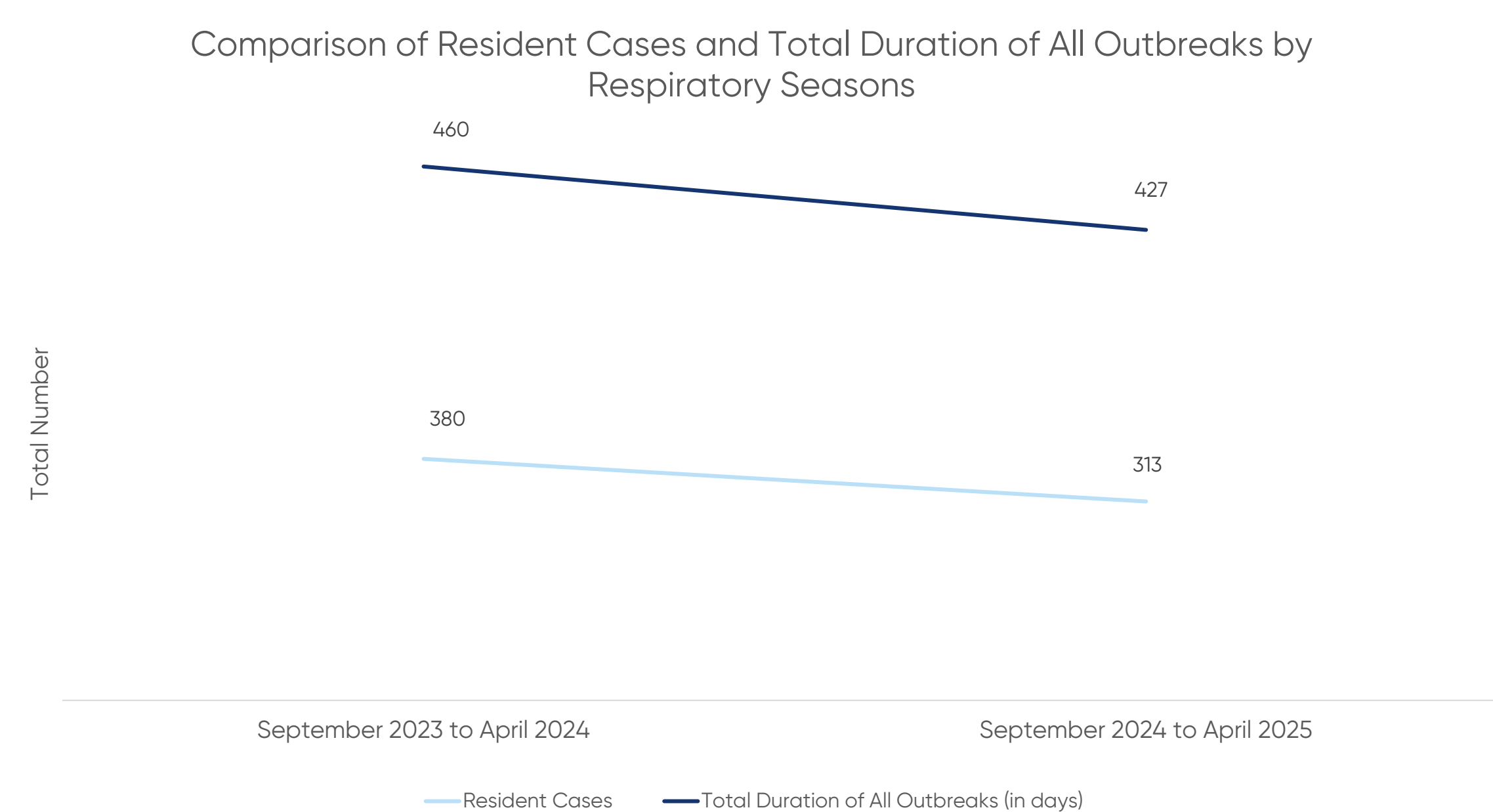


Figure 3. Comparison of Resident Cases and Total Duration of All Outbreaks (in days) for Respiratory Seasons (September 2023 to April 2024 versus September 2024 to April 2025).

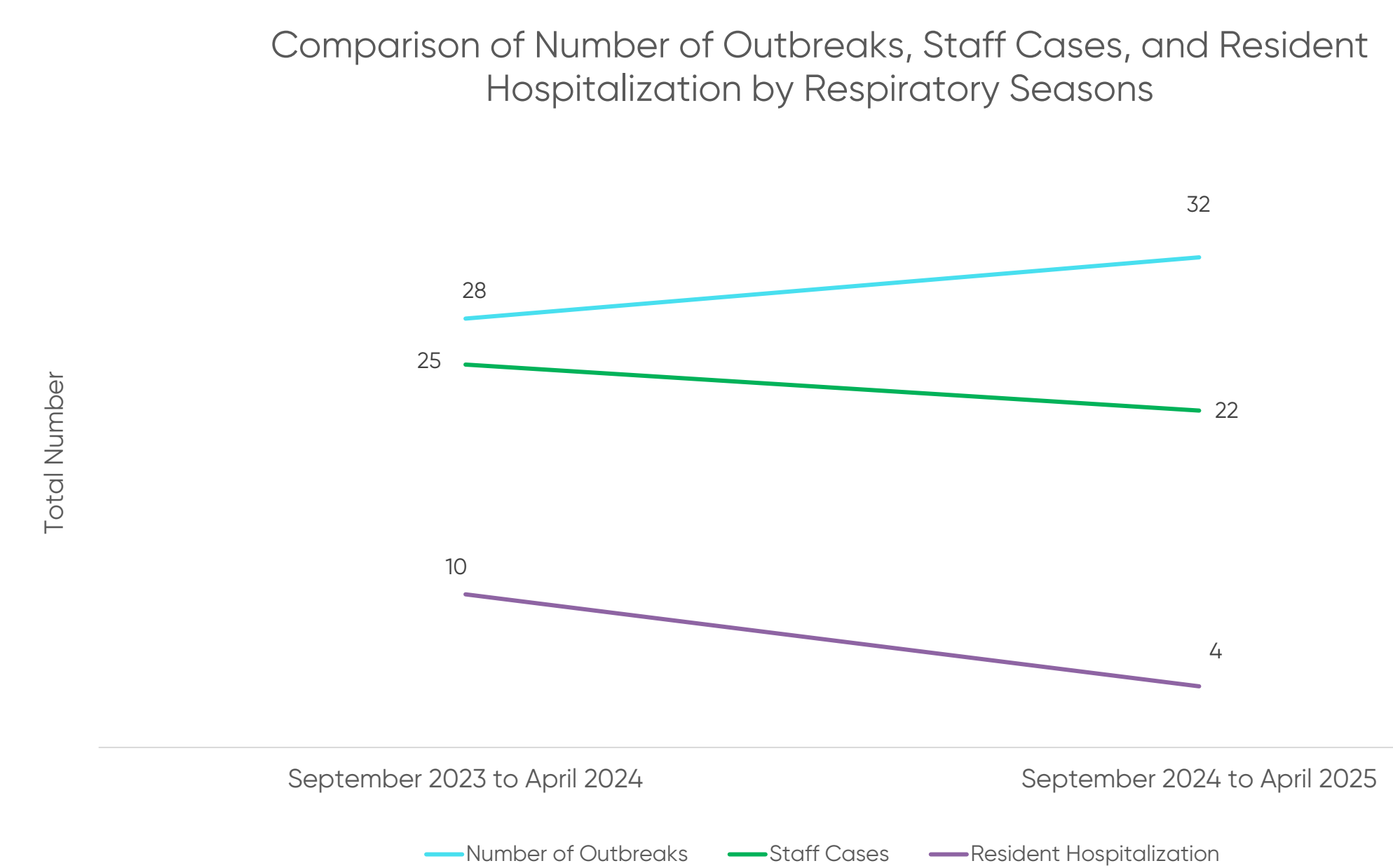


Figure 2. Comparison of Number of Outbreaks, Staff Cases, Resident Hospitalization for Respiratory Seasons (September 2023 to April 2024 versus September 2024 to April 2025).

Respiratory Season	Number of Outbreaks	Resident Cases	Staff Cases	Resident Hospitalization	Duration of Outbreak (in days)
September 2023 to April 2024	25	380	28	10	460
September 2024 to April 2025	32	313	22	4	427
Percentage Difference Between Respiratory Seasons	Increase by 14.3%	Decrease by 17.6%	Decrease by 12%	Decrease by 60%	Decrease by 7.2%

Table 1. Comparison of Percentage Difference Between Respiratory Season (September 2023 to April 2024 versus September 2024 to April 2025) for RHs in HRH Hub.

SUMMARY OF RESULTS

While the total number of outbreaks increased by 14.2% in the 2024/2025 respiratory season compared to 2023/2024, Figures 2 and 3 show meaningful improvements observed across key outcomes. In Figure 4, resident cases decreased by 17.6%, staff cases declined by 12%, hospitalizations dropped by 60%, and total outbreak duration shortened by 7.2%. These results reflect enhanced IPAC measures, improved clinical management, and strengthened preparedness achieved through continuous education, auditing, and collaboration, demonstrating the long-term effectiveness of the IPAC Hub's multifaceted approach in retirement home settings.

LESSONS LEARNED

Collaborative engagement, ongoing education, and hands-on auditing are essential for sustaining preparedness, improving outbreak response, and reinforcing IPAC measures within RHs.

