

# **ANTIMICROBIAL STEWARDSHIP PROGRAM**

## ***SEMI-ANNUAL REPORT***

***For the period June 1, 2025 to November 30, 2025***

Volume 2

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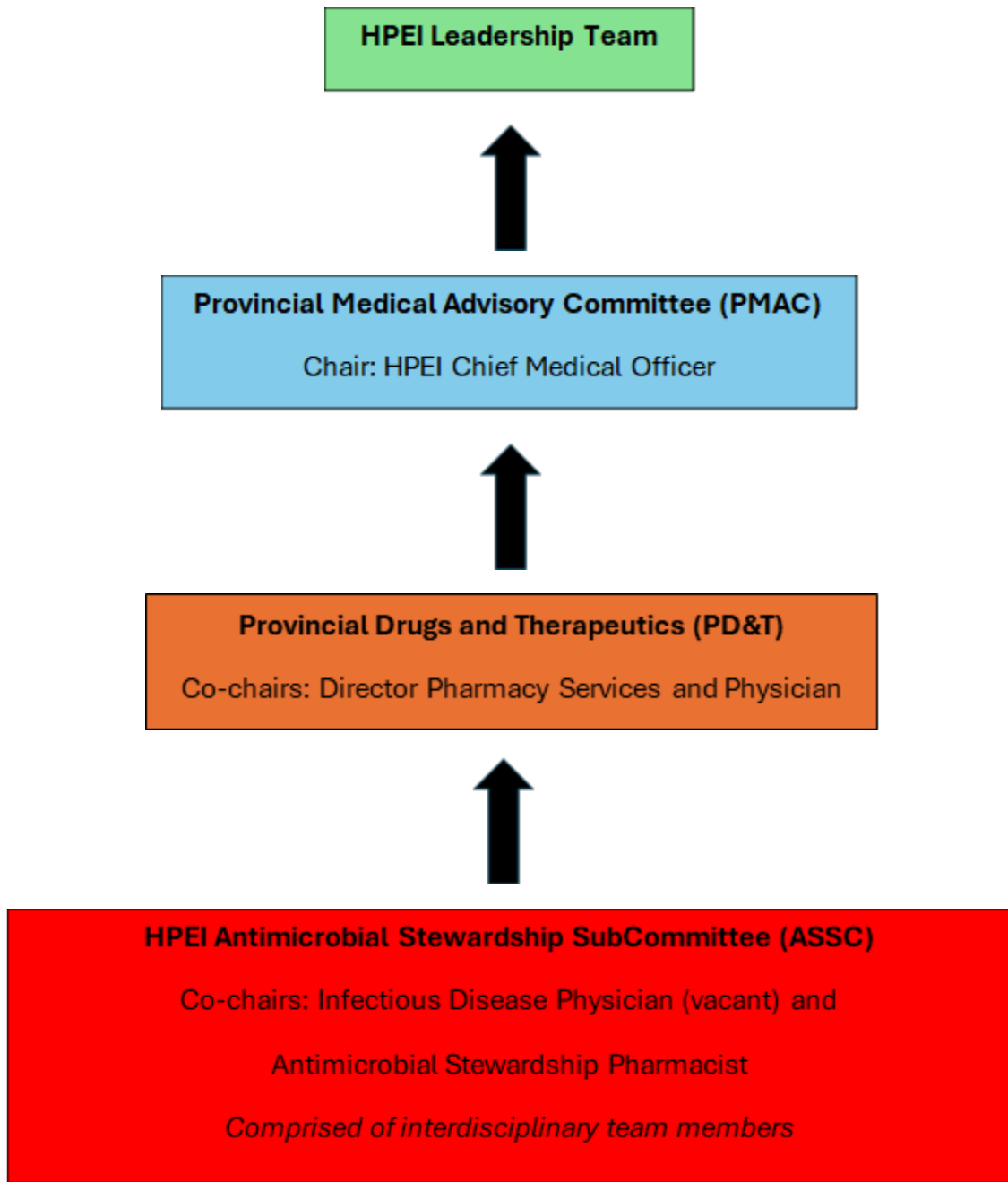
## HPEI Antimicrobial Stewardship Mission and Goals

**Mission:** The mission of Health PEI's Antimicrobial Stewardship (AMS) program is to promote the optimal use of antimicrobials on PEI by providing accessible, up-to-date, evidence-informed guidance for treating common infections and advocating for responsible antimicrobial practices to protect the health of future generations.

To support this mission, the HPEI Antimicrobial Stewardship Team will aim to:

1. Engage healthcare professionals from various disciplines (e.g., pharmacists, physicians, nurses, dentists) to work together in optimizing antimicrobial use to improve patient care.
2. Promote quality and safety of antimicrobial use through evidence-informed guidelines, prescribing tools, and stewardship programs.
3. Provide readily accessible, evidence-informed tools and guidance for all providers across Health PEI.
4. Embed evidence-informed guidance into computerized prescribing systems to leverage innovation and improve efficiency.

## HPEI AMS Reporting Structure



## Accreditation Canada and AMS

Antimicrobial stewardship is an activity that includes appropriate selection, dosing, route, and duration of antimicrobial therapy.

Accreditation Canada outlines 5 tests for compliance for the Accreditation Canada Antimicrobial Stewardship required organizational practice (ROP):

1. An antimicrobial stewardship program has been implemented.
2. The program specifies who is accountable for implementing the program.
3. The program is interdisciplinary, involving pharmacists, infectious diseases physicians, infection control specialists, physicians, microbiology staff, nursing staff, hospital administrators, and information system specialists, as available and appropriate.
4. The program includes interventions to optimize antimicrobial use, such as audit and feedback, a formulary of targeted antimicrobials and approved indications, education, antimicrobial order forms, guidelines and clinical pathways for antimicrobial utilization, strategies for streamlining or de-escalation of therapy, dose optimization, and parenteral to oral conversion of antimicrobials (where appropriate).
5. The program is evaluated on an ongoing basis, and results are shared with stakeholders in the organization.

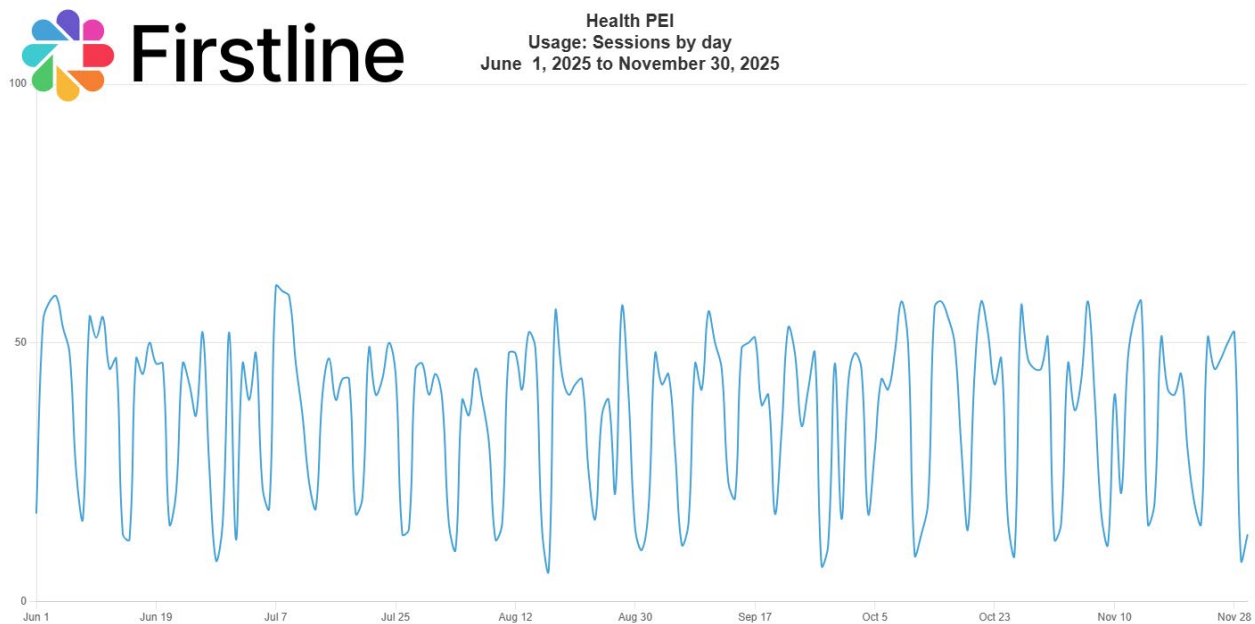
## AMS and the FIRSTLINE app

Since October 2020, HPEI has been actively promoting the use of FIRSTLINE as a tool to support evidence-informed clinical practice. With our small antimicrobial stewardship team, the Firstline app is an innovative solution for disseminating healthcare resources across PEI. We appreciate how it enables healthcare providers to effortlessly access antimicrobial guidelines, clinical pearls, and management strategies directly from their mobile devices.

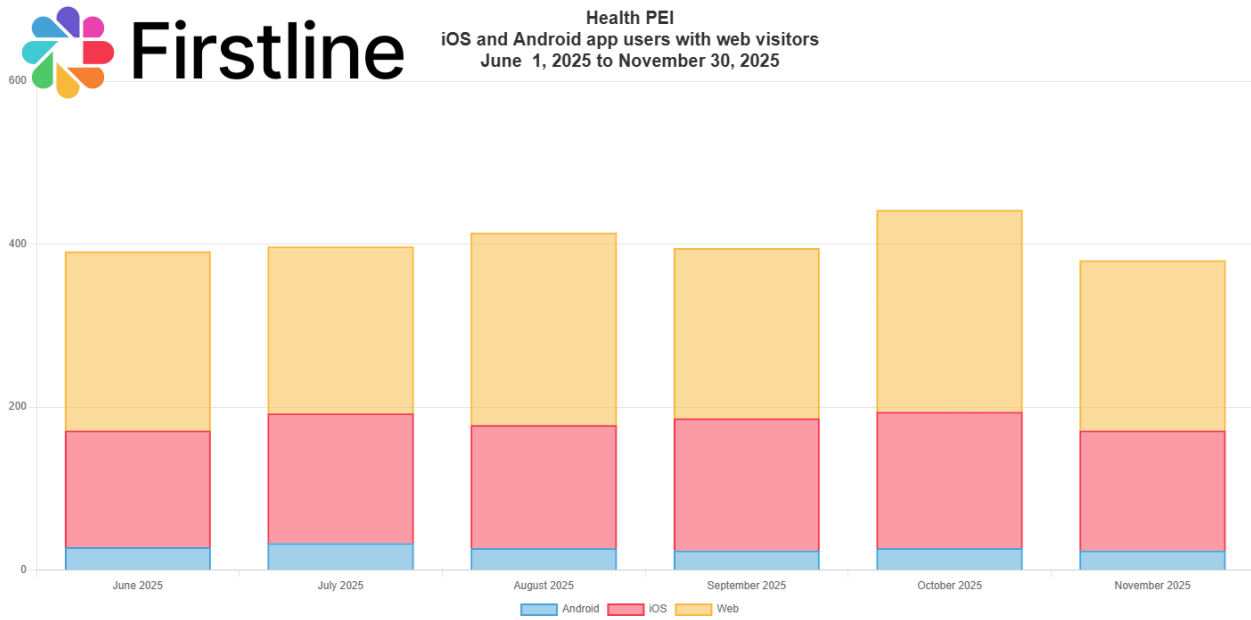
### Usage Data

#### *Sessions Per Day*

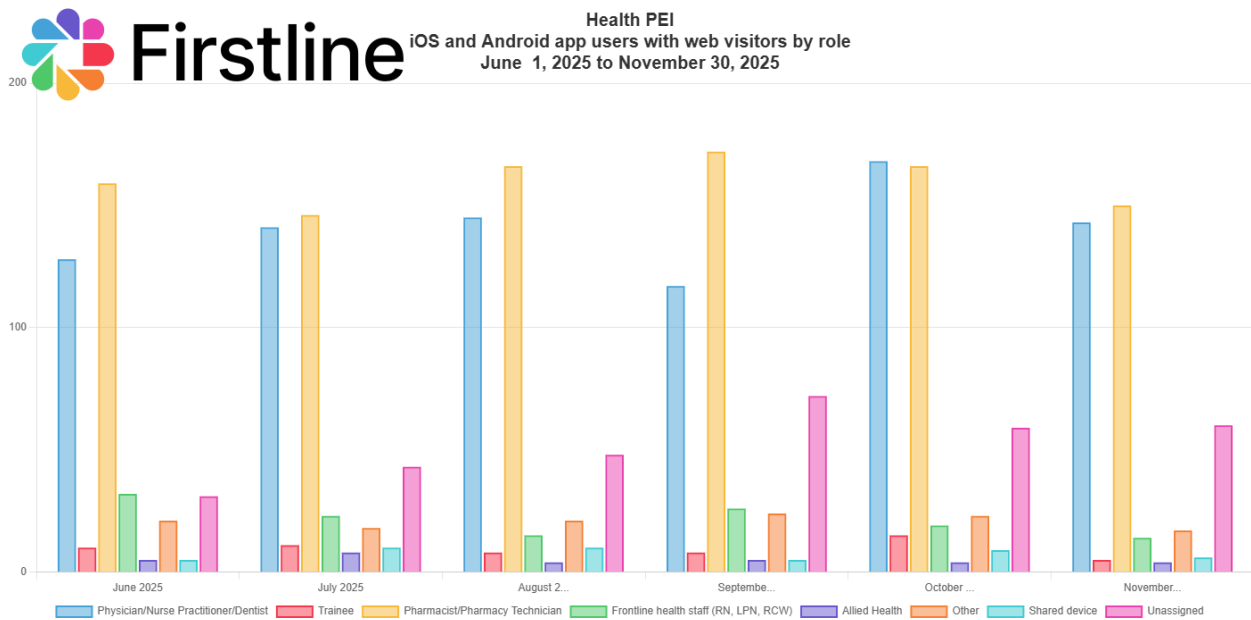
Peak 61 sessions per day on July 7, 2025 Average per day: 37



Monthly Users by iOS, Android and Web



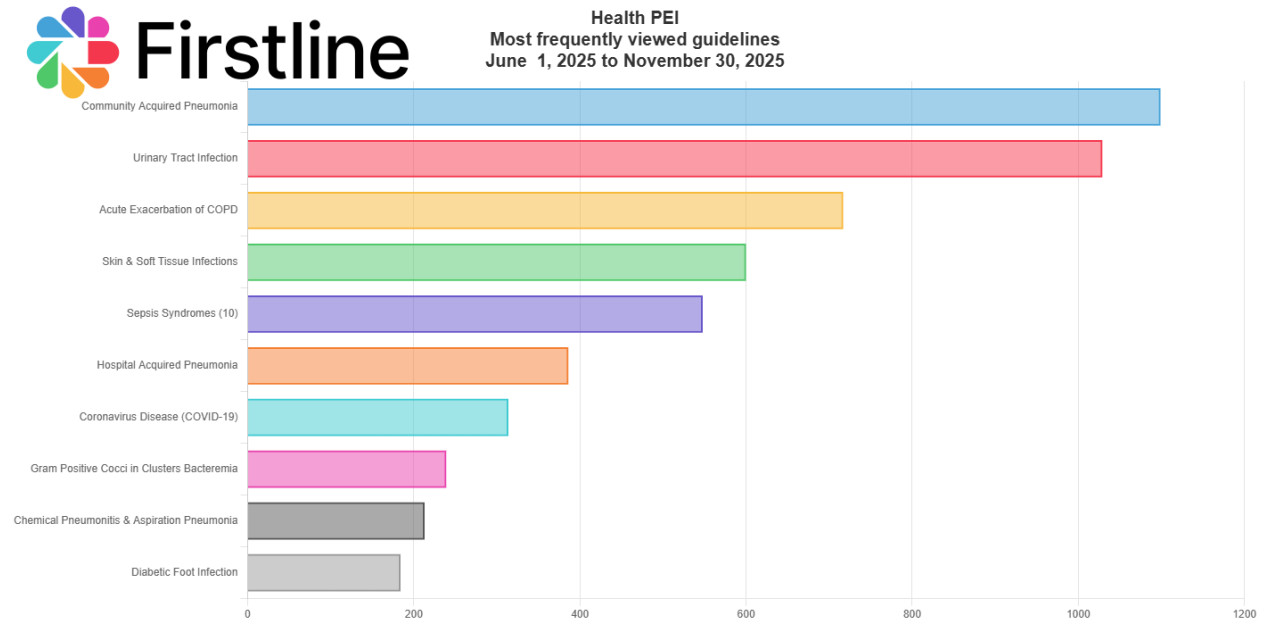
Monthly Users by Role (as defined by user)



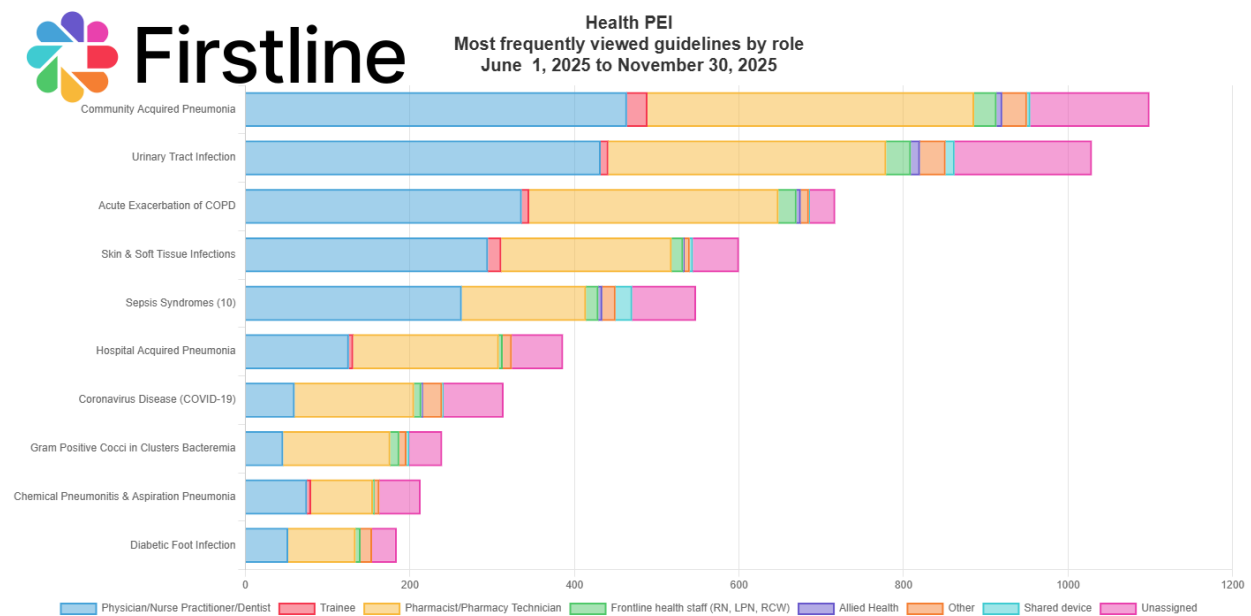
## Viewed Content

### Guidelines

The most frequently accessed guideline for this reporting period was *Community Acquired Pneumonia* with 1099 views, followed by *Urinary Tract Infection* (1029 views) and *Acute Exacerbation COPD* (717 views).

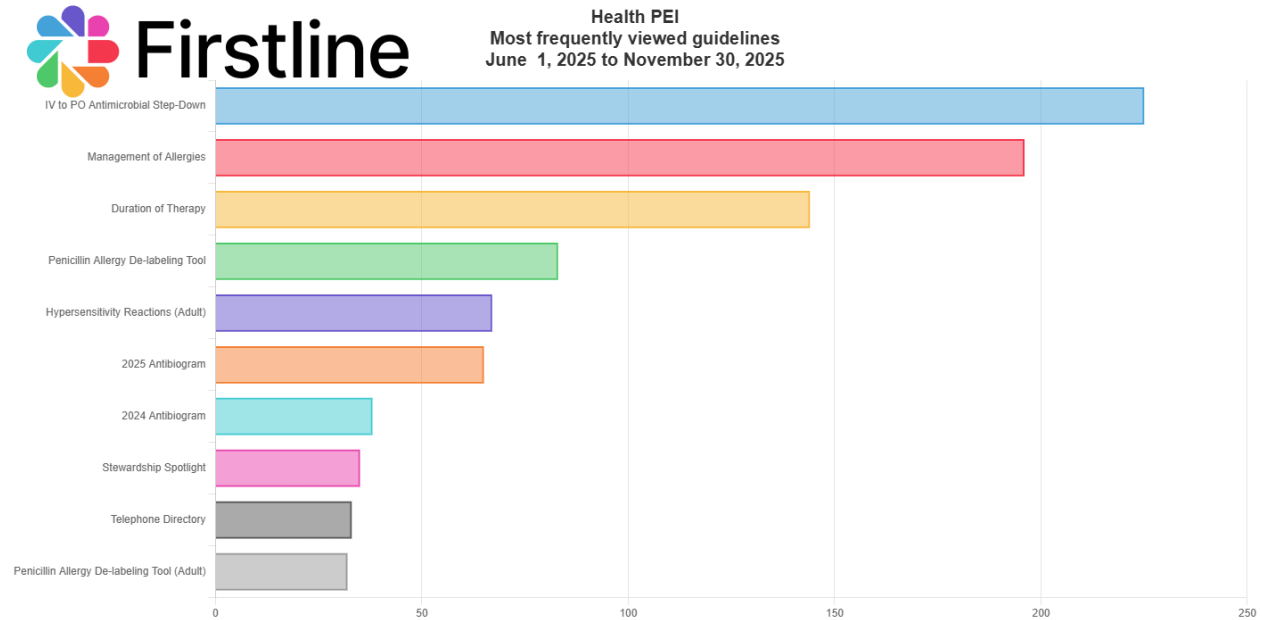


### Guideline access by role

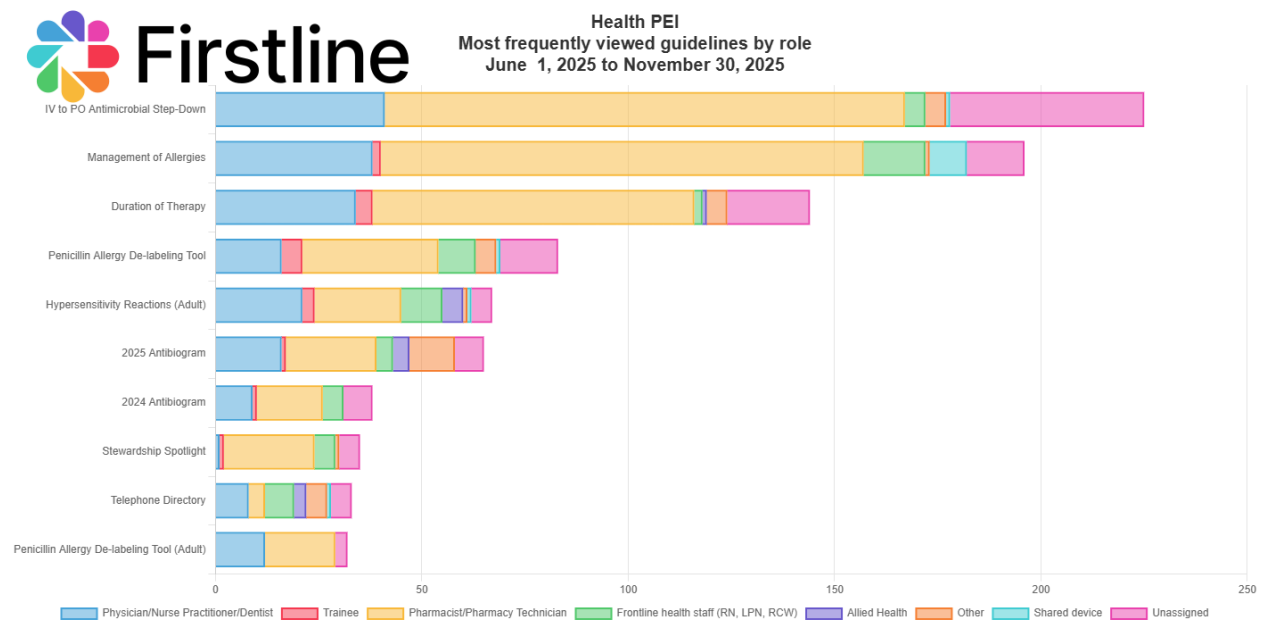


## Useful Tools

The most frequently accessed tool for this reporting period was *IV to PO Antimicrobial Step-down* with 225 views followed by *Management of Allergies* (196 views), and *Duration of Therapy* (144 views).

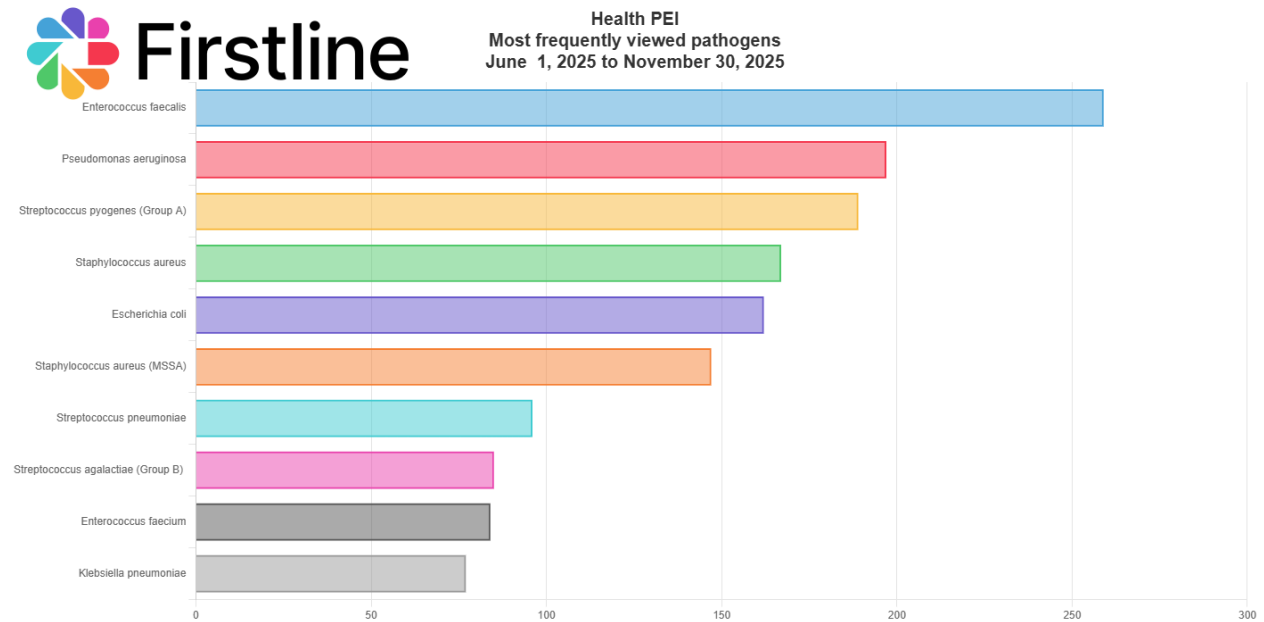


## Useful tool access by role

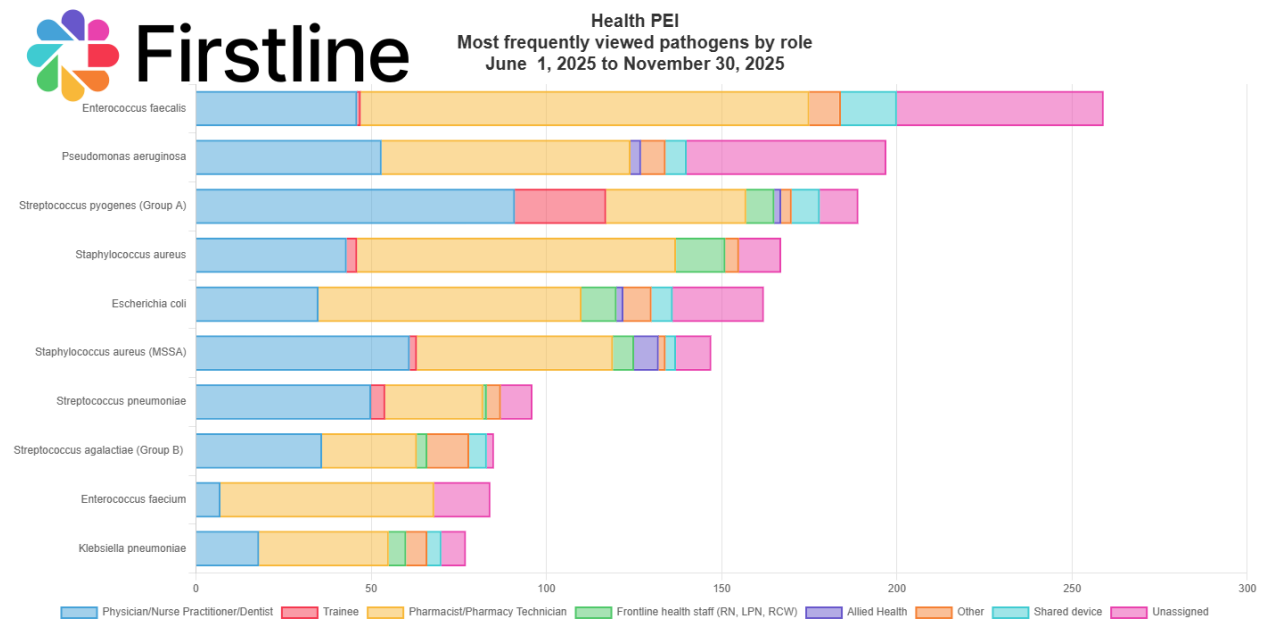


## Pathogens

The most frequently accessed pathogens for this reporting period were *Enterococcus faecalis* with 259 views followed by *Pseudomonas aeruginosa* (197 views), and *Streptococcus pyogenes (Group A)* (189 views).

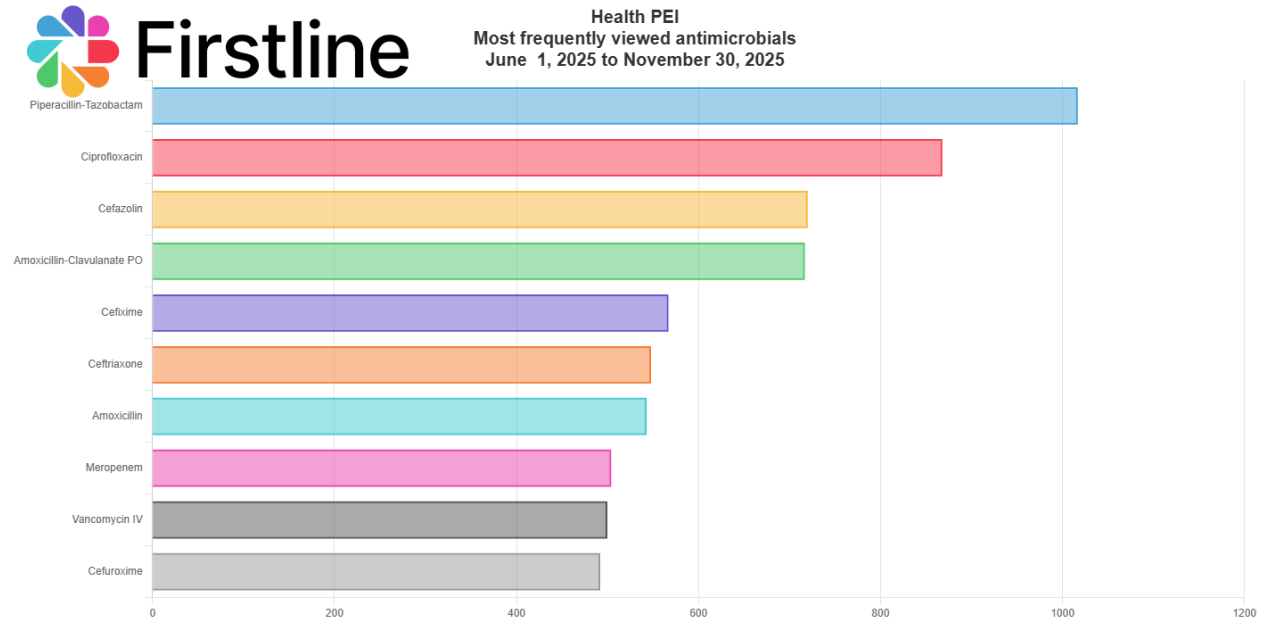


## Pathogen access by role

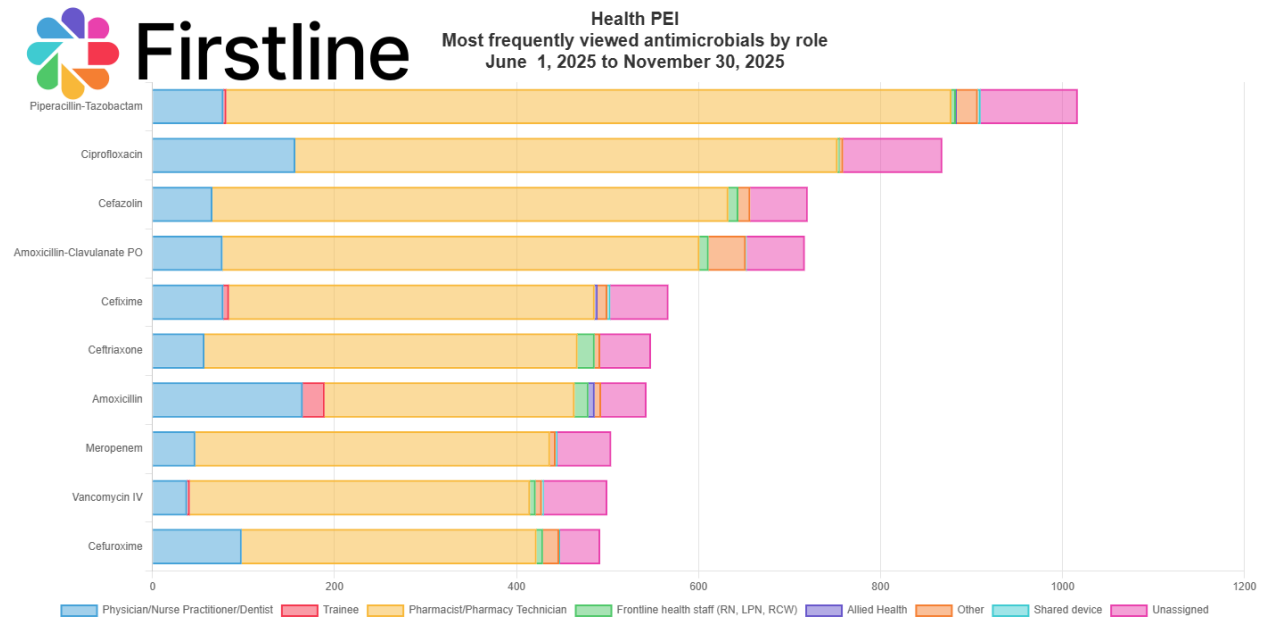


## Antimicrobials

The most frequently accessed antimicrobials for this reporting period were *Piperacillin-Tazobactam* with 1017 views followed by *Ciprofloxacin* (868 views), and *Cefazolin* (720 views).



## Antimicrobials by role



## Guideline Creation and Review

The HPEI Antimicrobial Stewardship team has **15 clinical guidelines** that are actively being used. The table below identifies when the guideline was last updated. Highlighted items were updated during this reporting period. During this reporting period, 2 new guidelines were created, and no updates were made to the existing 13 guidelines.

Guideline Name	Last updated
Seasonal Influenza	September 2025 (NEW)
Penicillin Allergy De-labeling Tool	July 2025 (NEW)
Acute Exacerbation of Chronic Obstructive Pulmonary Disease (COPD)	May 2025
Febrile Neutropenia	March 2025
Sepsis Syndromes	February 2014 to March 2025
Adult Chemical Pneumonitis and Aspiration Pneumonia	February 2025
Community Acquired Pneumonia	February 2025
Hospital Acquired Pneumonia	February 2025
COVID-19	June 2024
Diabetic Foot Infections	December 2023
Clostridioides (Clostridium) difficile Infection	July 2023
Skin and Soft Tissue Infections	February 2023
Lyme Disease Algorithm	February 2023
Urinary Tract Infection	October 2018
Gram Positive Cocci in Clusters Bacteremia	June 2016

## Top 10 Guidelines Accessed via Firstline

The following table reflects the top 10 guidelines accessed via Firstline for the period of June 1, 2025 to November 30, 2025, broken down by all users, physicians/nurse practitioners/dentists, and pharmacists.

	Guideline Name	Last updated	# times accessed during this period		
			All	MD/NP/DDS	PhC
1	Community Acquired Pneumonia	February 2025	1099	464	397
2	Urinary Tract Infection	October 2018	1029	432	338
3	Acute Exacerbation of Chronic Obstructive Pulmonary Disease (COPD)	May 2025	717	336	303
4	Skin & Soft Tissue Infections	February 2023	600	295	207
5	Sepsis Syndromes	February 2014 to March 2025	548	263	151
6	Hospital Acquired Pneumonia	February 2025	386	126	177
7	COVID-19	2022	314	60	145
8	Gram Positive Cocci in Clusters Bacteremia	June 2016	239	46	130
9	Adult Chemical Pneumonitis and Aspiration Pneumonia	February 2025	213	75	75
10	Diabetic Foot Infection	December 2023	184	52	82

## Firstline Antimicrobial Library Review

The Antimicrobial Stewardship team is responsible for updates to the antimicrobial library in Firstline. All content was initially reviewed for go live in 2020. Work is underway to review each antimicrobial and recommend updates where needed.

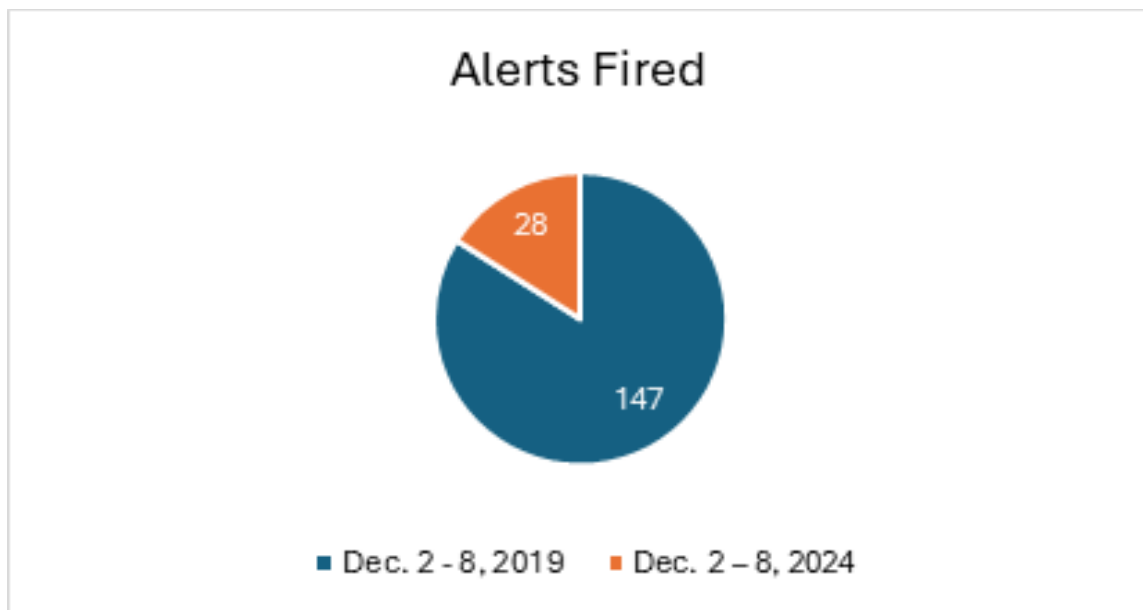
Antimicrobial	Summary	Date	New/Update
baricitinib	Formulary addition	December 2025	New
ceftazidime-avibactam	Formulary addition	December 2025	New
cetobiprole	Formulary addition	December 2025	New
meropenem-vaborbactam	Formulary addition	December 2025	New
ciprofloxacin	Added dosing for severe infections; pseudomonas infections	December 2025	Update
oseltamivir	Updated wording of HD dosing to match order sets	December 2025	Update
acyclovir	Updated dosing body weight recommendation: <ul style="list-style-type: none"> <li>Use <b>actual body weight</b> to calculate the dose</li> <li>If actual body weight is more than 125% ideal body weight (IBW), use <b>adjusted body weight</b> to calculate dose</li> </ul>	November 2025	Update
imipenem-cilastin	Updated note from "dose is sum of components" to "dosed on imipenem content"  Updated general spectrum of activity to include this note: Not reliably effective for <i>Proteus</i> spp., <i>Providencia</i> spp., or <i>Morganela morganii</i> , regardless of meropenem sensitivity report	November 2025	Update

## Beta-Lactam Allergy Alert Suppression Project

To reduce the number of alerts fired for clinicians and to guide appropriate antimicrobial prescribing, the decision was made at Health PEI to suppress the CIS alerts for specific allergy pairs based on the [Beta-Lactam Cross Allergy Matrix](#). This went live in 2020 and has had the following impact on number of allergy alerts fired:

Time Period (pre-suppression)	Alerts Fired	Time Period (post-suppression)	Alerts Fired	% Decrease in Alerts Fired
Dec. 2 - 8, 2019	147 alerts	Dec. 2 – 8, 2024	28 alerts	approx. 81%

Alerts fired the week of December 2 – 8, 2019 compared to December 2 – 8, 2024, resulting in approximately 81% reduction in alerts.

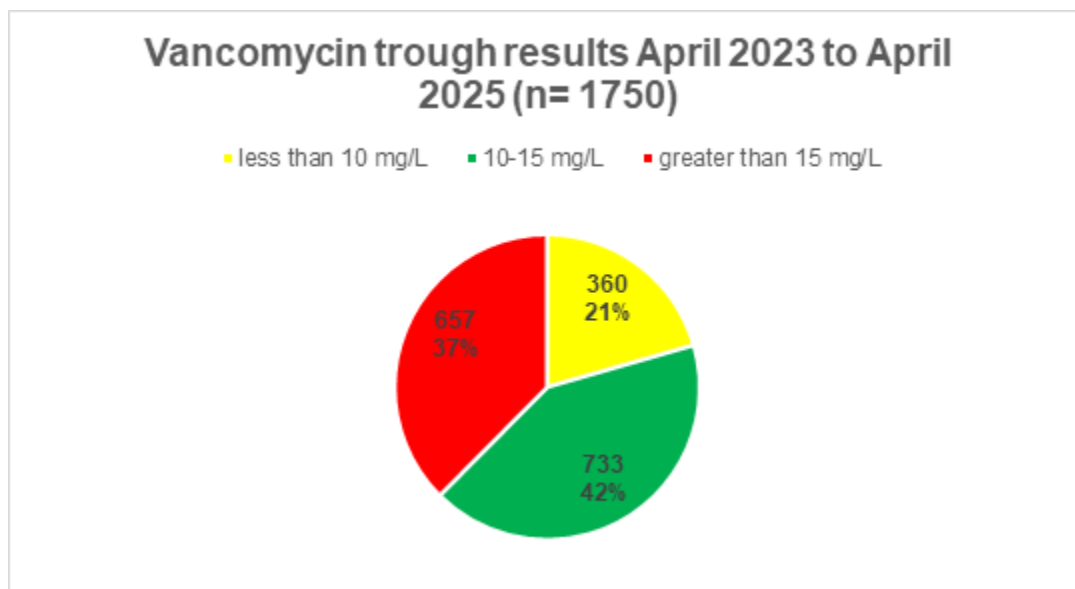


## Vancomycin Review

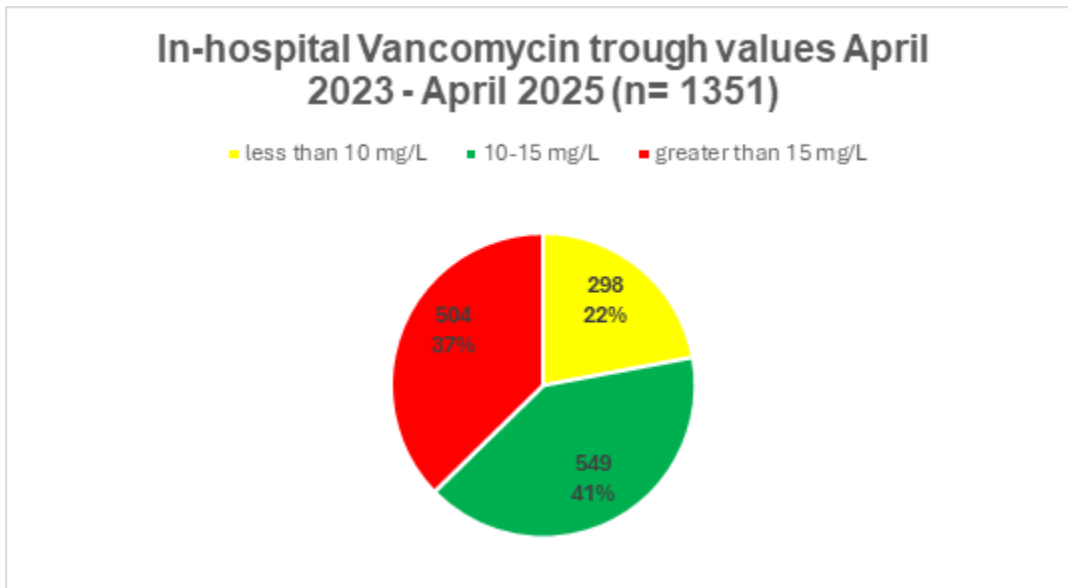
In June 2025, a review of Health PEI vancomycin trough levels was conducted as an initial step in a planned review of vancomycin dose and monitoring guidelines. Next steps include stakeholder input, education, and communication.

Over the past two years, vancomycin troughs have been outside the target range 58% of the time across all patient settings, and 59% of the time for in-hospital patients specifically. A more detailed analysis would be required to understand the clinical context behind these results.

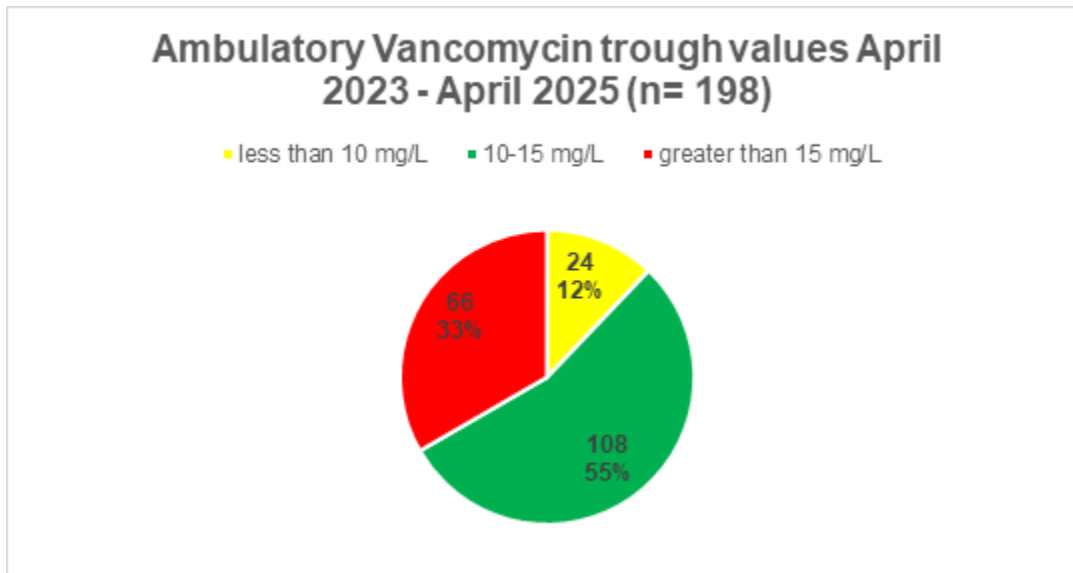
### *Vancomycin Trough Results*



*In-hospital Vancomycin Trough Results*

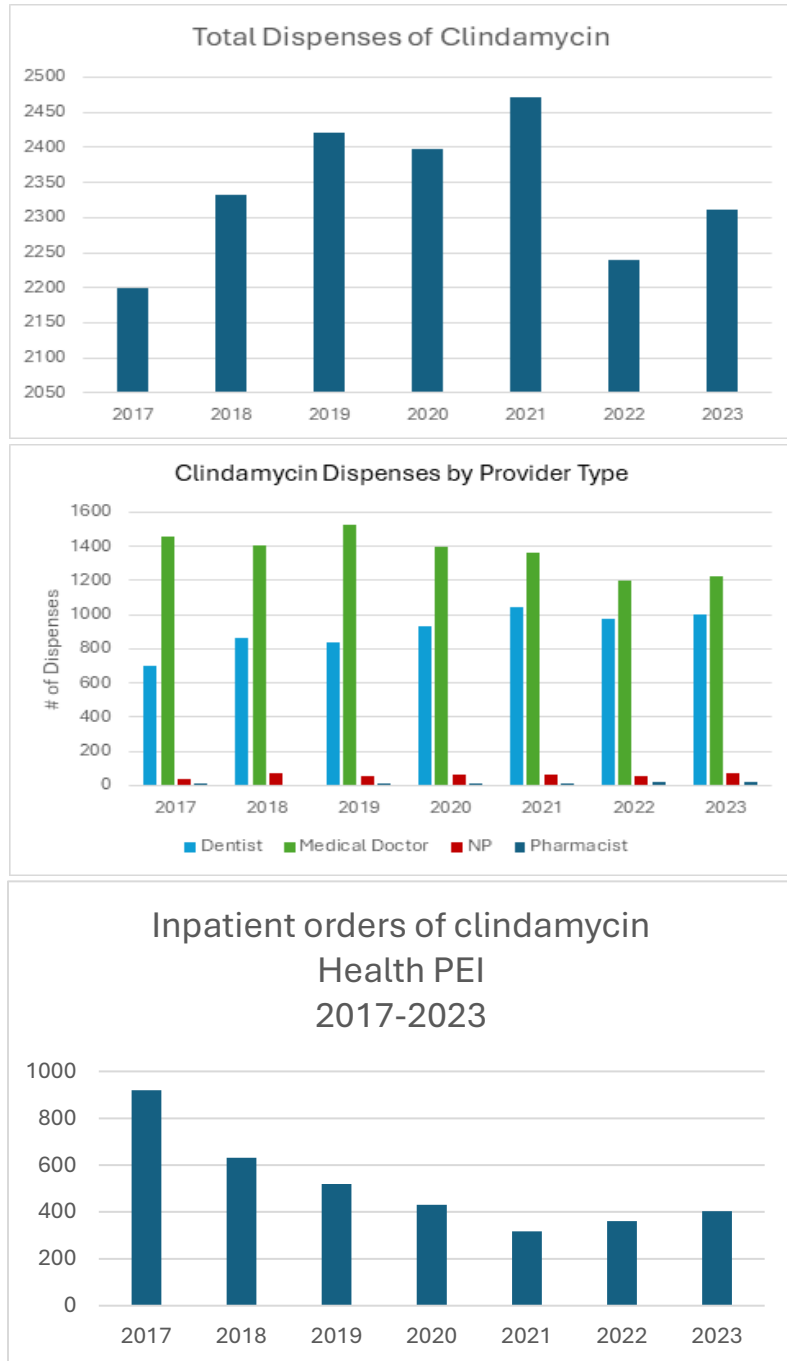


*Ambulatory Vancomycin Trough Results*



## Clindamycin Usage

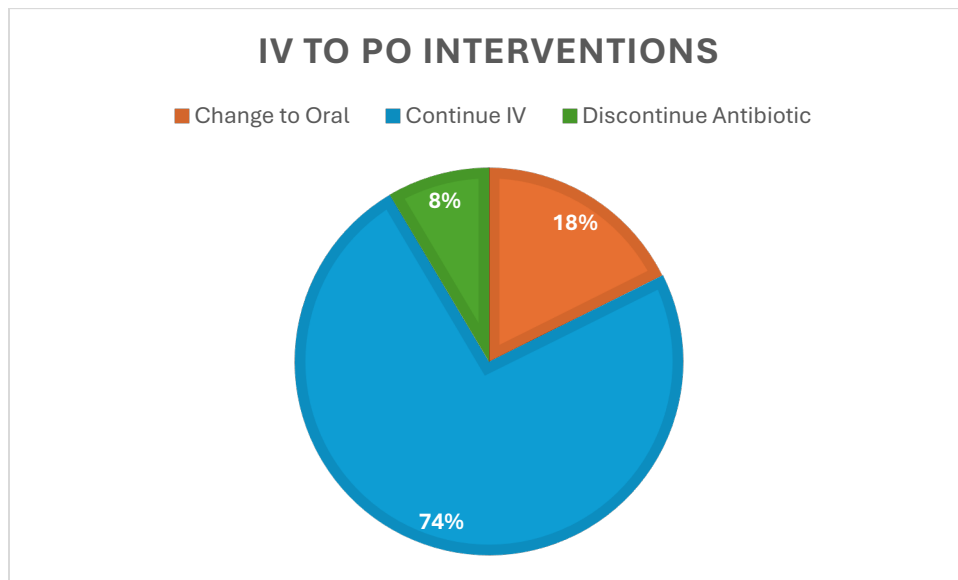
The best available evidence indicates that clindamycin is more strongly associated with the development of *Clostridium difficile* colitis than other antibiotic classes. The following graphic shows outpatient dispenses of clindamycin from community pharmacies on PEI.



## IV to PO Step Down

Health PEI’s IV to PO Antimicrobial Step-down Guidelines outline when it is safe to switch patients from intravenous to oral antibiotics. While all providers may consider step-down, pharmacists are notified electronically to reassess eligible antimicrobials within 72 hours of starting IV therapy.

From June to November 2025, pharmacists reviewed 152 patients for IV to PO antimicrobial step-down. Their recommendations are summarized below:



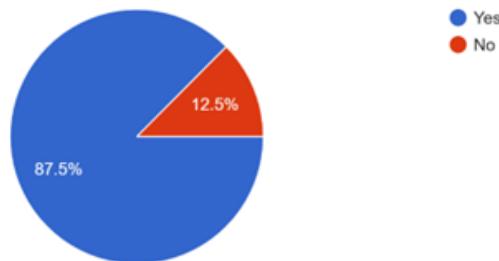
<b>Unmet Criteria</b>	<b>88</b>
	6
Patient cannot tolerate oral medications	11
Patient has been febrile in past 48 hrs	2
Patient is being treated for a condition where IV therapy is indicated	49
Patient is hemodynamically unstable	4
Patient is not improving clinically	3
Patient is showing evidence of malabsorption	7
Patient’s white blood cell count is not improving	6
<b>IV to PO Suggestion Accepted</b>	<b>35</b>
No	25
Yes	10

## First Line Survey Results

In June 2025, Health PEI conducted a Firstline User Experience Survey to assess staff awareness and utilization of key clinical support initiatives. The findings below summarize overall awareness of the Antimicrobial Stewardship (AMS) Program, as well as awareness levels by professional role and work location.

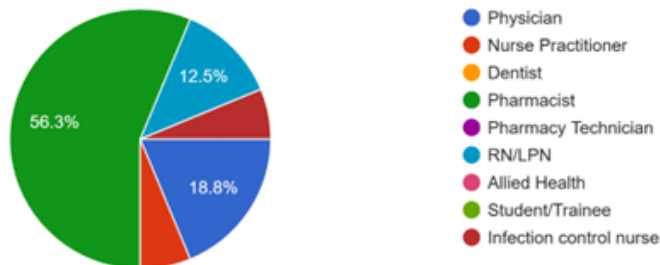
Were you aware that Health PEI has an Antimicrobial Stewardship Program?

16 responses



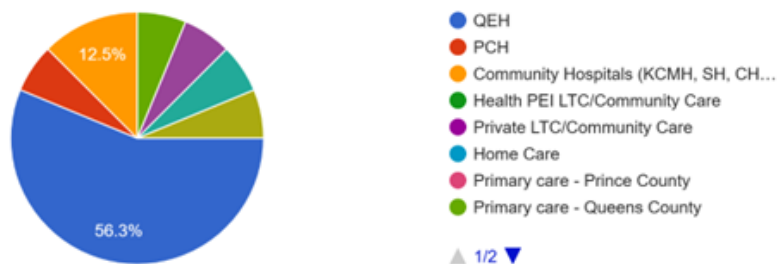
Role

16 responses



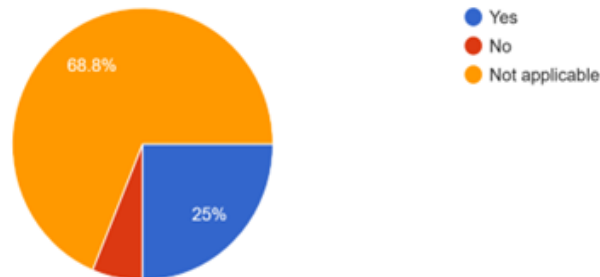
Location

16 responses



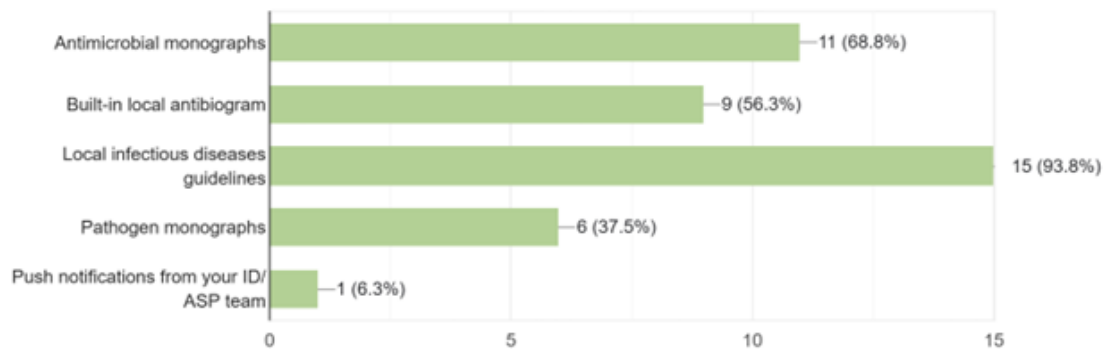
If you are a prescriber, would you be interested in viewing your personal antimicrobial prescribing data and comparing it with the data of your peers?

16 responses



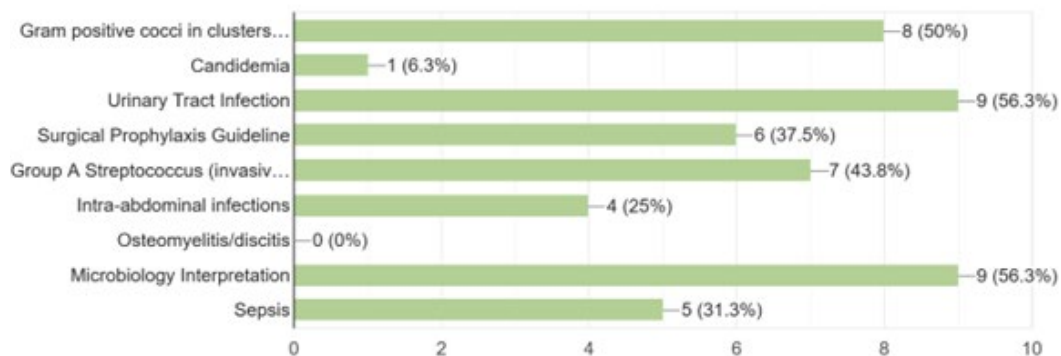
What do you like most about the Firstline App? (Check all that apply)

16 responses



We are working to update our current Adult Antimicrobial guidelines and create new ones. Please choose three (3) of the following guidelines that you feel are a priority to update or create:

16 responses



# Antimicrobial Stewardship Team Education and Communication

## 1. Stewardship Spotlights

As a means of improving communication, the AMS team has started to produce and circulate Stewardship Spotlights to highlight new or updated information that is pertinent to clinicians. The following Stewardship Spotlights have been circulated to date. Those highlighted were completed in the period of June 1, 2025 to November 30, 2025.

Topic	Date Circulated
Did you Know – Firstline App	June 2025
Acyclovir IV Dosing	November 2025

## 2. Continuing Education

Topic	Presenter	Audience	Date
Linezolid Drug Interactions	Fiona Mitchell	Pharmacists	June 2025
Respiratory Guideline Update	Fiona Mitchell	Pharmacists	October 2025

## 3. Other

Event	Date
Creation of new AMS page on the staff resource centre	July 2025

## Next Steps for the AMS Team

The AMS team has considerable work in progress to continue improving efforts to enhance antimicrobial stewardship.

- The Antimicrobial Stewardship Subcommittee now includes a dentist for the first time, and we plan on collaborating with dental prescribers on education related to antimicrobial use in dentistry, with a particular focus on alternatives for patients with reported penicillin allergies.
- Updating vancomycin dosing and monitoring guidelines.
- Continuing the review and optimization of antimicrobial content within Firstline.
- Updating the diabetic foot infection guideline to align with current best practices.
- Advocating for the addition of a physician co-lead with expertise in antimicrobials to support program leadership.

## Contact Us

**For questions about the content of this report or ongoing work of the AMS team, please contact:**

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**Email: [fcmitchell@ihis.org](mailto:fcmitchell@ihis.org)**