

## Antimicrobial Stewardship Profile: Michael Garron Hospital



**Michael Garron Hospital is a large, urban full-service community hospital with 400 acute care beds**

Michael Garron Hospital offers a broad range of programs and services, organized into several health service areas including:

- Ambulatory and Community Services
- Complex Continuing Care and Rehabilitation
- Diagnostic Imaging
- Emergency
- Laboratory Medicine
- Maternal/Newborn/Child
- Medicine
- Mental Health
- Surgery



**Champions** (L-R): Tonya Campbell, Data Analyst; Grace Ho, ASP Pharmacist; Kelly Walker, ICU ASP Pharmacist; Jackie Litynski, ICU ASP Pharmacist; Sue Gill, ASP Pharmacist; Dr. McCready, Assistant Director, ASP; Dr. Powis, Director, ASP.

### Why an Antimicrobial Stewardship Program (ASP)?

The antimicrobial stewardship program at Michael Garron Hospital began in April 2010 in the intensive care unit (ICU) to help fight an increase in *Clostridium difficile* cases. After a successful three-month pilot, the corporate executive team approved physician and pharmacist resources and made plans for expansion throughout the hospital.

Careful review of antimicrobial use patterns for the various hospital areas guided the implementation and expansion of the ASP. The program engaged physicians and front-line staff in each expansion by using prospective audit and feedback and developing communication strategies for each area; these initiatives drove the successful uptake of the program hospital-wide.

### A culture of communication

The ASP team implemented a number of effective communication strategies for clinical recommendations and the dissemination of information about the program to both staff and patients. Antimicrobial stewardship rounding notes appear in each patient's electronic health record and include valuable patient information and a rationale for ASP suggestions to clinicians. Electronic alerts have also been created, notifying prescribers to issues such as the concurrent risk of prescribing antimicrobials for a patient with *C. difficile* infection (CDI), and the potential increased risk of CDI when using antimicrobials and proton pump inhibitors together. As well, the ASP team conducts an annual review and update of the hospital's antimicrobial handbook; this handbook is available electronically to all staff and was recently made available for download on mobile devices.

The ASP quarterly report contains an extensive review of all success and harm metrics and includes a scorecard summary of results. A postcard highlighting the program and the importance of appropriate antibiotic use is provided to patients and their caregivers.

Prospective audit and feedback rounds have changed the antimicrobial prescribing culture at Michael Garron Hospital; ongoing education and expansion of the ASP to all adult acute care areas has helped maintain this change. The success of the ASP in acute care has also paved the way for its recent expansion to chronic and palliative care areas, where the team will gain experience with these patients and prescribers.

## Successes

- Significant decrease in the total antimicrobial days of therapy (DOT) and hospital-acquired CDI rates
- Awarded Accreditation Canada Lead Practice for the Antimicrobial Stewardship Required Organizational Practice (ROP)
- Serves as a training centre, mentoring and assisting in the development of other successful ASPs

## Challenges

Ensuring funding for the program from the corporate executive team was an initial concern. A successful ICU pilot program demonstrated the fiscal benefits for sustainability and secured funding for expansion of the program.

## Horizon

- Institution of extended beta-lactam infusions in the ICU
- Implement processes to reduce urine culture collection rates utilizing front-line ownership strategies
- Explore opportunities with local nursing homes to investigate improving antimicrobial use at these facilities

## Michael Garron Hospital ASP tools and resources

The following resources have been made available by Michael Garron Hospital and are examples of tools and resources that support its/an antimicrobial stewardship program:

1. Excerpts from [Michael Garron Hospital Antimicrobial Stewardship Committee Report, including ASP Scorecard and Balanced Scorecard Glossary of Terms](#)
2. [Michael Garron Hospital ASP Patient Information Card](#)

The materials and information in this section are not owned by Public Health Ontario. Neither PHO nor Michael Garron Hospital shall be responsible for the subsequent use of any tools and resources by any third party.

---

## Disclaimer

This document may be freely used without permission for non-commercial purposes only and provided that appropriate credit is given to Public Health Ontario. No changes and/or modifications may be made to the content without explicit written permission from Public Health Ontario.

## Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Antimicrobial Stewardship Hospital Profile: Michael Garron Hospital. Toronto, ON: Queen's Printer for Ontario; 2015.

©Queen's Printer for Ontario, 2015

## For further information

Antimicrobial Stewardship Program, Infection Prevention and Control, Public Health Ontario.

Email: [asp@oahpp.ca](mailto:asp@oahpp.ca)

Public Health Ontario acknowledges the financial support of the Ontario Government.



## Resource 1: Excerpts from Michael Garron Hospital Antimicrobial Stewardship Committee Report



TORONTO EAST  
GENERAL HOSPITAL

**Antibiotic Stewardship Program**  
*"The right drug for the right bug at the right time"*

August 7, 2014

### **Antimicrobial Stewardship Committee Report Q1 2014 (April 1, 2014-June 30, 2014)**

**Prepared by: The Antimicrobial Stewardship Committee**

---

The TEGH ASP continues to demonstrate sustainable success in the optimization of antimicrobial use. As we accumulate more data we can clearly see the impact on patient safety that is realized by our nationally recognized ASP. Mortality rates on wards with high populations of patients with complex infections such as ICU and A3/B3 have been significantly decreased. Our hospital-acquired *Clostridium difficile* Infection (HACDI) rates have are at historic lows having decreased by over 50% compared to our baseline.

The ASP also continues to mature and innovate. We are improving the "smart" administration of antimicrobials through extended infusions of antimicrobials in our sickest patients as well as through implementation of several quality improvement projects aimed at maximizing microbiology testing. New ASP techniques are being developed as the team explores how best to optimize antimicrobial in areas where traditional models of ASP will not work, such as the Emergency Department (ED) and long term care.

#### **Disclaimer**

This resource was created by Michael Garron Hospital. PHO is not the owner of this content and does not take responsibility for the information provided within this document. Neither PHO nor Michael Garron Hospital shall be responsible for the subsequent use of any tools and resources by any third party.

## Resource 1A: Michael Garron Hospital ASP scorecard



### Antibiotic Stewardship Program "The right drug for the right bug at the right time"

August 7, 2014

#### TEGH ASP Scorecard

Clinical area	Indicator	Baseline <sup>1</sup>	Previous Quarter	Current Quarter	Trend	Goal	Current Value (Fiscal YTD)
TEGH	Total antimicrobial use (DOT)	60.60/100 patient days	43.25	45.45	↑	48.48	45.45
	High risk antimicrobial use	24.16/100 patient days	17.39	16.72	↔	19.33	16.72
	Total antimicrobial cost	\$7.95/patient day	\$3.65	\$3.62	↔	\$5.57	\$3.62
ICU	Total antimicrobial use (DOT)	58.22/100 patient days	65.80	61.56	↓	46.58	61.56
	MRSA antimicrobial use (DOT)	9.14/100 patient days	9.95	4.95	↓	7.31	4.95
	Anti-pseudomonal antimicrobial use (DOT)	41.75/100 patient days	29.68	31.41	↑	33.40	31.41
	Total antimicrobial cost	\$39.60/patient day	\$11.39	\$13.50	↑	\$27.72	\$13.50
H7	Total antimicrobial use (DOT)	84.67/100 patient days	59.05	53.77	↓	67.74	53.77
	Total antimicrobial cost	\$9.34/patient day	\$3.38	\$3.22	↔	\$6.54	\$3.22
A5/B5	Total antimicrobial use (DOT)	38.22/100 patient days	28.59	23.65	↓	30.58	23.65
	Total antimicrobial cost	\$5.63/patient day	\$3.52	\$3.67	↔	\$3.94	\$3.67
B2	Total antimicrobial use (DOT)	37.41/100 patient days	17.34	25.82	↑	29.93	25.82
	Total antimicrobial cost	\$4.57/patient day	\$4.27	\$2.52	↓	\$3.20	\$2.52

#### Disclaimer

This resource was created by Michael Garron Hospital. PHO is not the owner of this content and does not take responsibility for the information provided within this document. Neither PHO nor Michael Garron Hospital shall be responsible for the subsequent use of any tools and resources by any third party.

## Resource 1A: Michael Garron Hospital ASP scorecard (continued)



**TORONTO EAST  
GENERAL HOSPITAL**

**Antibiotic Stewardship Program**  
"The right drug for the right bug at the right time"

August 7, 2014

ACC/CCU	Total antimicrobial use (DOT)	28.17/100 patient days	13.94	15.22	↑	22.54	15.22
	Total antimicrobial cost	\$2.66/patient day	\$0.83	\$1.83	↑	\$1.86	\$1.83
A3/B3	Total antimicrobial use (DOT)	32.95/100 patient days	16.56	17.22	↔	26.36	17.22
	Total antimicrobial cost	\$3.66/patient day	\$2.77	\$2.61	↓	\$2.56	\$2.61
MSSU	Total antimicrobial use (DOT)	47.04/100 patient days	35.33	37.93	↑	37.63	37.93
	Total antimicrobial cost	\$5.67/patient day	\$3.08	\$3.22	↔	\$3.97	\$3.22
F3	Total antimicrobial use (DOT)	4.87/100 patient days	2.54	2.32	↓	3.90	2.32
	Total antimicrobial cost	\$0.21/patient day	\$0.07	\$0.13	↑	0.15	\$0.13
Emergency	Total antimicrobial use (DDD)	5.80/ER visit	6.58	3.61	↓	4.64	3.61
	Total antimicrobial cost	\$0.61/ER Visit	\$0.74	\$0.43	↓	\$0.43	\$0.43

<sup>1</sup> With the exception of the ICU, and B2 (oncology/nephrology ward), baseline values for antimicrobial use and costs were calculated based on data from one year prior to ASP implementation in each unit. Baseline values for the ICU, and oncology/nephrology wards were calculated based on 1, and 3 quarters of data, respectively.

<sup>1</sup> With the exception of the ICU, and B2 (oncology/nephrology ward), baseline values for antimicrobial use and costs were calculated based on data from one year prior to ASP implementation in each unit. Baseline values for the ICU, and oncology/nephrology wards were calculated based on 1, and 3 quarters of data, respectively.

### Disclaimer

This resource was created by Michael Garron Hospital. PHO is not the owner of this content and does not take responsibility for the information provided within this document. Neither PHO nor Michael Garron Hospital shall be responsible for the subsequent use of any tools and resources by any third party.







## Resource 1B: Michael Garron Hospital Board Balanced Scorecard Glossary of Terms



### Antibiotic Stewardship Program *"The right drug for the right bug at the right time"*

August 7, 2014

#### TEGH Board Balanced Scorecard Glossary of Terms

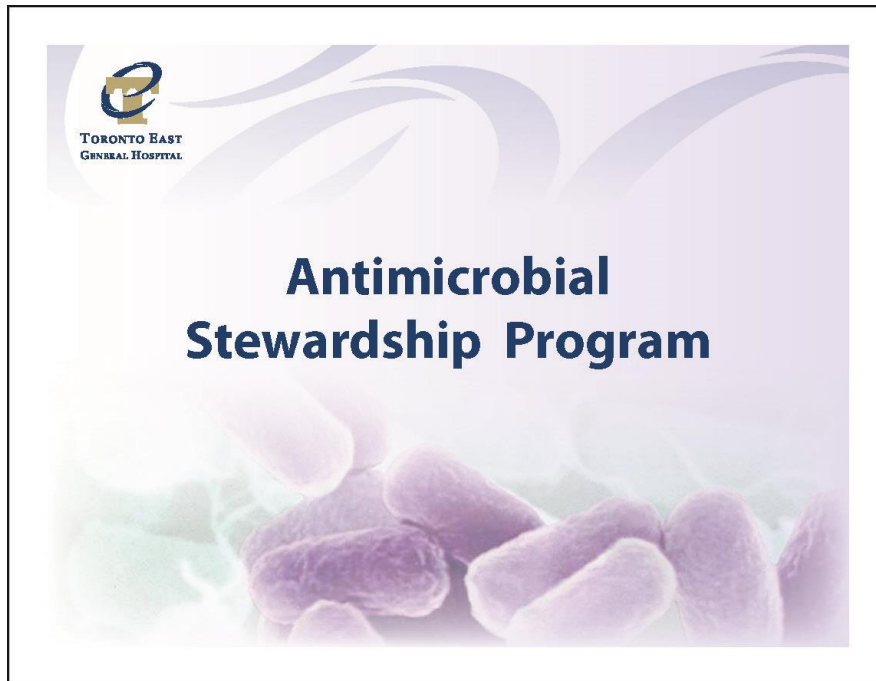
Baseline Value	The Baseline Value was determined from the one year retrospective data from the ward prior to ASP implementation
Current Value	The Current Value is the current fiscal year-to-date value calculated for the indicator. The reporting period is communicated on the top right corner of the summary sheets.
Performance Goal/ Benchmark	2013/2014 Performance Goal - This is the goal for each indicator. Antimicrobial utilization goals are to reduce by 20% from baseline. Antimicrobial cost goals are to decrease by 30% compared to baseline.
Trend	<p>The trend is the direction of change in current antimicrobial usage or costs relative to the previous quarter's values.</p> <p>  Antimicrobial use/cost has increased 5% above the previous quarters' values.   Antimicrobial use/cost has decreased 5% below the previous quarters' values.   Antimicrobial use/cost has remained within 5% of the previous quarters' values.                 </p>
Current Status	<p>  Red indicates that antimicrobial use/cost has not met the performance goal for the current reporting period and has not improved by 5% compared to the previous quarter's values.   Yellow indicates that antimicrobial use/cost has not met the performance goal for the current reporting period, but has improved by 5% compared to the previous quarter's values.   Green indicates that antimicrobial use/cost has met or exceeded the performance goal or has had a statistically significant improvement from baseline values.                 </p>

#### Disclaimer

This resource was created by Michael Garron Hospital. PHO is not the owner of this content and does not take responsibility for the information provided within this document. Neither PHO nor Michael Garron Hospital shall be responsible for the subsequent use of any tools and resources by any third party.



## Resource 2: Michael Garron Hospital ASP Patient Information Card



### **The Antimicrobial Stewardship Program (ASP)**

A team of infectious disease doctors and pharmacists who work closely with your healthcare team to minimize risks and ensure optimal antibiotic use.

#### **We ensure you:**

- Receive the right antibiotics for your infection.
- Receive antibiotics for the appropriate amount of time.
- Do not receive unnecessary antibiotics.

#### **Risks of antibiotic use:**

- ***Clostridium difficile* (C. difficile)** is a bacteria that can cause a bowel infection, resulting in severe diarrhea. Exposure to any antibiotic can increase the risk of developing this infection.
- **Antibiotic resistance** occurs when a bacteria mutates so that an antibiotic is no longer effective against it. This usually occurs when antibiotics are used improperly or for long periods of time. This may limit the choices of antibiotics available for future infections.

#### **Questions? Feel free to ask us!**

Toronto East General Hospital • 825 Coxwell Ave., Toronto, ON, M4C 3E7  
416-469-6580 ext. 6587 • [www.tegh.on.ca](http://www.tegh.on.ca)

#### **Disclaimer**

This resource was created by Michael Garron Hospital. PHO is not the owner of this content and does not take responsibility for the information provided within this document. Neither PHO nor Michael Garron Hospital shall be responsible for the subsequent use of any tools and resources by any third party.