

GeMQIN: Improving General Medicine Care in Ontario

Why Focus on General Medicine?

General medicine patients account for:

- **40%** of all emergency department admissions¹
- **25%** of all hospital bed-days¹

There was a **56% increase** in admissions to general medicine between 2010 and 2017.²

Improving Care for General Medicine Patients in Ontario

A [GEMINI](#) study³ was the first to identify large variations in clinical care and patient outcomes, leading to the development of the **General Medicine Quality Improvement Network (GeMQIN)**.

GeMQIN supports improved patient care by:

1. Providing reliable data

- [MyPractice Reports](#) sent to 700 physicians
- [OurPractice Reports](#) sent to 18 hospital organizations
- Informing 65 [publications](#) and 22 funded research projects

2. Supporting a community of practice

- Peer learning
- Evidence-based best practices
- Quality improvement expertise

3. Spreading and sustaining the program

- Expanded from 5 to 22 organizations
- 60% of general medicine patients in Ontario benefit from GeMQIN

Rapid Knowledge Translation



During the pandemic, **80% of hospitalized COVID-19 patients were cared for by general medicine physicians**.⁴ GeMQIN pivoted to facilitate knowledge exchange and apply learnings across Ontario, becoming a major focal point for rapid knowledge translation to the hospital sector.

Alignment With Health System Priorities

GeMQIN quality indicators align with provincial priorities to maximize improvements in patient care:

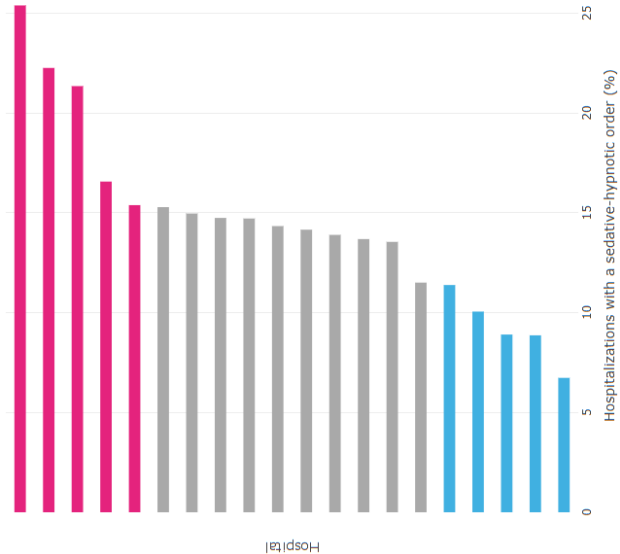
| Access and Flow | Patient Safety | Efficiency and Sustainability |
|---|------------------------------------|-------------------------------|
| 7- and 30-day readmission ^{*,†} | Blood transfusions | Blood transfusions |
| Length of stay [†] | In-hospital mortality [†] | Imaging |
| Alternate level of care (ALC) days ^{*,†} | Sedative-hypnotic prescribing | Routine bloodwork |

^{*}Ministry of Health Priority Area for 2023–2024.

[†]GeMQIN hospitals outperformed non-GeMQIN hospitals.

Provincial Delirium Campaign

75% of GeMQIN organizations are participating in the Delirium Aware Safer Healthcare ([DASH](#)) campaign to reduce the use of sedative-hypnotics. If all GeMQIN hospitals achieve reductions similar to the top performers, the use of these harmful prescriptions will be **reduced in 12,000 patients per year**.

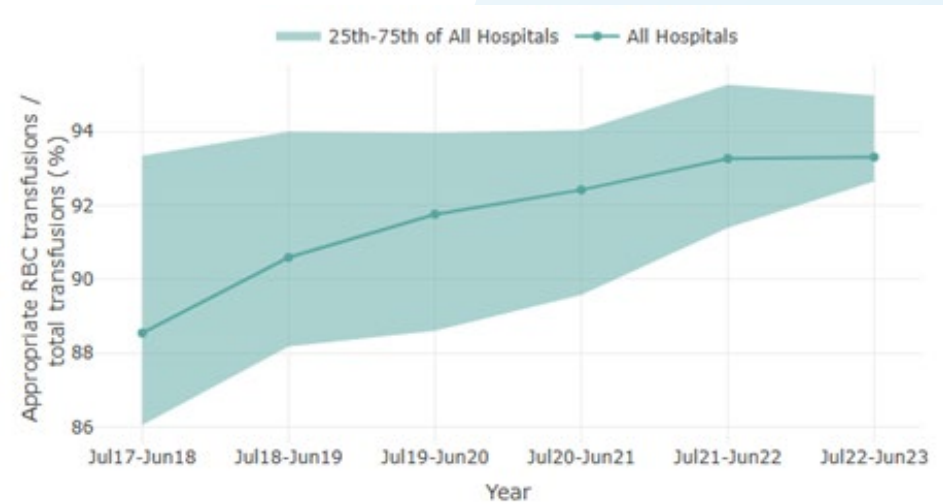


Room for Improvement: There is large variation between hospitals for prescribing sedative medications for sleep (range: 6.7%–25.4%).

Since the launch of the DASH campaign, membership on GeMQIN [Quorum](#) has increased by **150%**. Quorum is GeMQIN’s online forum for members to access resources and connect with colleagues.

Early Data Trends

The use of appropriate blood transfusions increased from **88.5% to 93.3%**, ensuring that patients are receiving the right product and amount, which leads to improved care and efficient use of resources.



GeMQIN’s 4.8% improvement in appropriate transfusions saves **11,554 kg CO₂eq per year**,⁵ equivalent to the emissions from driving 47,351 km in a gas-powered car (more than the distance around the world).⁶

Spotlight: Halton Healthcare



Halton Healthcare learned about the “COVID at Home” program from other GeMQIN hospitals and implemented this early-discharge program (supported by nursing and home oxygen), allowing them to discharge patients home **3 days earlier** on average, **saving ~1,000 hospital bed-days**. This translated into a positive impact on the environment, preventing greenhouse gas emissions equivalent to driving 94,260 km (~2.3 times around the world) in a gas-powered vehicle.

References:

- (1) Verma AA, et al. [Patient characteristics, resource use and outcomes associated with general internal medicine hospital care: the General Medicine Inpatient Initiative \(GEMINI\) retrospective cohort study](#). *CMAJ Open*. 2017;5(4):E842-9.
- (2) Ontario Ministry of Health. [Hallway health care: a system under strain](#). 2019 Jan.
- (3) Verma AA, et al. [Physician-level variation in clinical outcomes and resource use in inpatient general internal medicine: an observational study](#). *BMJ Qual Saf*. 2021;30(2):123-32.
- (4) Razak F, Verma AA. [COVID-19 has reinforced Canada’s need to strengthen generalist models of hospital care](#). *Toronto Star*. 2021 Mar 29.
- (5) Hibbs SP, et al. [What is the environmental impact of a blood transfusion? A life cycle assessment of transfusion services across England](#). *Transfusion*. 2024;64(4):638-45.
- (6) United States Environmental Protection Agency. [Greenhouse Gas Equivalencies Calculator](#). Accessed 18 Dec 2024.