

## **How do hospitalists perceive the effectiveness of various quality improvement strategies? Results from the British Columbia Hospitalist QI survey**

Alaleh Asghari-Roodsari, MD, MSc

Vandad Yousefi, MD, CCFP, FHM

Sarah Evans PhD (candidate), CCR, CEC, PCC

Cynthia Chan, MD, CCFP, FCFP

Corresponding Author:

Dr. Vandad Yousefi, MD, CCFP, FHM

Hospitalist Program

Room 3500, Third Floor Jim Pattison Pavilion North

Vancouver General Hospital

899 W 12th Ave, Vancouver, BC V5Z 1M9

[vandadyousefi@gmail.com](mailto:vandadyousefi@gmail.com)

Telephone: 604-822-7121

Fax: 604-875-5755

### **Introduction:**

Anecdotal evidence suggests that across Canada, hospitalists are participating and at times leading Quality Improvement (QI) initiatives (1). As pressures for higher quality of care and lower healthcare costs increase, acute care organizations need to engage hospitalists in formal QI and patient safety initiatives in an effort to address growing pressures for better value for health outcomes. Physicians are more likely to participate in initiatives that employ strategies that they believe to be effective. As a result, understanding hospitalists' perception of the effectiveness of various change strategies could be critical in facilitating higher engagement in improvement efforts.

### **Methodology:**

As part of the broader British Columbia Hospitalist QI Survey study, we aimed to explore perceptions of hospitalists about effectiveness of various system redesign and improvement strategies. The BC Hospitalist QI Survey is a structured web-based survey of individuals who participated in "hospitalist care" in British Columbia from January 2014 to February

2015. The survey contained a range of questions on individual hospitalist involvement in QI activities, as well as a range of demographic, program and institutional characteristics. Moreover, the survey contained questions on participants' perceptions of a range of concepts, such as barriers and facilitators of QI involvement and effectiveness of improvement modalities. A prior Commonwealth Fund survey of physicians in the United States had explored their perceptions of various quality system redesign efforts. This formed the basis of an updated set of questions contained in our survey that asked participants' opinions on the effectiveness of a number of commonly used strategies to improve quality of care (Table 1).

We utilized the Enterprise Feedback Management system developed by Verint Systems Inc (Mellville, NY). In order to develop a comprehensive list of "hospitalists" in the province, we contacted all hospital medicine program directors in British Columbia and invited members of their programs to participate in our study. The list generated through this voluntary mechanism was complemented by the contact list maintained by the Section of Hospital Medicine of Doctors of BC (formerly the British Columbia Medical Association). To analyze responses, we used a Likert scale by assigning numerical values to the response options (not effective = 0, very effective = 3). Each response was scored, and averages calculated for each improvement strategy. The study was approved by the University of British Columbia Behavioural Research Ethics Board and supported through a grant by the Section of Hospital Medicine of Doctors of BC.

### **Results:**

A total of 322 individuals were invited to participate in the study. We received 57 complete responses to the survey (response rate 17.7%). Table 2 ranks the various quality redesign strategies in order of effectiveness. The most effective strategies identified by respondents are: having more time to spend with patients, having more access to human resources (nursing staff, allied health professionals, discharge planners), better teamwork and inter-professional communication among healthcare providers, and having dedicated time for improvement activities. Respondents identified use of computer technology and access to preventive healthcare as least effective improvement strategies.

We subsequently explored for any potential associations between the responses for each improvement strategy and various demographic and work characteristics by employing non-parametric tests of associations. This analysis suggested that individuals who worked more as hospitalists (more than 37 weeks annually), and those with higher workload (as measured by higher individual census) found improved interprofessional teamwork and dedicated time for QI as more effective strategies.

### **Discussion:**

Quality Improvement and Patient Safety is considered an important cornerstone of hospital medicine (2). Hospitalists are increasingly taking on leadership roles in QI, and there is growing literature on their impact on formal QI initiatives. However, little is known about the perceptions of this group of physicians on the effectiveness of various system improvement strategies.

A 2003 Commonwealth Fund study explored physicians' opinion on the effectiveness of potential strategies to improve quality of care (3). Most physicians (52%) cited time spent with patients as an effective strategy in improving quality of care. They also cited access to preventive care (41%) and teamwork and increased communication among health care professionals (35%) as important. Other approaches such as guidelines, electronic medical record and e-prescribing, and performance data, received only limited support from physicians.

While the Commonwealth Fund survey was primarily focused on community-based practitioners (only 14% of respondents worked in acute care settings), there are some similarities with our findings. For example, participants in both surveys identified time spent with patients as the most effective strategy for improving quality of care. Similarly, teamwork was also identified by both groups as effective. However, the two participant groups differed in their views on the relative importance of access to preventive healthcare and use of computer technology.

Our findings also suggest that hospitalists in BC have diverging opinions about the effectiveness of more resources in improving the healthcare system. While access to more “human resources” (i.e. more nursing staff, discharge planners etc.) was identified as the second most important factor, access to “physical resources” such as more operating rooms, hospital beds and imaging capacity was deemed to be much less effective.

**Conclusions:**

To our knowledge, our study is the first formal attempt to gauge the opinions of a cross section of Canadian hospitalists about the effectiveness of various common strategies to improve the health system. Our findings suggest that hospitalists view time with patients as the most effective means to improve quality of care. Moreover, access to more human resources and better teamwork are identified as important factors, suggesting that hospitalists view collaboration with other healthcare professionals as an important driver of high quality care delivery.

**Table 1. How effective do you think each of the following would be in improving the quality of care you provide to your patients?**

	Not At All Effective	Not Very Effective	Somewhat Effective	Very Effective
More use of computer technology such as electronic medical records and physician order entry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better treatment guidelines or protocols for common conditions or procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having more time to spend with your patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having better access to the best specialized physicians and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved teamwork or communication among physicians and /or other medical care professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having more access to resources such as more nursing staff, discharge planners and other allied healthcare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better patient access to preventive care and health education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having more access to resources such as more hospital beds, OR time, endoscopy or imaging equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having dedicated/paid time to allocate to improvement work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better communication between hospitalists and primary care physicians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Table 2. Ranking of effectiveness strategies**

Having more time to spend with your patients	2.6
Having more access to resources such as more nursing staff, discharge planners and other allied healthcare	2.5
Improved teamwork or communication among physicians and /or other medical care professionals	2.4
Having dedicated/paid time to allocate to improvement work	2.4
Better communication between hospitalists and primary care physicians	2.3
Having more access to resources such as more hospital beds, OR time, endoscopy or imaging equipment	2.2
Better treatment guidelines or protocols for common conditions or procedures	2.2
Having better access to the best specialized physicians and services	2.1
More use of computer technology such as electronic medical records and physician order entry	2.0
Better patient access to preventive care and health education	2.0

## Reference

- 1- Lee JH, Vidyarthi AR, Sehgal NL, Auerbach AD, Watcher RM. I-Care: a case review tool focused on improving inpatient care. *Comm J Qual Patient Saf.* 2009;35(2):115-119
- 2- Canadian Hospitalist. Canadian Society of Hospital Medicine (CSHM) Website. Available at: [canadianhospitalist.ca](http://canadianhospitalist.ca)
- 3- Audet AJ, Doty MM, Shamasdin J, Schoenbaum SC. Measure, Learn, And Improve: Physicians' Involvement in Quality Improvement. *Health Affairs(millwood).* 2005;24(3):843-853