

Defining competencies based on community needs: A case study on procedural skills in GIM

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BACKGROUND

Competency based medical education requires curricula organized around predefined abilities required for graduates. An important but under represented step in defining competencies for independent practice is understanding community care needs.

However, there is no defined methodology to identify evolving community health care needs to be met by new practitioners. This is a particular need for graduating Canadian General Internists, who are called to fill a variety of health care needs depending on their practice setting. A first step in this direction might be to understand current patterns of practice and perceived community needs.

In particular, GIM specialists in Canada perform a wide variety of procedures, filling many niches as required by their communities. Needs for procedures may be more readily identifiable. Therefore this seemed a useful place to start defining standards of training in a new CBME model.

OBJECTIVE

We aimed to define training needs in procedural skills for Canadian General Internal Medicine (GIM) programs based on community care needs reported by practicing General Internists.

STUDY DESIGN

Literature review and stakeholder input informed development of an online questionnaire covering 41 procedures performed by GIM physicians in Canada, across a variety of community and academic practice.

The survey was sent to all Canadian Society of Internal Medicine (CSIM) members. Respondents were asked to comment on patterns of procedural practice by GIM physicians in their practice setting. For the same list of procedures they were also asked regarding community healthcare needs for procedures. Finally, respondents were asked to comment regarding perceived training requirements in procedural skills for graduates at the end of GIM subspecialty training.

Survey data formed a basis for a large group consensus symposium at the CSIM's annual meeting in 2015. This symposium sought to identify what procedures were perceived to be mandatory for training, selective, elective or not deemed to be feasible within GIM training. Results were further triangulated with discussions at the GIM Specialty Committee of the Royal College of Physicians of Canada.

RESULTS

127 practicing General Internists completed the survey (11.4 % response rate). Respondents represented a variety of practice settings. Only 48 % of respondents had all subspecialists available in their context; 16 % had none. Respondents came from a diversity of settings: rural, remote, urban, and ambulatory and hospital based. Approximately 28 % were remote or rural, with 72 % urban.

All 41 procedures were performed by at least 2 respondents. Triangulation of survey responses on practice patterns, community need, and skills for graduates generated consensus (>80%) for a proposed 17 mandatory procedures. Large group discussion (n=100) corroborated 14 of these. Consensus was finalized (> 80 %) at the GIM specialty committee for 15 mandatory procedures.

Table 1: Selected examples of responses by participants regarding key procedures in GIM

Procedure	Practice	Required skill for graduates	Needed for many graduates	Trainee needs
ECG interpretation	91.5	96.4	2.7	99.1
Lumbar Puncture	77.6	90.1	7.2	97.3
Central venous catheter insertion	62.1	89.1	7.3	96.4
Joint aspiration and injection	55.2	71.2	15.3	86.5
Pulmonary Function Test Interpretation	44.3	72.7	12.7	85.4
Skin biopsy	36.8	61.3	20.7	82
PICC line insertion	6.1	24.3	26.2	50.5
Insulin pump downloads, interpretation, and reprogramming	8.7	11.9	22.9	34.8
Sleep study interpretation (level 3)	3.5	12	19.4	31.4
Gastroscopy (diagnostic)	6.1	3.7	14.0	17.7

Practice: respondent performs procedure in clinical practice

Required skill for graduates: respondent believes procedure is requirement for GIM graduates

Needed for many graduates: respondent believes procedure is NOT a requirement but will be needed for many GIM graduates

Trainee needs: Sum of 'required skill' and 'needed for many'

Table 2: Mandatory procedures in GIM training

Mandatory
ECG Interpretation
Exercise Stress Testing
Holter Interpretation
Thoracentesis
PFT Interpretation
Paracentesis
Central Venous Catheter Insertion
Arterial Line Insertion
Endotracheal Tube Insertion
Mechanical Ventilation
Non-invasive positive-pressure ventilation
Ultrasound Guided Bedside Procedures (thoracentesis; paracentesis; central venous lines)
Lumbar Puncture
ACLS
Knee Joint Aspiration and Injection

CONCLUSION

- Practice patterns and community needs for procedures allowed for objective and updated definitions of training requirements for procedural skills for GIM physicians in Canada.
- These definitions allow the flexibility to ensure preparation for practice in a variety of settings, while not overburdening training programs.
- This study provides a model for training requirements to be informed by community care needs.

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