Point Of Care UltraSound Utilization and Training Among Trauma Providers Across Canada

Essa M. AlEassa[1] MBBS MSc
Markus T. Ziesmann[1] MD MSc
Andrew W. Kirkpatrick[2] MD MSc FACS
Charles L. Wurster[3] MD CCFP(EM)
Lawrence M. Gillman[1] MD MMedEd FRCSC FACS

[1]Department of Surgery, University of Manitoba, Winnipeg, Manitoba, Canada.
[2]Regional Trauma Services, Department of Surgery and Critical Care Medicine, University of Calgary, Calgary, Alberta, Canada.
[3]Department of Emergency Medicine, University of British Columbia, Nanaimo, British Columbia, Canada

Disclosure

- None

Background and Aim

Background

- Point of care ultrasound (POCUS) is revolutionizing care of critically ill patients

- Training in POCUS is extremely variable
  - no clearly accepted or standardized curriculum or certification process

Aim

- To delineate the training experience and utilization of POCUS amongst trauma providers across Canada

Methods

Methods

- Cross sectional study

- A secured e-questionnaire sent to physician members of the Trauma Association of Canada

Methods

- The questionnaire included
  - Demographics
  - First exposure and utilization pattern of ultrasound
  - Opinion on current ultrasound training and certification processes
  - Proposed optimum course design

Results

Results

- Response rate: 54.1%, n=133
  - 38 emergency physicians
  - 31 surgeons
  - 3 physicians from other specialties

- 83.3% used POCUS beyond FAST

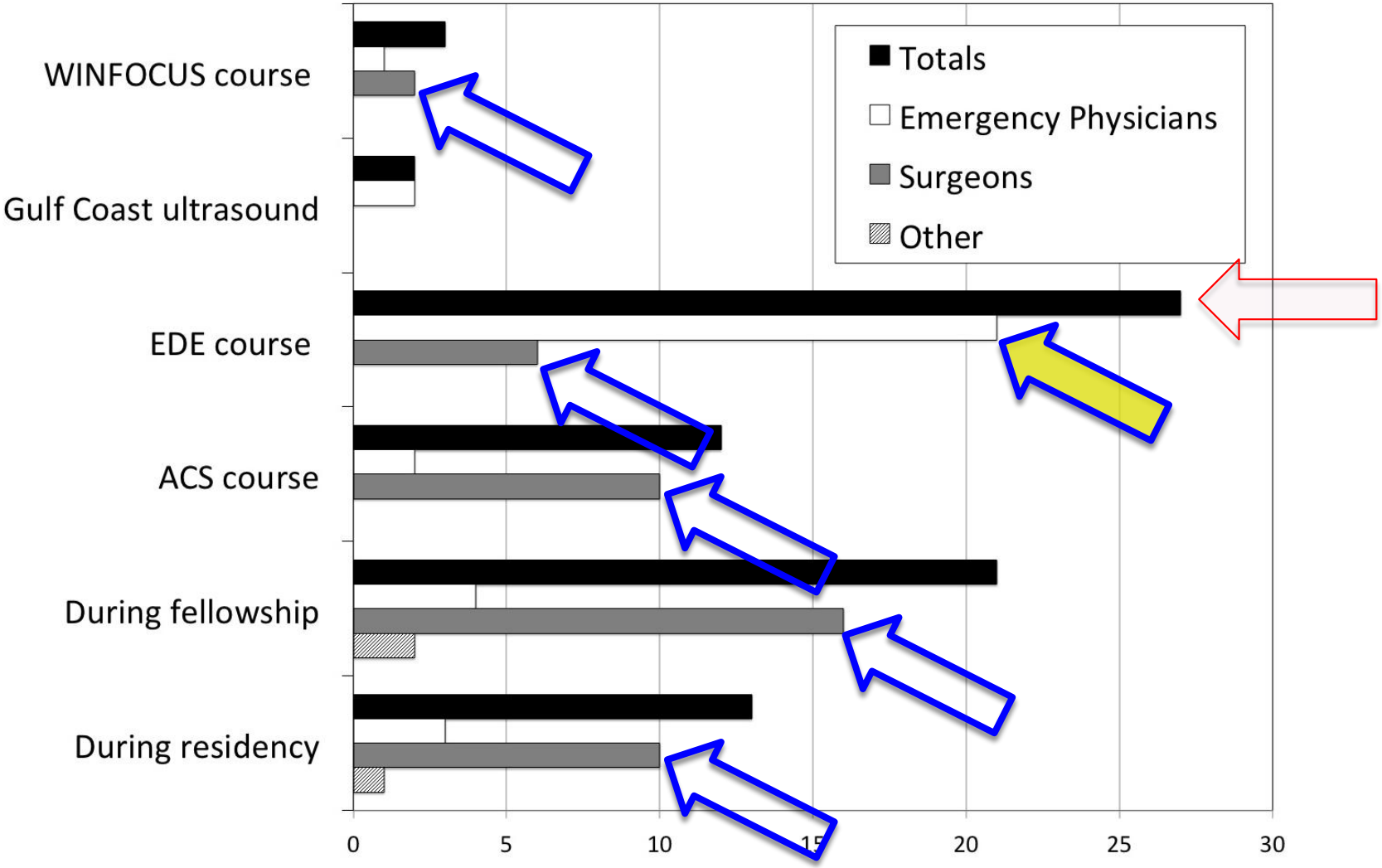
Results: Use of POCUS amongst Canadian trauma providers (n (%))

POCUS Usage	n(%)
Central Line Placement	48 (66.7%)
Assessment for Pneumothorax	47 (65.3%)
Assessment for Pleural Effusion	40 (55.5%)
Inferior Vena Cava Assessment for Volume status	37 (51.4%)
Echocardiography	32 (44.4%)
Guidance for Paracentesis	27 (37.5%)
Guidance for Thoracentesis	26 (36.1%)
Fracture diagnosis and reduction	7 (9.7%)
Optic Nerve Sheath Diameter Assessment for elevated intracranial pressure	4 (5.6%)

Results

- 34.7% were in practice when first exposed to POCUS
- 73.6% received formal ultrasound training

Results: Training courses by specialty

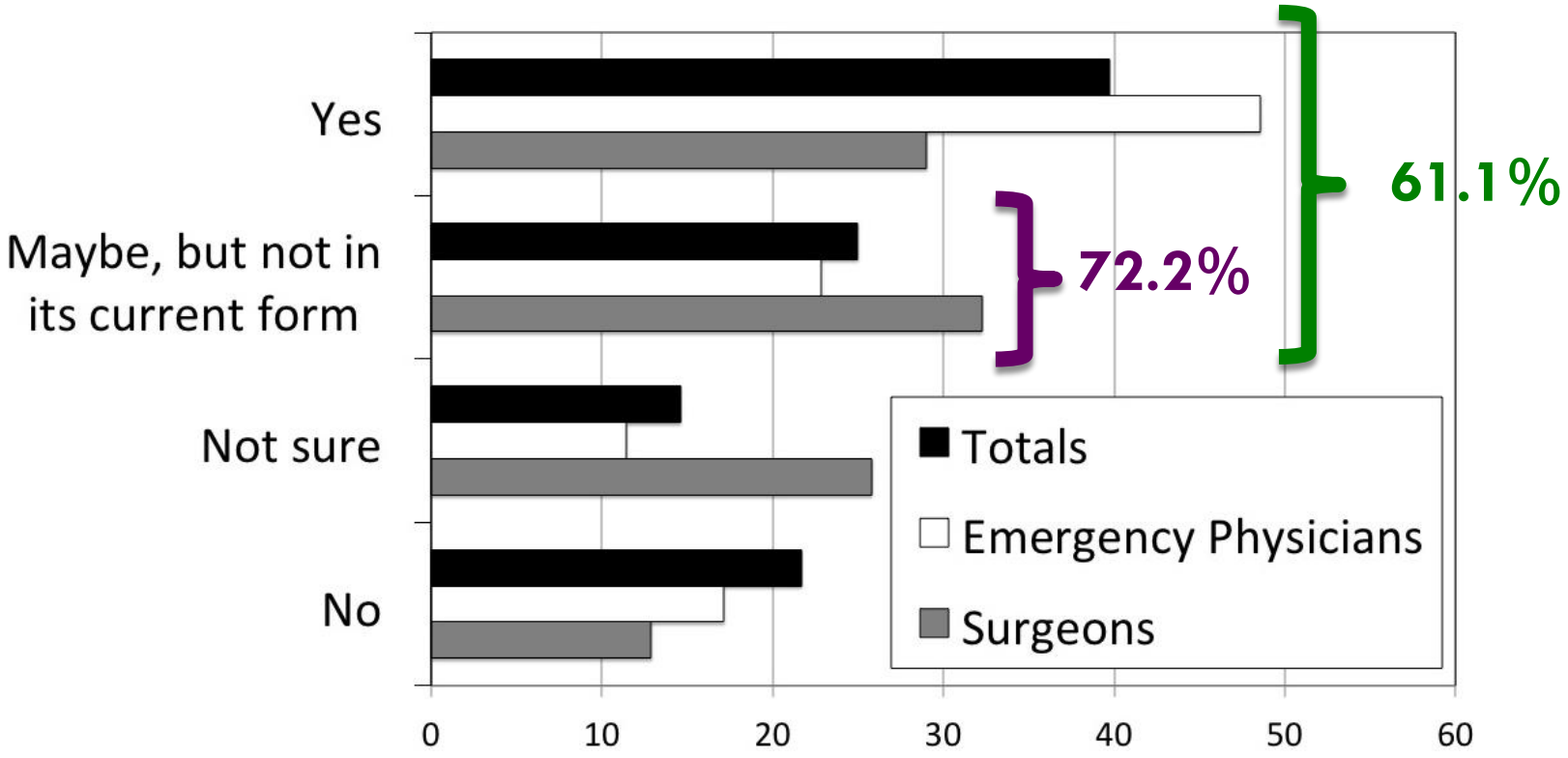


Results

- Only 34.7% underwent a formal certification process
  - 19 ED physicians (50% of total ED physicians)
  - 5 surgeons (16% of total surgeons)

Results:

Q. Do you believe that completing a credentialing process is essential after a course and prior to using FAST in your practice?



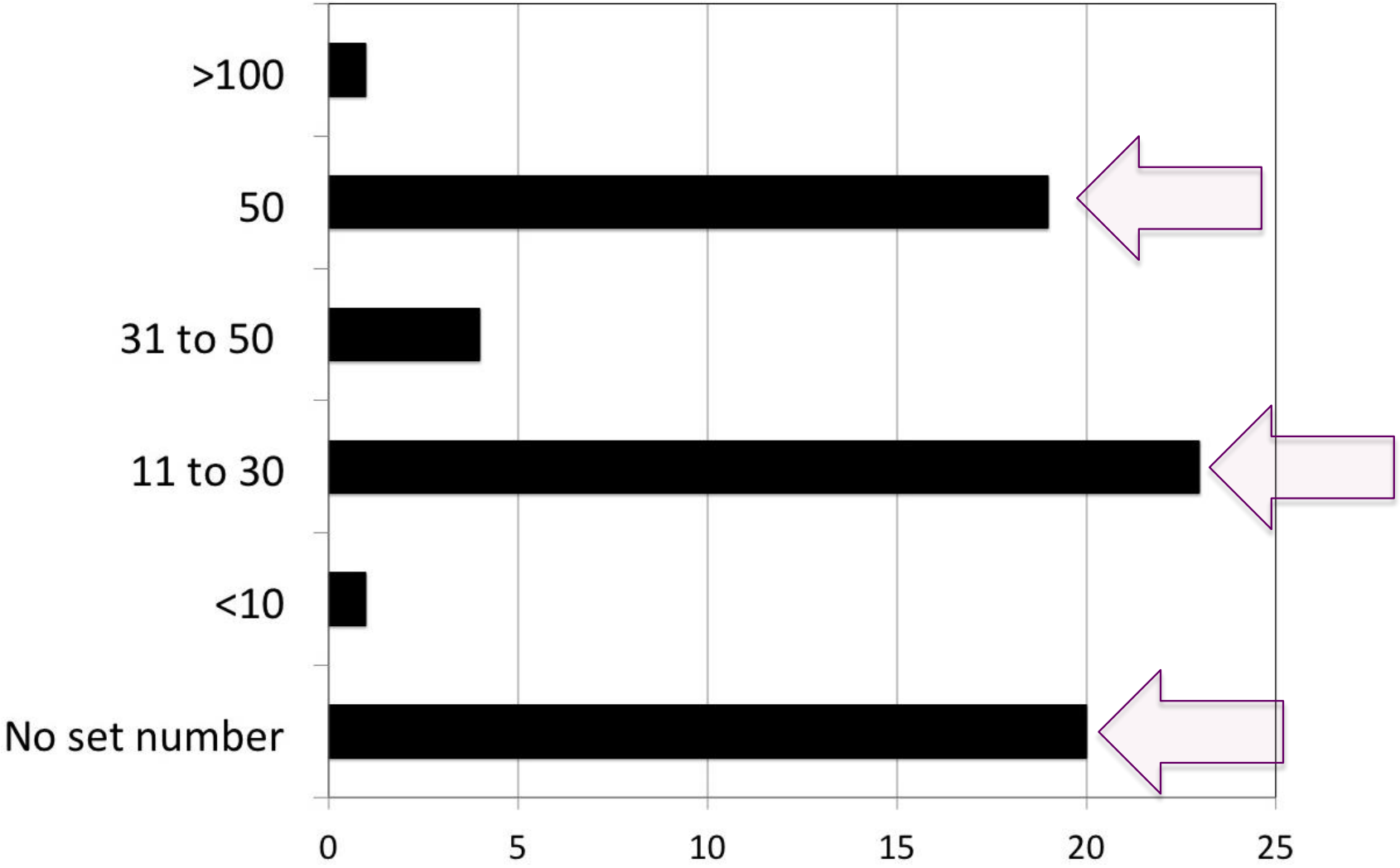
Results: Suggested alternate options for certification (n=41)

Q. Which of the following would be the best alternative credentialing process?

Option	n (%)
a. Standardized assessment of ultrasound technique	3 (7.3%)
b. Written examination of image interpretation	1 (2.4%)
c. A combination of "a" and "b"	13 (31.7%)
d. Mentored exams is the best process	8 (19.5%)
e. Mentored exams in combination with "a"	12 (29.3%)
f. Mentored exams in combination with "b"	4 (9.6%)

68.3%

Results: Minimum number of examinations for credentialing believed to be adequate



Results

- 92.8% believe that residency programs for all trauma providers must include ultrasound training

Conclusions

Conclusions

- Most common utilizations of POCUS among trauma providers in Canada are:
  - FAST
  - Central line placement
  - Assessment for pneumothorax and pleural effusion

Conclusions

- There is a wide variation in POCUS training amongst trauma providers in Canada
  - only a minority complete a formal certification process
  - most are ED physicians

- There is no consensus on the optimal curriculum for POCUS training

Conclusions

- Most providers support early introduction of structured training
- Modifications to the current credentialing processes are believed to be necessary

Limitations

- Small number of respondents
- Response bias potential

- This study represents a “needs analysis”
  - identified a number of areas in POCUS training requiring improvement and/or further study

Future Work

- Development of a national, standardized curriculum for all trauma providers regardless of profession, affiliation or specialty

- Development of evidence-based certification standards

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Thank You!