Introduction: Evidence suggests that prehospital point of care ultrasound (POCUS) may improve outcomes. It serves as an aid in physical examination, triage, diagnosis, and patient disposition. The rate of adoption of POCUS among aeromedical services (AMS) throughout Canada is unknown. The objective of this study was to describe current POCUS use among Canadian AMS providers. **Methods**: This is a cross-sectional observational study. A survey was emailed to directors of government-funded AMS bases in Canada. Data was analyzed using descriptive statistics. **Results**: The response rate was 88.2% (15/17 AMS directors) and accounted for 42 out of 46 individual bases. POCUS is used by AMS in British Columbia, Alberta, Saskatchewan, and Manitoba. New Brunswick, Nova Scotia, Prince Edward Island, and Yukon are planning to introduce POCUS within the next year. Ontario, Quebec, and Newfoundland are not utilizing POCUS and are not planning to introduce it. BC is the only province currently using POCUS on fixed-wing aircraft. POCUS is used in <25% of missions, most frequently at sending hospital and in flight. Most useful applications were assessment for pneumothorax, free abdominal fluid, and cardiac standstill. Most common barrier to POCUS use was cost of training and maintenance of competence. **Conclusion**: Prehospital POCUS is available in Western Canada with one third of the Canadian population having access to AMS utilizing ultrasound. The Maritimes and the Yukon Territory will further extend POCUS use on fixed-wing aircraft. While there are barriers to POCUS use, those bases that have adopted POCUS consider it valuable.

Keywords: point of care ultrasound, prehospital, ultrasound

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Narrative assessment of emergency medicine learners: What should we keep as we move to competency-based assessment?
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Introduction: For many years, Emergency Medicine (EM) educators have used narrative comments to assess their learners on each shift, either in isolation or combined with some type of Likert scale ranking. Competency based medical education (CBME), soon to be fully implemented throughout Canadian EM educational programs, encourages this type of frequent low-stakes narrative assessment. It is important to understand what information is currently garnered from existing narrative assessments in order to successfully and smoothly transition to the CBME system. The purpose of this study was to explore how one Canadian undergraduate EM program's narrative assessment comments mapped to two competency frameworks: one traditional CanMEDS-based and one competency-based, built on entrustable professional activities (EPAs). **Methods**: A qualitative and quantitative content analysis of 1925 retrospective, narrative assessments was conducted for the 2015/2016 and 2016/2017 academic years. The unprompted comments were mapped to the Royal College CanMEDS framework and the Association of Faculties of Medicine of Canada EPA Framework. Using an iterative coding process as per accepted qualitative methodologies, additional codes were generated to classify comments and identify themes that were not captured by either framework. **Results**: 93% and 85% of the unprompted narrative assessments contained comments that mapped to at least one CanMEDS role or EPA competency, respectively. The most common CanMEDS role commented upon was Medical Expert (86%), followed by Communicator, Collaborator and Scholar (all at 23%). The most common EPA competency mentioned related to history

and physical findings (62%) followed by management plan (33%), and differential diagnosis (33%). However, 75% of narrative comments contained within the assessments, included ideas that did not fall into either framework but were repeated with frequency to suggest importance. The experiential characteristics of working with a learner were commented upon by 22% of preceptors. Other unmapped themes included contextual information, generalities and platitudes, and directed feedback for next steps to improve. **Conclusion**: While much of the currently captured data can be mapped to established frameworks, important information for both learner and assessor may be lost by limiting comments to the competencies described within a particular framework, suggesting caution when transitioning to a CBME assessment program.

Keywords: competency based medical education, medical student, narrative assessments

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Retrospective review of transfusions for anemia ordered in the emergency department and concordance with guidelines
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Introduction: Iron Deficiency Anemia (IDA) is a common presentation to the emergency department (ED) and is often treated with red blood cell transfusions. Choosing Wisely and the American Association of Blood Banks released guidelines in 2016 outlining under what circumstances transfusions should be given for patients with IDA. Few well-powered studies have looked at the impact of these guidelines on transfusions in EDs. The goal of this study was to examine the number of RBC transfusions that were given in EDs in Calgary, Alberta from 2014-2018 and what proportion of these were potentially avoidable (PA). **Methods**: We analyzed 8651 IDA patient encounters from 2014–2018 at four centers in the Calgary Zone. A transfusion was considered PA if the patient's hemoglobin (hgb) was $\geq$70 g/L AND if the patient was hemodynamically stable. We performed descriptive statistics to assess the number of transfusions and the number of avoidable transfusions. We used chi-squared tests to determine if there were significant differences between site, time-period, hemoglobin level. **Results**: In total, 990 (11.4%) of the encounters received transfusions; 711 (71.8%) were indicated while 279 (28.1%) were PA. Out of the transfusions that were indicated, 230 (32.3%) were given to patients with a hgb <70 g/L and 481 (67.7%) were given to patients with a hgb >70 g/L but who were hemodynamically unstable. Out of the transfusions that were PA, the highest number were given to those in the 71-80 g/L hgb group (142) and the lowest number were given to those in the 110-130 g/L hgb group (9), a difference that was statistically significant (p < 0.001). The PA transfusion rates from 2014 to 2018 were 30.8%, 25.6%, 34.5%, 23.6%, 20.7% respectively, which was a statistically significant difference (p = 0.004). **Conclusion**: Our data suggest that the number of PA transfusions at the hospitals in the Calgary zone is comparable to the rates reported in the existing literature. In addition, the rate of PA transfusions has decreased since the release of the guidelines. A limitation of the present study was that it did not look at the number of units of red blood cells transfused and since many patients receive more than one unit, it is possible that the number of PA transfusions was underestimated. Nevertheless, we intend to use our results to create a safer and more cost-effective approach to managing IDA.

Keywords: Transfusions for Anemia