Title: Educating fellows in CanMEDS physician roles via a quality improvement-based curriculum

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Body: Background: Of the many CanMEDS physician roles that have been adopted by European medical educators, evidence suggests that several may be particularly challenging to teach and assess, namely: Health Advocate, Collaborator, Scholar and Manager. Objective: Since Quality Improvement (QI) activities have been shown to provide medical residents a means by which to learn skills relevant to the above CanMEDS roles, we sought to determine whether a QI-based curriculum would afford our fellows a robust, level-appropriate and assessable learning experience. Methods: Our fellows participated in our division-level program of continuous quality improvement. In doing so, they learned and applied QI principles as they developed an evidence-based respiratory treatment protocol (RTP) intended to reduce the incidence of chronic lung disease (CLD) among neonates born at <29 weeks gestation. To assess fellow competence in CanMEDS roles, the fellowship program directors maintained educational portfolios for each fellow, including self-reflections, competency-based evaluations and evidence of scholarship. Results: Our fellows successfully implemented their RTP, then collected, analyzed and reported outcomes data to division leadership. Our fellows' RTP reduced the incidence of CLD nearly 50% within one year, results they have presented at regional and national academic meetings. Last, this QI effort enabled one of our fellows to earn credit toward her maintenance of certification by the American Board of Pediatrics. Conclusion: A QI-based curriculum may be an effective means by which to teach and assess critical care fellows in the more challenging CanMEDS physician roles while also improving respiratory outcomes.