

## Integrated simulation for teaching and assessment of multiple skills in knee arthrocentesis

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Trainees in Internal Medicine routinely perform invasive procedures on patients who are awake. However, procedural and communication skills are rarely taught together. The Integrated Procedural Performance Instrument (IPPI), pioneered by Dr. Roger Kneebone, uses a series of patient focused scenarios combining standardized patients (SPs) with bench-top models to assess the simultaneous practice of technical, communication and professional skills across a range of procedural tasks.

Using the IPPI format, we designed a clinical scenario for teaching and assessing knee arthrocentesis. Forty-two second year Internal Medicine residents will be invited to participate in a half-day session on knee arthrocentesis. Orientation to the integrated simulation will be followed by teaching and practice. After the training, residents will be asked to perform the procedure using the IPPI-based scenario. Physician raters will assess trainees' newly acquired procedural skills. Physician and SP raters will also assess communication skills using validated IPPI and communication instruments. This is a work in progress to be implemented in June 2010.

The implementation experience will be described. We will report on trainee, SP and faculty feedback regarding educational value, relevance and realism. Additionally, the reliability of the rating instruments and comparisons between physician ratings (live, behind one-way mirror and remote) as well as with SP ratings will be presented. This work explores an innovative use of integrated simulation for the combined assessment of skills in the CanMEDS Medical Expert and Communicator Roles. The comparisons between SP and physician raters will help inform the design of assessment modalities for the Communicator Role.