

The Web-based CanMEDS Resident Learning Portfolio Project (WEBCAM): how we got started

Peter Glen, MD, MSc
Fady Balaa, MD, MEd
Franco Momoli, PhD
Louise Martin
Dorothy Found, BSc
Angel Arnaout, MD, MSc

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Correspondence to:

A. Arnaout
Suite CW 1606
Ottawa Hospital, General Campus
Ottawa ON K1H 8L6
anarnaout@toh.on.ca

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SUMMARY

The CanMEDS framework is ubiquitous in Canadian postgraduate medical education; however, training programs do not have a universal method of assessing competence. We set out to develop a novel portfolio that allowed trainees to generate a longitudinal record of their training and development within the framework. The portfolio provided an objective means for the residency program director to document and evaluate resident progress within the CanMEDS roles.

For nearly 2 decades the philosophical foundation of medical education in Canada has been oriented on the CanMEDS competencies, a framework that focuses on meeting the multifaceted needs of the Canadian health care consumer.¹ Its indoctrination was swift. Training program accreditation both in medical schools and in postgraduate training programs focuses a keen eye on the development of trainees within the model. While the framework details the core and enabling competencies required of trainees, it does not provide facile guidance on how a program is meant to evaluate competency.² An evidence-based evaluation framework is not known, the lack of which leaves individual training programs to determine how to track, measure, evaluate and assure the fulfillment of the CanMEDS competencies.

Those involved in the general surgery residency training program at the University of Ottawa recognized this problem. We sought to design an evaluation format in which trainees could track their development within the CanMEDS framework as well as allow the training program more objective evidence on which to evaluate the progress of residents. This was the concept behind the Web-based CanMEDS Portfolio Project (WEBCAM).

The first phase of the WEBCAM project involved a thorough program self-evaluation. We needed to first identify “activities” available to our residents within the current construct of the program that were felt to foster their development within the CanMEDS roles. An activity was defined as a discrete task (curricular or extracurricular) that a resident in the program could participate in during training. A committee with representation from staff and residents agreed on which CanMEDS competency³ was best represented by each of these activities. Within our program, a total of 43 activities were individually assigned to each of the CanMEDS roles.

In the second phase, we worked with a local software development team to design WEBCAM. The website design was focused on 3 principle concepts: 1) it would provide a platform customizable to any residency training program; 2) secure, remote access would be available for trainees and the residency training program director; and 3) reports of completed activities could be generated by and for each trainee. A study grant allowed WEBCAM to be built. The start-up cost was \$7500, with an annual hosting fee of \$100.

Each of the 7 CanMEDS competencies were used to label individual sections in the portfolio, with the previously identified associated activities listed within each section. Individual password-protected accounts for each of the 38 trainees in our program were created. We then held a brief orientation session to demonstrate the functionality and purpose of WEBCAM. Residents were then given the opportunity to record their participation and completion of the activities they performed over the course of a 12-month period. During this time residents were asked to evaluate the functionality and usefulness of WEBCAM.

The results were promising. Most (92%) of the residents felt that the portfolio was a good way to organize their training progress, with the majority noting that the act of recording activities took less than 1 hour of their time each month. The major advantage of the program highlighted in the qualitative feedback was that WEBCAM provided an instrument with which their fulfillment of the non-medical expert CanMEDS roles could be recorded. More encouraging was that residents using WEBCAM brought numerous new activities to the attention of the research team, reinforcing the notion that residents are regularly participating in extracurricular events that contribute to their development as well-rounded physicians. These activities were reviewed by the research committee and added to WEBCAM under the most appropriate CanMEDS role. Their addition to the website benefited other trainees who were then able to realize new ways in which they could improve the breadth of their training.

The recorded resident activities were used by the program director during the annual review of each resident. Progress within the CanMEDS competencies could be objectively tracked, and the program director found this useful to identify areas for improvement for individual residents and for the training program as a whole. Anecdotally the program director expressed the utility of WEBCAM in preparing the Final In-Training Evaluation Report (FITER) for graduating residents, which requires reporting on each resident within the CanMEDS framework. WEBCAM was seen as particularly valuable in ensuring continuity of records when a new program director is appointed. Learning portfolios have been used successfully in diagnostic imaging residency programs;⁴ however, they used a strategy of self-assessment within each role instead of defining categorical activities in which residents could participate.

One of the principle limitations of the design of this portfolio is that it ascribes activities to single CanMEDS competencies. Reviewing the key and enabling competencies for each of the CanMEDS roles shows that there is often overlap, and activities as we have assigned them could be argued to belong in different roles. This issue is

mollified somewhat when it is recognized that the portfolio generates a complete record of activities that can be used by the training program in developing the FITER and by residents in their preparation of curricula vitae. In these instances, residents and program directors would have the flexibility to cross-recognize activities in association with various CanMEDS roles. Another limitation of WEBCAM as a portfolio is that it does not evaluate objective competency in each of the CanMEDS roles. Mere performance of the activity may not be correlated with competence in a specific CanMEDS role. Further work will be focused on determining how fulfillment of activities can either be evaluated based on performance or linked to global assessments of competency with tools such as validated 360 evaluations.⁵

WEBCAM is our attempt to objectively document CanMEDS-centred training, with the long-term goal of establishing a practical and effective tool that the residency program director can use to assess longitudinal resident growth and performance of training within CanMEDS roles. We believe that the implementation of the WEBCAM portfolio has been a useful exercise and can be a platform that can be customized to any residency training program in any specialty.

Affiliations: From the Division of General Surgery, Department of Surgery, University of Ottawa, Ottawa, Ont. (Glen, Balaa, Martin, Found, Arnaut); the Ottawa Hospital Research Institute, Ottawa, Ont. (Haggart, Arnaut); and the Centre for Practice Changing Research, The Ottawa Hospital, Ottawa, Ont. (Momoli).

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