

# Progressive Assessment of Educational Interventions

Applying formative and summative methodologies to progressively assess medical student educational interventions.

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## Objectives:

- To provide reliable means to evaluate the learning outcomes of the cardiology residents and facilitators who attended NATICON 2004
- To provide NATICON 2004 organizers with information on the learning needs of cardiology residents
- To optimize the development of future cardiology programs and educational interventions (e.g. NATICON 2005)
- To assess the one-year impact of NATICON 2004 upon current third-year cardiology residents who attended the Second-Year NATICON 2004 weekend
- To assess the one-year impact of NATICON 2004 upon post-Royal College exam cardiology residents/fellows who attended the Third-Year NATICON 2004 weekend

## Methods:

### Baseline Evaluation

#### Surveys

Containing open and close-ended responses:  
Faculty (n=12)

Second-year cardiology residents (n=36, 88% of attendees)

#### Focus group

Third-year cardiology residents (n=5)

- Analysis of quantitative survey data using descriptive statistics
- Analysis of qualitative data using key themes

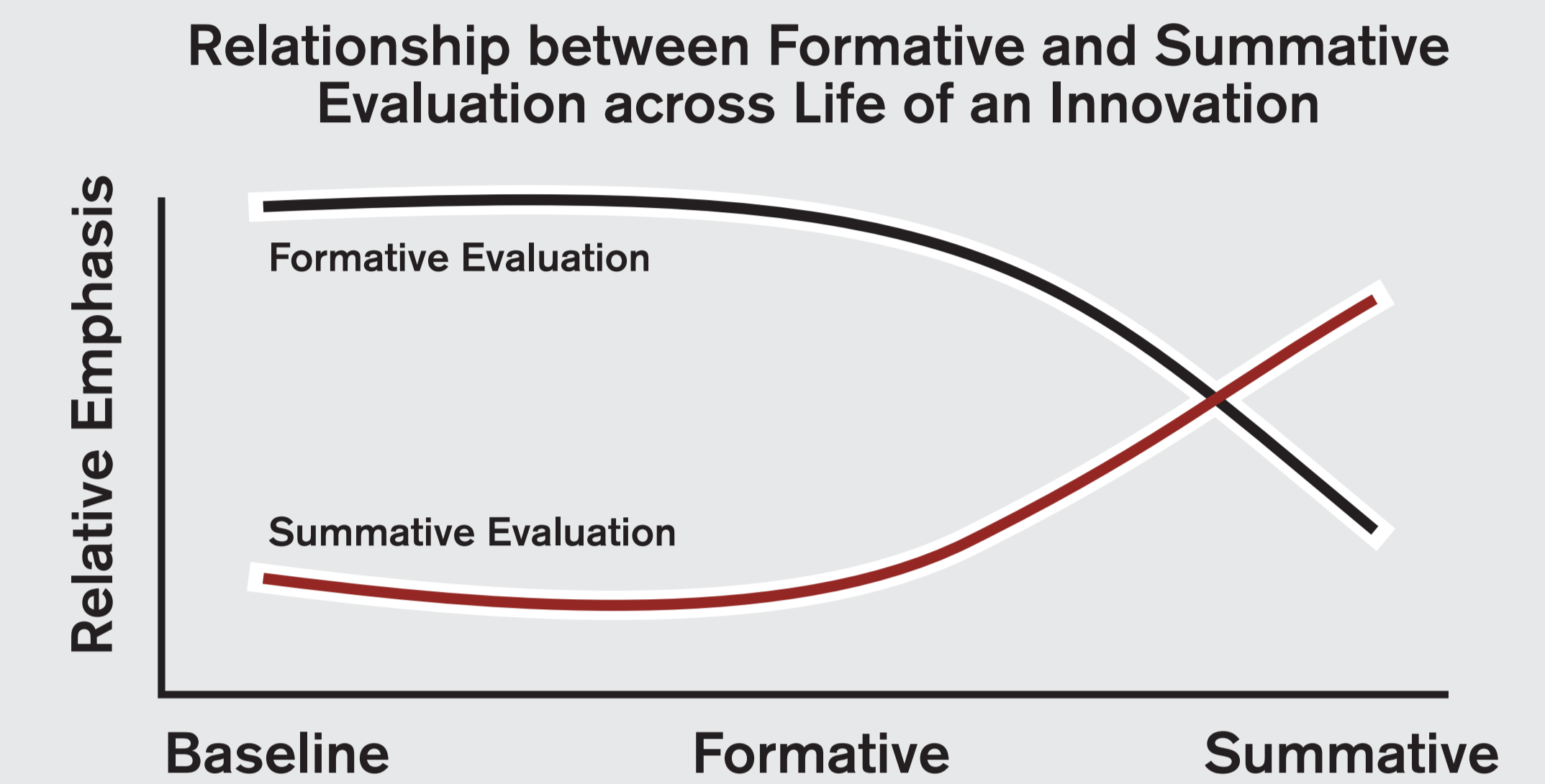
### Summative Evaluation

#### Follow-up survey

Third-year cardiology residents at NATICON 2005 (n=29, 81% of former second-year residents at NATICON 2004)

#### Telephone interviews

Post-Royal College exam cardiology residents/fellows (former third-year residents at NATICON 2004)

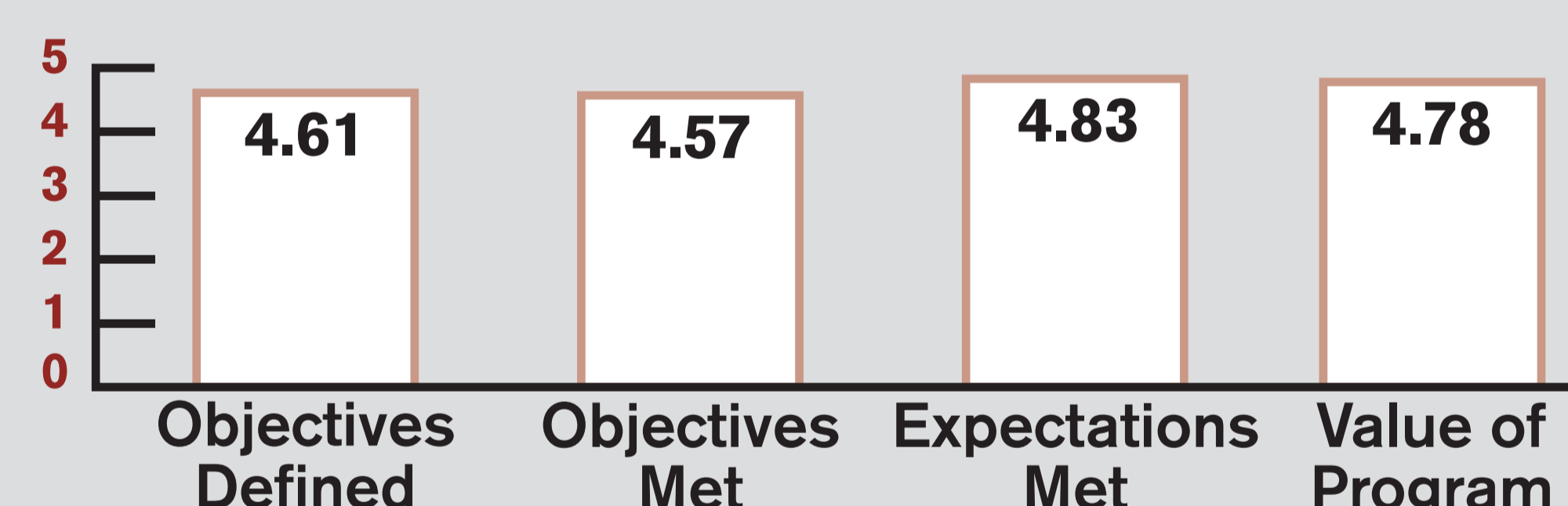


## Key Findings:

### Second-year Cardiology Residents

#### Baseline & summative data indicates:

- Overall, respondents very satisfied with NATICON program
- 97.2% of the respondents believe that NATICON will help them better prepare for the Royal College exams



#### Respondents feel that the NATICON program:

- Is comprehensive and well-organized
- Exposes them to strong teachers and supportive learning environment
- Provides benchmarking and networking opportunities
- Offers excellent topic selection and interactive discussions

### Third-year Cardiology Residents

#### Baseline & summative data indicates respondents feel that the NATICON program:

- Is great preparation for the Royal College exams
  - Provides new content
  - Helps fill gaps
  - Acts as a good simulation
- Provides benchmarking and networking opportunities
- Used stressful, but very effective, methods of learning

NATICON also gives respondents a lot of confidence, by facilitating knowledge change and practice with the format of the Royal College exams.

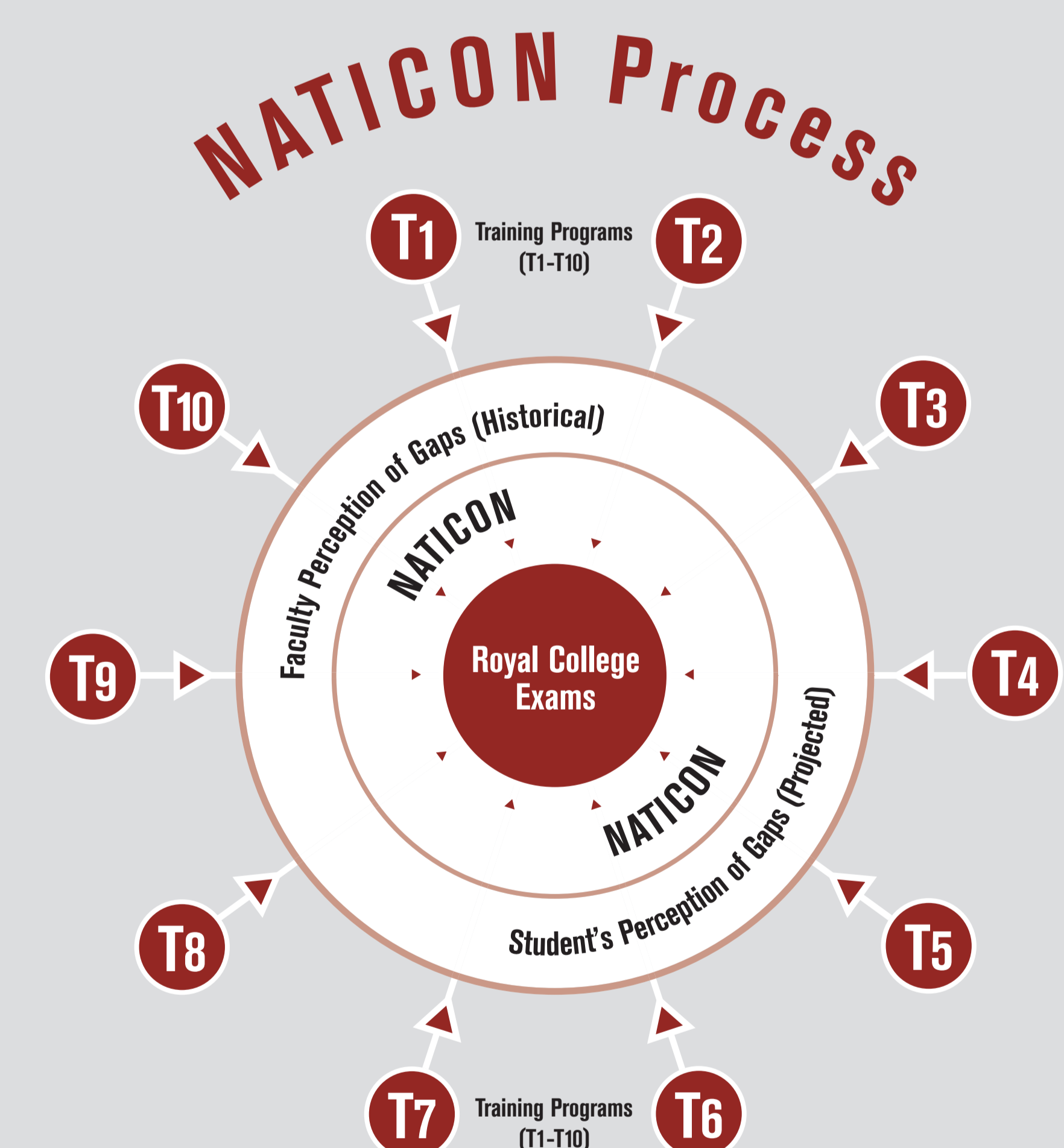
“A vital course. Must be continued at any cost. I would pay out of my pocket for this if I had to.”

“Very useful. This relieved a lot of my anxiety and helped me formulate a study plan.”

Limitations: The formative evaluation was less comprehensive, due to the challenges encountered recruiting participants.

## Faculty

- Faculty overwhelmingly (91%) indicated that objectives of the NATICON program were met and 75% reported that the objectives of their workshop were met
- Only half of faculty stated that residents' learning needs in their topic area were communicated to them



## Conclusion & Recommendations:

Employment of formative evaluation strategies supports multiple professional goals. The study reveals the benefit of improved program structure and outcomes including enhanced competency, professional self-regulation, and educational benchmarking.

Residents (second-year, third-year, and fellows) and faculty were very satisfied with NATICON and unanimously recommended sustaining the program.

NATICON strengths included exam preparation and knowledge consolidation. It filled gaps of training programs and identified areas to be reinforced, encouraged participants to network with residents and faculty, and provided opportunity to benchmark against other students' progress.

### Recommendations

#### 1. Recommended improvements for NATICON program included:

- Adapt context (venues and number of faculty) to more closely parallel Royal College exams
- Pre-NATICON preparation for faculty and residents
- Support a learner-centered approach with clear learning objectives and emphasize statement of learning objectives prior to NATICON programs and workshops

#### 2. Future areas of research:

- In-depth evaluation of cardiology residents' needs
- In-depth and longitudinal NATICON program evaluation
- Linking of universities' training program planning to findings from NATICON evaluation