Using Online Chemotherapy and Biotherapy Education to Support Standardized Clinical Care: A Knowledge Translation Outcome Evaluation

ABSTRACT

Since 2009, a Provincial Standardized Chemotherapy and Biotherapy (PSCB) Course has been offered to RNs in Ontario.

Objectives of the course are to support:

- Holistic patient-centred care
  - Support patient safety and promote quality of care for all Ontarians
  - Support knowledge translation and evidence-based practice (EPB)
- Integrate Cancer Care Ontario (CCO) recommendations and guidelines

Delivery methods: First offered via Ontario Telemedicine Network (OTN), transitioned to eLearning in 2014

- 17 online modules and two mandatory discussion forums
- Case studies
- 7.5 hour in person workshop/learning lab
- Exams and certificate of completion (35 learning hours)

Results: 228 RNs registered in two PSCB offerings online in Sep 13 and Jan 2014. Knowledge and competency, measured by entry and exit exam showed statistically significant improvements. Nurses liked eLearning for its innovative design, convenience, up to date content, interactive case studies, check points and quizzes. eLearning can reach a large number of providers over a short period of time.

BACKGROUND

The PSCB was developed to support standardized approach in Chemotherapy and Biotherapy delivery in Ontario.

- Ontario Expert Advisors guided curriculum development
- Course design used Holistic Model and Adult Learning Theory

The online was piloted and launched formally in Sep 2013 to:

- Improve access and further engage participants with high quality content
- Enhance ability to address adult learning needs
- Standardize the course further with timely updates
- Increase rigor in evaluating participants meeting requirements

Completion criteria: full participation in all 17 course modules and in skills lab; completion of all unit quizzes; and achievement of a minimum 80% in a standardized exit exam. A local preceptorship is required for some participants (i.e., Novice nurses)

Continuing competency requirement: Annual maintenance course

Building capacity-de Souza chemo facilitators: RNs certified with CON(C) or ONC, and has 2 years experience in oncology / chemotherapy teaching. Facilitators have to complete PSCB, facilitator training course, yearly maintenance course, and facilitate at least two classes per year.

PURPOSE

To evaluate the effectiveness of the eLearning course as a vehicle to support health care quality improvement

METHODS

Participant Group

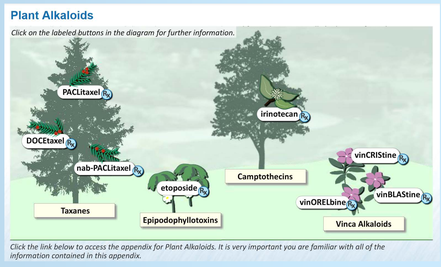
- RNs from across Ontario enrolled in the de Souza Institute online Provincial Standardized Chemotherapy and Biotherapy Course in Sep 2013 and Jan 2014

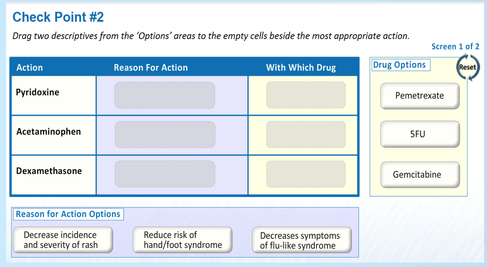
Data Collection

- Data was collected from the de Souza Institute LMS platform.
- Variables include:
  - Demographics
  - Self-perceived confidence (pre and post)
  - Unit quizzes, entrance and exit exam
  - Qualitative feedback (open-ended questions) and learner satisfaction

Data Analysis

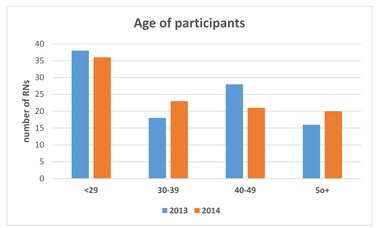
- Descriptive statistics, paired sample *t*-tests, chisq using SPSS; Nvivo for qualitative analysis

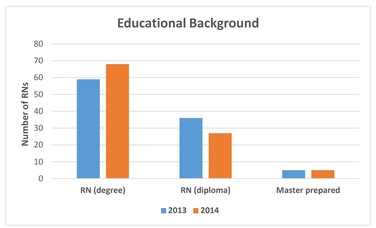




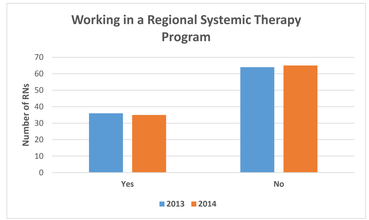
RESULTS

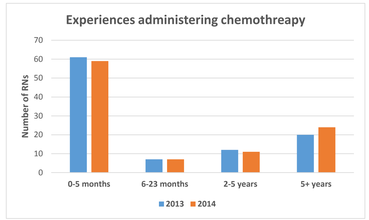
	Sep 2013	Jan 2014
Number of Participants:	153	75



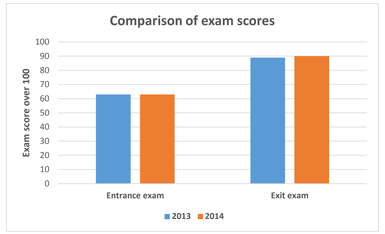


	2013	2014
Years on Nursing Experience	13.3	11.8
Years of Oncology Experience	5.5	4.4





RESULTS



- Difference between entrance exam and exit exam statistically significant at $p<0.05$
- Course completion rate: 95%

QUALITATIVE FEEDBACK

- eLearning easy to navigate; interactive; enjoyable.
- Case study activities practical; great resources; met learning needs.
- Checkpoints and quizzes fun to test knowledge.
- Occasional broken links.
- Content in some areas too much for novice nurses.

DISCUSSION

- Contents are current, evidence based and easily adaptable to front line care in each organization.
- Safe handling procedure identifies common issues: encouraging consistency across – “everyone learns the same information”.
- Integration of theory and practice is re-enforced via problem-solving, team work (practical application) in clinical skills lab.
- Contents integrates psychosocial care in problem-based learning.
- Peer supports and validations helps to implement recommended standards of practice.
- Positive impact on nursing practice: patient safety, professional development, patient education, better care.
- Clinical uptake: >90% of RSTP nurses have taken PSCB, ensuring standardized quality care delivered across Ontario.

CONCLUSIONS

eLearning is one of the fastest growing field in CE. The PSCB course meets the learning needs of multigenerational oncology nurses working in busy clinical settings across a large geographic areas.

eLearning makes it possible to disseminate high quality, up to date, evidence based, and clinically relevant information to a large number of providers in all settings over a relatively short period of time, supporting CCO best practice guideline uptake.

Virtual simulation is being developed for clinical skills assessment.

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