

SUCCESS AND PERTINENCE OF A PILOT ACUTE PAIN MANAGEMENT E-LEARNING PROGRAM FOR NURSING STAFF

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1. BACKGROUND AND AIMS

Continuing education in pain management is an important way to increase gain knowledge, and therefore, modify the caregivers' clinical practice. Different methodologies in continuing medical education (CME) vary from formal academic teaching to self-managed training. Utilizing an e-learning technology can be an efficient method to train nursing staff since autonomy is warranted. Autonomy is achieved by being actor on one's training, by auto-training, self pace, individual work and training organization, by videos which could be viewed as many times as desired and their 24/7 accessibility. It also offers the possibility to interact with peers when a whole ward is requested to participate in training.

Since 2009, at the University Hospital of Vaud, a policy named "Pain management" is part of an institutional commitment to improve pain practices. In its core, it states that all health care professionals are accountable for pain management.

To train nursing staff, a pilot e-learning program on acute pain management was created and tested in a traumatology ward.

The objectives of the training were:

- ✓ offering an attractive and relatively convenient way to get training
- ✓ responding to the needs of the caregivers
- ✓ encouraging self involvement and autonomy
- ✓ stimulating discussions and questioning at one's level and at the team's level.

2. METHODS

The Continuing Education Center, the institutional Pain project manager and the nursing staff of traumatology ward were involved with the construction of the training program.

- ✓ The pilot training consists of 17 themes of 3-6 short audio commented slides (ACS) and lasting about 5 minutes each
- ✓ Training is available on an internet e-learning platform requiring a password to access
- ✓ Trainees are requested to fill in an identical quiz before and after viewing each topic to test gain knowledge
- ✓ Each quiz contains 4-6 questions, which can be answered as MCQ, true/false, connecting sentences, etc. and can only be filled-in once
- ✓ The program is available during 2 ½ months on the internet (inside and outside hospital access)
- ✓ The team training participation is voluntary but strongly encouraged
- ✓ The anonymity of answers and scores to the quiz is ensured
- ✓ Numerous meetings are held in order to announce, prepare and explain the backgrounds, goals and method of the future training, introduce and present the platform, as well as gathering comments, questions and fears
- ✓ At the end of the pilot program, a questionnaire to evaluate 3 main areas (easiness-to-use of the platform; ACS and quiz: topics and contents; usefulness of this type of training compared to a more traditional one) is emailed to all caregivers of the ward
- ✓ Almost one year after the end of the program, for the purpose of checking knowledge retention, participants who enrolled in the program are invited to fill in another quiz gathering 2/3 of the previous 17 quiz. The questions are randomly selected for everyone.

3. RESULTS

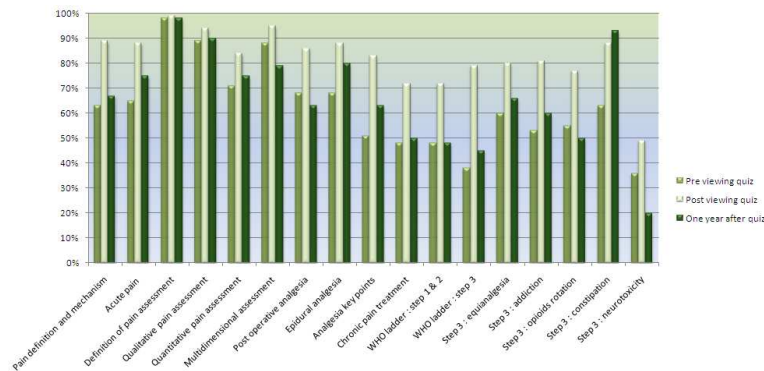
3 indicators were chosen to demonstrate the pilot training's pertinence: **participation rate**, **quiz scores** and **satisfaction rate**.

3.1 Participation rate :

50 RN of the traumatology ward followed the training, which gives a 92% participation rate (N=54). Among these, 68% (n= 34) viewed ≥ 80% the videos.

At the one year re-test, 32 participants completed the questionnaire (participation rate 76%).

3.2 Quiz scores:



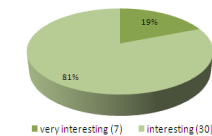
3. RESULTS (continued)

3.3 Satisfaction rate

At the end of the pilot program, a questionnaire is emailed to all participating RN to evaluate the content and the e-learning methodology : 37 RN responded to the evaluation (74% response rate).

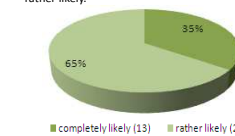
Interest for the ACS

All respondents considered that the ACS' content was interesting or very interesting



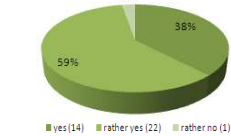
Transferring training into practice

The possibility of transferring the content of the training in their practice was considered as completely likely to one third of respondent. The rest evaluated that point as rather likely.



Recommending to colleagues :

Asking the participants about if they were to recommend this same training to colleagues, a vast majority said yes and rather ves.



4. DISCUSSION

Considering a voluntary participation, the participation rate is extremely high.

Regarding gain in knowledge :

- ✓ The score for all the participants between pre and post quiz increased from 64% to 84%. During this period, leaders' and trainers' support is particularly strong and RNs are also more likely to discuss together to share their points of views and seek others' advice about pain management
- ✓ One year after, the score of the global quiz is 66%. Although the availability of ACS was constant meantime, it appeared that no one reviewed a single ACS after the pilot period training. This, combined with the fact that long term mentoring by teachers was not organized, could perhaps explain that knowledge retention has decreased over time.
- ✓ Hypothesis can be made to explain variability in ACS scores : themes less central, questions not precisely formulated or that may induce confusion, setting and time when training is performed (home vs ward, daytime or nighttime,...).

The evaluation questionnaire reflected a **high satisfaction rate** about:

- ✓ the content and topics provided
- ✓ the possibility of transferring the knowledge into practice.

Participants would recommend this type of training to colleagues. They also mentioned their great interest toward an e-learning training compared to a more traditional one. They stated that the autonomy they had to perform the training was another success factor.

After the training, Traumatology team leaders noticed a better pain anticipation and pain management assessment in more patients as before, as well as the development of a more elaborate professional positioning regarding pain and pain management. A supportive clinical leadership is a key element of this program's success.

The analysis showed **some limitations to this e-learning training**:

- ✓ the training is not customized to each person's needs
- ✓ it was not possible to know the participants' certainty level of their answers, which is an interesting element to correlate with the actual answers
- ✓ the platform did not offer the possibility to post question on-line, nor did the training schedule a formal interactive session between participants and trainers

5. CONCLUSION

This pilot e-learning program was very successful, in terms of:

- ✓ participation
- ✓ short term knowledge increase
- ✓ participant satisfaction which was very favorable regarding easiness, transferability into practice and usefulness of this type of training.

Positive aspects of this E-learning training are:

- ✓ once it is developed, explained and given access, the program is available 24/7 to everyone who would like to re-view videos
- ✓ the training program is easily transferrable to other wards
- ✓ a supportive clinical leadership is a key element of this program's success.

Perspectives :

- ✓ the long term score of knowledge retention was rather low. Introducing a Q&A meeting during and after the training, or at a fixed time, could also offer a new perspective to the training.
- ✓ depending on the specificities of other wards, new videos have to be developed to target other topics pertaining to their needs (chronic pain, psychosocial aspects of pain management, impact of a multidisciplinary team, pediatrics, geriatrics, drug abusers, sedated patients, etc ...)
- ✓ one could imagine that every nurse should follow this training and validate it each year
- ✓ the high satisfaction rate encourages the continuing education center to carry on with the development of this model of training, particularly when the training's goal is sensitization to pain management