

E-Learning and Flipped Classroom in Medical Undergraduate Trauma Teaching

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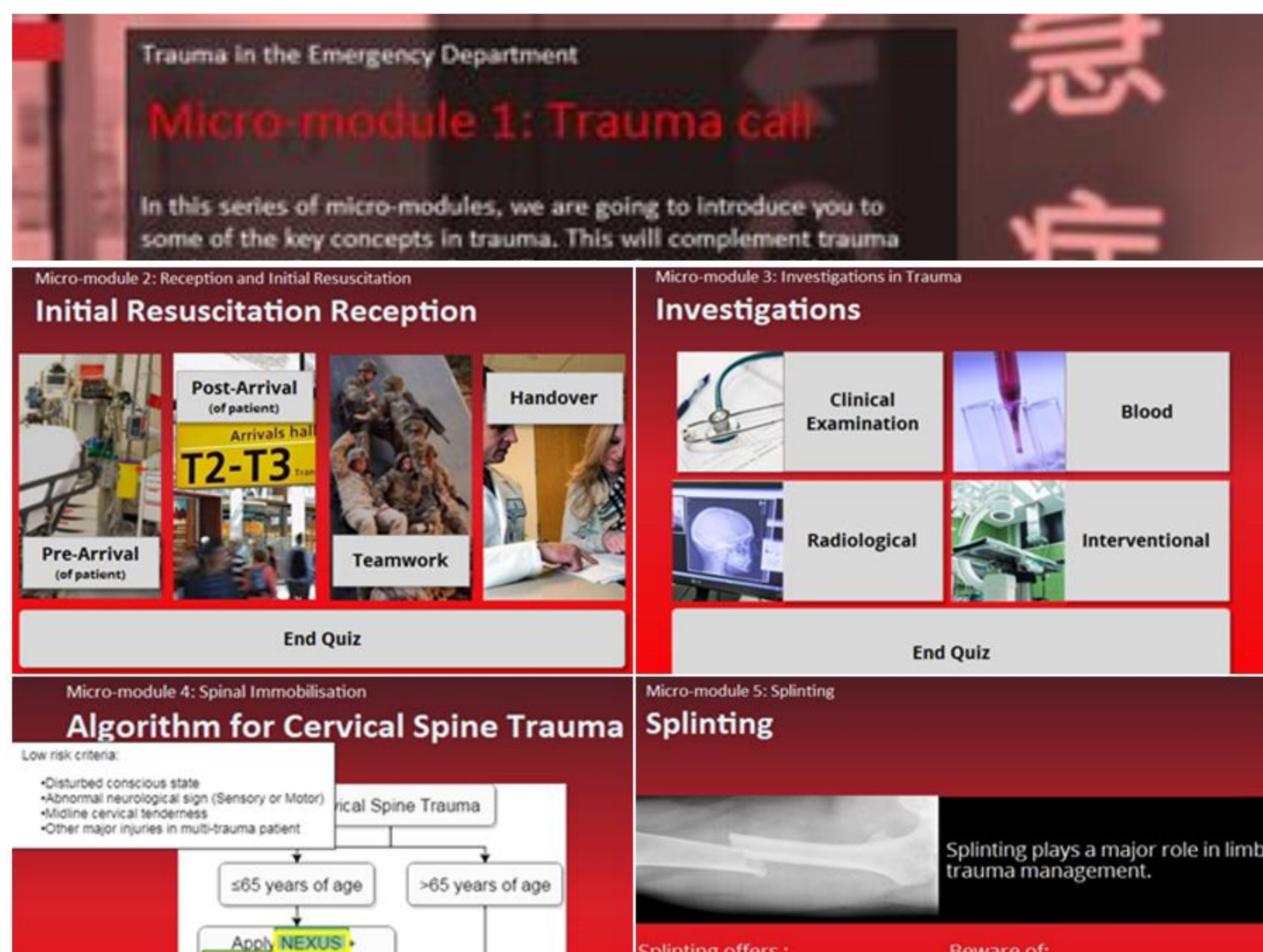


Background:

E-learning and the flipped classroom approach is a growing trend in medical education.

It enhances learning opportunities, boosts teaching efficiency and allows other forms of teaching to take place during contact time.

Knowledge acquisition may occur outside of lecture hall and hospital ward, and contact time will be left for analytical exercises, clinical skills practice and constructive discussions to aid understanding.



Aim:

To investigate if undergraduate emergency medicine trauma teaching may be covered using e-learning material and the flipped classroom approach.

Methodology:

The e-learning course was designed for final year medical students.

Five interactive narrated slides were constructed:

- Trauma Calls and Trauma Team;
- Reception and Initial Resuscitation;
- Investigations in Trauma;
- Spinal Immobilisation
- Splinting

Quizzes were implemented at the end for self-assessment. Teaching activities include: discussions, scenario simulation training and practical sessions.

Data Collection:

Questionnaire feedback from participants were collected to evaluate:

Time spent, Understanding of the material, Usefulness of the material, Usefulness of the teaching activities, Overall satisfaction.

Students responded to the questionnaire by using a 6-point Likert scale, with a qualitative free-text question included at the end for “any other comments”.

Results:

45 students completed the questionnaire.

Students reported spending 10-20 minutes on each topic.

the eLearning material useful (40/45) and the teaching activities useful (38/41).

Feedback			
	I have gained a basic understanding, N (%)		Overall Satisfaction, N (%)
1 (Strongly Disagree)	0 (0)	1 (Poor)	0 (0)
2	0 (0)	2	0 (0)
3	2 (4.4)	3	0 (0)
4	2 (4.4)	4	5 (11.4)
5	23 (51.2)	5	24(54.5)
6 (Strongly Agree)	18 (4)	6 (Excellent)	15(34.1)
Total	45 (100)	Total	44(100)

Table 1 : Feedback from students

The modules were well received and students found the modules “interesting and interactive”.

Negative comments from students were taken into consideration when updating the course e.g. narration speed was increased, question format adjusted, and smaller groups for practical scenarios were arranged.

Conclusion & perspectives :

Undergraduate emergency medicine trauma teaching may be covered using e-learning material and the flipped classroom approach. It appears to enhance both teaching and learning efficiency, facilitates self-learning, whilst keeping the topic interesting for students. This paradigm shift of learning should be supported.

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