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## **Background**

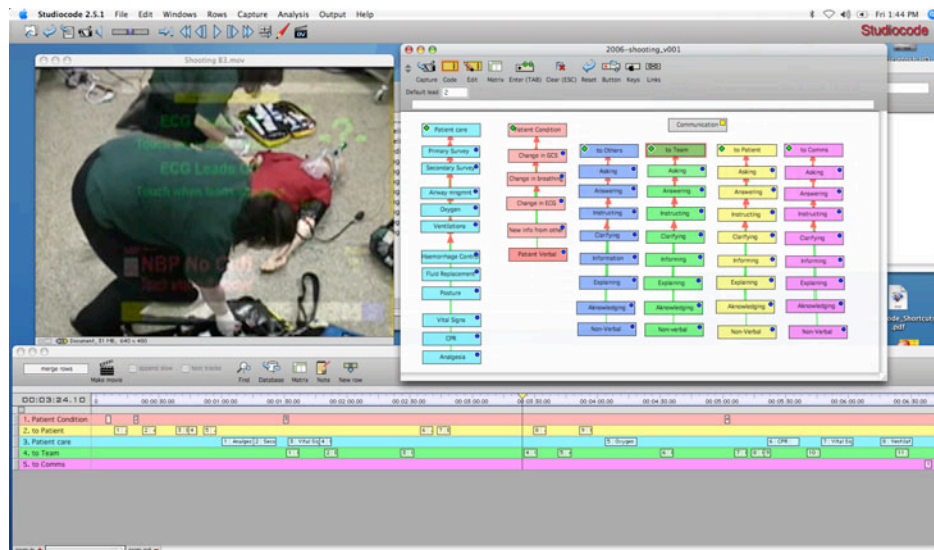
Learning by making mistakes is good for learning but patients must be protected from harm when student or trainee health professionals are providing their clinical care. When patient simulators are used students can be allowed to make mistakes and learn through that experience but to make the most of this requires appropriate feedback. Typically trainers will observe students or trainees in a role and note events and behaviours for discussion. Progress in acquiring and refining clinical is an important component of feedback but monitoring incremental change in performance is quite difficult because:

- Intervals between performance testing can be long
- There may be large numbers of students
- Performance is observed in many different scenarios
- There can be several trainers/facilitators.

To help with this process we have investigated some methods of 'in-training assessment' including video-analysis to track students' performance. One software package that has been used widely for video-analysis in sport has recently become available for use in education as Studiocode™ ([www.studiocodegroup.com](http://www.studiocodegroup.com)).

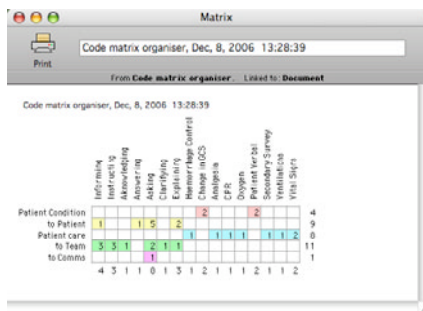
## **Methods**

The paramedic degree program at Flinders University is based on a curriculum that includes knowledge, clinical skills and attitudes that have been identified as important for professional practise. The course includes a series of simulated patient encounters designed to challenge students to perform particular skills in context. For example, students entered a scenario where they had to provide emergency care of shooting victim with severe bleeding. A major learning objective was effective communication strategies in a dynamic environment. Soft buttons were created in Studiocode™ to tag instances during the scenario where the skills being taught and assessed were used. The scenarios were recorded directly on a laptop using Studiocode™ for analysis.



## Results

We were readily able to customise Studiocode™ to our requirements. Coding can be concurrent with the scenario (on the GUI or a PDA) but it is difficult for one person to run a scenario, observe students and code at the same time so our coding was undertaken 'off-line'. Tagging instances in Studiocode™ facilitated analysis of communication with patient and colleagues. Instances can be automatically spliced together by the program to assist giving specific feedback to students. Also, the matrix function in Studiocode™ provided a useful graphical output to display overall performance in the scenario.



## Implications

Studiocode™ has given us a new way to analyse performance in simulation and provide feedback to participants. It did require more work by the training supervisor but has improved our confidence in being able to provide useful feedback to students. The labels ascribed to the soft buttons might help standardise analysis and improve inter-rater reliability. Between observers and fixed values should facilitate assessment of students' learning over time.

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Please visit [www.studiocodegroup.com](http://www.studiocodegroup.com) for more information