Background:
The Ballarat Health Services (BHS) Hospital in the Home (HiTH) nursing staff function independently in the community delivering acute care. HiTH nurses have been using a new anaphylaxis protocol for over one year. It is important that they are familiar with this protocol. Due to the low frequency of anaphylaxis it is difficult to maintain staff skills. We evaluate the efficacy of different training methods comparing high fidelity simulation to traditional training. High fidelity simulations have become popular for the education of health professionals; as they are resource intensive, efficacy must be assessed.

Objectives/Aims:
• Evaluate simulation training for the BHS anaphylaxis protocol.
• Compare simulation with traditional methods.
• Develop and verify an assessment tool to achieve these.

Method:
Nine HiTH nursing staff attended either a high fidelity simulation (n=6) or a traditional training session (n=3) on the BHS anaphylaxis protocol.

An assessment tool in the form of a three-part survey was designed (see Figure 1):
1. Modified Likert scale to assess confidence.
2. True/false and multiple-choice questions to assess declarative knowledge.

This design was based on an assessment tool that was validated to assess confidence and knowledge (Goodlin et al, 2007). Participants completed this survey both prior to and at least one week after their training session.

Results:
The mean score before the training session was 49 (SD 6), compared with a mean score of 60 (SD 8) after the training session. A Welch Two Sample t-test demonstrated a statistically significant increase following the training (t = 3.561, p = 0.003, CI 4.7-18.8). Refer to Figure 2 and Figure 3.

The mean difference in participants who attended the high fidelity simulation session was 12.8, compared with 9.7 for those attending traditional training. A Welch Two Sample t-test did not demonstrate statistical significance for this difference of means (t = 0.825, p=0.437, CI -5.9-12.2).

Power in this pilot study was insufficient to confirm the statistical significance of these findings.

Conclusion:
• The large change in mean survey score with training demonstrated poor baseline knowledge, indicating a need for ongoing training.
• We have shown that training increases participant knowledge.
• The data trend suggests this training is best delivered via high fidelity simulation. This is consistent with previous investigations comparing high fidelity to traditional training (Cant et al, 2010).

Implications:
• A formal training program should be established at BHS to enhance knowledge retention of this critical skill.
• The required frequency of training can be investigated in follow up studies using the assessment tool.
• As an adjunct to training, a copy of the anaphylaxis protocol has been placed in patient folders to assist with knowledge retention. Further investigation of this simple strategy would be useful.
• Although resource intensive, high fidelity simulation is an appropriate way to deliver training.

References: