Background

• Emergency situations often result in patient mortality.
• Hospitals and training programs need to effectively educate employees who frequently care for patients in critical condition.

Purpose

• Question: Do healthcare professionals with simulation training for emergency situations demonstrate higher clinical competence than healthcare professionals without simulation training?

Methods

• Databases searched:
  - Cochrane Library - Key words: “emergency simulations,” 2006-2016
  - OVID MEDLINE - Key words: “emergency simulations clinical competence” + “patient simulation,” 2011-2016
• Inclusion Criteria
  - Physicians, nurses, Emergency Medical Services and students in emergency or critical care simulations, peer-reviewed, randomized controlled trials (RCTs) or systematic reviews, English language studies
• Exclusion Criteria
  - Non-emergency simulations, studies that compared only different types of simulations, pharmacists/pharmacy students, studies with outcomes unrelated to clinical competence

Results

• 5 studies met search criteria
• 1 systematic review, 4 RCTs
• Outcomes measured included knowledge, patient outcomes, skills, teamwork, and case management (all components of clinical competence).
• All interventions resulted in higher outcome scores than no intervention.
• But results were mixed when comparing simulation to the other interventions:
  - No difference in outcomes between simulations and other interventions
  - Simulation training → higher knowledge retention
  - Lecture before simulation improved task performance

Conclusions

• The results indicate that simulation training improves the clinical competence of participants.
• BUT inconclusive if simulation > other training
• Limitations: Small sample size, not all studies included every aspect of clinical competence in their outcomes, few nurse participants
• Should simulations be included in training?
  - YES, BUT also present a pre-simulation lecture on the simulation topic.

Nursing Implications

• Hospitals and schools for healthcare professionals should continue to use simulations
• They should also combine practical simulations with classroom teaching about the subject of the simulation.

Future Research

• Further research needed:
  - Specialty units as research setting
  - Patient outcomes as a focus
  - Nurses as primary study participants