Background

The aim of rapid response teams is to intervene early on in deteriorating non-intensive care unit patients to decrease morbidity and mortality. While rapid response teams are widely prevalent, standardization of their approach to various clinical scenarios has not been well studied.

Objective

Our goal was to assess residents' ability to think of adequate differential diagnoses in a high-pressure scenario, and their perception of the utility of a checklist during rapid responses.

Methods

18 Internal Medicine residents from the same residency program were given clinical vignettes and asked to list differential diagnoses for three hypothetical scenarios – acute hypoxia, acute change in mental status, and cardiopulmonary arrest. The participants were assigned a total of fifteen minutes. Their answers were compared to a standardized list of life-threatening differential diagnoses. Participants were also surveyed to see if they thought such checklists would be useful during rapid responses.

Results

- 16 different differential diagnoses for acute hypoxia were enlisted: Pulmonary embolism (PE) (94.4%), pulmonary edema/CHF exacerbation (89%), and COPD exacerbation (67%) were the most common ones.
- 16 different differential diagnoses were listed for altered mental status: intracranial hemorrhage (89%) and ischemic stroke (55.5%) were the only two listed by more than half the residents.
- 19 different possibilities were listed as causes of cardiopulmonary arrest: Acute Coronary Syndrome (72.2%), PE (66.7%), and electrolyte abnormalities (50%) being most common.

Significance

- Our study shows variability in the approach of residents towards common rapid response scenarios, with several critical diagnoses being missed even in a controlled testing environment.
- Use of differential diagnoses checklists during rapid responses may lead to fewer missed or delayed diagnoses, thereby increasing patient safety.
- The checklist concept was well received with 87.5% agreeing it could be useful.
- Checklists are now being piloted by the RRT at Abington, after approval by an intensivist and the hospital’s rapid response committee.