



# The Impact Of Interventions To Reduce Length Of Stay In The Emergency Department: A Systematic Review

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## BACKGROUND

- Emergency department crowding is an increasing public health crisis in the U.S. and associated with negative outcomes, such as poor quality care, medical errors, inpatient complications, and higher mortality
- Over the past decade median ED lengths of stay have increased resulting in reductions in patient satisfaction and quality of care

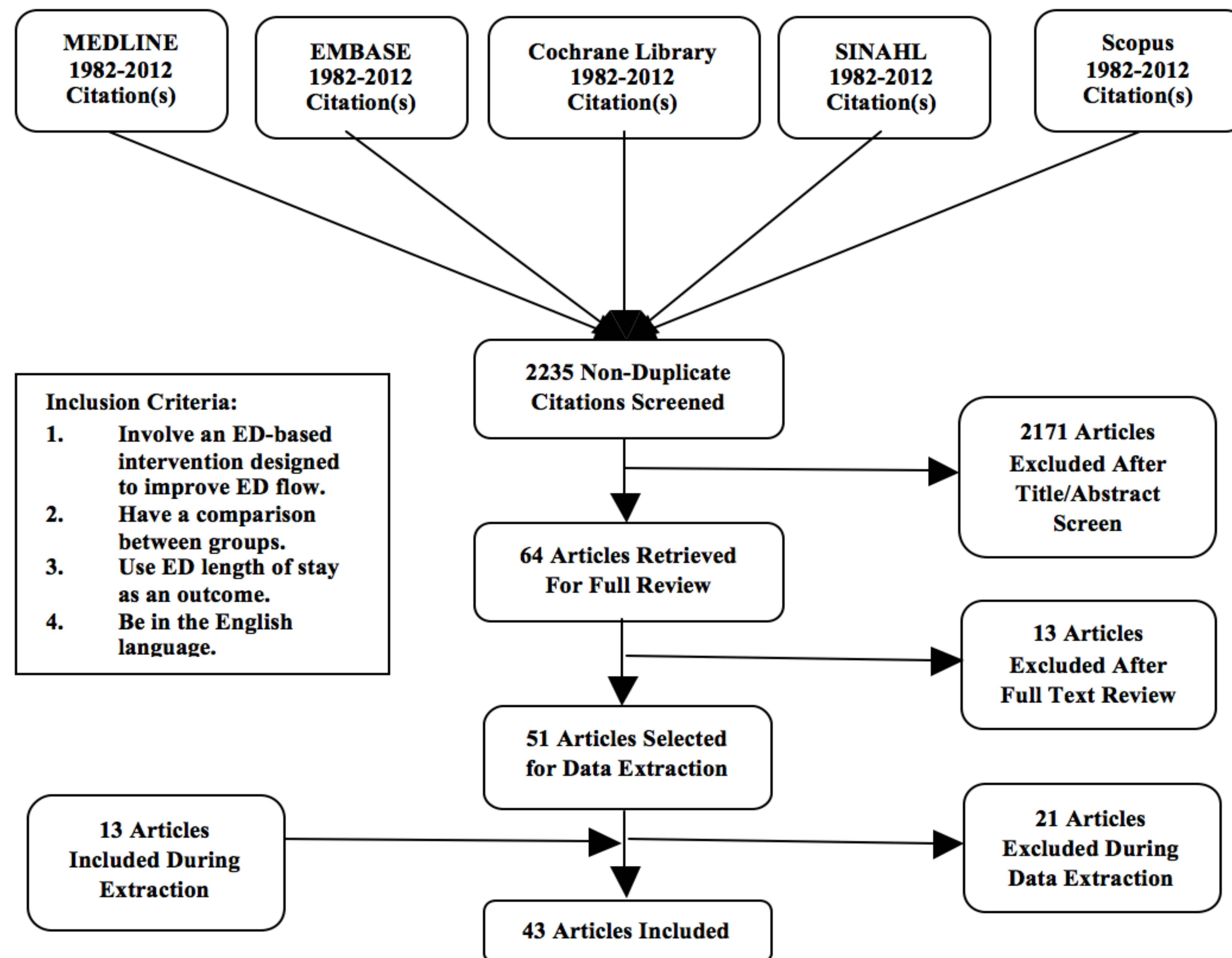
## OBJECTIVES

- We conducted a systematic review of the literature to compare the effectiveness of ED-based interventions reporting comparative data on length of stay

## METHODS

- A systematic review using five databases from 1982 to 2013
- Search terms including “Emergency Department”, “Crowding”, “length of stay”, and “Intervention”
- Study inclusion was reviewed by two reviewers - disagreement was resolved by consensus
- Data were extracted using a standardized data extraction form

Figure 1: PRISMA flow diagram of study selection from the literature review



## RESULTS

- 43 unique studies included
- 41 studies were single-center studies
- Annual visit volume ranged from 19-87K
- 20 studies were time series
- 10 studies were quasi-experimental before & after
- 7 studies were randomized controlled trials
- 3 studies were case control studies
- 3 studies used both mixed methods

## CONCLUSIONS

- Interventions to improve crowding in the ED have mostly been tested in single sites
- The most common intervention is implementing operational process changes
- Adding extra providers, implementing operational process changes and using point of care testing have the greatest observed impact on length of stay.
- Additional research is necessary to compare the effectiveness of interventions across settings

## RESULTS

Category	Number of Studies	Decreased LOS	Range for Decrease LOS (minutes)
Operational Process	11 (26%)	9/11	10-116
Triage	9 (21%)	6/9	12-83
Point of Care	7 (17%)	5/7	8--114
Fast Track	6 (14%)	6/6	13-74
Extra Provider	5 (12%)	3/5	7-125
Other	5 (12%)	5/5	11-47

## DISCLOSURES

- Pines – Funded by RWJF / Urgent Matters

