

# The Effectiveness of Incorporating Telehealth in Emergency Rooms to Reduce Hospital Costs

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## Background

Emergency department visits are expensive. With a growing patient population, emergency departments have seen an increase in unnecessary, non-emergent patients.<sup>1</sup> Hospital revenues are affected as resources must be allocated to these unnecessary visits.<sup>2</sup> The use of telehealth by these departments may serve as a cost-effective method to reduce unnecessary visits to the emergency room.

## PICOT Question

Do hospitals providing telehealth in the emergency room reduce the costs for patients?

- P** Emergency Room Patients
- I** Telehealth
- C** Non-use of telehealth treatment tied into the ER
- O** Reduce Patient Costs

## Literature Search

**Database:** PubMed, Google Scholar  
**Key Terms:** Telemedicine, Emergency Room, Reducing Costs, Cost-Benefit Analysis  
**Article Selection Criteria:**  
1. Published between 2017 and 2022  
2. Published in English  
3. Published in a scholarly journal  
4. Aligns with research question  
5. Includes the population of emergency room patients



## Synthesis of Findings

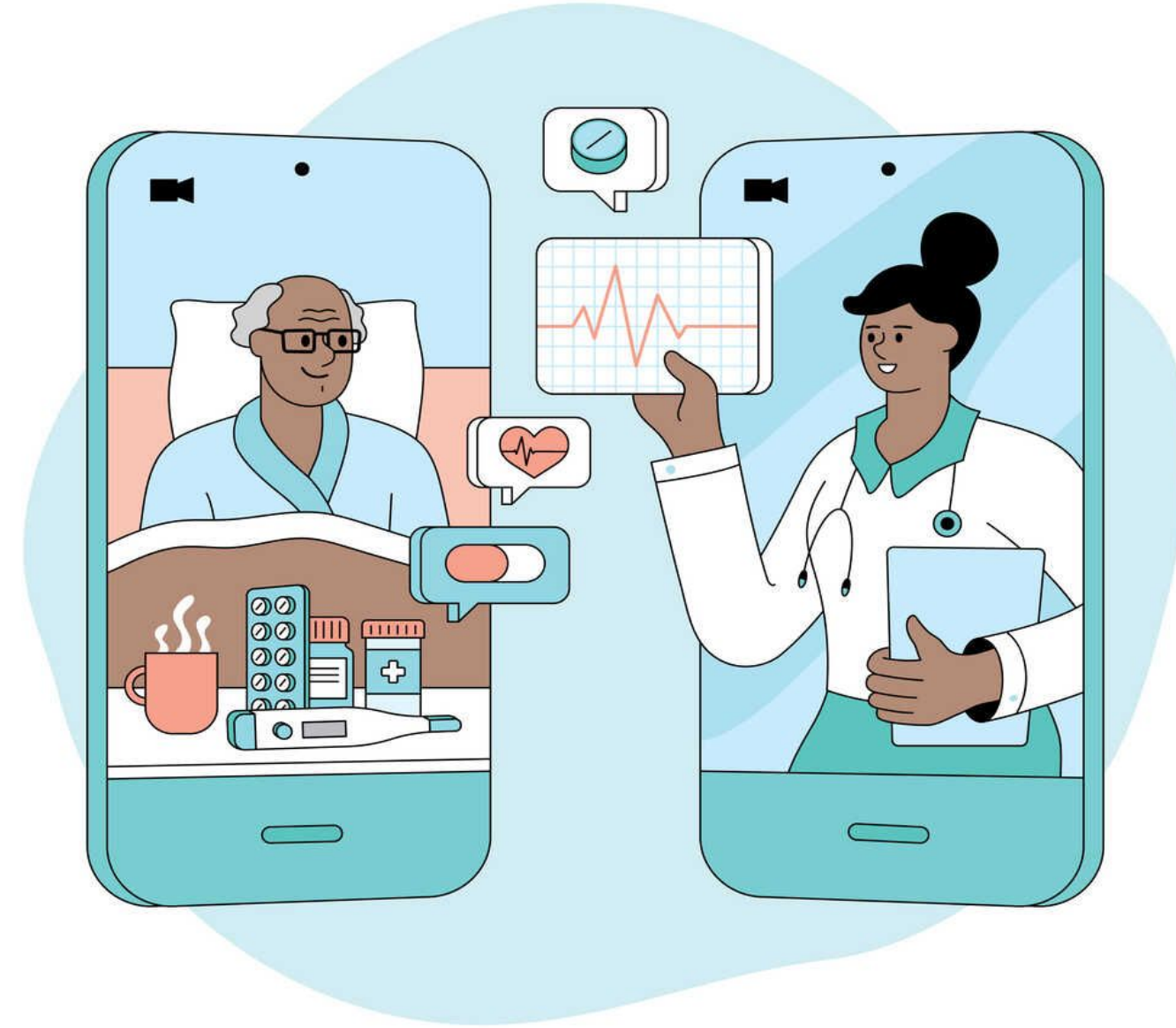
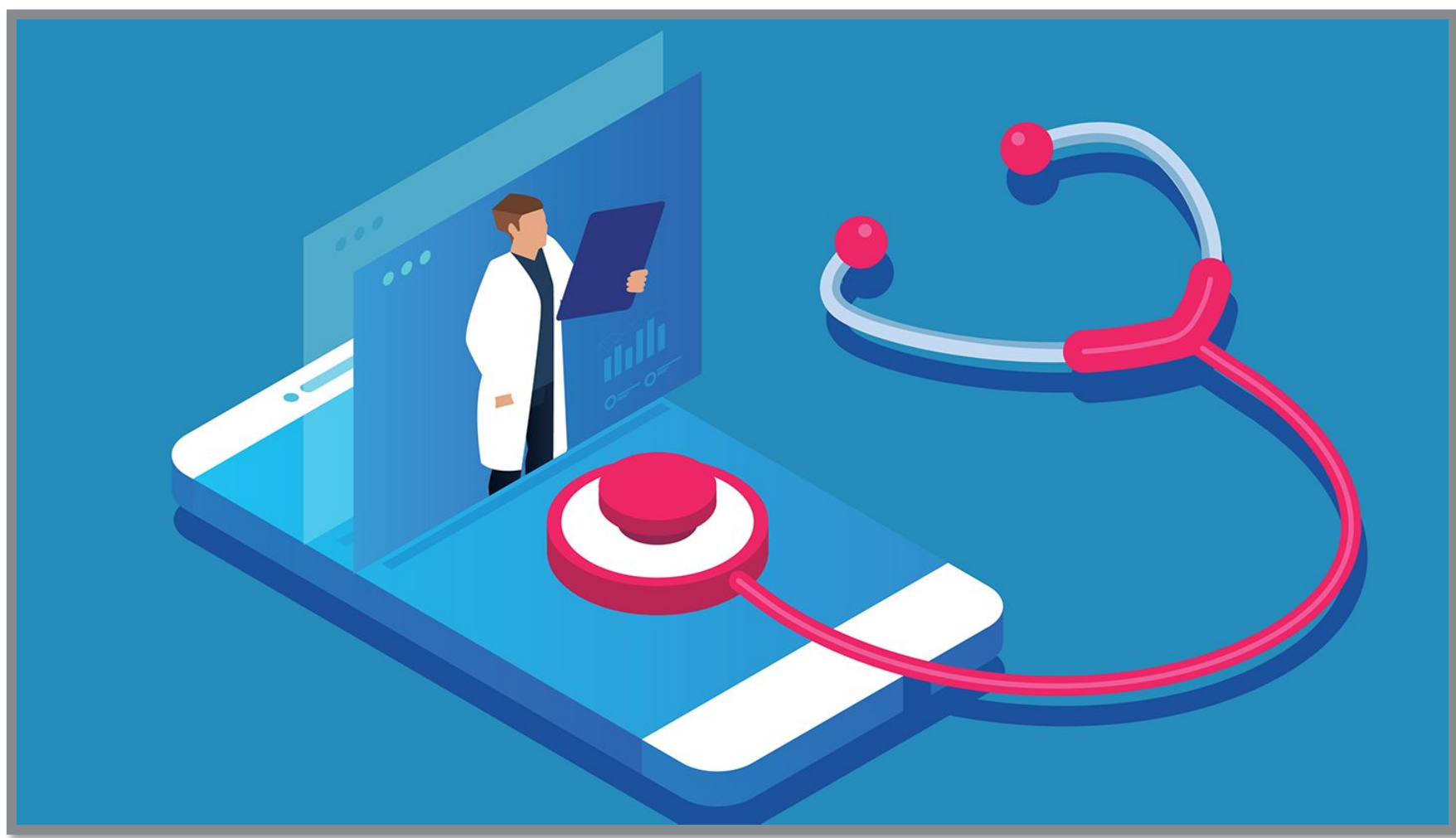
- Studies have shown that implementing telehealth as a resource to reduce unnecessary visits to the emergency room was over \$2000 lower than an in-person emergency department visit.<sup>2-3</sup>
- Research also suggests that incorporating telehealth in the emergency department has resulted in a 31.4% lower annual expenditure cost than hospitals that did not utilize telehealth.<sup>4-5</sup>
- The use of telehealth programs in emergency departments revealed the effectiveness of reducing unnecessary visits from non-emergent patients, which resulted in lowering healthcare costs and providing benefits to patients by increasing convenience and increasing access to care from a distance.<sup>6-8</sup>

## Decision to Change

- We want to implement telehealth in emergency departments to help reduce the unnecessary visits from patients who come in with non-emergency cases. With this change, this will benefit both the patient and the hospital in terms of costs, convenience, and time.
- Telehealth will decrease strain on the healthcare system as well as preserve scarce supplies. In addition, it can also significantly reduce the costs associated with in-person medical visits. If hospitals were to reduce 1% of emergency department visits with the incorporation of telemedicine, hospitals can greatly reduce their expenses spent annually.

## Evaluation

- By the end of the 6-month implementation period, incorporating telehealth into emergency departments will decrease hospital cost for the patient by 10%.
- To evaluate if implementing telehealth saved the hospital money, we would need to evaluate ER expenses before and after implementing it.



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