## Why is a Queue suitable for managing treatment requests?

Because what's really required here is the FIFO principle: first in, first out. That's why using this structure in a hospital is better in terms of organization. This queuing system therefore ensures fairness in the hospital. Everyone receives treatment according to the order of arrival.

## What issues would occur if a Stack were used instead?

Then the first-in, first-out principle wouldn't apply, and it would become the last-in, first-out principle. This wouldn't be good for the hospital at all, because it would be extremely illogical if the last patient to arrive were the first to enter.

## Compare their time complexities.

- **enqueue: O(1)**
- **dequeue: O(1)**

**Queue:** We used a tail pointer. Direct end-to-end insertion is performed.

**Dequeue:** We used a head pointer. Direct removal from the front.