
Which Chest Pain Patients Can Safely be Removed from Monitors?



A study using the [Ottawa Chest Pain Rule](#) to assess patients presenting to the emergency department with chest pain successfully identified the small subset of patients that required cardiac monitoring. Implementing this rule could potentially improve patient flow and free up cardiac monitored beds in the ED, according to the researchers.

Dr. Venkatesh Thiruganasambandamoorthy, the study's lead author, who is a scientist and emergency physician at The Ottawa Hospital and an assistant professor at the University of Ottawa, commented in a [media release](#) that as chest pain is a common reason for attending the ED, use of the rule has the potential to cut by one-third use of beds with heart monitors.

Current practice means that around 70 percent of chest pain patients are put into beds with heart monitors to check for arrhythmia. At Ottawa Hospital's two EDs, around 35 chest pain patients present each day, and 25 are currently allocated to monitored beds. Use of the rule would safely take 8 of those patients from those beds.

The Ottawa Rule is simple - patients can be removed from cardiac monitoring if:

1. they have no current chest pain and
2. they have a normal or non-specific ECG

As patients usually stay on a monitor for 8 hours before discharge home, applying the rule means they can be taken off the monitor sooner.

In their study, published in CMAJ, the Canadian Medical Association Journal, the researchers observed 1,125 chest pain patients admitted to Ottawa Hospital's emergency department between November 2013 and April 2015. Then they tested whether the tool could accurately predict which patients had needed to stay on heart monitors because of irregular heartbeat.

Results

Fifteen of the 1,125 patients experienced irregular heartbeat during their eight-hour stay. The rule was able to predict with 100 percent accuracy those patients who needed to stay on heart monitors. It also indicated that 36 percent of the 796 patients who were monitored during the study could have been safely removed from the monitors.

"This rule now has the potential to take a large number of low risk chest pain patients off of heart monitors," commented Dr. Thiruganasambandamoorthy. "We started using this rule in The Ottawa Hospital emergency departments a few months ago, and we're watching the outcomes very closely. We have also spoken to several emergency departments across the country who are excited about bringing this rule into their hospitals."

Source: [Ottawa Hospital Research Institute](#)

Image: Dr. Venkatesh Thiruganasambandamoorthy, Ottawa Hospital Research Institute
Image credit: The Ottawa Hospital

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