

# New screening tool to help physicians tell if a fainting episode heralds something serious

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A simple eight-question tool could help emergency physicians uncover the dangerous hidden conditions that make some people faint, according to a study published today in the *Canadian Medical Association Journal*. Dr. Venkatesh Thiruganasambandamoorthy is the lead author of the study, and is an emergency physician and scientist at The Ottawa Hospital and an assistant professor at the University of Ottawa. Credit: The Ottawa Hospital

A simple nine-question tool could help emergency physicians uncover the sometimes dangerous hidden conditions that cause some people to faint, according to a study published today in *CMAJ* (*Canadian Medical Association Journal*).

Syncope, or [fainting](#), accounts for between 1% and 3% of all [emergency](#) department visits. In most cases, it is benign, but it can sometimes be caused by serious health conditions. About 10% of [patients](#) who visit emergency departments for fainting experience a serious adverse event within 1 week to a month after their visit.

A team of researchers at The Ottawa Hospital and the University of Ottawa have created the Canadian Syncope Risk Score to help emergency doctors predict the risk of a patient experiencing an adverse event, such as potentially fatal irregular heart rhythm, heart attack and other cardiac events, gastrointestinal bleeding, and even death within a month after fainting.

"Fainting is a big problem," says Dr. Venkatesh Thiruganasambandamoorthy, an emergency physician and scientist at The Ottawa Hospital and an assistant professor at the University of Ottawa. "The way fainting patients are examined in emergency rooms varies greatly between physicians and hospitals. We hope that this screening tool will make the process more consistent and improve the detection of serious conditions related to fainting."

Researchers looked at 4030 patients from six Canadian hospitals including the Ottawa Hospital Civic and General Campuses, Ottawa; Kingston General Hospital and Hotel Dieu Hospital, Kingston, Ontario; and Foothills Medical Centre, Calgary, and University of Alberta Hospital, Edmonton. Of the total patients, 147 experienced a serious event in the month following discharge.

Dr. Thiruganasambandamoorthy and his team found eight factors that physicians can plug in to a screening tool. When combined, these factors give the patient's total risk of an adverse event, from very low to very high.

These factors include:

- the presumed cause of fainting at the end of emergency department assessment
- whether fainting was triggered by the patient being in a warm or crowded place, standing for a long time or experiencing intense fear, emotion or pain
- a history of heart disease
- abnormal electrocardiogram measurements
- high levels of troponin, a protein that indicates damage to the heart if detected in blood
- abnormal blood pressure reading during the emergency visit.

Most patients admitted to [hospital](#) for fainting do not need to be there, and can spend four to seven hours in the [emergency department](#) before a decision is made to discharge them.

"If our tool can discharge low-risk patients quickly and safely, then I think we can reduce emergency room wait times and open up those resources to other patients," said Dr. Thiruganasambandamoorthy.

**More information:** *Canadian Medical Association Journal*,  
[www.cmaj.ca/lookup/doi/10.1503/cmaj.151469](http://www.cmaj.ca/lookup/doi/10.1503/cmaj.151469)

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