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CMAJ headlines:
- ☐ **New computer-aided model may help predict sepsis**
- ☐ **Too much of a good thing? High doses of vitamin D can lead to kidney failure**

New computer-aided model may help predict sepsis

▪️ SEPSIS

Can a computer-aided model predict life-threatening sepsis? A model developed in the UK that uses routinely collected data to identify early symptoms of sepsis, published in *CMAJ (Canadian Medical Association Journal)*, shows promise.

Sepsis is a major cause of death in hospitals, and early detection is key to preventing deaths. Every hour of delay is linked to a 7% reduction in survival, but delays in detection are common. Several scores exist to help identify patients with sepsis, including the National Early Warning Score (NEWS) used in the United Kingdom's National Health Service hospitals.

Researchers in the UK developed a computer-aided National Early Warning Score (cNEWS) to determine if it could enhance the accuracy of predicting sepsis.

"The main advantage of these computer models is that they are designed to incorporate data that exist in the patient record, can be easily automated and place no extra burden on the hospital staff to collect additional information," says Professor Mohammed A. Mohammed, University of Bradford, Bradford, United Kingdom.

The cNEWS score can trigger screening for sepsis usually within 30 minutes of admission once routinely collected information has been electronically entered into the patient's medical record.

"These risk scores should support, rather than replace, clinical judgment. We hope they will heighten awareness of sepsis with additional information on this serious condition," says Professor Mohammed.

cNEWS may now be introduced carefully into hospitals with appropriate information technology infrastructure and evaluated.

"Computer-aided National Early Warning Score to predict the risk of sepsis following emergency medical admission to hospital: a model development and external validation study" is published April 8, 2019.

MEDIA NOTE: Please use the following public links after the embargo lift:

Research: http://www.cmaj.ca/lookup/doi/10.1503/cmaj.181418

Too much of a good thing? High doses of vitamin D can lead to kidney failure

A case study in *CMAJ* highlights the dangers of taking too much vitamin D.

A 54-year-old man, after returning from a trip to Southeast Asia where he spent much of his holiday sunbathing, showed increased levels of creatinine, suggesting kidney damage or malfunction. After referral to a kidney specialist and further testing, it was discovered that he had been prescribed high doses of vitamin D by a naturopath, who recommended a dose of 8 drops every day. Over 2 ½ years, the patient, who did not have a history of bone loss or vitamin D deficiency, took 8–12 drops of vitamin D daily, totalling 8000–12 000 IU. As a result, he had very high levels of calcium in the blood, which left him with significant kidney damage.

"Although vitamin D toxicity is rare owing to a large therapeutic range, its widespread availability in various over-the-counter formulations may pose a substantial risk to uninformed patients," writes Dr. Bourne Auguste, a Clinical Fellow in Home Dialysis at Toronto General Hospital and the University of Toronto.

The recommended daily allowance is 400–1000 IU, with 800-2000 IU recommended for adults at high-risk of osteoporosis and for older adults.

"Our experience informs us that patients and clinicians should be better informed about the risks regarding the unfettered use of vitamin D. Given new findings from the US Preventive Services Task Force, current Canadian guidelines regarding its use in low-risk individuals should be revisited," the authors suggest.

"Use of vitamin D drops leading to kidney failure in a 54-year-old man" is published April 8, 2019.

MEDIA NOTE: Please use the following public links after the embargo lift:

Practice: http://www.cmaj.ca/lookup/doi/10.1503/cmaj.180465

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