

## **News Release Embargoed until Monday, July 15, 2019, 12:01 a.m. ET**

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CMAJ headlines:

- Surgery before pregnancy linked to increased risk of opioid withdrawal in babies born afterwards**
- Political support, strong public health systems key to eliminating measles outbreaks worldwide**
- Sudden cardiac arrest in athletes: prevention and management**

### **Surgery before pregnancy linked to increased risk of opioid withdrawal in babies**

Babies whose mothers underwent surgery before pregnancy had an increased risk of opioid withdrawal symptoms at birth, found a new study in *CMAJ (Canadian Medical Association Journal)*.

“Use of opioids for pain control after surgery may increase the risk of opioid dependence in women and withdrawal in their newborns,” says lead author Dr. Nathalie Auger, University of Montreal Hospital Research Centre, University of Montreal and McGill University. “We found mothers who had surgery before pregnancy had 1.6 times the risk of neonatal abstinence syndrome; that is, opioid withdrawal symptoms in their future newborns, perhaps because opioid use continues after surgery.”

The large study included data on almost 2.2 million births in Quebec between 1989 and 2016. Of the total, 2346 newborns had neonatal abstinence syndrome and, of these, 1052 had mothers who underwent prepregnancy surgery (14.9 per 10 000 babies) compared with 1294 babies (8.8 per 10 000) born to mothers who did not have surgery. Multiple surgeries; younger age at surgery; longer time between surgery and pregnancy; and cardiovascular, thoracic, urologic, or neurosurgery were associated with the largest risk of neonatal abstinence syndrome. There was also a strong association with general anesthesia, perhaps because this type of anesthesia is used in more complex surgeries, which can require longer use and higher dosage of pain relievers.

“Physicians have the potential to prevent neonatal abstinence syndrome with careful postoperative pain management in young women,” says Dr. Auger.

“Opioids continue to be overprescribed, despite calls to optimize postsurgical pain control through improvement of surgical guidelines and use of multipronged approaches with nonopioid painkillers or local anesthetics,” she says.

Limiting postoperative opioid exposure, reducing overprescribing and screening for opioid use in pregnant women who have had previous surgery may help reduce the risk of neonatal abstinence syndrome.

*“Maternal prepregnancy surgery and risk of neonatal abstinence syndrome in future newborns: a longitudinal cohort study”* is published July 15, 2019.

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

**Research:** <http://www.cmaj.ca/lookup/doi/10.1503/cmaj.181519>

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## **Political support, strong public health systems key to eliminating measles outbreaks worldwide**

Strong political support and strong public health systems are necessary to combat measles outbreaks, which are growing in frequency around the world, argue public health experts in a commentary in *CMAJ (Canadian Medical Association Journal)*.

“Sustaining measles elimination requires strong regional public health systems,” write Drs. Natasha Crowcroft and Shelly Bolotin, Public Health Ontario and Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario. “In a globalized society in which we are all connected, a disease as infectious as measles — the most infectious of the vaccine-preventable diseases — is easily spread. To prevent this, public health programs need to deliver close to 100% immunization coverage, which is challenging on a technical level.”

The World Health Organization reports a 300% increase in cases of measles in the first 3 months of 2019 compared with 2018.

“In the war against microbes, victories are achieved at a huge price, and the peace that follows is fragile,” write the authors. “It took many years for the Americas to verify elimination of measles in 2016. It took only 2 years of political disruption in Venezuela to disrupt the health system enough to obliterate this achievement.”

Ensuring that everyone is vaccinated is complex and requires coordination at the local level, which is undermined by the pockets of anti-vaccination proponents. Strong public health systems are needed to ensure everyone is immunized and to track this uptake accurately.

**Commentary:** <http://www.cmaj.ca/lookup/doi/10.1503/cmaj.190559>

**Podcast post-embargo link:** <https://soundcloud.com/cmajpodcasts/190559-com>

*“Measles outbreaks demand systems-level action locally, nationally and globally”* is published July 15, 2019.

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## **Sudden cardiac arrest in athletes: prevention and management**

It’s marathon season, and every so often a news report will focus on an athlete who has collapsed from sudden cardiac arrest. Although uncommon, these events get attention. A new review in *CMAJ (Canadian Medical Association Journal)* looks at recent evidence to help physicians prevent and manage the risk of sudden cardiac arrest in competitive athletes.

Sudden cardiac arrest is rare and, in young athletes, is usually the first sign of heart disease, although one study found that 29% of athletes had symptoms of underlying disease before an arrest. It is very difficult to predict or prevent, and screening programs are challenging and of uncertain benefit. Physicians should routinely ask athletes if they feel dizzy, short of breath or experience chest pains during or after exercise and ask about family history to determine if there may be an inherited condition.

Survival rates after sudden cardiac arrest in athletes are quite high when automated external defibrillators are used.

“Establishing effective resuscitation protocols and increasing the availability of automated external defibrillators in settings where competitive sport is undertaken are the most effective strategies in helping reduce the incidence of sudden cardiac death among athletes,” says Dr. Paul Dorian, a cardiologist at St. Michael’s Hospital and the University of Toronto, Toronto, Ontario.

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**Review:** <http://www.cmaj.ca/lookup/doi/10.1503/cmaj.190166>

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