News Release Embargoed until Monday, April 23, 2018, 12:01 a.m. ET

Please credit CMAJ, not the Canadian Medical Association (CMA). CMAJ is an independent medical journal; views expressed do not necessarily reflect those of its owner, Joule, a CMA company.

CMAJ headlines:

- **Opioid use linked to increased risk of falls, death in older adults**
- **Bias against female researchers in peer review of research grants**
- **Face transplant surgery prevents "social death" –** *podcast*

Opioid use linked to increased risk of falls, death in older adults

Recent opioid use is associated with an increased risk of falls in older adults and an increased risk of death, found new research in *CMAJ (Canadian Medical Association Journal)*.

Falls are a leading cause of injury and death in older adults. However, evidence for a link between opioid use and falls is inconsistent.

The study included data on 67 929 patients aged 65 and older who were admitted for injury to one of 57 trauma centres in the province of Quebec. The mean age of patients was 81 years, and the majority — 69% — were women. Falls were the most common cause of injury (92% of patients), and more than half (59%) had surgery for their injuries, with lengthy hospital stays (median stay of 12 days). Researchers looked at opioid prescriptions in the preceding 2 weeks before injury and found that the patients who had filled an opioid prescription during this period were 2.4 times more likely to have had a fall causing injury. Patients whose falls were linked to opioid use were also more likely to die during their hospital stay.

"This study confirms an association between recent opioid use and fall-related injury in a large trauma population of older adults," writes Dr. Raoul Daoust, Hôpital du Sacré-Coeur de Montréal and the Université de Montréal, Montreal, Quebec, with coauthors.

"Physicians should be aware that prescribing opioids to older patients is not only associated with an increased risk of falls, but also, if these patients do fall, a higher in-hospital mortality rate," conclude the authors.

"Recent opioid use and fall-related injury among older patients with trauma" is published April 23, 2018.

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

Research: http://www.cmaj.ca/lookup/doi/10.1503/cmaj.171286

Media contact for research: Hugo Larouche, CIUSSS Nord de l'Ile de Montreal, tel: 514 331-3418, relations.medias.CNMTL@ssss.gouv.qc.ca

Potential gender bias against female researchers in peer review of research grants

Is peer review biased? Female health researchers who applied for grants from Canada's major health research funder were funded less often than male counterparts because of potential bias, and characteristics of peer reviewers can also affect the result, found a study in *CMAJ (Canadian Medical Association Journal)*.

Applicants who had not been previously funded also received lower scores, making them less likely to be funded.

Between 2012 and 2014, 11 624 applications were submitted to the Canadian Institutes of Health Research (CIHR) open operating grant competitions. Two-thirds (66%) of applicants were male and 69% were aged 40 years or older. Almost two-thirds of applications (64%) were in basic science, with the remainder from applied science (16.6% clinical, 8.1% health services and 11.3% in population health).

The study, by researchers from CIHR and McGill University, looking at reviewer characteristics, including gender, previous success rates with grants, experience, scientific domain, conflict of interest and more, found that these traits did introduce bias into peer review of grant applications. This bias resulted in lower scores that could place the application in the non-fundable range.

CIHR's annual investment in health research is about $1 billion a year as of 2018.

Previous studies have found inconsistent evidence of bias, but few studies have analyzed whether reviewer characteristics could potentially bias applications.

"This study confirmed many of the suspected biases in the peer review of operating grant applications and identified important characteristics of peer reviewers that must be considered in application assignment," writes Dr. Robyn Tamblyn, Scientific Director, CIHR – Institute of Health Services and Policy Research, and a senior scientist at the Research Institute of the McGill University Health Centre, Montreal, Quebec. "By measuring and controlling for scientific excellence of the applicant, we were able to examine how applicant, application and reviewer characteristics may unduly influence the assessment of operating grant applications."

The researchers also found that reviewer expertise influenced the application rating, as reviewers with high expertise rated previously successful applicants higher than less experienced applicants.

"We found lower scores for applied science applications, gender inequities in application scores that favoured male applicants who had past funding success rates equivalent to

female applicants, particularly in the applied sciences," write the authors. "Conflicts on the panel, male reviewers only, reviewers with all high expertise, and those whose own research was exclusively in the same scientific domain as the applicant's conferred positive benefits in application rating."

They suggest that training of reviewers, policy change and monitoring may help address these biases.

"These findings are important, as securing less funding slows career progression for women and reduces opportunities for publishing and other forms of collaboration, which are criteria for professional advancement," writes Rosemary Morgan, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, in a related commentary with coauthors. "To understand why this occurs, we must recognize that gender bias within the grant review process is a manifestation of historical and systemic gender bias within academia."

The study was funded by the Canadian Institutes of Health Research.

"Assessment of potential bias in research grant peer review in Canada" is published April 23, 2018.

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

Research: http://www.cmaj.ca/lookup/doi/10.1503/cmaj.170901
Commentary: http://www.cmaj.ca/lookup/doi/10.1503/cmaj.180188

Media contact: Julie Robert, Communications & Media Relations, McGill University Health Centre and Research Institute, tel: 514-971-4747, julie.robert@muhc.mcgill.ca

Face transplant surgery prevents "social death"

A Humanities article in *CMAJ (Canadian Medical Association Journal)* <insert URL here charts changes in thinking and practices around facial transplant surgery, which initially faced resistance from bioethicists and others mostly based on social barriers.

"One of the unsettling — and fundamentally important — things about face transplant surgery is that it insists on an expanded definition of what constitutes health and wellness, and what can be done to achieve it," writes Dr. Sharrona Pearl, University of Pennsylvania, Philadelphia, Pennsylvania. "At the same time, it exposes biases against people with facial disfigurement so substantial as to create risks and challenges akin to death."

"Social scientists have defined social death as social isolation, loneliness, ostracism, loss of personhood, change of role and identity, harm and disfigurement. By including social death in the evaluation of patient need, face transplants can certainly be considered life-saving."

She writes that the “acceptance of the surgery has signalled an acceptance that living life faceless is akin to not living at all.”

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

Humanities: http://www.cmaj.ca/lookup/doi/10.1503/cmaj.180039

Podcast permanent link: https://soundcloud.com/cmajpodcasts/180039-medsoc

General media contact: Kim Barnhardt, Communications, *CMAJ*, kim.barnhardt@cmaj.ca

@CMAJ