

Amanda D Vandyk<sup>1\*</sup>, Ian D Graham<sup>2,3</sup>, Elizabeth G VanDenKerkhof<sup>4,5</sup>, Margaret B Harrison<sup>6,7</sup>

<sup>1</sup>School of Nursing, University of Ottawa, 451 Smyth Rd., Ottawa, Ontario, Canada

<sup>2</sup>Epidemiology and Community Medicine, University of Ottawa, Ottawa, ON, Canada

<sup>3</sup>Centre for Practice-Changing Research, Ottawa Hospital Research Institute, Ottawa, Ontario, Canada

<sup>4</sup>School Nursing and Dept of Anesthesiology & Perioperative Medicine Career Investigator, OWHC/CIHR

<sup>5</sup>Practice and Research in Nursing Group, Queen's University, Kingston, Ontario, Canada

<sup>6</sup>Emerita, School of Nursing, Ontario, Canada

<sup>7</sup>Queen's Joanna Briggs Collaboration, Queen's University, Kingston, Ontario, Canada

The International Classification of Diseases (ICD) is the standard diagnostic tool for clinical, health management, and research purposes, put forth by the World Health Organization. Currently in its 10<sup>th</sup> version, ICD-11 is expected to release in 2017. Researchers use ICD codes to identify participants for clinical studies and to track healthcare utilization rates, among a variety of other purposes (e.g. to study access, quality, costs, and effectiveness of care, patient comorbidities, incidence of complications, morbidity, and mortality) (O'Malley et al., 2005). Clearly, code accuracy is paramount and existing priorities include assessing diagnostic congruence of ICD codes and medical records (De Coster et al., 2006). From the emerging evidence, we see that at least two ICD codes are needed

ICD codes accurately report the *exact* health record diagnosis, and in many cases, disorders that were not part of their most responsible diagnosis or contributing comorbidities were attributed to patients in administrative data. Less than 50% of ICD codes exactly matched the most responsible primary diagnosis and only 7% of cases matched for affective disorders. F n diagnoses (53% according to ICD co

also evident when examining comorb \_ high healthcare utilization sh

codes, given their propensity to falsely attribute disorders. A clinical diagnosis or the use of a validated diagnostic tool would more appropriately measure the burden of disease in this cohort.

De Coster, C., Quan, H., Finlayson, A., Gao, M., Halfon, P., Humphries, K.H., et al. (2006). Identifying priorities in methodological research using ICD-9-CM and ICD-10 administrative data: Report from an international consortium. *BMC Health Services Research*, 6, 77.

---

\*Correspondence regarding this article should be directed to: Amanda.Vandyk@uottawa.ca

- Goldberg, D.S., Lewis, J.D., Halpern, S.D., Weiner, M.G., & Lo Re, V. (2013). Validation of a coding algorithm to identify patients with hepatocellular carcinoma in an administrative database. *Pharmacoepidemiology & Drug Safety*, 22(1), 103-107.
- Krueger, K.P., Armstrong, E.P., & Langley, P.C. (2001). The accuracy of asthma and respiratory disease diagnostic codes in a managed care medical claims database. *Disease Management*, 4(4), 155-161
- Vandyk, A.D., Harrison, M.B., VanDenKerkhof, E.G., Graham, I.D., & Ross-White, A. (2013). Frequent Emergency Department Use by Individuals Seeking Mental Healthcare: A Systematic Search and Review. *Archives of Psychiatric Nursing*, 27(4), 171-178.
- Vandyk, A.D., VanDenKerkhof, E., Graham, I., & Harrison, M. (2014). Profiling frequent presenters to the emergency department for mental health complaints: Socio-demographic, clinical, and service use characteristics. *Archives of Psychiatric Nursing*, 28(6), 420-425.