Unintentional medication incidents when using combination drug products

By Allen Chiu and Certina Ho

While the intrinsic nature of healthcare is to do good, the opposite may unintentionally occur. For example, something as simple as combining two pills as one in order to provide convenience and improve adherence in patients can still have the potential to cause patient harm. The following medication incidents were reported to the Institute for Safe Medication Practices Canada (ISMP Canada). ‘Patient was admitted to emergency with confusion and hypoglycemia. It was later found out that the patient took both metformin 1000 mg twice daily and a combination metformin/ glipizide 100/5 mg tablets twice daily. Several weeks ago, it was suggested that the patient switched to a combination pill [metformin/glipizide 100/50 mg], but the old medication [metformin 1000 mg] was not discontinued.’* "Note: The maximum dose of metformin is 2550 mg per day. In this case, the patient has taken a total of metformin 4000 mg per day due to duplicate therapy. Combination drugs or fixed-dose combinations, for the purpose of this article, refer to a medication that contains more than one active ingredient. They are also sometimes referred to as "combo pills" or "polypills." Using combination drug products can potentially reduce pill burden and may increase patient adherence, leading to better patient outcomes. This strategy may also reduce the financial cost to the patient. Fixed-dose combinations are most commonly seen in anti-hypertensives and anti-hyperglycemic medications, but they can also be found in other therapeutic categories, such as, glucosamine eye drops and anti-retrovirals, etc. A 2013 report of prescription data by the Canadian Healthcare Network showed that combination medications were the top two most commonly prescribed within the therapeutic class of cardiovascular drugs. The report also stated that the presence of combination medications was substantially lower in community ICUs than in academic ICUs. This has also been noted in a 2015 report from the Canadian Institutes of Health Research in which combination therapy was associated as well. A common issue is the potential for therapeutic duplication errors. The above incident involved switching a patient from single to combination drug products. While more research may be warranted on this topic, Table 1 offers some suggestions that may potentially decrease the risk of these incidents. In conclusion, while switching patients from single to combination drug products can have many benefits, healthcare practitioners should be aware of the potential risks associated as well.

IUCC national research network: First of its kind in Canada

By Steven Gallagher

Niagara Health physician is leading the launch of a national network to support the growth of research in Intensive Care Units at community hospitals in Canada. The Canadian Community ICU Research Network, which held its inaugural meeting on Nov. 11 in Toronto, is the brainchild of Dr. Jennifer Tsang, Niagara Health’s Research Lead and Intensivist. Dr. Tsang worked closely with Dr. Alexandra Binnie, an Intensivist at the Leslie Dan Faculty of Pharmacy, University of Toronto, and Certina Ho, a Project Lead at the Institute for Safe Medication Practices Canada (ISMP Canada). ‘Patients of the intensive care unit at Niagara Health who conduct research. A goal of the network, a first of its kind in Canada, is to develop strategies for building and sustaining research programs in community hospitals,’ says Dr. Tsang, who also co-founded Niagara Health’s Intensive Care Unit. Dr. Tsang has been an advocate for creating a supportive environment in community ICUs, and together with representatives from four provinces – Ontario, Quebec, Alberta and Manitoba – at-tended the inaugural meeting, which was presided over by Dr. Jennifer Tsang. The meeting focused on discussing the current research landscape in intensive care ICUs, discussing strategies to build research capacity in community ICUs and defining the structure and scope of the research network. Niagara Health, a regional health care provider with multiple sites, has been a leader when it comes to research in a community hospital setting, working closely with its academic partners. Niagara Health established a dedicated Research Office in 2015 to strengthen its research and academic partnerships and set out to conduct research that would inform care, inspire innovation and create environments of collaborative learning. Research and clinical trials are taking place in several Niagara Health departments/divisions, including the Intensive Care Unit, Oncology, Cardiology and Emergency Medicine. Dr. Tsang and Paige Ghebre, a Registered Nurse in the ICU at Niagara Health’s St. Catharines site, recently had their work published in the prestigious Canadian Medical Association Journal (September 3, 2019 issue), examining the impact of nurse staffing in community health settings. They were part of a team of clinicians who suggest that increased involvement in research could offer more capacity for national research, expedite knowledge translation, increase staff engagement, opportunities for continuing education and enhanced clinician career satisfaction, among many other benefits.