BIOSIMILARS EDUCATION INITIATIVES BY A CANADIAN UNIVERSITY

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SCENARIO 1

Jessica is a 46-year-old female with advanced, stage 4 colorectal cancer. She is currently receiving chemotherapy with FOLFOX and bevacizumab every two weeks and has received this treatment for the past two months. She is responding well to her treatment and has stable disease with no major impact on her activities of daily living. Today, Jessica is in the clinic to receive her FOLFOX and bevacizumab cycle #5. As the clinic pharmacist, you stop by to provide her with an information sheet on biosimilars. You explain that the bevacizumab portion of her regimen is being switched to a biosimilar due to a change in funding policy. Jessica tells you that she is very concerned about using a biosimilar instead of "real" drugs. She is afraid that they will not work as well.

SCENARIO 2

Frank is a 48-year-old-male who was diagnosed with non-Hodgkin's lymphoma 4 months ago. He presents to you with a prescription for filgrastim and tells you that he needs this as he had an episode of febrile neutropenia with his second cycle of treatment. He has been using filgrastim (Neupogen®) since his 3rd cycle and will need to continue until he is done with chemotherapy. He has drug coverage through the publicly funded provincial drug program but will need to be switched from Neupogen® to a biosimilar due to the funding policy. As a pharmacy student on your second experiential placement at a community pharmacy in a cancer center, your preceptor has assigned this patient to you and asked you to prepare to counsel Frank on this impending product switch.

INTRODUCTION

The two scenarios described are common situations encountered in pharmacy practice since the introduction of biosimilars into the Canadian market. Although these agents have been used for many years in other disease conditions (e.g. rheumatology and gastroenterology), therapeutic biosimilars are relatively new in oncology.[1] Based on experience from jurisdictions that have adopted biosimilars before Canada, a thoughtful implementation plan is critical to the successful uptake of these agents by patients, health care providers, and payers alike. The experiences from Europe and the United States show us that education must also be part of the broader implementation plan.[2]

Without this education, those directly responsible for the uptake of biosimilars will lack the confidence to prescribe, recommend, and dispense or administer these therapies to patients. This article describes the educational initiatives undertaken by the Leslie Dan Faculty of Pharmacy (LDFP) to deliver education to patients, health care providers, and students across Canada.

BACKGROUND

In late 2019, Ontario approved the first therapeutic oncology biosimilar which was later followed by similar approvals in other provinces. Although the implementation strategy and funding policies differ across the various provinces, a common

education strategy was identified as being critical for the successful adoption of biosimilars. Based on the experience in Europe and the United States, education remains the most important factor to ensure pharmacists, physicians and nurses have the understanding to improve uptake which then drives competition and cost savings to the healthcare system.[2,3]

The pan-Canadian Pharmaceutical Alliance and Ontario Health (Cancer Care Ontario) collaborated to lead the pan-Canadian Oncology Biosimilars Initiative (pCOBI). Resulting from the pCOBI were two work streams focused on clinical operations and education.[4] The education working group conducted a needs assessment of health care professionals and developed resources for healthcare providers and patients before the implementation of the first therapeutic biosimilar in oncology across Canada.[5,6]

Figure 1. Screenshots (1A and 1B) of YouTube videos developed for healthcare providers and patients

Building on the work of pCOBI, the LDFP at the University of Toronto is collaborating with Ontario Health (Cancer Care Ontario) to develop an educational strategy for biosimilars beyond focusing on biosimilar therapies in oncology. This multi-pronged approach aims to deliver education to clinicians, patients as well as students in the health sciences faculties, with a specific focus on pharmacy students.

EDUCATION TARGETED AT CLINICIANS

Clinicians play a major role in the education of patients when initiating, switching, and discontinuing drug therapy. However, clinicians must themselves acquire the knowledge and skills to synthesize and communicate unbiased information. This is not an easy task with biosimilars due to the complex manufacturing and regulatory approval processes, ethical considerations, and a general lack of experience with their use in clinical practice. Furthermore, with competing priorities and the demands of managing the COVD-19 pandemic, finding time for continuing education is a challenge.

In early October, the LDFP hosted a two-day Biosimilars Symposium in collaboration with Ontario Health (Cancer Care Ontario). This was the first initiative to deliver education to pharmacists.[7] and the two-day event brought speakers together from across Canada to share various perspectives ranging from local and provincial implementation experiences to a broader understanding of Health Canada's regulatory processes. Additionally, a presentation on the ethical frameworks helped guide clinical decision-making for attendees. A pre-symposium needs assessment helped steer the development of the curriculum by providing information on the gaps in knowledge and optimal methods to deliver continuous professional development for clinicians, as reported by the respondents.

As a result of the success of this event, additional plans are underway to create an online curriculum that aims to deliver biosimilar education to clinicians, patients, and students in the health sciences faculties at the University of Toronto.

EDUCATION TARGETED AT STUDENTS IN THE HEALTH DISCIPLINES FIELD

Although clinicians and patients are the main educational focus, trainees and students in the health sciences faculties should not be left out. This stakeholder group is crucial to the successful implementation of a biosimilars strategy. Their comfort with these therapies begin in the classroom and continues after licensure and they also have the potential to bring current knowledge and skills to their place of experiential learning. Li et al published a framework for integrating biosimilars into the didactic core requirements of a Doctor of Pharmacy curriculum in the United States.[8] A similar approach can be taken in Canada using the educational outcomes of the Association of Faculties of Pharmacy of Canada.[9]

The biosimilars curriculum being developed by the LDFP and Ontario Health (Cancer Care Ontario) aims to deliver education to students using a modular approach to curriculum design. Topics may be integrated in different courses throughout the four-year curriculum to enhance training. The potential for micro credentialing is also an appealing concept that allows students to demonstrate knowledge and skills in this important area of growth in biomedical sciences in Canada.

CONCLUSION

Education is a critical aspect of the successful adoption of biosimilars in Canada, as seen from the experiences in Europe and the United States. A multi-pronged approach must be taken to ensure that key stakeholders are considered in any curriculum design. Furthermore, an evidence-based approach should be taken to identify knowledge gaps and the optimal delivery of education for each stakeholder group.

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