In recent years, the practice of oncology pharmacy has become increasingly more complex, with the advent of a wide range of therapies including tyrosine kinase inhibitors and other targeted agents, many of them given via the oral route. Oncology therapy, once thought to be largely the purview of the hospital practitioner, now has implications for pharmacists working in other fields, especially that of community pharmacy. Even for those who wish to enter the field of oncology practice, the amount of oncology content taught in pharmacy schools across the country varies, and residency opportunities are scarce [1]. This is likely to be problematic given the increasing incidence of cancer in the general population and the large numbers of new therapies which will be introduced in coming years from drug developers. Furthermore, practitioners will need to be well versed in all aspects of cancer, including drug therapy, psychosocial aspects of cancer, and toxicity management, in order to provide optimal care to patients.

**Rationale**

Oncology topics. Abbott et al. described a survey conducted via an electronic mailing strategy to 560 community pharmacists in Newfoundland [2]. Of the 39% who responded, only 25% felt comfortable education patients on oral oncology medications, 28% were familiar with standard doses of these medications, and 9.6% felt they had received enough oncology education as undergraduates to prepare them adequately for practice. A similar survey by the same group carried out across Canada garnered 352 responses, with 9% of respondents feeling comfortable with patient education, 24% familiar with common doses, and 13.6% feeling they had received adequate undergraduate education [3]. This research clearly identifies a gap in pharmacy training which requires resolution.

**Design**

It was decided when building the curriculum at University of Waterloo that giving a greater priority to oncology education was necessary. To this end, a three-week core therapeutic oncology component was created which included a review of oncology agents and an overview of supportive care issues (see Figure 1). Each week included a total of 14 contact hours including lecture and case presentations. Students were evaluated on workup of oncology related cases as well as multiple choice testing. Additionally, a 4th year elective entitled “Advanced Therapeutic Concepts in Oncology” was offered. The elective was a module based with individual modules examining the pathophysiology, staging, and therapeutics of various cancer types, as well as various special topics (see Figure 2). The course included 3 hours per week of lecture and case presentation and was intended to give practitioners planning on entering the hospital clinical field a comprehensive picture of oncology practice. Students taking this course had to have successfully taken the core therapeutics as a prerequisite or had to be currently taking them as a corequisite.

Evaluation of the coursework was done through a standardized student evaluation common to all courses offered at University of Waterloo. Students were asked several questions about the organization, content, and quality of the coursework and teaching, with answers being given on a 5-point ordinal scale. Pertinent data is tabulated in the following results section.

**Results**

Data collected showed a very high level of satisfaction with the course content and quality (see Figure 3). Additionally, students were overall very positive in their written comments about the course. Criticisms were mainly confined to the complexity and volume of course content, which led to adjustments in the density of course content in subsequent years. In addition, the course has now been at or above its predetermined capacity of 30 students in each section it has been taught, demonstrating the continued interest in this topic displayed by students.

We will continue to offer this coursework to students as part of University of Waterloo’s entry level PharmD curriculum. Future directions may include an assessment of graduates’ comfort level with oncology topics in practice.

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