2011

The Design of a Sterile Product Laboratory Module as Preparation for an Institutional IPPE Course

Fang Zhao
St. John Fisher College, fzhao@sjfc.edu

Christine R. Birnie
St. John Fisher College, cbirnie@sjfc.edu

Anthony Corigliano
St. John Fisher College, acorigliano@sjfc.edu

Susan Hughes
University of Rochester, Medical Center

John Loughner
University of Rochester, Medical Center

See next page for additional authors

How has open access to Fisher Digital Publications benefited you?
Follow this and additional works at: https://fisherpub.sjfc.edu/pharmacy_facpub
Part of the Education Commons, and the Pharmacy and Pharmaceutical Sciences Commons

Publication Information
Zhao, Fang; Birnie, Christine R.; Corigliano, Anthony; Hughes, Susan; Loughner, John; and Valentine, Stephen, "The Design of a Sterile Product Laboratory Module as Preparation for an Institutional IPPE Course" (2011). Pharmacy Faculty/Staff Publications.
Paper 7.
https://fisherpub.sjfc.edu/pharmacy_facpub/7
Please note that the Publication Information provides general citation information and may not be appropriate for your discipline. To receive help in creating a citation based on your discipline, please visit http://libguides.sjfc.edu/citations.

This document is posted at https://fisherpub.sjfc.edu/pharmacy_facpub/7 and is brought to you for free and open access by Fisher Digital Publications at St. John Fisher College. For more information, please contact fisherpub@sjfc.edu.
The Design of a Sterile Product Laboratory Module as Preparation for an Institutional IPPE Course

Abstract

Objectives: To develop a pharmaceutics laboratory module on compounded sterile products for the second year pharmacy students as preparation for an institutional pharmacy experiential course. Method: A 5-week lab module was designed and implemented as part of the Pharmaceutics Lab Course to provide training in the basic skills of sterile product compounding. The module included techniques in the handling of sterile products, aseptic techniques, medium risk products, and hazardous products. A practical exam was given at the end of this module to ensure student competency. Upon completion of the lab module, students enrolled in a required 4-week institutional pharmacy experiential course (IPPE-2), where students were required to compound a minimum of 10 sterile products. Students were then asked to participate in a survey assessing the effectiveness and relevance of the lab module as preparation for their IPPE-2. Results: The sterile product lab module was offered in the spring semester with 75 students enrolled. All students passed the sterile product lab module and continued onto the IPPE-2 course during the following summer. The student survey indicated that the students felt well prepared for the IPPE-2 and that the preceptors were satisfied with their prior training in sterile compounding. The average scores ranged from 4.8 - 6.5 (scale of 1-7) for the various products addressed in the lab module. Implications: The 5-week sterile product lab module progressively prepares the students with the basic skills and knowledge in compounding sterile products. This preparedness allows the students to transition smoothly into the subsequent institutional pharmacy experiential course.

Copyright © 2011 American Association of Colleges of Pharmacy

Disciplines
Education | Pharmacy and Pharmaceutical Sciences

Comments
Poster presented at Faculty Scholarship Celebration, St. John Fisher College, October 25, 2012.


Authors
Fang Zhao, Christine R. Birnie, Anthony Corigliano, Susan Hughes, John Loughner, and Stephen Valentine
OBJECTIVE
To develop a pharmaceutics laboratory module on compounded sterile products for the second year pharmacy students as preparation for an institutional pharmacy experiential course.

INTRODUCTION
- At WSOP, sterile product preparation is a required learning objective in IPPE-2, the second of the four introductory rotation courses. IPPE-2 is offered to students during the summer after their P-2 year. The focus of this rotation is on institutional pharmacy, and each student is required to compound at least 10 sterile products under the supervision of a preceptor.
- Few students have experience in an institutional pharmacy setting, especially in the area of sterile product preparations. Many students are apprehensive about the use of sterile product supplies, environmental control and aseptic techniques. Therefore, it is prudent to provide the students with some basic training on sterile product compounding as preparations for their IPPE-2 rotation.
- This poster describes the design and implementation of a sterile product lab module as part of the pharmaceutics lab course for the P-2 students during the spring semester prior to IPPE-2.

METHODS
- A 5-week lab module was designed to include the basic skills in the handling of sterile products, aseptic techniques, medium risk products, and hazardous products. The detailed lab design and schedule are presented in Table 1.
- The students prepared two sterile products during each lab. Due to space limitation, students prepared only one product in a laminar flow hood nested within the simulated clean room. They prepared the second product in the main lab and were asked to follow the same techniques required for compounding in the hood.
- Teaching assistants (P-3 students) and faculty volunteers were utilized to provide one-on-one coaching for the students in the simulated clean room.
- All students were asked to complete the course evaluation. A small group of nine students were asked to complete a short survey after they completed the IPPE-2 rotation.

RESULTS AND DISCUSSION
- The sterile product lab module was offered in the spring semester of 2008 – 2010 with 53 – 75 students enrolled each semester. All students passed the sterile product lab module and continued onto the IPPE-2 course during the following summer.
- A number of students requested and were given extra lab practice sessions to improve their compounding skills prior to the lab practical. An extra week has been scheduled for this lab module in 2012.
- For the 2010 lab course evaluation (scale of 1 – 7), the average student rating was 6.42 for “The course objectives were met” and 6.45 for “I am able to accurately compound a medication product.”
- A group of nine students were surveyed after the IPPE-2 rotation in 2010. These students indicated that they felt well prepared for the IPPE-2 (score 6.57 out of 7) and that the preceptors were satisfied with their prior training in sterile compounding (score 6.43 out of 7). These students also provided written feedback for the two questions shown below. Selected answers are included after each question.

What aspect of the sterile product lab module was most beneficial to you during IPPE-2?
- Plenty of hands-on experience
- Use of syringes and IV bags
- The techniques and the rationale behind them
- Working in the hood
- The variety of labs

How can the lab module be improved in the future to prepare students for IPPE-2?
- Have videos for review
- Consistency in sterile techniques
- Gowning practice for every lab
- This is hard, because many sites have their own policies and procedures.

CONCLUSIONS AND IMPLICATIONS
- The 5-week sterile product lab module progressively prepares the students with the basic skills and knowledge in compounding sterile products.
- The preparations from this lab module allow the students to transition smoothly to the subsequent institutional pharmacy rotation.
- The students are able to focus on higher level experiential learning objectives during the rotation than basic compounding skills.