

NORTH DAKOTA PHARMACY-BASED IMMUNIZATION DELIVERY

Course Description

The goal of this program is to provide pharmacists with knowledge of immunology, vaccine-preventable diseases, indications for vaccination, and implementation and maintenance of a pharmacy-based vaccination program to incorporate vaccination delivery into pharmacy practice.

Each participant is expected to verify that he/she is enrolled in Pharmacy-Based Immunization Delivery course on the NDSU Blackboard website (<https://bb.ndsu.nodak.edu/webapps/portal/frameset.jsp>). Lecture materials (notes, audio commentary, and supplemental material), discussion board, home-study quizzes, final exam, scores, and course evaluation will be available through this site.

Each participant will listen to the archived audio commentary while reviewing the course notes and supplemental materials. Then participants will complete the home-study quizzes prior to the live-training portion of the course. Please complete your home-study quizzes on Blackboard by **Friday, September 9**. The live-training portion will be held on **Saturday, September 10** at NDSU Sudro Hall. It will start at TBA and is located in Sudro 110 (Concept Pharmacy Lab classroom). The schedule will include a demonstration, practice, and practical examination of vaccination techniques. The program will conclude with a final examination and program evaluation that must be completed on Blackboard to receive your certificate of completion for this course.

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Learning Objectives

1. Describe immunology principles which underlie use of vaccines
2. Discuss the epidemiology of vaccine preventable diseases
3. Identify sources of current information relative to vaccine use
4. Respond to common questions regarding vaccine safety
5. Anticipate and manage potential adverse reactions of vaccines
6. Identify an emergency plan for management of anaphylaxis associated with injectable administration
7. List storage and handling requirements for vaccines
8. Identify special populations needing specific vaccinations
9. List appropriate schedules for administration of vaccines
10. List precautions and contraindications for vaccine use
11. Construct a vaccination schedule for a patient who has fallen behind
12. Anticipate the effects of immune globulins on vaccination
13. Discuss advantages and disadvantages of commonly used vaccine products
14. Describe prescription and protocol requirements that cover vaccination activities in your pharmacy
15. Describe methods for reimbursement for injectable/vaccination services
16. Identify requirements for maintaining vaccination records in a pharmacy
17. Devise a marketing plan for a pharmacy offering injectable services
18. List requirements of the ND Board of Pharmacy and Department of Health relative to vaccinations
19. Choose a site and route of administration for medications based on the type of medication and the patient
20. Administer subcutaneous, intramuscular, and intradermal injections to another attendee
21. Describe how to access the ND Immunization Information System (NDIIS)
22. Explain the various tools available on NDIIS

Course Completion

The *ND Board of Pharmacy* will grant each participant the authority to administer injectable medications upon completion of the following:

- Score at least 70% on the online home-study quizzes
- Participation in the online home-study discussion board forums and cases
- Attendance and participation at the live training session
- Successful demonstration of the techniques for subcutaneous, intramuscular, and intradermal injection
- Score at least 70% on the online final take-home exam
- Completion of the online course evaluation
- Current CPR certification
- Completed application submitted to the ND Board of Pharmacy

Continuing Education Credits



North Dakota State University College of Pharmacy, Nursing, and Allied Sciences is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

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A total of 20 hours will be issued for completion of this program. An ACPE statement of credit will be mailed to those participating in this program within 4-6 weeks of receipt of all required materials.

HOME-STUDY MATERIALS

1. On the Blackboard course website, click on the 'Modules and Quizzes' tab. Course material is broken down into 7 modules; start at module 1 and proceed from there. For each module, listen to the audio commentary while reviewing the corresponding notes. Complete the online quizzes for modules 1-7. Duplication of the quiz documents is not permitted and is copyrighted by NDSU. If a participant fails to score at least 70% on the total points for the quizzes, he or she will be contacted and allowed to retest as time permits.
2. The following articles are supplemental materials located on Blackboard in the corresponding modules. These readings will enhance your knowledge of pharmacy-based immunization delivery, and complement the lecture notes/audio.
 - North Dakota law related to pharmacist administration by injection
 - Immunology primer
 - Epidemiology and Prevention of Vaccine-Preventable Diseases, 12th Edition, May 2011
 - Chapter 1: Principles of Vaccination
<http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/prinvac.pdf>
 - Chapter 2: General Recommendations on Immunization
<http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/genrec.pdf>
 - Chapter 3: Immunization Strategies
<http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/strat.pdf>
 - Chapter 4: Vaccine Safety
<http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/safety.pdf>
 - General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices, January 2011 <http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf>
3. These supplemental materials are available on Blackboard in the corresponding modules for quick reference.
 - Do I Need Any Vaccinations Today?
 - Screening Questionnaire for Child and Teen Immunization
 - Screening Questionnaire for Adult Immunization
 - Guide to Contraindications and Precautions to Commonly Used Vaccines
 - Recommended Immunization Schedules for Persons Aged 0-18 Years – United States, 2011
 - Recommended Adult Immunization Schedule – United States, 2011
 - Healthcare Personnel Vaccination Recommendations
 - Institute for Vaccine Safety – Thimerosal Table
 - Vaccine Adverse Event Reporting System forms
 - Vaccine Information Statements
 - Checklist for Safe Vaccine Handling and Storage
 - Medical Management of Vaccine Reactions in Adult Patients
 - How to Administer Intramuscular and Subcutaneous Injections
 - Vaccine Administration Record for Children and Teens
 - Vaccine Administration Record for Adults
 - Standard Prescription Order to Administer Immunizations from Terry Dwelle, MD
 - Application for Certificate of Authority to Administer Immunizations and/or Other Injectable Medications
4. A discussion board is available on Blackboard for you to discuss clinical pearls, current events, and confusing topic areas relative to immunizations with other course participants and instructors. Also, there are 2 cases that the participants will complete online as a group. Directions for each section of the discussion board are available in the 'Discussion Board' tab on Blackboard. Please take advantage of this opportunity to network with other pharmacists interested in making vaccinations part of their pharmacy practice. Your participation in this portion of the course is expected.

LIVE TRAINING SESSION

1. Lectures
 - North Dakota Immunization Information System (NDIIS)
 - Immunizations in a Community Pharmacy Setting
2. Injection (SC, IM, ID) demonstration, practice, and practical exam
3. Final exam on Blackboard, similar directions as the home-study quizzes, due by September 30, 2011
4. Course evaluation on Blackboard in the 'Course Evaluation' tab due by September 30, 2011