Immunization Resources for Undergraduate Nursing (IRUN) Project

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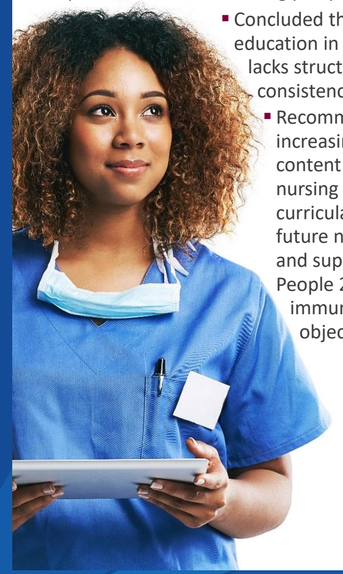
Background

The Immunization Resources for Undergraduate Nursing (IRUN) project is a collaboration of:

- Association for Prevention Teaching and Research (APTR)
- APTR's Committee on Integration of Immunization into Undergraduate Nursing Curriculum (CIIUN) and
- Communication and Education Branch (CEB), Immunization Services Division of the National Center for Immunization and Respiratory Diseases

CIIUN

- Established in 2015, CIIUN is a committee of experts with diverse nursing perspectives.
- Concluded that immunization education in nursing curricula lacks structure and consistency.
- Recommended increasing immunization content in undergraduate nursing curricula. Such curricula will prepare the future nursing workforce and support the Healthy People 2020 immunization objectives.



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Project description

Goal

Undergraduate nursing faculty members and educators will increase immunization content in their respective courses by using the IRUN project resources including: framework, teaching resources (case studies and presentation slides), and website.

Effective immunization training in undergraduate nursing → Competent nursing workforce → Safe and timely receipt of vaccines → High vaccination coverage; Low prevalence of vaccine-preventable disease

The main components of the IRUN Project

Immunization framework
- Outlines learning objectives

Teaching resources

Case studies
- 21 case studies developed by CDC
- 10 case studies developed by academic institutions

Presentation slides
- CDC immunization course slides adapted for undergraduate nursing

IRUN website
- Uses the framework for organization and navigation
- Populated with teaching resources

IRUN framework

- Immunization nursing curriculum guide for undergraduate nursing faculty members and educators.
- Learning objectives describe the immunization knowledge and skills that CIIUN, APTR, and CDC recommend nursing students acquire during their undergraduate training.
- Derived from four documents:
  - Immunization Competencies for Health Professionals – Public Health Agency of Canada
  - Teaching Immunization Practices for Nurses – ANA, APTR (formerly ATPM), and CDC
  - Nursing Initiative Promoting Immunization Training (NIP-IT) – University of Oklahoma College of Nursing and CDC
  - Competencies of the Immunization Technical Workforce – Global Immunization Division, CDC

IRUN framework

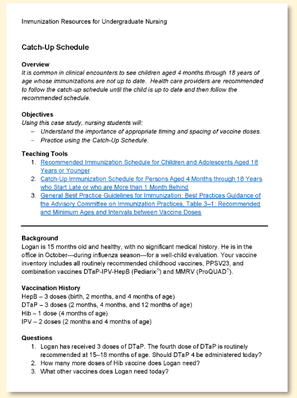
I.	Public Health Perspective
II.	Immunization Strategies
III.	Immune System/Immunology
IV.	Vaccine-Preventable Diseases
V.	Types of Vaccines
VI.	Immunization Schedules
VII.	Communications
VIII.	Legal/Ethical Issues
IX.	Vaccine Storage and Handling
X.	Vaccine Administration
XI.	Documentation
XII.	Vaccine Safety

V. Types of Vaccines

Learning objectives

1. Identify types of vaccines (i.e., live, inactivated).
2. Compare types of vaccines by how they are derived.
3. Compare types of vaccines by how they produce immunity.
4. Discuss implications of the different types of vaccines (i.e., contraindications, precautions, risks, and use in special populations).
5. Identify common vaccine components that may be present in a given vaccine product (e.g., adjuvants, preservatives, stabilizers, and antibiotics).
6. Identify common public concerns about vaccine components such as formaldehyde, aluminum, and thimerosal.
7. Describe the nursing roles related to types of vaccines: communicator, educator, lifelong learner, and screener/assessor.

Case studies



Immunization Resources for Undergraduate Nursing

Catch-Up Schedule

Overview

It is common in clinical encounters to see children aged 4 months through 18 years of age whose immunizations are not up to date. Health care providers are recommended to follow the catch-up schedule until the child is up to date and then follow the recommended schedule.

Objectives

Using this case study, nursing students will:
- *Understand the importance of appropriate timing and spacing of vaccine doses.*
- *Practice using the Catch-Up Schedule.*

Teaching Tools

1. Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger
2. Catch-Up Immunization Schedule for Persons Aged 4 Months through 18 Years who Start Late or who are More than 1 Month Behind
3. General Best Practice Guidelines for Immunization: Best Practices Guidance of the Advisory Committee on Immunization Practices, Table 3–1. Recommended and Minimum Ages and Intervals between Vaccine Doses

Background

Logan is 15 months old and healthy, with no significant medical history. He is in the office in October—during influenza season—for a well-child evaluation. Your vaccine inventory includes all routinely recommended childhood vaccines, PPSV23, and combination vaccines DTaP-IPV-HepB (Pediarix®) and MMRV (ProQUAD®).

Vaccination History

HepB – 3 doses (birth, 2 months, and 4 months of age)
DTaP – 3 doses (2 months, 4 months, and 12 months of age)
Hib – 1 dose (4 months of age)
IPV – 2 doses (2 months and 4 months of age)

Questions

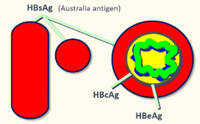
1. Logan has received 3 doses of DTaP. The fourth dose of DTaP is routinely recommended at 15–18 months of age. Should DTaP 4 be administered today?
2. How many more doses of Hib vaccine does Logan need?
3. What other vaccines does Logan need today?

Presentation slides

CDC immunization course slides adapted for undergraduate nursing

Hepatitis B Virus
- Hepadnaviridae family (DNA)
- Numerous antigenic components
- Humans are only known host
- May retain infectivity for more than 7 days at room temperature

Hepatitis B Virus



Hepatitis B Virus Infection
- 850,000 – 2.2 million chronic infections in US
- 260 million chronically infected worldwide
- Established cause of chronic hepatitis and cirrhosis
- Human carcinogen—cause of up to 50% of hepatocellular carcinomas
- Causes about 887,000 deaths worldwide

Hepatitis B Clinical Features
- Incubation period 45-160 days (average 120 days)
- Illness not specific for hepatitis B
- Nonspecific prodrome of malaise, fever, headache, myalgia
- At least 50% of infections asymptomatic

IRUN website

- A resources website populated with teaching tools using the framework as the website's navigation/organization
- Using the website, nursing faculty members will

1. Use the framework to assess their existing curricula for content gaps → **2.** Use resources, case studies, and presentation slides to address these content gaps → **3.** Use the IRUN website to gather and share teaching resources

Next steps

1. Publish IRUN framework
2. Finalize case studies and presentation slides
3. Develop a marketing plan for the IRUN resources
4. Develop evaluation plan for the IRUN project

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