

*TTUHSC Preston Smith Library*  
*presents*

# *How to Search PubMed®*

Information for Doctor of Nursing Practice

## **Doctorate of Nursing Practice Student Library Orientation**

**Friday, November 16, 2012**

**Time: 8:30 am – 11:30 am, 1C Room 120**

**Approx. 27 students**

**Contact: Lauren Sullivan (3-2748)**

8:30 – 8:35	5 min.	Welcome/introductions - Peggy Edwards  Reference Librarians: Carrie Gasset, Margaret Vugrin
8:35 - 9:05	30 min.	PubMed Searching Demo - Peggy Edwards
9:05 - 9:35	30 min.	Live Group Practice Question/Discussion Hands-on "Systems Leadership" - Peggy Edwards
9:35 - 9:45	10 min.	Break
9:45 - 10:00	15 min.	CINAHL Searching Demo - Peggy Edwards
10:00 - 10:30	30 min.	Live Group Practice Question/Discussion Hands-on "Systems Leadership" - Peggy Edwards
10:30 - 11:20	50 min.	Solo Practice Questions
11:20 - 11:30	10 min.	Electronic Evaluations (on desktop)

To begin...

RESOURCES...

- About the Libraries
- Site Map
- Contact the Libraries
- Ask A Librarian
- Audio Guides
- Guides & Tutorials
- Distance Students
- EBM OSCE Instruction

HEALTH SCIENCES CENTER...

## Libraries

### FACTS AT A GLANCE



The TTUHSC Delia Montes-Gallo Library on El Paso serves the Paul L. Foster School of Medicine and the Gayle Grever School of Nursing. The Library also serves health professionals throughout the state, and on the U.S. - Mexico border.

The library is located in two buildings: The Delia Montes-Gallo Library Center (AEC) houses electronic materials, while The Education Building (MEB) houses print materials.

Privileges are available to faculty, staff and students. On-site collection is also available to the

RESEARCH TOOLS...

- Library Catalog
- Textbooks

← Databases

- ← eJournals
- ← Online Multimedia
- ← Public (non-TTUHSC) Access
- ← Other Resources

LIBRARY SERVICES...

- ← Bibliographic Tools
- ← Downloads and Tools
- ← Interlibrary Loan (ILL)
- ← Reference Services

Librarians @ Your Service

NEWS & ANNOUNCEMENTS...

- Ask A Librarian
- Off-campus Login (via eRaider)
- Mobile Resources
- Medline Plus
- TeamViewer 6 - Windows
- TeamViewer 6 - Mac
- NIH Clinical Alerts
- Library Cards

SEARCH...

GO ►

- directory
- maps
- general contacts
- site map

Hover-over Databases

Research

- Administration
- Human Resources
- Libraries
- Accreditation
- The Daily Dose
- Emergency Preparedness
- Compliance Hotline

- PubMed
- eJournals
- Library Catalog
- Databases
- eBooks



Search:  Go

Keywords MeSH

#### Popular resources by school

- Allied Health
- Biomedical
- Medicine
- Nursing
- Pharmacy

#### We're social!

- Facebook
- Twitter
- News
- Events
- Outages



RESOURCES...

- [About the Libraries](#)
- [Site Map](#)
- [Contact the Libraries](#)
- [Ask A Librarian](#)
- [Audio Guides](#)
- [Guides & Tutorials](#)
- [Distance Students](#)
- [EBM OSCE Instruction](#)

HEALTH SCIENCES CENTER...

- [HSC Home](#)
- [Welcome to the HSC](#)
- [Office of the President](#)
- [Campuses](#)
- [Schools](#)

- [Emergency Preparedness](#)
- [Compliance Hotline](#)

Libraries

FACTS AT A



Evidence Based Databases

>>

- PubMed**
- CINAHL Plus with Full Text
- EMBASE
- Entrez
- ISI Web of Knowledge
- MD Consult
- MICROMEDEX
- OT Search
- Ovid
- Scopus
- TexShare
- All Databases >>

RESEARCH TOOLS...

- [Library Catalog](#)
- [Textbooks](#)
- [Maximum Simultaneous Use](#)
- [Databases](#)
- [eBooks, Theses, & Dissertations](#)
- [eJournals](#)
- [Online Multimedia](#)
- [Public \(non-TTUHSC\) Access](#)
- [Other Resources](#)

LIBRARY SERVICES...

- [Bibliographic Tools](#)
- [Downloads and Tools](#)
- [Interlibrary Loan \(ILL\)](#)
- [Reference Services](#)
- [Librarians @ Your Service](#)

NEWS & ANNOUNCEMENTS...

- [Ask A Librarian](#)
- [Off-campus Login \(via eRaider\)](#)
- [Mobile Resources](#)
- [Medline Plus](#)
- [TeamViewer 6 - Windows](#)
- [TeamViewer 6 - Mac](#)
- [NIH Clinical Alerts](#)
- [Library Cards](#)

SEARCH...

GO

- [directory](#)
- [general contacts](#)
- [maps](#)
- [site map](#)



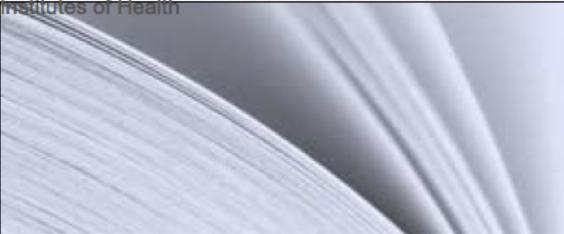
Allied Health

We're social!

- [FaceBook](#)
- [Twitter](#)
- [News](#)
- [Events](#)
- [Outages](#)

Click PubMed





## PubMed

PubMed comprises more than 22 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

### Using PubMed

[PubMed Quick Start Guide](#)

[Full Text Articles](#)

[PubMed FAQs](#)

[PubMed Tutorials](#)

[New and Noteworthy](#) 

### PubMed Tools

[PubMed Mobile](#)

[Single Citation Matcher](#)

[Batch Citation Matcher](#)

[Clinical Queries](#)

[Topic-Specific Queries](#)

### More Resources

[MeSH Database](#)

[Journals in NCBI Databases](#)

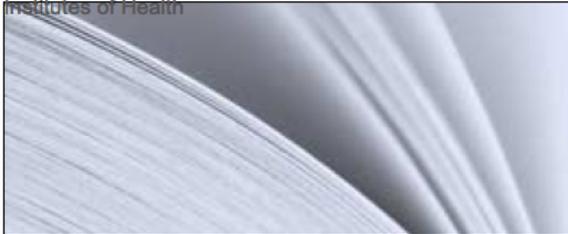
[Clinical Trials](#)

[E-Utilities](#)

[LinkOut](#)

PubMed Home Page

# Searching PubMed



## PubMed

PubMed comprises more than 22 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

### Using PubMed

[PubMed Quick Start Guide](#)

[Full Text Articles](#)

[PubMed FAQs](#)

[PubMed Tutorials](#)

[New and Noteworthy](#)

### PubMed Tools

[PubMed Mobile](#)

[Single Citation Matcher](#)

[Batch Citation Matcher](#)

[Clinical Queries](#)

[Topic-Specific Queries](#)

### More Resources

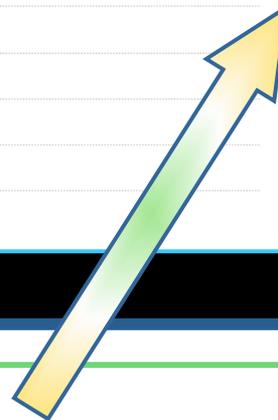
[MeSH Database](#)

[Journals in NCBI Databases](#)

[Clinical Trials](#)

[E-Utilities](#)

[LinkOut](#)



Click MeSH Database

# MeSH Database

Terms in the database are called

*Medical Subject Headings* or *MeSH*.

is a “controlled vocabulary list” of more than 25,000 subject headings.

10-15 *MeSH* are assigned to each article in *PubMed*.

The *MeSH* index of 10-15 subject headings is like a keyword abstract of the article.

*MeSH* are updated annually in December.

# Frequently Used Mesh Categories - 2011

## **A Anatomy**

- A1 Body Regions
- A2 Musculoskeletal System
- A3 Digestive System
- A4 Respiratory System
- A5 Urogenital System
- A6 Endocrine System
- A7 Cardiovascular System
- A8 Nervous System
- A9 Sense Organs
- A10 Tissues
- A11 Cells
- A12 Fluids and Secretions
- A13 Animal Structures
- A14 Stomatognathic System
- A15 Hemic and Immune Systems
- A16 Embryonic Structures
- A17 Integumentary System
- A18 Plant Structures
- A19 Fungal Structures
- A20 Bacterial Structures
- A21 Viral Structures

## **B Organisms**

- B1 Eukaryota
- B2 Archaea
- B3 Bacteria
- B4 Viruses
- B5 Organism Forms

## **C Diseases**

- C1 Bacterial Infections & Mycoses
- C2 Virus Diseases
- C3 Parasitic Diseases
- C4 Neoplasms
- C5 Musculoskeletal Diseases
- C6 Digestive System Diseases
- C7 Stomatognathic Diseases
- C8 Respiratory Tract Diseases
- C9 Otorhinolaryngologic Diseases
- C10 Nervous System Diseases
- C11 Eye Diseases
- C12 Male Urogenital Diseases
- C13 Female Urogenital Diseases  
& Pregnancy Complications
- C14 Cardiovascular Diseases
- C15 Hemic & Lymphatic Diseases
- C16 Congenital, Hereditary, &  
Neonatal Diseases & Abnormalities
- C17 Skin & Connective Tissue Diseases
- C18 Nutritional & Metabolic Diseases
- C19 Endocrine System Diseases
- C20 Immune System Diseases
- C21 Disorders of Environmental Origin
- C22 Animal Diseases
- C23 Pathologic Conditions,  
Signs, and Symptoms
- C24 Occupational Diseases
- C25 Substance-Related Disorders
- C26 Wounds and Injuries

## **D Chemicals & Drugs**

- D1 Inorganic Chemicals
- D2 Organic Chemicals
- D3 Heterocyclic Compounds
- D4 Polycyclic Compounds
- D5 Macromolecular Substances
- D6 Hormones, Hormone Substitutes,  
& Hormone Antagonists
- D8 Enzymes, & Coenzymes
- D9 Carbohydrates
- D10 Lipids
- D12 Amino Acids, Peptides,  
& Proteins
- D13 Nucleic Acids, Nucleotides,  
& Nucleosides
- D20 Complex Mixtures
- D23 Biologic Factors
- D25 Biomedical and Dental Materials
- D26 Pharmaceutical Preparations
- D27 Chemical Actions and Uses

# *Other Categories Include:*

Analytical, Diagnostic, & Therapeutic Techniques & Equipment

Psychiatry and Psychology

Biological Sciences

Natural Sciences

Anthropology, Education, Sociology & Social Phenomena

Technology, Industry, Agriculture

Information Science

Named Groups

Health Care

Publication Characteristics

Geographic Locations

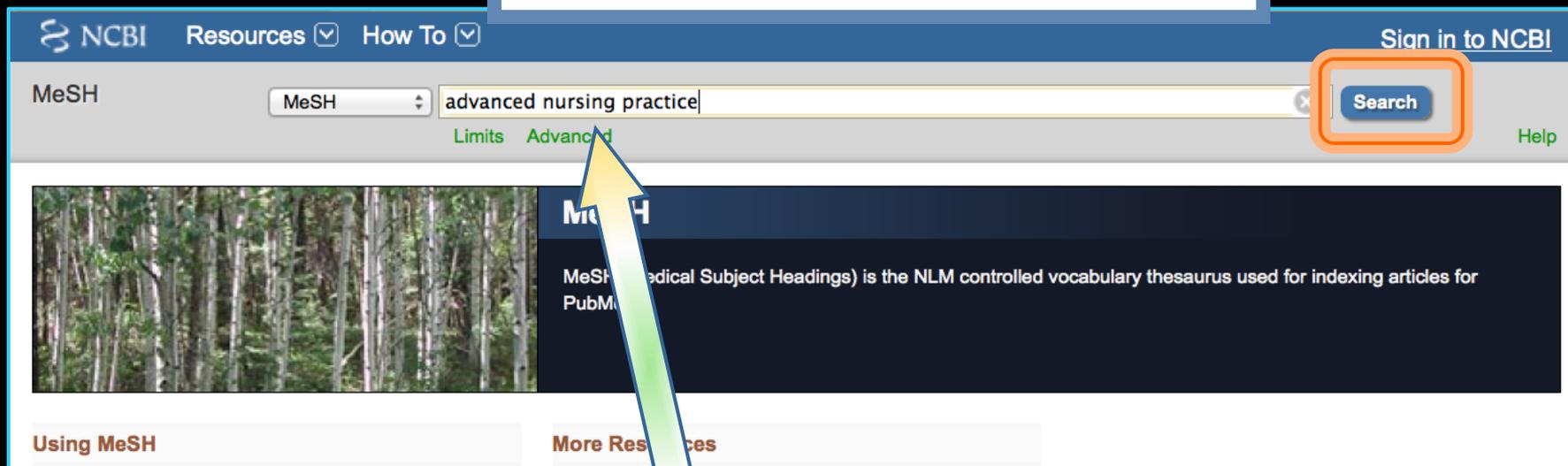
# *Create a Search Strategy Plan*

Identify the question and key concepts:

*advanced nursing practice and  
trends in graduate nursing education*

Write the search program using  
medical subject headings (MeSH)

and click 



NCBI Resources How To Sign in to NCBI

MeSH MeSH advanced nursing practice Search

Limits Advanced Help

MeSH (Medical Subject Headings) is the NLM controlled vocabulary thesaurus used for indexing articles for PubMed.

Using MeSH More Resources

Enter

advanced nursing practice

(Note: If there is a Boolean OR relationship, start with the "OR" statement first.)

MeSH

MeSH

advanced nursing practice

Search

[Save search](#) [Limits](#) [Advanced](#)

[Help](#)

Display Settings: Full

Send to:

### Advanced Practice Nursing

Evidence-based nursing, midwifery and healthcare grounded in research and scholarship. Practitioners include nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives.

Year introduced: 2010

Subheadings:

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> classification | <input type="checkbox"/> history                       | <input type="checkbox"/> organization and administration |
| <input type="checkbox"/> economics      | <input type="checkbox"/> legislation and jurisprudence | <input type="checkbox"/> standards                       |
| <input type="checkbox"/> education      | <input type="checkbox"/> manpower                      | <input type="checkbox"/> statistics and numerical data   |
| <input type="checkbox"/> ethics         | <input type="checkbox"/> methods                       | <input type="checkbox"/> trends                          |

Restrict to MeSH Major Topic.

Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): H02.478.676.074

Entry Terms:

- Nursing, Advanced Practice
- Practice Nursing, Advanced

Previous Indexing:

- [Nurse's Role \(2002-2010\)](#)

[All MeSH Categories](#)

[Disciplines and](#)

[Health Occupations](#)

[Nursing](#)

[Specialty](#)

PubMed search builder

Add to search builder

AND

Search PubMed

Related information

[PubMed](#)

[PubMed - Major Topic](#)

[Clinical Queries](#)

[NLM MeSH Browser](#)

Search details

```
advanced[All Fields] AND
("nursing"[Subheading] OR
"nursing"[MeSH Terms] OR
"breast feeding"[MeSH Terms]
OR nursing[Text Word]) AND
nursing[All Fields]
```

See more...

Turn Off Clear

advanced nursing practice (1)

MeSH

See more...

Term Definitions

MeSH

MeSH ▾

advanced nursing practice

Search

[Save search](#) [Limits](#) [Advanced](#)

[Help](#)

Display Settings: ▾ Full

Send to: ▾

PubMed search builder

**Advanced Practice**

Evidence-based nursing  
clinical nurse specialist  
Year introduced: 2011

PubMed search builder

Subheadings:

- classification
- economics
- education
- ethics

- Restrict to MeSH Major topic.
- Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): H02.478.676.074

Entry Terms:

- Nursing, Advanced Practice
- Practice Nursing, Advanced

Previous Indexing:

[All MeSH Categories](#)

[Disciplines and Occupations Category](#)

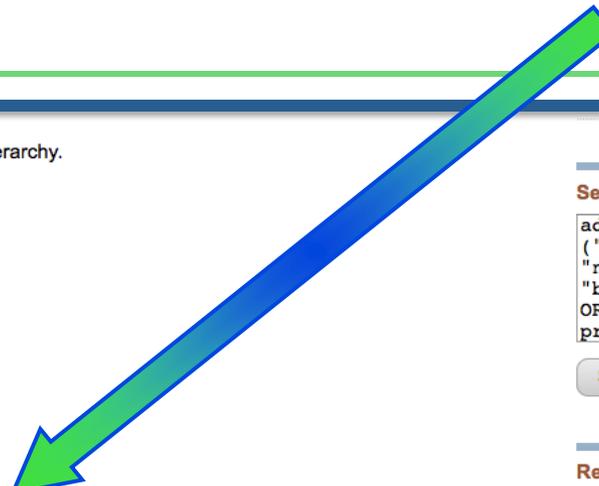
[Health Occupations](#)

[Nursing](#)

[Specialties, Nursing](#)

**Advanced Practice Nursing**

Tree Structures are MeSH terms arranged in a hierarchy.



**Search details**

```
advanced[All Fields] AND
("nursing"[Subheading] OR
"nursing"[MeSH Terms] OR
"breast feeding"[MeSH Terms]
OR nursing[Text Word]) AND
practice[All Fields]
```

Search

[See more...](#)

**Recent activity**

[Turn Off](#) [Clear](#)

🔍 advanced nursing practice (1)

MeSH

[See more...](#)

MeSH

MeSH ▾

advanced nursing practice

✕

Search

[Save search](#) [Limits](#) [Advanced](#)[Help](#)[Display Settings:](#) ▾ Full[Send to:](#) ▾

## Advanced Practice Nursing

Evidence-based nursing, midwifery and healthcare grounded in research and scholarship. Practitioners include nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives.

Year introduced: 2010

PubMed search builder options

[Subheadings:](#)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> classification | <input type="checkbox"/> history                       | <input type="checkbox"/> organization and administration |
| <input type="checkbox"/> economics      | <input type="checkbox"/> legislation and jurisprudence | <input type="checkbox"/> standards                       |
| <input type="checkbox"/> education      | <input type="checkbox"/> manpower                      | <input type="checkbox"/> statistics and numerical data   |
| <input type="checkbox"/> ethics         | <input type="checkbox"/> methods                       | <input type="checkbox"/> trends                          |

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- Nursing, Advanced Practice
- Practice Nursing, Advanced

Previous Indexing:

[All MeSH Categories](#)

[Disciplines and Occupations Category](#)

[Health Occupations](#)

[Nursing](#)

[Specialties, Nursing](#)

**Advanced Practice Nursing**

PubMed search builder

Add to search builder

AND ▾

Search PubMed

Related information

[PubMed](#)

[PubMed - Major Topic](#)

[Clinical Queries](#)

[NLM MeSH Browser](#)

Terms are listed from  
broadest to narrowest.  
If *Advanced Practice Nursing*  
yields zero results, try using a  
broader term such as: *Nursing*

MeSH

MeSH

advanced nursing practice



Search

Save search Limits Advanced

Help

Display Settings: Full

Send to:

### Advanced Practice Nursing

Evidence-based nursing, midwifery and healthcare grounded in research and scholarship. Practitioners include nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives.

Year introduced: 2010

PubMed search builder options

Subheadings:

- classification
- economics
- education
- ethics
- history
- legislation and jurisprudence
- manpower
- methods
- organization and administration
- standards
- statistics and numerical data
- trends

#### PubMed search builder

Add to search builder

AND

Search PubMed

#### Related information

PubMed

PubMed - Major Topic

Clinical Queries

MeSH Browser

#### details

```

ced[All Fields] AND
sing"[Subheading] OR
ing"[MeSH Terms] OR
st feeding"[MeSH Terms]
rsing[Text Word]) AND
ice[All Fields]

```

See more...

#### Recent activity

Turn Off Clear

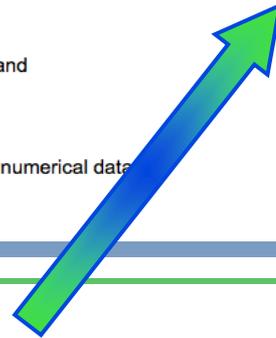
advanced nursing practice (1)

MeSH

See more...

Click

Add to search builder



Health Occupations

Nursing

Specialties, Nursing

Advanced Practice Nursing

Tree N

Entry T

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• Nu

All

MeSH

MeSH

advanced nursing practice



Search

Save search Limits Advanced

Help

Display Settings: Full

Send to:

### Advanced Practice Nursing

Evidence-based nursing, midwifery and healthcare grounded in research and scholarship. Practitioners include nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives.

Year introduced: 2010

PubMed search builder options

Subheadings:

- classification
- economics
- education
- ethics
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- legislation and jurisprudence
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- methods
- organization and administration
- standards
- statistics and numerical data
- trends

Restrict to MeSH Major Topic.

Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): H02.478.676.074

Entry Terms:

- Nursing, Advanc
- Practice Nursing

Previous Indexing:

- Nurse's Role (20

All MeSH Categ

Disciplines

Health

Nu

#### PubMed search builder

"Advanced Practice Nursing" [Mesh]

to search builder

AND

Search PubMed

#### Related information

PubMed

PubMed - Major Topic

Clinical Queries

NLM MeSH Browser

#### Search details

```
anced[All Fields] AND
nursing"[Subheading] OR
rsing"[MeSH Terms] OR
east feeding"[MeSH Terms]
nursing[Text Word]) AND
ctice[All Fields]
```

Search

See more...

#### Recent activity

Turn Off Clear

advanced nursing practice (1)

MeSH

See more...

The first MeSH term is in the search program "box"



MeSH

MeSH

graduate nursing education

Search

Save search Limits Advanced

Help

Display Settings: Full

Send to:

### Advanced Practice Nursing

Evidence-based nursing, midwifery and healthcare grounded in research and scholarship. Practitioners include nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives.

Year introduced: 2010

PubMed search builder options

Subj

PubMed search builder

Add to search builder

AND

Enter

graduate nursing education

and click

Search

Disciplines and Occupations Category

Health Occupations

Nursing

Specialties, Nursing

Advanced Practice Nursing

Recent activity

Turn Off Clear

advanced nursing practice (1)

MeSH

See more...

Display Settings: Full

Send to:

### Education, Nursing, Graduate

Those educational activities engaged in by holders of a bachelor's degree in nursing, which are primarily designed to prepare them for entrance into a specific field of nursing, and may lead to board certification or a more advanced degree.

Year introduced: 1966

PubMed search builder options

Subheadings:

- classification
- economics
- ethics
- history
- legislation and jurisprudence
- manpower
- methods
- organization and administration
- standards
- trends
- status and numerical data

Restrict to MeSH Major Topic.

Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): I02.358.337.450, I02.358.462.565

Entry Terms:

- Postgraduate Nursing Education
- Education, Postgraduate Nursing
- Nursing Education, Graduate
- Nursing Education, Postgraduate
- Education, Nursing, Postgraduate
- Graduate Nursing Education

#### PubMed search builder

"Advanced Practice Nursing"  
[Mesh]

Add to search builder AND

Search PubMed

#### Related information

PubMed

PubMed - Major Topic

Clinical Queries

NLM MeSH Browser

#### Search details

"education, nursing,  
graduate"[MeSH Terms] OR  
graduate nursing  
education[Text Word]

Search

See more...

**Sub-headings** narrow the "meaning" of a **MeSH** term.

They are a "subset" of **all** the articles under the

**MeSH** term: **Education, Nursing, Graduate**

MeSH

MeSH ▾

graduate nursing education

Search

[Save search](#) [Limits](#) [Advanced](#)

[Help](#)

Display Settings: ▾ Full

Send to: ▾

### Education, Nursing, Graduate

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Year introduced: 1966

PubMed search builder options

[Subheadings:](#)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> classification | <input type="checkbox"/> legislation and jurisprudence   | <input type="checkbox"/> standards                     |
| <input type="checkbox"/> economics      | <input type="checkbox"/> manpower                        | <input type="checkbox"/> statistics and numerical data |
| <input type="checkbox"/> ethics         | <input type="checkbox"/> methods                         | <input type="checkbox"/> trends                        |
| <input type="checkbox"/> history        | <input type="checkbox"/> organization and administration |  |

Restrict to MeSH Major Topic.

Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): I02.358.337.450, I02.358.462.565

Entry Terms:

- Postgraduate Nursing Education
- Education, Postgraduate Nursing
- Nursing Education, Graduate
- Nursing Education, Postgraduate
- Education, Nursing, Postgraduate
- Graduate Nursing Education
- Education, Graduate Nursing

[All MeSH Categories](#)

[Anthropology, Education, Sociology and Social Phenomena Category](#)

[Education](#)

[Education, Professional](#)

[Education, Graduate](#)

**Education, Nursing, Graduate**

[All MeSH Categories](#)

[Anthropology, Education, Sociology and Social Phenomena Category](#)

[Education](#)

[Education, Professional](#)

[Education, Nursing](#)

**Education, Nursing, Graduate**

#### PubMed search builder

"Advanced Practice Nursing"  
[Mesh]

Add to search builder AND ▾

Search PubMed

#### Related information

PubMed

PubMed - Major Topic

Clinical Queries

NLM MeSH Browser

#### Search details

1) Check the box next to the subheading.

graduate nursing education (1)

Advanced Practice Nursing

advanced nursing practice (1)

[See more...](#)

# 83 SUBHEADINGS:

abnormalities  
administrations & dosage  
adverse effects  
agonists  
analogs & derivatives  
analysis  
anatomy & histology  
antagonists & inhibitors  
biosynthesis  
blood  
blood supply  
cerebrospinal fluid  
chemical synthesis  
chemically induced  
chemistry  
classification  
complications  
congenital  
contraindications  
cytology  
deficiency  
diagnosis  
diagnostic use  
diet therapy  
drug effects  
drug therapy  
economics  
education

embryology  
enzymology  
epidemiology  
ethics  
ethnology  
etiology  
genetics  
growth & development  
history  
immunology  
injuries  
innervation  
instrumentation  
isolation & purification  
legislation & jurisprudence  
manpower  
metabolism  
methods  
microbiology  
mortality  
nursing  
organization & administration  
parasitology  
pathogenicity  
pathology  
pharmacokinetics  
pharmacology  
physiology

physiopathology  
poisoning  
prevention & control  
psychology  
radiation effects  
radiography  
radionuclide imaging  
radiotherapy  
rehabilitation  
secondary  
secretion  
standards  
statistics & numerical data  
supply & distribution  
surgery  
therapeutic use  
therapy  
toxicity  
transmission  
transplantation  
**trends**  
ultrasonography  
ultrastructure  
urine  
utilization  
veterinary  
virology

MeSH MeSH graduate nursing education Search

Save search Limits Advanced

Help

Display Settings: Full

Send to:

Education, Nursing, Graduate

Those educational activities engaged in by holders of a bachelor's degree in nursing, which are primarily designed to prepare them for entrance into a specific field of nursing, and may lead to board certification or a more advanced degree.

Year introduced: 1966

PubMed search builder options

Subheadings:

- classification, economics, ethics, history, legislation and jurisprudence, manpower, methods, organization and administration, standards, statistics and numerical data, trends

Restrict to MeSH Major Topic.

Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): 102.358.337.450, 102.358.462.565

Entry Terms:

- Postgraduate Nursing Education, Education, Postgraduate Nursing, Nursing Education, Graduate, Education, Nursing, Postgraduate, Graduate Nursing Education, Education, Graduate Nursing

All MeSH Categories

Anthropology, Education, Sociology and Social Phenomena Category

Education

Education, Professional

Education, Graduate

Education, Nursing, Graduate

All MeSH Categories

Anthropology, Education, Sociology and Social Phenomena Category

Education

Education, Professional

Education, Nursing

Education, Nursing, Graduate

PubMed search builder

"Advanced Practice Nursing" [Mesh]

Add to search builder AND

Search PubMed

Related information

PubMed

PubMed - Major Topic

Clinical Queries

NLM MeSH Browser

Search details

"education, nursing, graduate" [MeSH Term] OR

Click Add to search builder

Advanced Practice Nursing

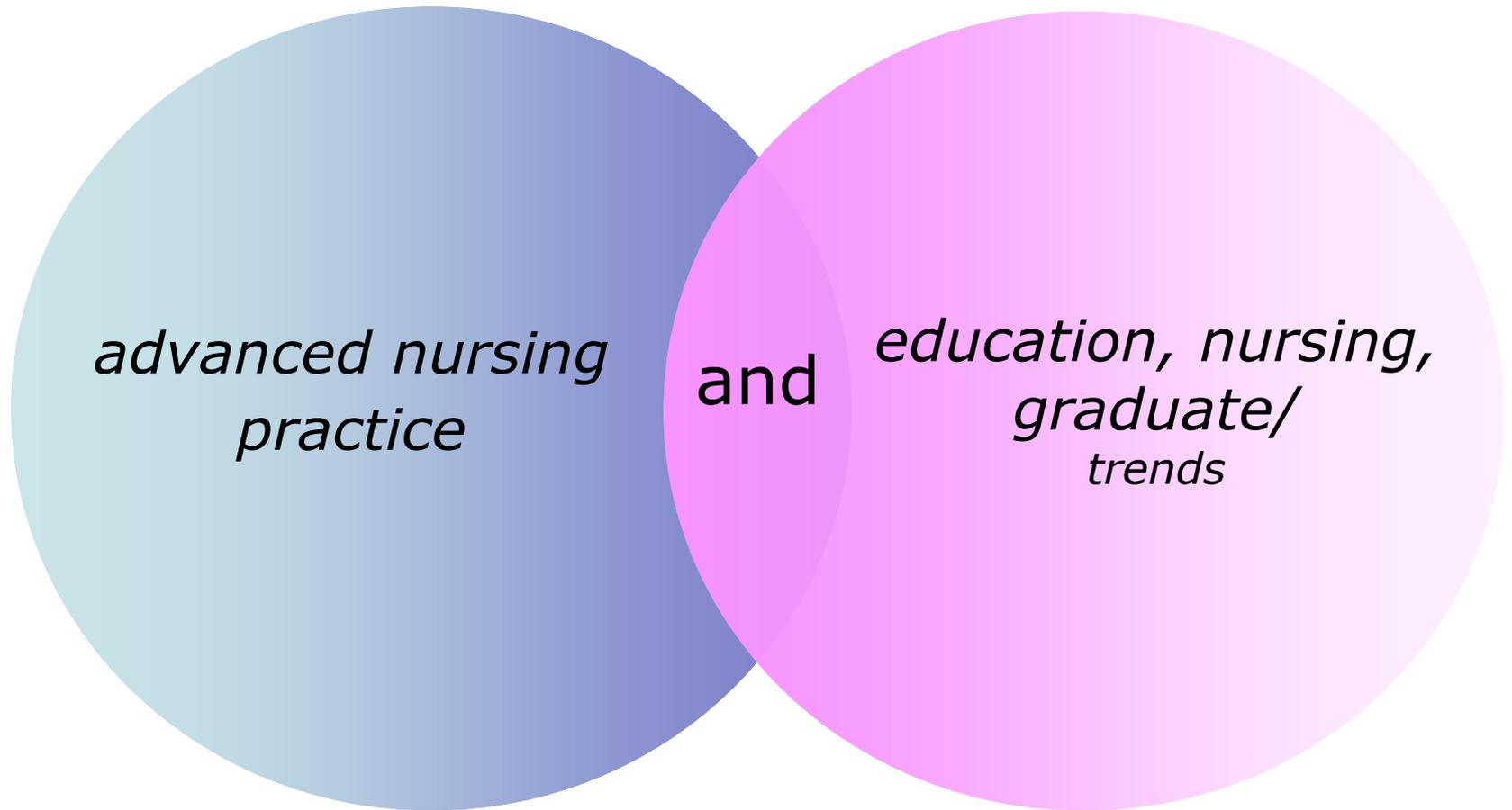
MeSH

advanced nursing practice (1)

MeSH

See more...

# Boolean Logic - AND



MeSH MeSH graduate nursing education Search

Help

Send to: [v]

# Final Search Strategy



PubMed search builder  
("Advanced Practice Nursing" [Mesh]) AND "Education, Nursing, Graduate/trends" [Mesh]

Add to search builder AND

Search PubMed

Subheadings:

- classification
- economics
- ethics
- history
- legislation and jurisprudence
- manpower
- methods
- organization and administration
- standards
- statistics and numerical data
- trends

Restrict to MeSH Major Topic.

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- Education, Nursing, Postgraduate
- Graduate Nursing Education
- Education, Graduate Nursing

All MeSH Categories

[Anthropology, Education, Sociology and Social Phenomena Category](#)  
[Education](#)  
[Education, Professional](#)  
[Education, Graduate](#)  
**Education, Nursing, Graduate**

All MeSH Categories

[Anthropology, Education, Sociology and Social Phenomena Category](#)  
[Education](#)  
[Education, Professional](#)  
[Education, Nursing](#)  
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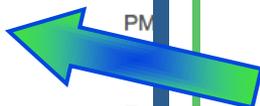
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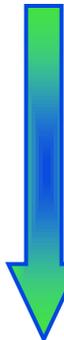
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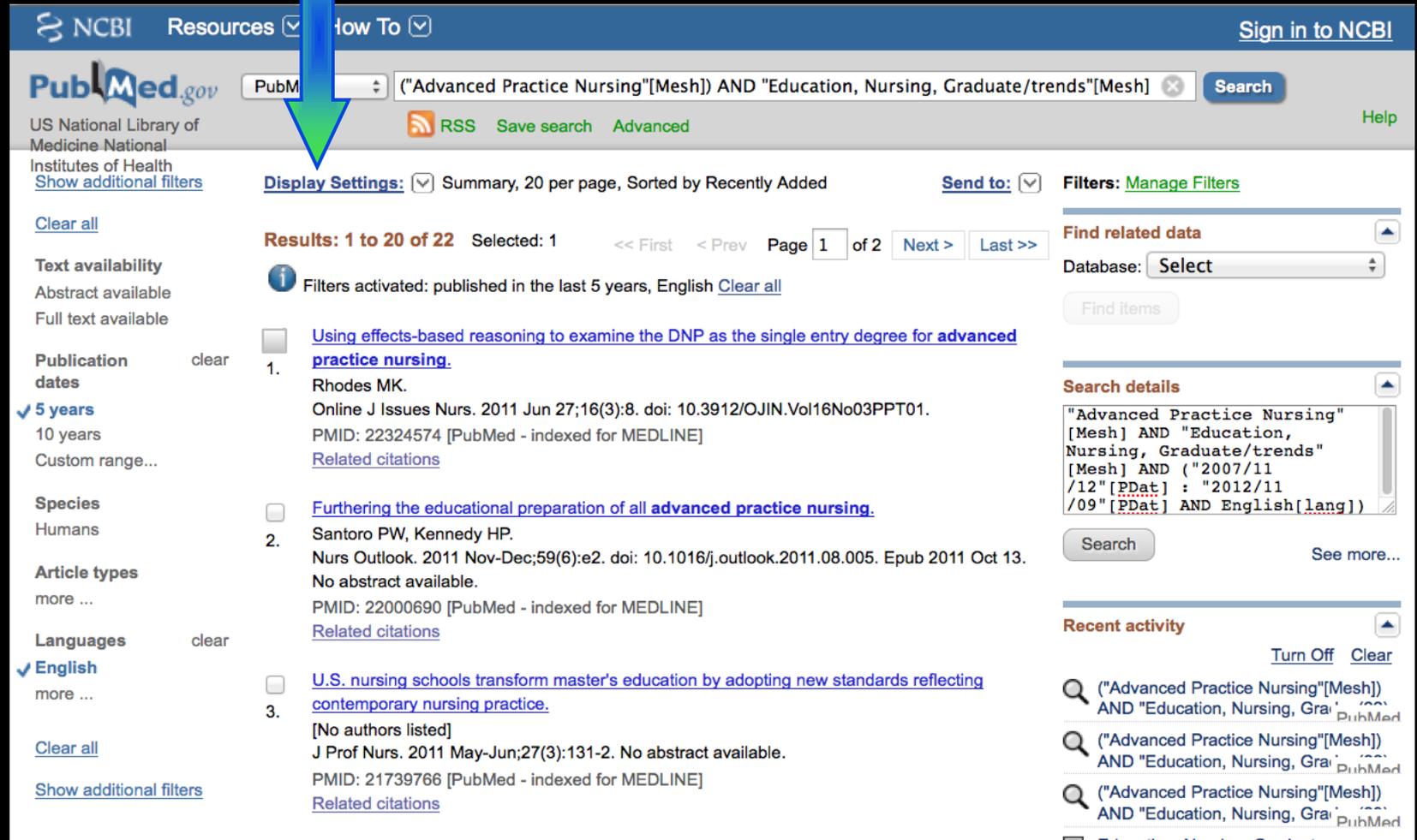
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University of North Carolina at Chapel Hill, School of Nursing, Chapel Hill, NC 27599, USA. lcronenwett@unc.edu

Abstract

In 2004, the American Association of Colleges of Nursing (AACN) adopted a position statement concerning the future of advanced practice nursing education. A target date of 2015 was articulated as the point by which master's preparation for advanced practice nurses would be replaced by doctoral level education. Seismic shifts in the realities surrounding nursing education and practice have occurred since the proposal to require a Doctor of Nursing Practice (DNP) degree for entry into advanced practice nursing was proposed. Unprecedented economic challenges have resulted in significant budget downturns for all sectors, including higher education. The consequent cutbacks, furloughs, and restructuring in educational operations of all types have placed enormous demands on faculty, staff, and students across the country. In addition, the growing incidence and earlier onset of chronic disease, a rapidly aging population, health care reform agendas, a shortage of primary care practitioners, and projected severe shortages of nursing faculty have raised fundamental questions about the capacity of nursing education to produce the numbers of advanced practice nurses needed. This article addresses the changing realities and growing concerns associated with the future of advanced practice nursing. Recommendations to ensure continuing development of advanced nursing practice that serves the interests and needs of the public now and in the future are presented within the context of a national workforce perspective.

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### Using effects-based reasoning to examine the DNP as the single entry

Rhodes MK.

Auburn Montgomery School of Nursing, USA. mrrhodes2@aum.edu

#### Abstract

In October 2004 the American Association of Colleges of Nursing (AACN) endorsed a single entry degree for advanced practice nurses (APNs) beginning in 2015. This article examines graduate nursing programs. Currently 153 DNP programs have enrolled students at various stages of development. This article will examine real and potential outcomes of high-level APN practice using an effects-based-reasoning framework. The author begins with a description of the initiative and an explanation of effects-based reasoning. Within an effects-based framework, the rejection of the DNP initiative by APN programs and professional organizations, and the nursing community. Concluding observations will be shared.

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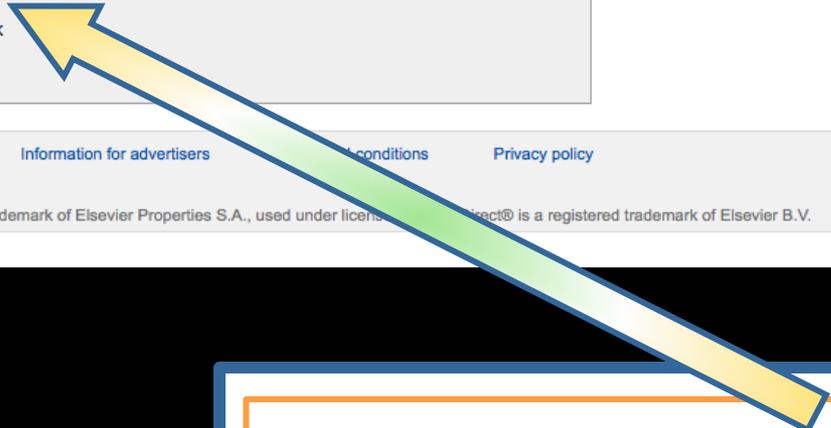
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## The Doctor of Nursing Practice: A national workforce perspective

Linda Cronenwett, PhD, RN, FAAN<sup>a,\*</sup>, Kathleen Dracup, DNSc, RN, FAAN<sup>b</sup>,  
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<sup>a</sup> University of North Carolina at Chapel Hill, Chapel Hill, NC

<sup>b</sup> University of California San Francisco, San Francisco, CA

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<sup>f</sup> University of Washington, Seattle, WA

### ARTICLE INFO

#### Article history:

Received 9 September 2010

Revised 12 November 2010

Accepted 12 November 2010

### ABSTRACT

In 2004, the American Association of Colleges of Nursing (AACN) adopted a position statement concerning the future of advanced practice nursing education. A target date of 2015 was articulated as the point by which preparation for advanced practice nurses would be replaced by education. Seismic shifts in the realities surrounding nursing practice have occurred since the proposal to require a Doctor of Nursing Practice (DNP) degree for entry into advanced practice nursing was proposed. Documented economic challenges have resulted in significant budget cuts in all sectors, including higher education. The consequent cutbacks, restructuring in educational operations of all types have placed increased demands on faculty, staff, and students across the country. Increasing incidence and earlier onset of chronic disease, a rapidly aging population, health care reform agendas, a shortage of primary care physicians, and projected severe shortages of nursing faculty have raised questions about the capacity of nursing education to produce the number of advanced practice nurses needed. This article addresses the challenges and growing concerns associated with the future of advanced practice nursing education. Recommendations to ensure continuing development of advanced practice that serves the interests and needs of the public now and in the future are presented within the context of a national workforce perspective.

**Cite this article:** Cronenwett, L., Dracup, K., Grey, M., McCauley, L., Meleis, A., & Salmon, M. (2011, FEBRUARY). The Doctor of Nursing Practice: A national workforce perspective. *Nursing Outlook*, 59(1), 9–17. doi:10.1016/j.outlook.2010.11.003

\* Corresponding author: Dr. Linda Cronenwett, University of North Carolina at Chapel Hill, School of Nursing, Carrington Hall, Campus Box 7460, Chapel Hill, NC 27599.

E-mail address: [lcronenwett@unc.edu](mailto:lcronenwett@unc.edu) (L. Cronenwett).

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National Human Genome Research Institute (U.S.)

3. Component of the NATIONAL INSTITUTES OF HEALTH. It conducts and supports research into the mapping of the human genome and other organism genomes. The National Center for Human Genome Research was established in 1989 and re-named the National Human Genome Research Institute in 1997. Year introduced: 2008

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3. van Bakel H, Nislow C, Blencowe BJ, Hughes JP, et al.  
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PMID: 20502517 [PubMed - indexed for MEDLINE]  
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4. Zhang Z, Pang AW, Gerstein M.  
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PMID: 17288572 [PubMed - indexed for MEDLINE]  
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5. Freyhult EK, Bollback JP, Gardner PP.  
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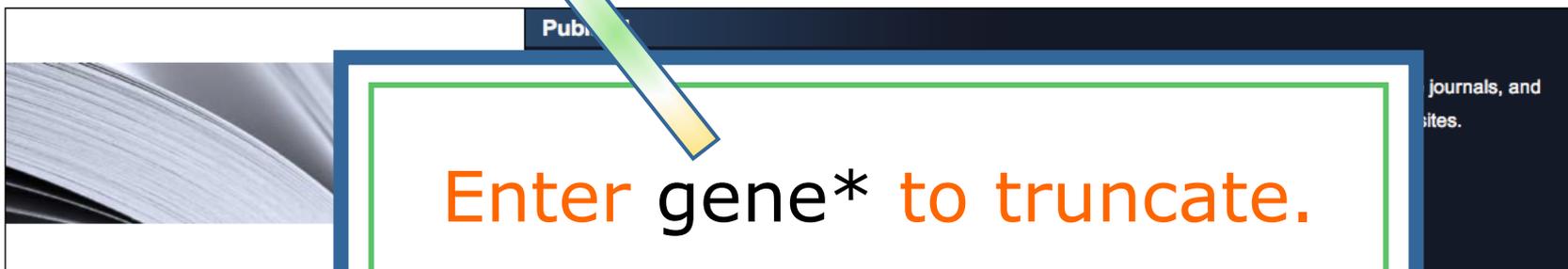
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 Stroke Res Treat. 2011;2011:212485. Epub 2011 Nov 10.  
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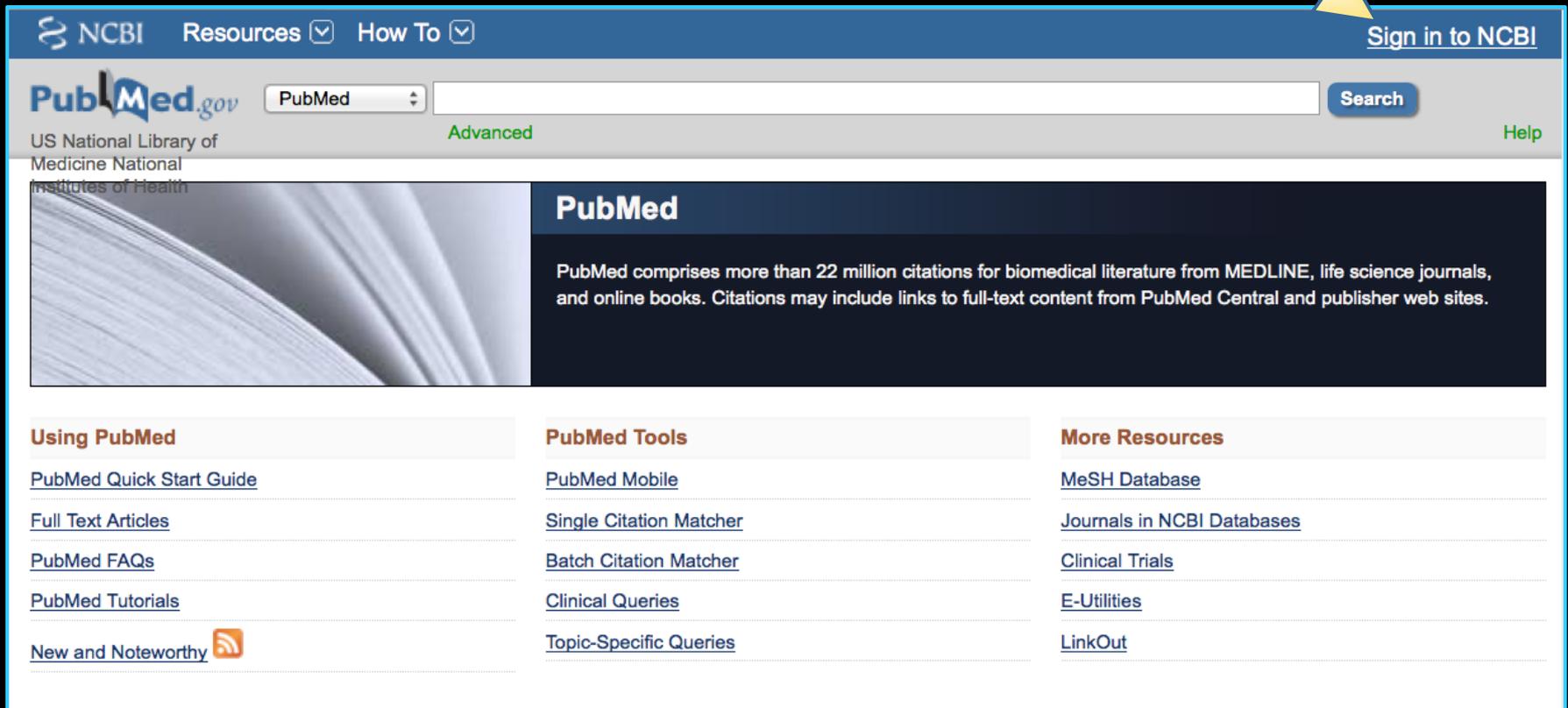
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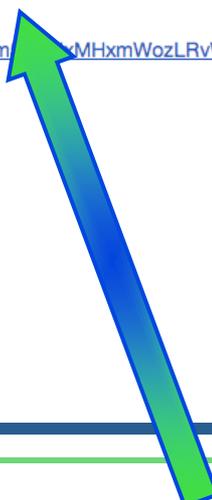
Please send questions, problems, and comments to [info@ncbi.nlm.nih.gov](mailto:info@ncbi.nlm.nih.gov).

Do not reply directly to this message.

Thank you

Thursday, January 14 2010.

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The National Center for Biotechnology Information  
National Library of Medicine  
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Bethesda, MD  
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# Search Filters

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Search Name	What's New	Last Searched
<b>PubMed Searches</b>		
<a href="#">("Alanine"[Mesh] OR "Threonine"[Mesh]) AND "Neo...</a>	0	today

[Manage Saved Searches »](#)

**My Bibliography**

Your bibliography contains **no items**.

Use the "Send to > My Bibliography" menu in PubMed to add citations,  
OR  
[Click here](#) to manually create citations.

[Manage My Bibliography »](#)

**Collections**

Collection Name	Items	Settings/Sharing	Type
<a href="#">Favorites</a>	<a href="#">edit</a> 0	<a href="#">Private</a>	Standard
<a href="#">My Bibliography</a>	<a href="#">edit</a> 0	<a href="#">Private</a>	Standard
<a href="#">Other Citations</a>	<a href="#">edit</a> 0	<a href="#">Private</a>	Standard

[Manage Collections »](#)

**Recent Activity**

Time	Database	Type	Term
6:53 PM	PubMed	search	<a href="#">(((("Alanine"[Mesh] OR "Threonine"[M...</a>

[Clear](#) [Turn Off](#)

[See All Recent Activity »](#)

**Filters**

Filters for: (P

[Manage Filters »](#)

Click Manage Filters



[Manage Filters »](#)

# My NCBI — Filters

You are managing filters for: PubMed Choose another

Select Properties

Your PubMed filter list

Create custom filter

Browse/Search for PubMed Filters

Select category:

- Popular
- LinkOut
- Properties
- Links

Search with terms (optional):

 Search

Active	Name	Description
<input type="checkbox"/>	Clinical Trial	
<input type="checkbox"/>	English	
<input checked="" type="checkbox"/>	English & Humans	
<input type="checkbox"/>	Free Full Text	links to Web accessible full text articles (all available free of charge)
<input type="checkbox"/>	Full Text	links to Web accessible full text articles (some may require subscription)
<input type="checkbox"/>	Humans	
<input type="checkbox"/>	Items with Abstracts	
<input type="checkbox"/>	Published in the last 5 years	
<input type="checkbox"/>	Review	articles that review the literature on a subject

Select English & Humans

# My NCBI — Filters

[Filters help](#)

Under Publication Types select

database: PubMed (9 active)

Search for PubMed Filters

Popular  LinkOut  Properties  Links

Search with terms (optional):

Active	Name	Description
<input checked="" type="checkbox"/>	Meta-analysis	
<input type="checkbox"/>	Multicenter Study	
<input type="checkbox"/>	News	
<input type="checkbox"/>	Newspaper Article	
<input type="checkbox"/>	Overall	
<input type="checkbox"/>	Patient Education Handout	
<input type="checkbox"/>	Periodical Index	
<input type="checkbox"/>	Portraits	
<input checked="" type="checkbox"/>	Practice Guideline	
<input type="checkbox"/>	Published Erratum	
<input checked="" type="checkbox"/>	Randomized Controlled Trial	

Active	Name	Description
<input type="checkbox"/>	<a href="#">Age Groups</a>	
<input type="checkbox"/>	<a href="#">Clinical Queries</a>	
<input type="checkbox"/>	<a href="#">Entrez (Entered) Date</a>	
<input type="checkbox"/>	<a href="#">Gender</a>	
<input type="checkbox"/>	<a href="#">Health Services Research Queries</a>	
<input type="checkbox"/>	<a href="#">Humans or Animals</a>	
<input type="checkbox"/>	<a href="#">Languages</a>	
<input type="checkbox"/>	<a href="#">Other</a>	
<input type="checkbox"/>	<a href="#">Publication Date</a>	
<input type="checkbox"/>	<a href="#">Publication Types</a>	



# My NCBI — Filters

[Filters help](#)

You are managing filters for: PubMed Choose another database: PubMed (9 active)

Your PubMed filter list

Create custom filter

## Browse/Search for PubMed Filters

Select category:

- Popular
- LinkOut
- Properties
- Links

Search with terms (optional):

Active	Name	Description
<input checked="" type="checkbox"/> <u>Subsets</u>		
<input type="checkbox"/>	AIDS	Strategy created to facilitate searching for citations in the area of AIDS.
<input checked="" type="checkbox"/>	Nursing Journals	Citations to articles in nursing journals.
<input checked="" type="checkbox"/>	Systematic Reviews	Strategy intended to retrieve citations for systematic reviews, meta-analyses, reviews of clinical trials, guidelines, and similar articles.

Under Subsets select

# My NCBI — Filters

[Filters help](#)

You are managing filters for: PubMed Choose another database: PubMed (9 active)

## Your PubMed filter list

Create custom filter

Active	Name	Type
<input checked="" type="checkbox"/>	All Adult	Standard filter
<input checked="" type="checkbox"/>	All Child	Standard filter
<input checked="" type="checkbox"/>	All Infant	Standard filter
<input checked="" type="checkbox"/>	English & Humans	Standard filter
<input checked="" type="checkbox"/>	Meta-analysis	Standard filter
<input checked="" type="checkbox"/>	Nursing Journals	Standard filter
<input checked="" type="checkbox"/>	Practice Guideline	Standard filter
<input checked="" type="checkbox"/>	Randomized Controlled Trial	Standard filter
<input checked="" type="checkbox"/>	Systematic Reviews	Standard filter

## Browse/Search for PubMed Filters

Select category:

Popular  LinkOut  Properties  Links

Search with terms (optional):

You may select up to 15 filters. These selections override the default filters of Review and Free Full Text. These filters apply to searches run while signed into you're My NCBI account.

# Example of results with customized filters

NCBI Resources How To

PubMed.gov  
US National Library of Medicine National Institutes of Health  
[Show additional filters](#)

PubMed ("Advanced Practice Nursing"[Mesh] AND "Education, Nursing, Graduate/trends"[Mesh])

RSS Save search Advanced Help

Display Settings: Summary, 20 per page, Sorted by Recently Added

Filter your results:

Text availability  
Abstract available  
Full text available

Publication dates  
5 years  
10 years  
Custom range...

Species  
Humans

Article types  
more ...

Languages  
English  
more ...

Clear all

Show additional filters

Results: 1 to 20 of 29

<< First < Prev Page 1 of 2 Next > >>

[Using effects-based reasoning to examine the DNP as the single entry degree for advanced practice nursing.](#)  
Rhodes MK.  
Online J Issues Nurs. 2011 Jun 27;16(3):8. doi: 10.3912/OJIN.Vol16No03PPT01.  
PMID: 22324574 [PubMed - indexed for MEDLINE]  
[Related citations](#)

[\[Advanced practices in nursing, the American example\].](#)  
2. Debout C.  
Soins Psychiatr. 2011 Nov-Dec;(277):18-22. French.  
PMID: 22165329 [PubMed - indexed for MEDLINE]  
[Related citations](#)

[Furthering the educational preparation of all advanced practice nursing.](#)  
3. Santoro PW, Kennedy HP.  
Nurs Outlook. 2011 Nov-Dec;59(6):e2. doi: 10.1016/j.outlook.2011.08.005. Epub 2011 Oct 13. No abstract available.  
PMID: 22000690 [PubMed - indexed for MEDLINE]  
[Related citations](#)

[\[Advanced nursing practice - a path to better health care? The country needs specialists\].](#)  
4. Gerlach A.  
Pflege Z. 2011 Jul;64(7):406-9. German. No abstract available.  
PMID: 21845895 [PubMed - indexed for MEDLINE]  
[Related citations](#)

All (29)  
All Adult (0)  
[All Child \(1\)](#)  
All Infant (0)  
[English & Humans \(22\)](#)  
Meta-analysis (0)  
[Nursing Journals \(28\)](#)  
Practice Guideline (0)  
Randomized Controlled Trial (0)  
Systematic Reviews (0)  
[Manage Filters](#)

Find related data  
Database: Select  
Find items

Search details  
"Advanced Practice Nursing"[Mesh] AND "Education, Nursing, Graduate/trends"[Mesh]

# Example of results with standard filters

My NCBI Sign Out

AND "Education, Nursing, Graduate/trends"[Mesh] Search Help

Recently Added Send to: Filter your results:

Results: 1 to 20 of 22 << First < Prev Page 1 of 2 Next > Last >>

Filters activated: English Clear all

1. [Using effects-based reasoning to examine the DNP as the single entry degree for advanced practice nursing.](#)  
Rhodes MK.  
Online J Issues Nurs. 2011 Jun 27;16(3):8. doi: 10.3912/OJIN.Vol16No03PPT01.  
PMID: 22324574 [PubMed - indexed for MEDLINE]  
[Related citations](#)

2. [Furthering the educational preparation of all advanced practice nursing.](#)  
Santoro PW, Kennedy HP.  
Nurs Outlook. 2011 Nov-Dec;59(6):e2. doi: 10.1016/j.outlook.2011.08.005. Epub 2011 Oct 13. No abstract available.  
PMID: 22000690 [PubMed - indexed for MEDLINE]  
[Related citations](#)

3. [U.S. nursing schools transform master's education by adopting new standards reflecting contemporary nursing practice.](#)  
[No authors listed]  
J Prof Nurs. 2011 May-Jun;27(3):131-2. No abstract available.  
PMID: 21739766 [PubMed - indexed for MEDLINE]  
[Related citations](#)

4. [Re: The Doctor of Nursing Practice: a national workforce perspective.](#)  
Curtis AC, Kelly KA.  
Nurs Outlook. 2011 May-Jun;59(3):133-4; author reply 135-6. No abstract available.  
PMID: 21565588 [PubMed - indexed for MEDLINE]  
[Related citations](#)

Filter your results:

All (22)

All Adult (0)

All Child (0)

All Infant (0)

[English & Humans \(22\)](#)

Meta-analysis (0)

[Nursing Journals \(21\)](#)

Practice Guideline (0)

Randomized Controlled Trial (0)

Systematic Reviews (0)

[Manage Filters](#)

Find related data

Database: Select

Find items

Search details

"Advanced Practice Nursing"[Mesh] AND "Education, Nursing, Graduate/trends"[Mesh] AND English[lang]

Search See more...

Clear all

## Text availability

Abstract available  
Full text available

## Publication dates

5 years  
10 years  
Custom range

## Species

Humans

## Article type

more ...

## Languages

✓ English  
more ...

Clear all

Show additional filters

Save Search

# Click Save Search

NCBI Resources How To Sign in to NCBI

PubMed.gov PubMed ("Advanced Practice Nursing"[Mesh] AND "Education, Nursing, Graduate/trends"[Mesh]) Search

US National Library of Medicine National Institutes of Health Show additional filters

RSS Save search Advanced Help

Display Settings: Summary, 20 per page, Sorted by Recently Added Send to: Filters: Manage Filters

Clear all

Text availability  
Abstract available  
Full text available

Publication dates clear  
5 years  
10 years  
Custom range...

Species  
Humans

Article types  
more ...

Languages clear  
English  
more ...

Clear all

Show additional filters

Results: 1 to 20 of 22 Selected: 1 << First < Prev Page 1 of 2 Next > Last >>

Filters activated: published in the last 5 years, English Clear all

1. [Using effects-based reasoning to examine the DNP as the single entry degree for advanced practice nursing.](#)  
Rhodes MK.  
Online J Issues Nurs. 2011 Jun 27;16(3):8. doi: 10.3912/OJIN.Vol16No03PPT01.  
PMID: 22324574 [PubMed - indexed for MEDLINE]  
[Related citations](#)

2. [Furthering the educational preparation of all advanced practice nursing.](#)  
Santoro PW, Kennedy HP.  
Nurs Outlook. 2011 Nov-Dec;59(6):e2. doi: 10.1016/j.outlook.2011.08.005. Epub 2011 Oct 13.  
No abstract available.  
PMID: 22000690 [PubMed - indexed for MEDLINE]  
[Related citations](#)

3. [U.S. nursing schools transform master's education by adopting new standards reflecting contemporary nursing practice.](#)  
[No authors listed]  
J Prof Nurs. 2011 May-Jun;27(3):131-2. No abstract available.  
PMID: 21739766 [PubMed - indexed for MEDLINE]  
[Related citations](#)

Find related data  
Database: Select  
Find items

Search details  
"Advanced Practice Nursing"[Mesh] AND "Education, Nursing, Graduate/trends"[Mesh] AND ("2007/11/12"[PDat] : "2012/11/09"[PDat] AND English[lang])  
Search See more...

Recent activity  
Turn Off Clear  
("Advanced Practice Nursing"[Mesh] AND "Education, Nursing, Graduate/trends"[Mesh]) PubMed  
("Advanced Practice Nursing"[Mesh] AND "Education, Nursing, Graduate/trends"[Mesh]) PubMed  
("Advanced Practice Nursing"[Mesh] AND "Education, Nursing, Graduate/trends"[Mesh]) PubMed

# My NCBI — Saved Searches

[Saved Searches help](#)

## Your PubMed search

Search: ("Advanced Practice Nursing"[Mesh]) AND "Education, Nursing, Graduate/trends"[Mesh]

Filters: English

Name of Search: ("Advanced Practice N

Save

Cancel

Click **Save** to receive automatic email updates of newly published articles on this topic.

Save Search successful.

Your PubMed search

Search: ("Advanced Practice Nursing"[Mesh]) AND "Edu

Filters: English

Name of Search: ("Advanced Practice N

E-mail:

Would you like e-mail updates of new search results?

- No thanks.
- Yes, once a month.  
Which day? the first Saturday
- Yes, once a week.  
Which day? Saturday
- Yes, every day.

Formats:

Report format: Summary

Number of items:

Send at most: 200 items  Send even when there aren't any new results

Any text you want to be added at the top of your e-mail (optional):

Save

Click Save

Select when and how often you wish to receive updates, report format, and number of results.

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OR

[Click here](#) to manually create citations.

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### Saved Searches

Search Name	What's New	Last Searched
<b>PubMed Searches</b>		
<a href="#">("Advanced Practice Nursing" [Mesh]) AND "Educat...</a>	0	today

[Manage Saved Searches »](#)

### Collections

Collection Name	Items	Type
<a href="#">Favorites</a>	0	Standard
<a href="#">My Bibliography</a>	0	Standard
<a href="#">Other Citations</a>	0	Standard

[Manage Collections »](#)



Click

# Online Tutorial

### PubMed

PubMed comprises more than 22 million citations for biomedical literature from MEDLINE, life science journals, and

Click **Training & Tutorials** for hands-on learning.



You are here: NCBI > Literature > PubMed

Write to the Help Desk

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- NCBI Help Manual
- NCBI Handbook

**Training & Tutorials**

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- Data & Software
- DNA & RNA
- Domains & Structures
- Genes & Expression
- Genetics & Medicine
- Genomes & Maps
- Homology
- Literature
- Proteins
- Sequence Analysis
- Taxonomy
- Training & Tutorials
- Variation

#### POPULAR

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- Nucleotide
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- PubMed Central
- Gene
- Bookshelf
- Protein
- OMIM
- Genome
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- Structure

#### FEATURED

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- Human Genome
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*The End*