NCS1202
Evidence Based Practice
Assignment 2
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Finding Evidence-based Information

THE JOANNA BRIGGS INSTITUTE
MEDLINE
Cochrane Library
BMJ Best Practice
informit

Your instant second opinion
A sample case study

You are a recently graduated RN working with a child health nurse. One of her patients is 5 year old Sam who suffers from nocturnal enuresis. His mother said it is a constant problem and it was affecting Sam more lately as he is now getting to the age when children like to have a sleep-over. Sam was reluctant to accept invitations because of his embarrassment. The conventional therapies include medication (desmopressin in antidiuretic hormone or arginine vasopressin, either of which decrease night-time urine production), and enuresis alarms. His mother is unconvinced about the safety of Sam taking ‘drugs’ and wants to try using a bed wetting alarm. You decide to find out which treatment is more effective by doing a search to find the evidence.
Part A Analyse your case study – important issue

Identify the answerable question – a/the core question that requires evidence-based information from which to make a decision for the best treatment etc.

You are a recently graduated RN working with a child health nurse. One of her patients is 5 year old Sam who suffers from nocturnal enuresis. His mother said it is a constant problem and it was affecting Sam more lately as he is now getting to the age when children like to have a sleep-over. Sam was reluctant to accept invitations because of his embarrassment.

The conventional therapies include medication (desmopressin in antidiuretic hormone or arginine vasopressin, either of which decrease night-time urine production), and enuresis alarms.

His mother is unconvinced about the safety of Sam taking 'drugs' and wants to try using a bed wetting alarm.

You decide to find out which treatment is more effective by doing a search to find the evidence.
Part A: Develop an answerable Question

In this sample case study, a few key points from the patient interview have been identified. This will enable us to work through the steps to find the best-evidence on which to make a decision for the most appropriate patient care.

In the case study it is identified that:
• Sam is a 5 year old child.
• Sam suffers from nocturnal enuresis
• Sam's mother advised that it is a constant problem and is affecting Sam.
• Sam's mother would like to avoid the use of drugs as a form of treatment.

The answerable question for this case study could be:
What are the experiences of young children using a bed wetting alarm as an effective treatment for nocturnal enuresis?

This is a qualitative answerable question.
In the Week 4 material examples of both were included.
Make sure your research question is specific and that it is a question and not a statement.

Part A: PICO vs. PIO Framework

What are the experiences of young children using a bed wetting alarm as an effective treatment for nocturnal enuresis?

<table>
<thead>
<tr>
<th>Question parts/concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
</tr>
<tr>
<td>Intervention</td>
</tr>
<tr>
<td>Comparison</td>
</tr>
<tr>
<td>Outcome</td>
</tr>
</tbody>
</table>

The PICO Search Strategy Worksheet can help when designing an effective search strategy.
Part A: Plan your search

- Analyse your topic
- Plan your search
- Decide where to search
- Evaluate and Manage

Part A: Creating a smart search strategy

- Decide which terms (words) you should use to search.
- Focus on the **who** (is it meant to treat), **what** (disease, condition etc.) and the **Intervention**, as the searchable concepts:
  - Child/children
  - Nocturnal Enuresis/Bed wetting
  - Bed wetting alarm
- For each concept consider any synonyms (keywords & alternative terms)

Fundamental to smart searching is to identify all the different ways each concept can/might be expressed - list them in **Database Search Strategy Form**.
You can do this using dictionaries, thesaurus, the simple internet searches etc.
In doing this you will ensure a comprehensive search strategy from which to find relevant information relating to the research question. This will enable you to then make an informed decision(s).
### Part A Search Terms

<table>
<thead>
<tr>
<th>Question parts (concepts)</th>
<th>Search terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>P 5 year old child suffering from Nocturnal Enuresis</td>
<td>Child Nocturnal enuresis</td>
</tr>
<tr>
<td>I Bed wetting alarm</td>
<td>Bed wetting alarm</td>
</tr>
<tr>
<td>C Medications such as Desmopressin or Arginine vasopressin</td>
<td>Not required due to Sam's mother's concerns about the use of drugs</td>
</tr>
<tr>
<td>O No bed wetting</td>
<td></td>
</tr>
</tbody>
</table>

But why do you need to find alternative terms and key words (synonyms) and how do you find them?

### How to find alternative search terms

**Dictionaries & Encyclopaedias:**
Use these to source the meaning of terminology. Some are e-versions.

- Australian nurses' dictionary
- Biostat's medical dictionary
  - Available online
- Dictionary of nursing theory and research
- Mosby's dictionary of medicine, nursing & health professions
- Taber's cyclopedic medical dictionary
  - Available online

**Books:**
Are a good starting point for an introduction to the topic such as background information, theories, frameworks and overviews.

Your Reading List in Blackboard includes recommended texts for your Unit.
How to find alternative search terms

Journal Articles:
Provide information on current research, often specific to a topic. They are an online source of information searchable from the ECU subscribed databases and sometimes ECU Worldsearch.

Key Databases:
- Cochrane Library: full-text database for health care and health-related research.
- Medline: International coverage, core database for medical sciences.

Some Key Australian Journals:
- AORNJ: The journal of perioperative nurses in Australia
- Australian Emergency Nursing Journal (AENJ)
- Australian Critical Care
- Australian Journal of Rural Health
- Australian Nursing & Midwifery Journal

Websites:
These include Government Reports, professional, research organisations. The Nursing Library Guide lists many of the credible sites to use.

Nursing Professionals:
- Australian Nursing & Midwifery Council (ANMC)
- Nursing & Midwifery Board of Australia
- Australian College of Nursing
- Nursing & Midwifery Board of Queensland
- Review of home births in Western Australia

How to find alternative search terms

The description tab in a record either in ECU Worldsearch can provide possible alternative search terms (keywords/alternative terms).

1. Enhanced response using a multicomponent urine alarm treatment for nocturnal enuresis.
2. Description
3. Subjects:
   - Clinical Alarms
   - Child
   - Evidence-Based Nursing
   - Intervention
   - Nocturnal Enuresis nursing
   - Premature nursing methods
   - Primary Care Nursing: Implementation
   - Primary Care nursing methods
   - Incontinence Nursing
How to find alternative search terms

The Major and Minor Subjects listed within an article sourced from a Database can also provide possible alternative search terms (keywords/alternative terms).

Efficacy of the bell and pail alaram therapy for nocturnal enuresis.

Author: Cil-C. United States: Calabria, PH
Affiliation: The Children’s Hospital at Westmead, Westmead, New South Wales, Australia
Journal: Journal of Pediatrics & Child Health (PEDIATRICS CHILD HEALTH, 2005; 41:17; 419-426)
Publication Type: Journal Article
Language: English

Major Subjects: Behavior Therapy - Equipment and Supplies
Minor Subjects: Bedwetting

No Wikipedia in your references!

Wikipedia only the planning stage!

Wikipedia articles can be useful to gain a quick overview of the topic, and/or to find alternative terms/keywords for your search strategy. Remember anyone can write a Wikipedia article, so will it be accurate?

Quality Wikipedia articles will contain references to their sources - listed at the bottom of each page. They can often be credible quality sources of information that you can cite in your assignments.

Note: If the information available in Wikipedia is accurate, it will always be available as a scholarly source, such as a book, Journal Article and/or a quality website. Do not use a Wikipedia source as supporting evidence in your assignment, always use the scholarly source.

## An exemplar Search Strategy

<table>
<thead>
<tr>
<th>Patient Problem/Population</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nocturnal Enuresis</td>
<td>Bedwetting alarm/s</td>
</tr>
<tr>
<td>Enuresis</td>
<td>Bed wetting alarm/s</td>
</tr>
<tr>
<td>Bed wetting</td>
<td>Buzzer alarm/s</td>
</tr>
<tr>
<td>Bedwetting</td>
<td>Enuresis alarm/s</td>
</tr>
<tr>
<td>Urinary incontinence</td>
<td>Behaviour therapy(ies)/</td>
</tr>
<tr>
<td></td>
<td>Behavior therapy(ies)</td>
</tr>
</tbody>
</table>

And any others you may find...

### Smart Searching: how to search for these concepts
- words vs. phrases (put phrases in " ")
- Truncation (use * to ensure plurals, word extensions and/or the American spelling are covered in your search)
  - e.g., nurs* = nurse, nursing, nurses
  - e.g., librar* = library, libraries
  - e.g., behavi*r = behaviour (Australian) vs. behavior (American)

## Part A Search Strategy

<table>
<thead>
<tr>
<th>Patient Problem/Population</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Nocturnal Enuresis&quot;</td>
<td>&quot;Bedwetting alarm**&quot;</td>
</tr>
<tr>
<td>Enuresis</td>
<td>&quot;Bed wetting alarm**&quot;</td>
</tr>
<tr>
<td>&quot;Bed wetting&quot;</td>
<td>&quot;Buzzer alarm**&quot;</td>
</tr>
<tr>
<td>Bedwetting</td>
<td>&quot;Enuresis alarm**&quot;</td>
</tr>
<tr>
<td>&quot;Urinary incontinence&quot;</td>
<td>&quot;Behavi<em>r therap</em>&quot;</td>
</tr>
</tbody>
</table>

And any others you may find...

### Boolean Operators: this is the use of 'AND', 'OR' and 'NOT' to join search phrases and words.

- A potential search strategy:
  - ("nocturnal enuresis" OR enuresis OR "bed wetting" OR "bedwetting" OR "urinary incontinence")
  - AND
  - ("bedwetting alarm**" OR "bed wetting alarm**" OR "buzzer alarm**" OR "enuresis alarm**" OR "behavi*r therap**")
Questions you may have:

- There is no need to include 'child' as a search term, because within most databases there is the option to refine the search results by age groups. However you may have to include child in the search strategy if a database does not have this option.

- The actual search terms used in the search strategy will depend on the database you search across.

- The Boolean operator of 'OR' connects the synonyms for each part/concept and the Boolean operator 'AND' joins the concepts.

- Where do I find the information I need?

- What date parameters will I use?

Part A: Refining the search results

Date parameter:
- Is there an Assignment date parameter set?
- What is your topic e.g. Zika virus

Language e.g. only English
Type of Information e.g. Zika virus
Part A: Decide where to search

- Analyse your topic
- Plan your search
- Decide where to search
- Evaluate and Manage

Databases and Evidence-based Practice

Identify and use databases that cover the topic area.

**Significant Health Science Databases:**
- CINAHL Plus Full Text
- MEDLINE

**Specific evidence-based health Databases:**
- Cochrane Library
- BMJ Best Practice
- PsycINFO

*N.B. You are required to search at least 3 databases*
So which Database to choose?

To find out more about particular databases go the Nursing Library Guide and the Databases/Journals tab. ([http://eu.au.illuminati.com/nursing/journal-articles-databases](http://eu.au.illuminati.com/nursing/journal-articles-databases))

So which Database to choose?

Evidence-Based Health: Databases

The Cochrane Library
- Cochrane Database of Systematic Reviews
- Database of Abstracts of Reviews of Effects (DARE)
- Cochrane Central Register of Controlled Trials (CENTRAL)
- Clinicians' Knowledge Base (NICE Evidence)
- NHS Economic Evaluation Database (NHS EED)
- Health Technology Assessment Database (HTA)
- Health Technology Assessment Database (HTA) (non-COCHRANE)

CINAHL Plus with Full Text
- Cumulative Index to Nursing and Allied Health Literature
- Health CARE Database
- Nursing Research Database
- Health CARE Database

For information on these core databases go to the Databases/Journals tab

How do you access these Databases?

Access these databases via the Library website homepage or via the Library Guides homepage.

Accessing and searching CINAHL

Access this database via the alpha list or go to the Subjects dropdown box and choose Nursing. This subject group, lists the Nursing Databases subscribed to by ECU.
Part A Conducting the Search -CINAHL

In CINAHL, as do most databases the Boolean operator of AND is already populated for you.

<table>
<thead>
<tr>
<th>Searching: CINAHL Plus with Full Text</th>
<th>Choose Databases</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Suggest Subject Terms</td>
<td></td>
</tr>
<tr>
<td>&quot;nocturnal enuresis&quot; OR enuresis OR &quot;bed wetlin</td>
<td>Select a Field (optional)</td>
</tr>
<tr>
<td>AND + &quot;enuresis alarm&quot; OR &quot;behav'/r therap&quot;</td>
<td>Select a Field (optional)</td>
</tr>
<tr>
<td>AND +</td>
<td>Select a Field (optional)</td>
</tr>
</tbody>
</table>

Basic Search Advanced Search Search History

Search results: 16
Refine by article (excludes books): N/A as Databases do not contain books
Refine by Academic Journal: 14
Date range - last 10 years: 7
English language: N/A as the 7 results are in English language.

(N.B. that the SNM Assignment Guidelines usually state 5 years or less)

Refining by information type in CINAHL

In addition to the common filters available, CINAHL also includes the ability to refine search results by information type - such as specific evidence-based information

REMEmBER: MEDLINE and PsyInfo are also hosted by EBSCOhost and are therefore searched in the same way as CINAHL.
Refining by information type in CINAHL

In addition to the common filters available, CINAHL also includes the ability to refine search results by information type – such as specific evidence-based information.

Sourcing the search strategy to document it for future searches in CINAHL

You can source the search strategy by copy and pasting the ‘persistent link to search option’ into a new browser tab. Click on the video to view the process.
Part A Documenting the Search - CINAHL

In CINAHL, as do most databases the Boolean operator of AND is already populated for you.

<table>
<thead>
<tr>
<th>Database</th>
<th>Search Terms</th>
<th>Number of Articles Retrieved</th>
<th>Relevance to your Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>CINAHL</td>
<td>(nocturnal enuresis OR enuresis OR bedwetting) AND (enuresis alarms OR behav**r therap*)</td>
<td>16</td>
<td>Refined by parameters of journal articles, English language and last 10 years = 7</td>
</tr>
<tr>
<td>MEDLINE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PsycINFO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JBI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>etc</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(N.B. that the SNM Assignment Guidelines usually state 5 years or less)

Part A: JBI search

Access this database the same way as you accessed CINAHL.

The JBI Database contains systematic reviews, Evidence Summaries, Evidence Based Recommended Practices, Consumer Information Sheets, Systematic Review Protocol and Technical Reports. It is a small database with only 3000 records.

Note: Keep the search strategy simple because of the limited number of records held in this database.
Searching in JBI

The number of search results are listed above the search fields with the actual search results listed below the search fields.

Search results: 5
No limits used due to small number of results.
Types of information retrieved: Evidence summaries, Customer Information Sheets and systematic reviews — all forms of evidence-based information.

Accessing JBI search results

Note: Evidence-based summaries are great because they provide a list of references for the particular topic that can then be followed up on.

Click on the title link to access the information.

There is a short video on how to use the JBI Database in the Database/Journals Tab of the Nursing Library Guide.
Part A: The Cochrane Library search

Access this database via the alpha list or go to the Subjects dropdown box and choose Nursing. This subject group lists the Nursing Databases subscribed to by ECU.

Searching in The Cochrane Library

The Cochrane Library contains high quality, independent evidence. It includes reliable evidence from Cochrane and a group of 6 affiliated databases. In addition to systematic reviews it also includes clinical trials, method studies and more.

Cochrane Library can be searched in a variety of ways.

1. Basic search
   Enter keywords or phrases into the search bar.

2. Advanced search
   Choose Advanced Search, Search Manager or MeSH to tailor your search strategies.

Note: Again keep the search strategy simple because of the highly specialized records in this database.
Note: Again keep the search strategy simple because of the highly specialized records in this database.
Searching in The Cochrane Library

83 search results

Click on the search results number and view the number of results per information type.

Refining the search results in the Cochrane Library

Click on this box to view or set limits.
Accessing search results in Cochrane

And finally ECU Worldsearch

It can be useful to start by doing a broad multidisciplinary search in ECU Worldsearch.

Search results: 149
Refine by article (excludes books): 146
Date range – last 10 years: 85
(N.B. that the SNM Assignment Guidelines usually state 5 years or less)
English language: 69

But how many of these results are relevant and evidence-based? This is where you scan and skim each result and save any relevant results for reading in full and making selections. This is the next step and forms part of Question 6.
Part A: Evaluating and Managing search results

- Analyse your topic
- Plan your search
- Decide where to search
- Evaluate and Manage

Part A: Relevance - Scanning & Skimming

Scanning & Skimming the search results

Part A: Evaluate - Scanning & Skimming

While locating information in the search process you should scan and skim the search results for signs of relevancy – look at the title and abstract.

### Scanning

Reading to find specific information to answer a question/solve a problem.

Use your knowledge of how information is organised to quickly find relevant content (e.g., abstract, introduction, conclusion, summary, tables, etc.).

This will enable you to:
- locate the relevant sections; and
- read only as much as you need to find the relevant information.

### Skimming

This is a quick initial reading of the piece of information such as an article or evidence summary or randomized control trial to:
- establish usefulness and/or
- obtain an overview (the gist).

Browse, survey the content, dip into different parts of the article etc.

**REMEMBER:** You still need to analyse for content credibility and relevancy. This will include looking at the quality of the evidence (e.g., was the randomised control trial conducted in the prescribed way) and the relevancy of the conclusions/outcomes.

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Part A: Relevance - Scanning & Skimming

1. **Evaluation of the Effectiveness of a Short-term Treatment and Repeat Trial of Nocturnal Enuresis Using an Enuresis Alarm.**
   - **Authors:** [Author names]
   - **Source:** [Journal name]
   - **Date:** [Date]
   - **Publication Type:** [Type of publication]
   - **Keywords:** Enuresis, alarm, therapy, children, sleep.

2. **Treatment of enuresis: alarm monotherapy versus a multi-modal treatment.**
   - **Authors:** [Author names]
   - **Source:** [Journal name]
   - **Date:** [Date]
   - **Publication Type:** [Type of publication]
   - **Keywords:** Enuresis, therapy, children, sleep.

3. **Nocturnal enuresis: a survey of parental coping strategies at 7-5 years.**
   - **Authors:** [Author names]
   - **Source:** [Journal name]
   - **Date:** [Date]
   - **Publication Type:** [Type of publication]
   - **Keywords:** Enuresis, parent, coping, children, age.

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1. Read the title of the article
2. Read the abstract – relevant?
3. Add to the folder
4. Click on Folder View and select full articles to read in full
Managing search results in the CINAHL database

Some useful features in CINAHL to manage search results is the ability to save, cite, e-mail or access the full-text.

You can also save your search and the search results in CINAHL by setting up an account.

Managing search results in the JBI database

In the JBI Database you can print or e-mail the results and access the full-text.

There is also the ability to save the search and the search results if you create an account.
Managing search results In The Cochrane Library

Managing search results in ECU Worldsearch

These 3 buttons on the top right-hand side of the screen enable you to share the information, cite, and/or save the record until you decide it is the best information for your purpose.
Part A: Critical Appraisal – recommendation for best practice

Critical Appraisal Tools

Critical Appraisal Tool Downloads

- Checklist for Case Control Studies
- Checklist for Case Reports
- Checklist for Case Series
- Checklist for Cohort Studies
- Checklist for Diagnostic Test Accuracy Studies

Part A: Critical Appraisal – recommendations for best practice

CASP Checklists

This set of eight critical appraisal tools are designed to be used when reading research, these include tools for Systematic Reviews, Randomised Controlled Trials, Cohort Studies, Case Control Studies, Economic Evaluations, Diagnostic Studies and Clinical Prediction Rule.

These are free to download and can be used by anyone under the Creative Commons License.
Some useful links


The Workshop recordings

**Semester 2 2018: Unit Specific Workshop Dates and links to the Recordings**

Write is a list of Unit Specific workshops that Melissa Buckingham (m.buckingham@ecu.edu.au, 6849 1437) will be running in 2018. These Workshops are in addition to any Unit Drop-in sessions as part of the Unit Teaching by your Unit Coordinator/Tutors. Refer to your Unit Blackboard site for details of these.

The workshop recordings will be uploaded to the Blackboard site when they become available.