

Evidence-Based Decision Making Assignment

HYGN 1352 Community Health I 2025-26

Value of Assignment: 30%

In-class test and Written Report Due: Friday, November 14, 2025

Required Textbooks:

- Forrest J., Miller S. (2025) Chapter 3 Evidence-based decision making. Pieren J., & Amyot C. (editors) Darby and Walsh Dental Hygiene Theory and Practice. 6e. Elsevier-Evolve.
<https://online.vitalsource.com/books/9780323933049>
- Frantsve-Hawley, J. (2014) Evidence-Based Dentistry for the Dental Hygienist. Quintessence Publishing (IL). ISBN 978-0-86715-646-1.

AIM:

Two fundamental skills of the oral health practitioner are evidence-based practice (EBP) and teamwork. In this assignment, you will demonstrate these skills. The assignment activities emulate real-world collaborative teamwork, such as relationship-focused care/service, functioning as a team, employing effective communication strategies, sharing leadership, negotiating and clarifying roles and responsibilities, managing and navigating disagreements/conflict, promoting inclusivity, respecting differing ways of knowing and abilities, and creating a safe learning space for all to flourish.

The focus of the assignment is on demonstrating knowledge, skill, and ability in evidence-based decision making (EBDM). Though the assignment is part of the course, the knowledge, skill, and abilities are foundational to dental hygiene practice; hence, the assignment is situated early in the program. The emphasis is on the EBDM process and outcome, and not on your oral health and dental hygiene knowledge or literacy. Health professionals in decision-making access the best available evidence. They respect various ways of knowing and sharing knowledge. Whether the evidence is located in a published, peer-reviewed study or is a lived experience, the process, for e.g., involves listening/reading with an open mind, critical thinking, critical analysis, etc. For this assignment, the focus is on peer-reviewed publications. The process involves analyzing an assigned article (study), for example, by considering the question or hypothesis posed by the study, identifying the study method(s) and methodology, and reasoning what type or level of evidence the study offers toward decision-making, etc. Hence, for the assignment, focus on the EBDM process.

Importantly, EBDM is a skill required for evidence-based practice (EBP). Do refer to the EBDM lecture series (ask, acquire, appraise, apply, assess) facilitated by librarian Caroline Monin, as well use the assigned readings to help inform you about the process. Throughout the lecture and in the readings examples will be shared using a variety of topics/issues. The examples are provided for process purposes and not to increase knowledge base regarding the topic/issue. Focus on the process involved in EBDM.

School of Dental Hygiene Competencies:

The School of Dental Hygiene Competencies primarily addressed in this assignment are:

1. Communicate effectively and collaboratively during professional interactions.
2. Use critical thinking strategies to make evidence-based decisions in all aspects of dental hygiene practice.
3. Serve as an advocate for individuals and/or groups.
4. Serve as an oral health educator applying teaching and learning principles to facilitate client development of attitudes, knowledge, skills and behaviours with particular emphasis on oral health and its relationship to overall health.
5. Serve as health promoters enabling people to increase control over and improve their health and take actions towards changing social, environmental and economic conditions that impact public and individual health.

Learning Objectives:

Following completion of this assignment, students will be able to:

- Use a five-step evidence-based decision-making process to arrive at an evidence-based practice decision: asking a good question, searching for evidence, appraising available evidence, implementing the decision, and evaluating performance.
- Engage in teamwork to arrive at the evidence-based practice decision.
- Employ a critical appraisal tool for evidence-based decision-making.

Assignment Overview:

Assignment Structure: There are two parts to this assignment [Part 1](#) (PICO) and [Part 2](#) (Critical Appraisal). Work in pairs with one submission per pair for Part 1 and Part 2 (a).

Identify partners via email to Laura.MacDonald@umanitoba.ca by **Oct 10th, 8 AM**. Use email subject heading: EBDM assignment partners. A UML assignment folder will then be set up for you.

For both Part 1 and Part 2, use the [case scenario appended](#), a fictional scenario focused on a request for an oral health education session for primary school-aged children.

Use of any form of artificial intelligence for this assignment is not permitted. You must learn the process of developing critical appraisal skills.

Part 1: Due November 14, 8 AM. Submit to the UML folder.

Ask a good question and look for a good answer. As health professionals, we ASK and ACQUIRE as the first two steps of the evidence-based decision-making process. The ASK is formed as a structured question about the population or people (P) who you are interested in; the type of intervention or topic

of interest (I); something to compare (C) it with (e.g., past practice or intervention, what is commonly done); and an outcome (O) that you are seeking. This is called a PICO question.

In fulfilling the learning objectives, Part 1 enables you to:

- Demonstrate an ability to identify PICO concepts.
- Practice identifying background questions.
- Model planning a search from identified PICO concepts.
- Perform a multi-component search in databases.
- Demonstrate an ability to select appropriate research articles for evidence-based decision making.
- Practice citing references using AMA Vancouver/Biomedical style.
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Part 1 Details: Send an email to Laura.MacDonald@umanitoba.ca identifying your partner. Send only one email copied to both partners. Use the subject heading: EBDM partners. A UML folder will then be created in UML.

Part I has six sections. Use Word to document responses. Do not pdf the Word document. One Word document for the team.

1. Create a foreground question based on the [appended scenario](#).
2. Define the four primary concepts for your case:
 - Population:
 - Intervention:
 - Comparison:
 - Outcome:
3. Identify the type of question in your case:
 - Therapy/Prevention
 - Diagnosis
 - Etiology, Causation or Harm
 - Prognosis
4. Identify one possible background question.

5. Complete a search plan:

| | Population | Intervention | Comparison | Outcome |
|------------------------------------------|------------|--------------|------------|---------|
| Primary concept | | | | |
| Possible keywords, including synonyms | | | | |
| Possible MeSH terms (may not be present) | | | | |
| Filters relevant for entire case | | | | |

6. Complete a search in PubMed based on your search plans. Include your search history in your assignment documents (copy/paste a screenshot from the advanced tab in PubMed). PubMed is a readily available database for practicing dental hygienist who may not have direct access to other bibliographic databases at institutions. There are other databases, but for assignment, PubMed is the database for the search.

Be sure to:

- Test at least one term for each primary concept for inclusion.
- Test and use at least one MeSH term for inclusion in your final search.
- Comparison and Outcomes concepts are not required to be included in final search, but may help narrow your results and are still important to consider.
- Add at least one filter to your search that improves the results.
- Test and use OR between two synonyms for one concept.

Sample search (found under Advanced in search)

| History and Search Details | | | | Download | Delete |
|----------------------------|---------|---------|--------------------------------------------------------------------------------------------------------------------------|----------|----------|
| Search | Actions | Details | Query | Results | Time |
| #4 | ... | > | Search: ("Burning Mouth Syndrome"[Mesh] AND (clonazepam OR trazodone)) Filters: in the last 5 years Sort by: Most Recent | 26 | 09:34:15 |
| #3 | ... | > | Search: ("Burning Mouth Syndrome"[Mesh] AND (clonazepam OR trazodone)) Sort by: Most Recent | 75 | 09:34:11 |
| #2 | ... | > | Search: (clonazepam OR trazodone) Sort by: Most Recent | 7,077 | 09:33:33 |
| #1 | ... | > | Search: "Burning Mouth Syndrome"[Mesh] Sort by: Most Recent | 1,107 | 09:33:11 |

7. From your search results, select three relevant articles for further reading. Include citations in AMA Vancouver/Biomedical format in your assignment documents. Please review the following guides for additional help:

- <https://libguides.lib.umanitoba.ca/amastyle>
- <https://libguides.lib.umanitoba.ca/learning/citing>

PubMed also has a Cite button for AMA.

Part 1 Marking scheme:

| | |
|--------------------------------------|------------|
| Section 1 (primary concepts) | /1 |
| Section 2 (foreground question) | /1 |
| Section 3 (type of question) | /1 |
| Section 4 (background question) | /1 |
| Section 5 (search plans) | /8 |
| Section 6 (PubMed search) | /5 |
| Section 7 (relevant articles, cited) | /3 |
| Total | /20 |

Part 2: In-class Test Nov 14, 2025 8:00-9:50 AM

Once you have asked your question and acquired evidence, you want to APPRAISE the evidence quality and relevance to your actual query. Once appraised, you APPLY and ASSESS the evidence within practice.

In fulfilling the learning objectives, Part 2 enables you to:

- Describe how reading research will inform decision-making.
- Use a critical appraisal checklist ([CASP](#)) for critical appraisal of study.
- Form an opinion about the strength of the evidence based on the results of the checklist
- Draw on the evidence in dental hygiene decision-making.

Part 2 Details: There are two sections in Part 2.

A. **With the same partner** as for Part 1, read the [assigned article below](#) by Nov 14th, 8 AM. You may each bring a clean copy of the article to class, i.e., no annotations or writing on the article. With your partner, you will do a critical appraisal on the article. In preparation, do know that you will be given, in class, a hard copy print of the appropriate CASP Checklist link. (See: 3rd tab on [CASP](#) webpage). You are not allowed to bring a completed CASP form to class. However, do know that with your partner, you will complete the CASP checklist and provide written responses in the comments section for each question, indicating where in the article you found information to make your choices (page number, section heading, or figure/table). Hence, it is important to know the study. If you select “Can’t Tell” as an answer, discuss where you looked for the information.

Assigned article: Aljafari, A., ElKarmi, R., Nasser, O., Atef, A., & Hosey, M. T. (2022). A Video-Game-Based Oral Health Intervention in Primary Schools—A Randomised Controlled Trial. *Dentistry Journal*, 10(5), Article 90. <https://doi.org/10.3390/dj10050090>

You will have one hour to complete the appraisal. Hand in the completed form. Be sure all team members' names are on the form.

B. **Individually**, complete the short-answer test on UML entitled: Evidence-based Decision-making. You will use the [fictional case scenario in the appendix](#). One paragraph per response (6-8 sentences/paragraph).

- i. What level of evidence and recommendation would you give the [Aljafari et al. \(2022\)](#) study? Defend your decision.
- ii. Given the [Aljafari et al. \(2022\)](#) conclusion, what two key activities (implications) would you consider incorporating into the oral health education session for the primary school children in the [fictional case scenario](#)?

Complete the self/peer evaluation form and submit it individually to UML folder. The evaluation is based on Part 1 and 2.

Part 2 Marking scheme:

| | |
|---------------------------------------------------|------------|
| Section A (Apply CASP tool) | /10 |
| Section Bi (Level of evidence and recommendation) | /5 |
| Section Bii (Implications) | /5 |
| Total | /25 |

Due Date: Nov 14, 8 AM via UM Learn assignment folder.

Questions about this assignment can be directed to Caroline Monnin (Part A) at Caroline.Monnin@umanitoba.ca or Laura MacDonald (Part B) at Laura.MacDonald@umanitoba.ca.

To book an appointment with Carline Monnin go to [Make an Appointment - LibCal - University of Manitoba](#).

Total Mark: /45

Percent of HGYN 1352: /30%

All of the above are due: **Friday, November 14, 2025**

Appendix: Fictional Scenario

A primary school principal sent an email specifically addressed to you, one of the dental hygienists in the healthcare clinic. The principal is asking if you would come and talk to the children about good oral hygiene habits, and that having good oral health is part of overall health. The principal tells you that the teachers are concerned that several children over the past few years have had visible cavities in their mouths. You are keen to prepare and deliver an oral health education session for the children, and reply “Yes, I would be delighted to and that you and a couple of other dental hygiene colleagues (team) in the clinic are happy to help.” Before designing the oral health education session, the team decides to do a search of the literature on good or best practices for preparing and delivering an oral health education session for primary school-aged children.