



EWMA Education Committee

Education Module: Seeking and Appraising Evidence



Latest review: January 2019



ABOUT THE EWMA EDUCATIONAL DEVELOPMENT PROGRAMME

The Programme is designed to assist students and healthcare professionals who work with patients with wounds and related skin conditions and wish to develop and/or increase their knowledge and skills in order to meet patient needs.

Overall, the Programme aims to:

- Provide students and healthcare professionals with the knowledge and skills to equip them to perform their role in the delivery of optimal wound care.
- Provide contemporary, interdisciplinary, product/brand neutral wound management education that is endorsed by EWMA.
- Provide quality standards against which other organisations can evaluate existing wound management programmes.
- Achieve European acceptance by developing an educational framework that is in line with European Commission educational initiatives in order to disseminate best practice in wound care.

ABOUT THE CURRICULUM DEVELOPMENT PROJECT

The Curriculum Development Project is at the heart of the Educational Development Programme. The aim of the Project is to develop a flexible curriculum, consisting of a number of modules.

All modules are based on a standard template but individually focused on a specific aspect of wound management. Each module is developed by a small group consisting of members of the EWMA Education Committee and/or affiliated wound care key specialists. For an updated list of the currently available modules please visit the education sub page at www.ewma.org.

ABOUT THIS MODULE

The Seeking and Appraising Evidence module aims to:

- Provide information on accessing relevant evidence to answer questions related to a range of issues important to wound management
- Broaden participants' knowledge of relevant electronic databases and strategies to search these effectively
- Introduce a range of methods to critically review the evidence found to further develop skills in critical appraisal
- Distinguish between types of critical appraisal questions asked dependent on the study design



MODULE CONTENT

1. Elaborating Body

European Wound Management Association (EWMA)

2. Date of production of module

March 2009

3. Latest review date

August 2012

4. Module intended learning outcomes

This module provides opportunities for health professionals to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas:

A. Intellectual Skills – Knowledge and Understanding

Participants will have knowledge of:

1. The difference between a systematic review, a meta-analysis and an opinion based review
2. A range of paper based and electronic resources available relevant to wound management
2. The Literature Search process, including defining and limiting the scope of a search, relevant search terms, and MESH terminology
3. Levels of evidence and how these relate to different research designs used
4. Types of questions (established checklists) a reviewers needs to ask when establishing the quality of the evidence across a range of research designs from qualitative to quantitative
5. Various ways of presenting and analysing data across the spectrum of different research designs from qualitative to quantitative

B. Practical Skills – Skills and Attributes:

Participants will be able to:

1. Formulate answerable clinical questions relevant for wound management
2. Carry out a search of electronic databases to find the best evidence on a given topic
3. Critique a relevant research paper in terms of the quality of the research undertaken
3. Assess the results of a paper for generalisability to other areas
4. Record and present a critical appraisal of a paper

5. Teaching/learning methods & strategies

Acquisition of 4.A & 4.B (see above) is through a combination of lectures, small group workshops and learning in practice throughout the module. There is also the possibility of using e-learning in combination



with traditional learning methods. Throughout, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught and to broaden individual knowledge and understanding of the subject.

6. Assessment methods

Assessment methods will need to include opportunities to seek out literature relevant to a particular aspect of wound management and critically evaluate literature based on research that uses a range of methods. Understanding may be assessed in a variety of ways i.e. open discussion, formal written exercises, practice work-books, exercises in critical thinking, critique of specific papers. Throughout, the learner is expected to consolidate the development of practical skills / management skills in the clinical setting.

7. Unit content

The steps needed to practice evidence based care: There are five main steps to practising evidence based medicine:¹

- Identify knowledge gaps and formulate a clear clinical question (e.g., PICO method)
- Search the literature to identify relevant articles
- Critically appraise the articles for quality and the usefulness of results; always question whether the available evidence is valid, important and applicable to individual patients / client groups
- Implement clinically useful findings into practice
- Make recommendations for future research

Finding the evidence

1. Searching for guidelines e.g. NICE, National Library for Health, professional bodies (e.g. relevant specialist site such as the Royal College of Nursing).
2. Searching for systematic reviews and meta-analyses, e.g. Cochrane database, Joanna Briggs system.
3. If no systematic reviews or meta-analyses are available, look for primary research, e.g. Medline and Bandolier
4. If no research is available, consider general internet search, e.g. Google, or discuss with a local specialist (at this level beware poor quality information from the internet or individual personal bias from even the most respected specialist).

Student should become familiar with relevant databases, for example: The National Library for Health which provides access to a range of medical search sites, including PubMed, Medline, EMBASE, Bandolier, York Centre for Review and Dissemination and the Cochrane database. National guidelines and guidance sites include the National Institute of Clinical Excellence (NICE) and the Scottish Intercollegiate Guidelines Network (SIGN). Guidance on many topics is also available at the Clinical Knowledge Summaries (formerly PRODIGY) website.



Evaluate the evidence

- A review of the different ways in which evidence is graded (see example below)
- An overview of the different checklists that are available to assess the quality of studies
- The course should include an introduction to a range of research designs and methods, including meta analysis, randomised controlled trials, cohort studies, case-control methods, longitudinal and cross-sectional designs, case studies and case reports, surveys, qualitative interviews.
- Questions related to the ethics of the study and the role of funding sources should be debated

Grading of evidence

A range of methods exist to grade evidence to help and support clinical decisions; the students should be introduced to several of these. For example:

- Ia: systematic review or meta-analysis of randomised controlled trials
- Ib: at least one randomised controlled trial
- IIa: at least one well-designed controlled study without randomisation
- IIb: at least one well-designed quasi-experimental study, such as a cohort study
- III: well-designed non-experimental descriptive studies, such as comparative studies, correlation studies, case-control studies and case series
- IV: expert committee reports, opinions and/or clinical experience of respected authorities

Grading of recommendations

- A: based on hierarchy I evidence
- B: based on hierarchy II evidence or extrapolated from hierarchy I evidence
- C: based on hierarchy III evidence or extrapolated from hierarchy I or II evidence
- D: directly based on hierarchy IV evidence or extrapolated from hierarchy I, II or III evidence

A simpler system of A, B or C is recommended by the US Government Agency for Health Care Policy and Research (AHCPR):

- A: requires at least one randomised controlled trial as part of the body of evidence.
- B: requires availability of well-conducted clinical studies but no randomised controlled trials in the body of evidence.
- C: requires evidence from expert committee reports or opinions and/ or clinical experience of respected authorities. Indicates absence of directly applicable studies of good quality.

Guideline recommendation and evidence grading

Students should be introduced to new methods to grade evidence, e.g., Guideline Recommendation and Evidence Grading - GREG:

- Evidence grade:
 - I (High): the described effect is plausible, precisely quantified and not vulnerable to bias



- II (Intermediate): the described effect is plausible but is not quantified precisely or may be vulnerable to bias
- III (Low): concerns about plausibility or vulnerability to bias severely limit the value of the effect being described and quantified
- Recommendation grade:
 - A (Recommendation): there is robust evidence to recommend a pattern of care
 - B (Provisional recommendation): on balance of evidence, a pattern of care is recommended with caution
 - C (Consensus opinion): evidence being inadequate, a pattern of care is recommended by consensus

Other systems such as GRADE (Guyatt et al 2008) or the AGREE Tool (www.agreecollaboration.org) should also be considered as part of evaluating the evidence that underpins guidelines as well as the quality of the system used to develop relevant guidelines.

8. Unit specific learning resources

Books/Book chapters

Greenhalgh, T. (4th Ed.) (2010). *How to Read a Paper: the Basics of Evidence Based Medicine*. Blackwell Publishing Ltd. Oxford.

Journals

Papers

Glasziou P, Vandenbroucke J P and Chambers I (2004) Assessing quality of research. *BMJ*. 328 (7430) 39-41

Gottrup F, Apelqvist J, Price P (2010) Outcomes in controlled and comparative studies on non-healing wounds: recommendations to improve the quality of evidence in wound management. *Journal of Wound Care*, 19 (6): 237 – 268

Guyatt GH, Oxman AD, Vist GE, Kunz R, Falck-Ytter Y, Schünemann HJ (2008) GRADE: what is 'quality of evidence' and why is it important to clinicians? *BMJ*, 3May, Vol 336: 995-998

Jeffcoate WJ, Bus SA, Game FL, Hinchliffe RJ, Price PE, Schaper NC (on behalf of the International Working Group on the Diabetic Foot and the European Wound Management Association): Reporting standards of studies and papers on the prevention and management of foot ulcers in diabetes: required details and markers of good quality, *Lancet Diabetes Endocrinol* 2016; 4: 781–88

Price, P., Gottrup, F., Abel, M. Study recommendations for clinical investigations in leg ulcers and wound care. *J Wound Care* 2014; 23: 5, S1–S36.

Sackett DL, Rosenberg WMC, Muir Grey JA et al (1996). Evidence based medicine: what it is and what it isn't. *BMJ* 312: 71-72.



Useful Web Links

www.agreecollaboration.org/

http://www.ajan.com.au/vol26/26-1v2_ingham-broomfield.pdf

<http://www.casp-uk.net/>

<http://www.cebm.net/>

<http://cks.nice.org.uk/#?char=A>

<http://www.consort-statement.org/>

<http://www.equator-network.org/reporting-guidelines/>

<http://www.equator-network.org/reporting-guidelines/srqr/>

<http://global.oup.com/uk/orc/nursing/holland/01student/chapters/ch07/frameworks/>

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291982/HTN-strength-evidence-march2014.pdf

<http://www.bandolier.org.uk/>

<https://www.ncbi.nlm.nih.gov/pubmed>

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2947361/table/t2-ijnes1961/>

<https://www.york.ac.uk/crd/>