

## **HARM UNIT**

### **Internal Medicine, Chiropractic and Other**

#### **Goal:**

At the completion of this unit, participants will be able to determine whether a clinical article, which purports to prove (or dismiss) a suspected cause of a disease has drawn conclusions about causation that are valid (true) and, if so, to determine the applicability of the result's to one's own clinical practice.

#### **Instructional Objectives:**

At the completion of this unit you will be able to:

1. Assess the validity of an article about a harm or etiology.
2. Explain the magnitude of the effect.
3. Explain the precision of the effect, using p values or Confidence Intervals.
4. Determine the applicability of an article on harm or etiology to a particular situation.
5. Define and give examples of ecological, case-control, and cohort studies.

#### **Reference (Further Reading):**

In: Users' Guides to the Medical Literature: A Manual for Evidence Based Clinical Practice, 3<sup>rd</sup> Edition, Eds: Guyatt GH, Rennie D, Meade M, Cook DJ. New York, NY: The McGraw-Hill 2015.

1. Chapter 14. Harm Observational Studies
2. Chapter 15 Advanced Topics in Harm
3. Chapter 15.1 Correlation and Regression

#### **Problem Based Educational Strategy:**

1. Read the Clinical Scenario
2. Compose a well-built clinical (foreground) question about the clinical problem.
3. Complete a literature search using the headings from your well-built clinical question, and bring the results to the session.
4. Read the Users' Guides to the Medical Literature reference articles.
5. Complete the attached Users' Guides to the Medical Literature Worksheet.
6. Describe how you would address the question raised in the Clinical Scenario taking into account your review of the article.

**Clinical Scenario:**

Mary is a 55-year-old otherwise healthy woman with a 12 year history of remitting and relapsing uncomplicated neck pain for which she has sought chiropractic care (mainly involving cervical spine manipulation) when symptomatic. This approach has typically resolved her complaint, when present, in 2-3 weeks. However, she has recently come across an article on the Internet that suggests there may be a risk of stroke associated with chiropractic care<sup>1</sup> and she has come to your office asking if she should avoid this form of care in the future. You advise Mary that you will look into this issue further and get back to her at her next visit.

Using PubMed and Clinical Queries you use the search terms “chiropractic care” AND “stroke” and restrict your search to “etiology”. You are aware that case studies cannot be used to establish risk due to the lack of a control group, and you identify the following case-control study which you decide to explore further:

Risk of vertebrobasilar stroke and chiropractic care: results of a population-based case-control and case-crossover study. *Spine (Phila Pa 1976)*. 2008; 33: S176-83. Cassidy JD, et al.

The abstract indicates it is relevant to your patient and you decide to critically appraise this paper using the “Users’ Guides” for a Harm paper.

After critically appraising this paper, what will you advise Mary?

**Enclosed Materials:**

Risk of vertebrobasilar stroke and chiropractic care: results of a population-based case-control and case-crossover study. *Spine (Phila Pa 1976)*. 2008; 33 S176-83 Cassidy JD, et al.