

IS THERE A ROLE FOR MEDICAL LIBRARIANS IN THE „BRAVE NEW WORLD” OF SYSTEMATIC REVIEWS DEVELOPMENT?

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Outline

Aim, introduction

- Cochrane Renal Group review development
- Review articles : from narrative to systematic
- Systematic reviews and librarians

Materials and Methods

- Human resources & fund raising
- Cochrane Methodology
 - Cochrane Renal Group

Results

- Protocol development
 - Search strategy
 - Editorial process
 - Approval and publication in the Cochrane Library

Conclusions

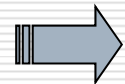
Aim

Cochrane review development

Title registration: „**Diuretics for nephrotic syndrome**“

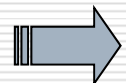
- Cochrane Renal Group methodology and assistance

Clinical definition



Nephrotic syndrome

- Kidney disorder, causing abnormal excretion of protein in urine
- Swelling (edema) is the most common symptom



Diuretics

- Drugs increasing discharge of urine, used in treatment of high blood pressure, **edema** etc.
- Used as supportive medications in NS

Introduction (1)

Systematic reviews : definitions

- Papers that summarize other papers
- Overviews of primary studies using explicit and reproducible methods
- **Scientific investigations** with pre-determined methodology, using original studies as their "subjects."
- Synthesized findings from important clinical trials
 - **Meta-analysis** is a possible component to combine data
- Critical links in the great chain of evidence.

HLWIKI 2010. Available from: http://hlwiki.slais.ubc.ca/index.php/Systematic_review_searching
Mulrow CD. Ann Intern Med 1997.



Introduction (2)

Stages of systematic review production

Planning the review

- Identification of the need for review
 - Specification of the research question
- Development of the review protocol
 - Search strategy design

Conducting the review

- Identification of (published) research
 - Searching for studies
- Selection of primary studies
 - Explicit inclusion & exclusion criteria
- Study quality assessment
 - Quality criteria
- Data extraction & monitoring
- Data synthesis.

Reporting the review

- Documentation to show rigour and completeness

Introduction (3)

Systematic reviews and librarians

- Searching is a critical part of conducting systematic reviews
- Comprehensive searching for all relevant studies & documentation of explicit strategies are essential steps



Librarian is a key player in a systematic review team.

- Multiple roles for librarians
 - literature search consultant/assistant
 - **expert searcher**
 - search process reporter
 - reference manager
 - document supplier
 - report writer.

Smith JT. Libr Trends 1996; Glasziou P. Cambridge Univ Press 2001; Beverley CA. Health Info Libr J 2003; Harris M. J Med Libr Assoc 2005; McGowan J. J Med Libr Assoc 2005; Hannigan GG. Evid Based Libr Info Practice 2006; McKibbin A. Libr Trends 2006; Higgins JPT. Cochrane Handbook 2009; HLWIKI 2010.



Materials and Methods (1)

Team building

□ **Medical doctors**

- P. Geier/pediatrician, contact reviewer
- J. Strojil/pharmacologist, co-reviewer
- K. Kutrova/pediatrician, co-reviewer
- J. Feber/pediatrician, co-reviewer, arbitration, observation, conclusions

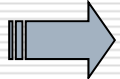
□ **Information specialist**

- J. Potomkova/librarian, co-reviewer, searching for studies

Materials and Methods (2)

Fund-raising

To complete a systematic review, you will need

 **600 hours**

Research project 2009-2010

- Librarian involvement in grant proposal writing
- Grant Agency of the Czech Ministry of Healthcare (IGA)
 - „Systematic review focusing on diuretics and nephrotic syndrome” (code NS9936).

<http://www.isvav.cz/prepareProjectForm.do>

Materials and Methods (3)

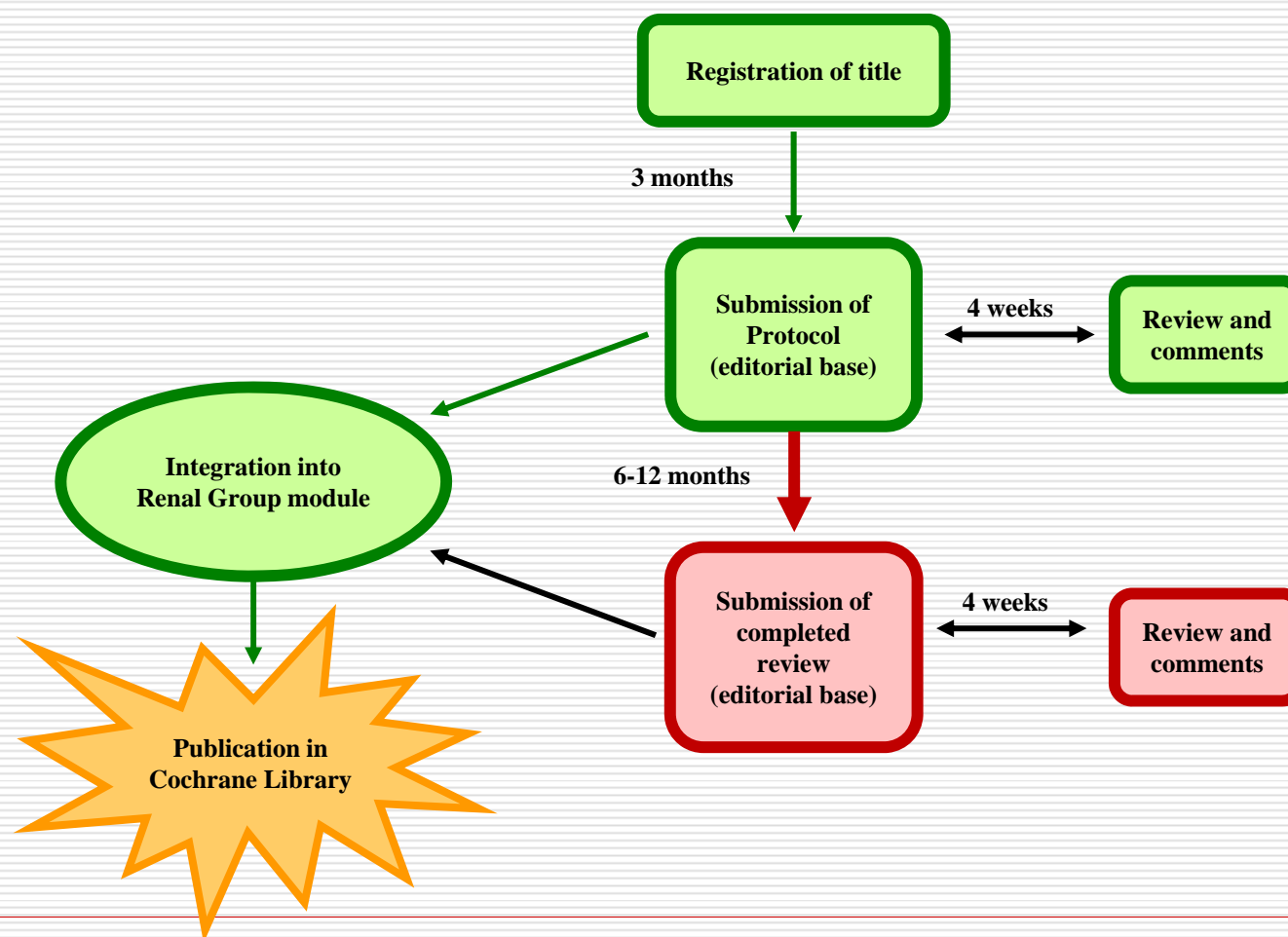
Cochrane methodology

- **Cochrane Handbook for Systematic Reviews and Interventions**
 - Chapter 6: Searching for studies
- **RevMan** – program for preparing Cochrane reviews
- **Cochrane Style Guide**
- **Locating Studies for Your Systematic Review** – a brief guide to develop search strategies
- CRGs employ **Trials Search Coordinators**
- The **Cochrane Renal Group** booklet – simple guidelines

<http://www.cochrane.org>, Section „Authors. Researchers“
<http://www.cochrane-renal.org>

Results (1)

Cochrane Renal Group review development

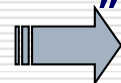


Results (2)

Title & protocol development


Registration of title

- „Diuretics for nephrotic syndrome“

 **3 months** working on Protocol

Submission of Protocol to editorial base

- Librarian's responsibility
 - **Sources and search methods to find primary studies**
 - **3 bibliographic databases** recommended: **CENTRAL, MEDLINE, EMBASE**, search strategy designed for each of them.
 - Journals + other non-bibliographical sources
 - Unpublished and ongoing studies.
 - Biases: publication, duplication, location, language

 **1month** (expected); **3 months** (in reality)

Editorial process

- 4 referees + Coordinating Editor
- Corrections, changes, final approval
- Publication in the Cochrane Library

Results (3)

Editorial comments & corrections

Change of title

- „Diuretics for nephrotic syndrome“

to

- „Diuretics for treating edema in nephrotic syndrome“

Consequences for librarian

- Include recommended terms not contained in the search strategy
- Refine search strategy.
 - Cooperate with Trials Search Coordinator.
- Guidelines say **„.....do not start searching for studies until your protocol is approved.....“**

Conclusions (1)

Rules for systematic review expert searchers

- Understand systematic review methodology
- Plan search strategies, be ready to modify them
- Undertake searches using a variety of tools and resources
- Maximize recall
- Manage bias
- Understand how to get cost support
- Be able to move beyond information retrieval
 - document search process
 - work towards reproducibility and transparency.

Conclusions (2)

Challenge

- Participation in systematic reviews development expands options for librarians.
- One great advantage for the librarians who become involved in systematic reviews is that they learn a powerful methodology for answering research questions.

Acknowledgements

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