Retrospective observational study of the unique yield from CINAHL for clinical questions posed in NICE guidelines

- Zosia Beckles, National Collaborating Centre for Women's and Children's Health, United Kingdom
- Sarah Glover, National Institute for Health and Clinical Excellence, United Kingdom
- Sarah Stockton, National Collaborating Centre for Mental Health, United Kingdom; Centre for Evidence Based Mental Health, United Kingdom
Introduction

About NICE clinical guidelines

- Provide recommendations for the treatment and care of people
- Used to develop standards to assess the clinical practice of individual health professionals
- Used in the education and training of health professionals
- Helps patients make informed decisions
- Improves communication between patient and health professional
Introduction

Developing NICE clinical guidelines

- National Clinical Guidelines Centre for Acute and Chronic Conditions
- National Collaborating Centre for Cancer
- National Collaborating Centre for Mental Health
- National Collaborating Centre for Women's and Children's Health
- Short Clinical Guidelines team (SCG team)
Introduction

NICE guideline development manual

• Aimed primarily at staff at the National Collaborating Centres (NCCs) that are commissioned by NICE to develop NICE clinical guidelines

• Explains how NICE develops clinical guidelines

• Provides advice on the technical aspects of clinical guideline development and the methods used
Introduction

Core databases searched

- Cochrane Database of Systematic Reviews (CDSR)
- Database of Abstracts of Reviews of Effects (DARE)
- Cochrane Central Register of Controlled Trials (CENTRAL)
- Health Technology Assessment (HTA) database
- MEDLINE/MEDLINE In-Process
- EMBASE
- CINAHL (Cumulative Index to Nursing and Allied Health Literature)
- PsycINFO [NCCMH ONLY]
Introduction

CINAHL: the transition to EBSCOhost

Problems posed to the Centres:

- Inability to search CINAHL via platforms widely used by the Centres
- Time taken to translate search for use in CINAHL
- Perceived low yield of unique references indexed to CINAHL
Introduction

Aim

• Quantify the unique useful yield from CINAHL across a sample range of NICE clinical guidelines

Secondary aim

• Identify the types of clinical questions associated with a higher useful yield from CINAHL
Methods - Sample

The unique useful yield from CINAHL was defined as the proportion of references included in a guideline’s evidence tables that were retrieved from CINAHL only.

- Address a clinical question in a guideline
- Identified by searching CINAHL
- Not identified by searching the other core databases (MEDLINE, EMBASE, Cochrane Library, and/or PsycInfo) for that question.
Methods - Sample

- Only references included in evidence tables were used as these are the references which directly influence recommendations.

- Initially a sample of 20 guidelines had been planned but we encountered difficulties finding sufficient guidelines suitable for inclusion. Our final sample included data from 15 clinical guidelines.
Methods - Sample

A pilot study was carried out using data extracted from five NICE guidelines

- National Clinical Guidelines Centre (NCGC) x1
- National Collaborating Centre for Mental Health (NCC-MH) x1
- National Collaborating Centre for Women’s Children’s Health (NCC-WCH) x1
- Short Clinical Guidelines Centre (SCG team) x2
Methods - Sample

- Bipolar disorder
- Chronic kidney disease
- Dementia
- Depression in children & young people
- Diabetes in pregnancy
- Drug misuse – psychosocial
- Intrapartum care
- Irritable bowel syndrome

- Metastatic spinal cord compression
- Perioperative hypothermia
- Prophylaxis endocarditis
- Prostate cancer
- Rheumatoid arthritis
- RTIs
- Surgical site infection
1. Guidelines were checked to see which platform had been used to access CINAHL

Prior to 2009 most National Collaborating Centres were using the same platform (Ovid) to access CINAHL. After this date a variety of platforms were used (including NHS Evidence Search 2.0, Dialog and EBSCO).

In order to ensure consistency only guidelines searching CINAHL via Ovid were included.
Methods - Data Extraction

2. The clinical review questions addressed in each guideline were recorded.

Economic review questions were excluded as CINAHL is not routinely searched for these questions.

Clinical questions were classified in two ways:

- drug- or non-drug-related
- nursing/allied health or non-nursing/allied health-related
Methods - Data Extraction

3. The references found in the evidence table(s) for each clinical question were extracted and tagged according to their source:

- Indexed in any of the core databases (including CINAHL) at the time of the original search
- Indexed in CINAHL only at the time of the original search
- Found elsewhere (i.e. not indexed in any of the core databases at the time of the original search)
Results

There were 332 clinical questions covered by 291 searches. These contained 3476 included references (some studies may appear more than once).

- 18 (0.52%) of these were unique to CINAHL
- Mean unique CINAHL refs per guideline is 1.2 (range 0-6, SD 2.1)
Results

The unique CINAHL yield for drug-related questions was also calculated:

<table>
<thead>
<tr>
<th>Type</th>
<th>Yield</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug-related</td>
<td>0.57%</td>
<td>(0.35-0.94)</td>
</tr>
<tr>
<td>Non-drug related</td>
<td>0.35%</td>
<td>(0.01-1.02)</td>
</tr>
</tbody>
</table>

The nursing/allied health coding is currently being independently verified by a second data extractor.
Discussion

• As expected an extremely small proportion of included references were unique to CINAHL.

• The proportion is so small (<1%) that removing this database would not adversely affect search sensitivity - over 99% of references would still be retrieved.

• Insufficient references unique to CINAHL were retrieved to draw conclusions about the relationship between useful CINAHL yield and question type.
Discussion

Study limitations:

- Underpowered to detect relationship between unique CINAHL yield and question type

- Assumed if a study was indexed at the time of the original search it was picked up by that search – actual contribution of each search strategy not checked

- Some discrepancies between included studies cited in evidence tables and reference lists
Conclusions

• The extremely low unique useful yield from CINAHL indicates that this database need not be searched routinely

• This is in line with the results of other studies (For example Aker 1994, Kelly 2008, Royle and Waugh 2003)

- Downgrading CINAHL to non-core/subject-specific status is strongly suggested

- Insufficient evidence to recommend for which question types CINAHL should be searched – this will need to be decided on a case-by-case basis
Areas for further study

1. Expand sample size to explore relationship between useful CINAHL yield and question type

2. Investigate relationship between useful yield from other subject-specific databases and question type

3. Expand question classification to capture more detail; existing taxonomies of clinical questions could be used (e.g. Kobayashi and Shyu 2006)

4. Expand scope of study to investigate whether guideline recommendations would have changed if CINAHL had not been searched
References


Thank You

Any Questions?

Contact details:
Zbeckles@ncc-wch.org.uk
Sarah.glover@nice.org.uk
Sarah.stockton@psych.ox.ac.uk