Evidence-Based Medicine in the curriculum

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EAHIL meeting 4th June 2009

Outline

1. Background EBM
2. Competencies required
3. Student assessment of EBM competencies
4. A case study
5. Future developments & requirements

(1) Background EBM

Principals of Evidence-Based Medicine

"Conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients"

(Sackett et al 1997)

Progress in Evidence-Based Medicine

SUMMARY OF THE ORIGINAL ARTICLE

Evidence-Based Medicine: A New Approach to Teaching the Practice of Medicine

Evidence-Based Medicine Working Group

JAMA. 1992;268(17):2420-2425.

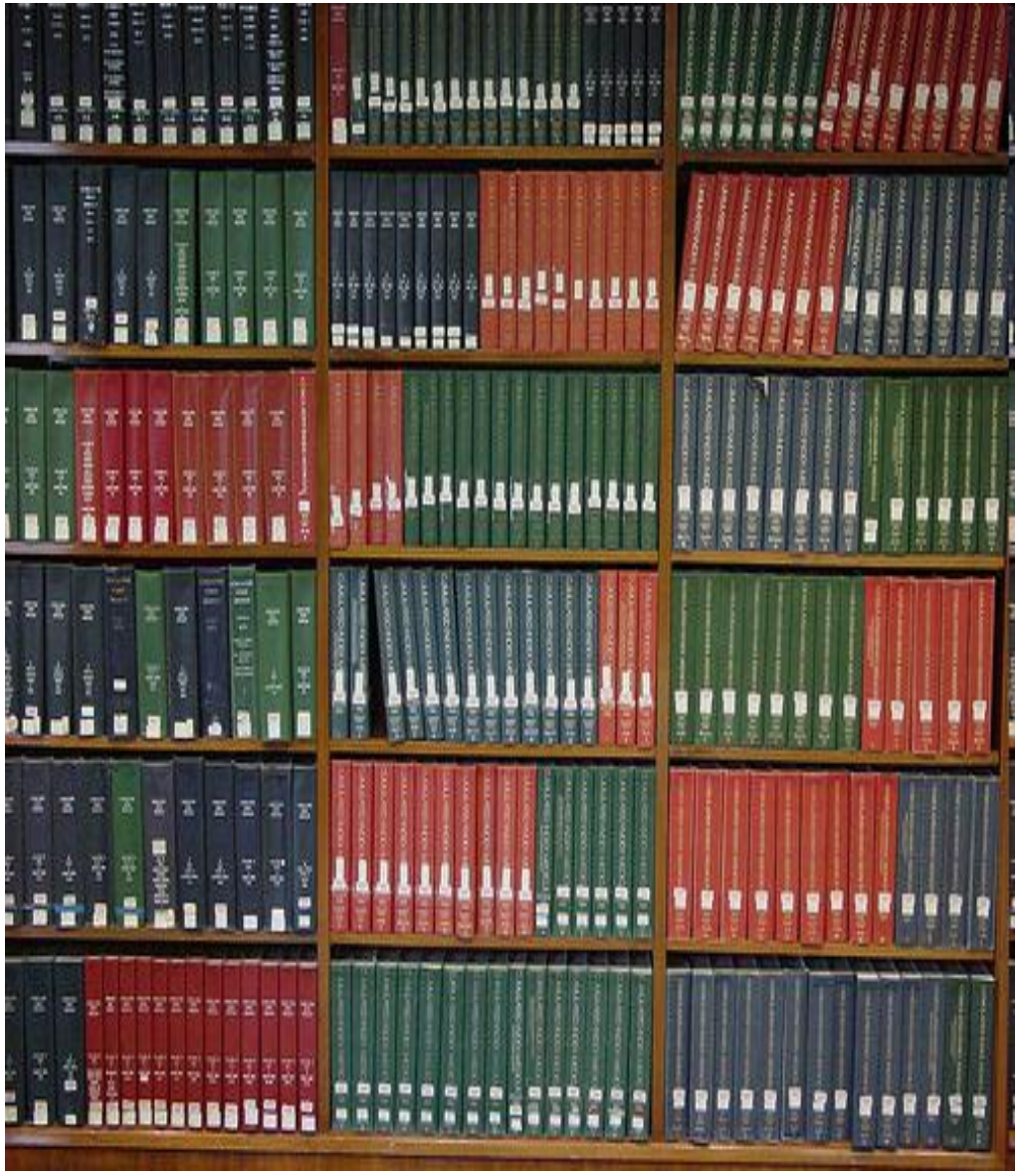
A new paradigm for medical practice is emerging. Evidence-based medicine de-emphasizes intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical decision making and stresses the examination of evidence from clinical research. Evidence-based medicine requires new skills of the physician, including efficient literature searching and the application of formal rules of evidence evaluating the clinical literature.

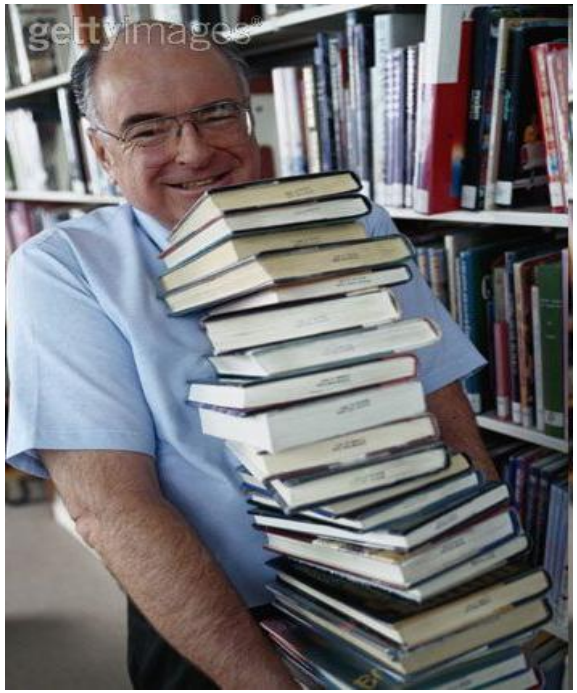
See www.jama.com for full text of the original *JAMA* article.

Commentary by Victor M. Montori, MD, MSc, and Gordon H. Guyatt, MD, MSc

cluding one based on the Users' Guides series[4]); related series in medical and surgical specialties; and enthusiastic uptake by junior faculty (mostly in general medicine), students,

The past





(2) Competencies required

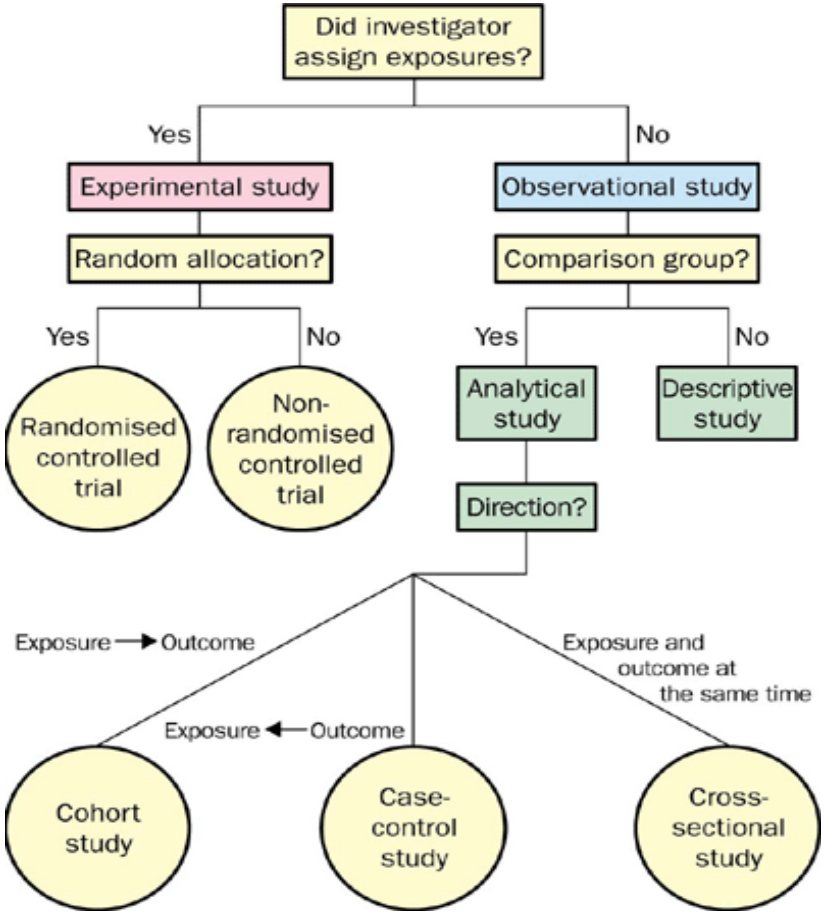
Steps in EBM?

- Asking- convert clinical puzzle into an answerable question
- Accessing- search to find evidence to the question
- Appraisal- critical evaluating evidence in terms of validity, quantitative value and clinical relevance
- Applying- decide what clinical action is best for your patient

Mapping evidence to study design

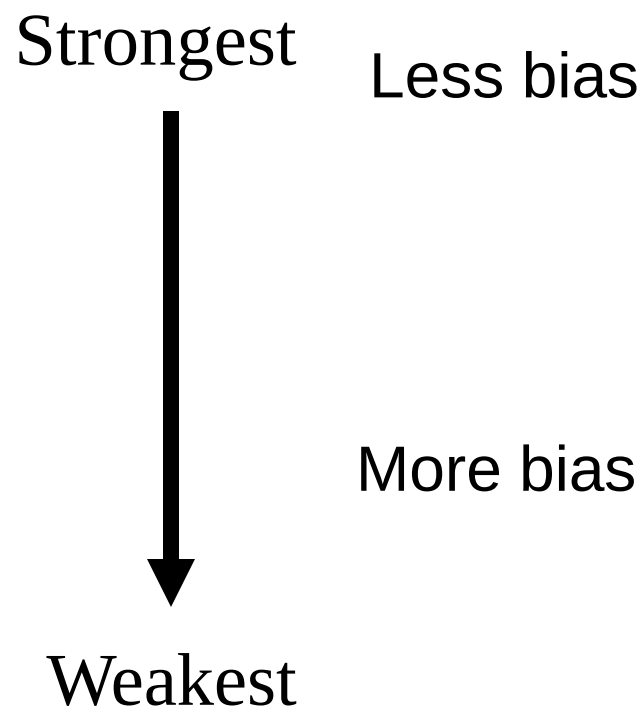
- What is the most appropriate type of study to answer:
  - Diagnostic question (cross sectional study)
  - Prognostic question (cohort study)
  - Therapeutic question (randomised controlled trial)

Assessment of study design



Hierarchy of evidence

- Experimental study (RCT)
- Cohort study
- Case-control study
- Cross-sectional study
- Ecological study
- Case series



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BMJ 2008;336:924-926 (26 April), doi:10.1136/bmj.39489.470347.AD

Analysis

Rating quality of evidence and strength of recommendations

GRADE: an emerging consensus on rating quality of evidence and strength of recommendations

Gordon H Guyatt, *professor*[1], **Andrew D Oxman**, *researcher*[2], **Gunn E Vist**, *researcher*[2], **Regina Kunz**, *associate professor*[3], **Yngve Falck-Ytter**, *assistant professor*[4], **Pablo Alonso-Coello**, *researcher*[5], **Holger J Schünemann**, *professor*[6], for the GRADE Working Group

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Correspondence to: G H Guyatt, CLARITY Research Group, Department of Clinical Epidemiology and Biostatistics, Room 2C12, 1200 Main Street, West Hamilton, ON, Canada L8N 3Z5 guyatt@mcmaster.ca

Guidelines are inconsistent in how they rate the quality of evidence and the strength of recommendations. This article explores the advantages of the GRADE system, which is increasingly being adopted by organisations worldwide

Summary points

Failure to consider the quality of evidence can lead to misguided recommendations; hormone replacement therapy for post-menopausal women provides an instructive example

High quality evidence that an intervention's desirable effects are clearly greater than its undesirable effects, or are clearly not, warrants a strong recommendation

What's new
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- The day that human nature changed
- Being critical
- Eating Es
- BMJ in the news
- Who are the Philistines now?
- Richard Lehman's journal blog
- Swine flu blogs

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- News: Inadequate data mean UK nations are failing to learn from each other (26 May 2009)
- Editorials: Prevalence of variant CJD in the UK (21 May 2009)
- News: UK urges more flexibility in criteria for flu pandemic alerts (21 May 2009)
- Endgames: An elderly woman with weight loss and diarrhoea (20 May 2009)

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Steps in EBM?

- Asking- convert clinical puzzle into an answerable question
- Accessing- search to find evidence to the question
- Appraisal- critical evaluating evidence in terms of validity, quantitative value and clinical relevance
- Applying- decide what clinical action is best for your patient

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		Description	Numbers	
Question	**P** atients			
	I ntervention			
	C omparator			
	O utcomes		CER (%)	IER (%)
		1		
		2		
Appraisal	**R**andomized			
	Ascertainment			
	Measures			
Outcomes	RDifference	CER – EER		
	RRR	RD/CER		
	NNT	1/RD		

Clinical Bottom-line:

Further Actions:

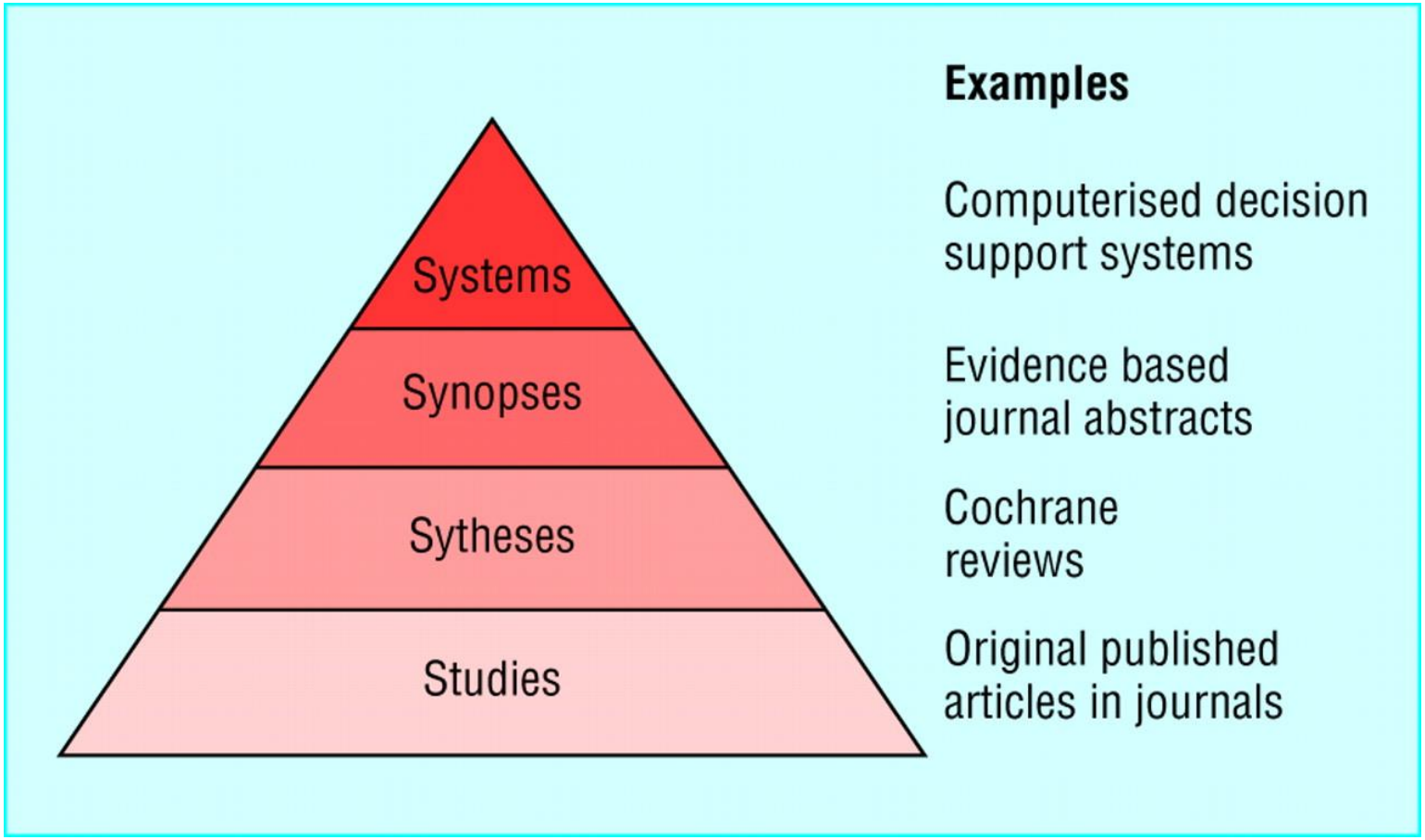
Steps in EBM?

- Asking- convert clinical puzzle into an answerable question
- Accessing- search to find evidence to the question
- Appraisal- critical evaluating evidence in terms of validity, quantitative value and clinical relevance
- Applying- decide what clinical action is best for your patient

Primary and secondary literature

- Primary sources are original research publications
- Secondary sources are publications that analyze, synthesize and summarize the evidence
- Can you think of any examples?

Implementation of research evidence



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- Newest 2009 H1N1 Flu Outbreak Sequences
- Citations recently added to PubMed
- MedlinePlus (consumer health information)
- Enviro-Health Links

H1N1 Flu Info
U.S. Info ▸
Things You Can Do ▸
Plan & Prepare ▸
International Info ▸
HHS.gov CDC.gov

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How?

If you publish in one of these journals, they will take care of the whole process.

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PubMed is a service of the U.S. National Library of Medicine that includes over 18 million citations from MEDLINE and other life science journals for biomedical articles back to 1948. PubMed includes links to full text articles and other related resources.

The Cochrane Library

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Highlights of new and updated Reviews (PDF)

What's New in Issue 4 - Important Changes to *The Cochrane Library* (PDF)

Cochrane Reviews of Diagnostic Test Accuracy

LHRH agonists for adjuvant therapy of early breast cancer in premenopausal women

St John's wort for major depression

Nebulized hypertonic saline solution for acute bronchiolitis in infants

Mouthrinses for the treatment of halitosis

Probiotics for treating eczema

Pelvic floor muscle training for prevention and treatment of urinary and faecal incontinence in antenatal and postnatal women

Honey as a topical treatment for wounds

Dressings for superficial and partial thickness burns

Acupuncture and assisted conception

Low molecular weight heparin for prevention of venous thromboembolism in patients with lower-leg immobilization

Blood pressure lowering efficacy of angiotensin receptor blockers for primary hypertension

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8 October: Changes with Issue 4, 2008... More

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As a clinician you are under constant pressure to have high-quality, up-to-date evidence at your fingertips. More

For Researchers

The internet has given us instant access to a huge amount of research, but the large volume of available information is a problem in itself. More

For Patients

Healthcare consumers and patients need high-quality evidence about the effectiveness of treatments. More

For Policy Makers

As a policy maker or healthcare manager you are a generalist in search of high-quality information across a broad range of issues. More

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05 January 2009
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Latest updated reviews

- Panic disorder (updated)
- Wrinkles (updated)
- Raynaud's (primary) (updated)
- COPD (updated)
- Fungal toenail infections (updated)
- Postpartum haemorrhage: prevention (updated)
- Deliberate self-harm and attempted suicide (updated)
- Chronic pancreatitis (updated)
- Acute cholecystitis (updated)

Summary of all updates

Editorial

There is consensus that glycaemic control helps to prevent microvascular complications of diabetes, but its role in prevention of cardiovascular complications has been less clear. Several recent studies shed light on this issue, and our Editorial looks at how this research has prompted reconsideration of how, when, and why to use antihyperglycaemic drugs.

Read the Editorial

Our methods

The systematic reviews in *Clinical*

Consultancy reviews

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Evidence-based Databases in Medicine

Charles Young, Editor of *Clinical Evidence* discusses evidence-based information in medicine

Deep vein thrombosis (DVT)

Top
General Information (including ICD-9/-10 Codes)
Causes and Risk Factors
Complications and Associated Conditions
History
Physical
Diagnosis
Prognosis
Treatment
Prevention and Screening
References including Reviews and Guidelines
Patient Information
Acknowledgements
Send Comment to Editor

Updated 2008 Sep 09 01:11 PM: case presentation of anomaly of inferior vena cava resulting in clot of lumbar vein (N Engl J Med 2008 Sep 4)
women with 0-1 risk factors might be at low risk for recurrence after 6 months of anticoagulation (CMAJ 2008 Aug 26)
ACOG Practice Bulletin 84 on prevention of deep vein thrombosis and pulmonary embolism (National Guideline Clearinghouse 2008 Aug 25)

Related Summaries:

- Pulmonary embolism (PE)
- D-dimer testing for venous thromboembolism
- HRT and venous thromboembolism
- Anticoagulation for general information
- Low-molecular-weight heparin (LMWH) for treatment of venous thromboembolism
- Perioperative DVT Prophylaxis
- DVT prophylaxis in medical inpatients

General Information (including ICD-9/-10 Codes)
Causes and Risk Factors
Complications and Associated Conditions
History
Physical
Diagnosis
Prognosis
Treatment
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References including Reviews and Guidelines
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- Applying- decide what clinical action is best for your patient

Evidence-Based Medicine: Online Library Access

- Evidence Based Medicine; Introduction & Summary
- CCHE Users' Guides to Evidence-Based Practice
- The Cochrane Library Summary
- Finding The Evidence: A Cochrane Exercise
- Finding The Evidence: A PubMed Exercise
- Finding The Evidence: A PubMed Tutorial
  - PubMed: Simple search
  - PubMed: Searching for an author
  - PubMed: Author and subject search
  - PubMed: Using MeSH terms
- Helping patients to make informed decisions about treatment
- Putting it into Practice: Practical Application of EBM in General Practice
- Library Session : Finding the evidence in PubMed and Cochrane
- Accessing "Clinical Evidence"

Evidence-Based Medicine: Powerpoint Presentations

- Introduction to Evidence-Based Medicine
- Clarifying the Clinical Question
- Diagnostic Test
- Therapy
- Prognosis
- Clinical Prediction Rules
- Fagan Nomogram

Evidence-Based Medicine: Camtasia Modules

- Introduction
- Clarifying The Clinical Question
- Diagnosis: Quantitative Aspects & Clinical Prediction Rules
- Therapy
- Prognosis

Evidence-Based Medicine will be examined in MCQ & OSCE

Steps in EBM?

- Asking- convert clinical puzzle into an answerable question
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(3) Assessment of EBM competencies

- Linkage to real clinical problems
- Viewed and assessed in the same way as clinical competencies
  - MCQ
  - OSCE
  - Portfolio

Edit View Insert Format Tools Table Window Help

Type a question for

1. Which of the following studies is considered to be the most robust when searching for evidence concerning a patient's prognosis for a clinical condition.

a) Ecological Study
b) Case control Study
c) Case Series
d) Cross Sectional Study
e) Cohort Study

2. Mary Ryan attends your surgery with her 4 year old daughter who has a skin rash on her wrists, behind her knees and on her face. The rash is very itchy, and dry. Mrs Ryan tells you that the child is very prone to colds as she always has a cough and a runny nose. The most likely diagnosis is:

a) Impetigo
b) Atopic eczema
c) Asthma
d) Allergic dermatitis
e) Chicken pox

3. Mr Smith, a 60 year old overweight non insulin dependent diabetic presents for annual review. His HbA1c is 8.2% and his blood pressure is 145/95. He rarely monitors his blood sugar. He occasionally indulges in alcohol and take away food which causes his blood sugars to rise. The most important message for Mr Smith is

a) avoid alcohol
b) increase metformin on the nights he plans to over indulge
c) good blood pressure control is very important
d) increase exercise
e) measure blood sugar more often

4. A 24-year-old man visits your clinic saying he hurt his back the previous day and he has some pain in his left leg. Examination shows slight restriction of straight leg raising of his left leg. Would you:

a) Prescribe analgesia
b) Refer him to an orthopaedic surgeon

You are aware of a risk score (FRAMO) for fracture in elderly women based on their age (>80years), weight (<60kg), strength (able to rise 5 times independently) and past history of fragility fracture.

The Table summarizes her risk in relation to scoring 2 or more from the FRAMO questions.

(1) Formulate a clinical question for this clinical scenario. (4 marks)

Population	Intervention	Comparison	Outcome
Elderly women at risk of fragility/osteoporosis fracture (1 mark)	FRAMO risk 2-4 (1 mark)	FRAMO risk 0-1 (1 mark)	Hip fracture (1 mark)

(2) You are aware that in similar groups of patients the risk of hip fracture is about 2.5%; risk of fragility fracture 10% and all cause mortality is 5.5% over the following two years. Using the nomogram and the information in the Table estimate the risk of (1) hip fracture; (2) other fragility fracture and (3) all cause mortality for Mrs Moore over the next two years based on her FRAMO risk score (3 marks)

Calculates appropriate post test probabilities for each outcome

Hip fracture 5.6% → → → → → → → → (1 mark)
Other fragility fracture 20.4% → → → → → → → (1 mark)
All cause mortality 12.7% → → → → → → → (1 mark)

(3) What type of study design is FRAMO based on? (1 mark)

Cohort study → → → → → → → → → (1 mark)

(4) Name an alternative definition of the FRAMO risk function? (1 mark)

Clinical prediction rule → → → → → → → (1 mark)

(5) Do you think an x ray of her hips is indicated, explain your reasoning? (1 mark)

Prodigy

4 GPortfolio

Guidelines for GPortfolio assignment submission

GPortfolio Background Info

Evidence-Based Medicine (EBM)

Glossary of EBM Terms

Model Answers

Diagnosis
Therapy
Prognosis
Ethical Issues in Primary Care
Medication Review
Referral Letter
Background to Reflective Account

Assignment Templates

GP EBM 1 Diagnosis
GP EBM 2 Therapy
GP EBM 3 Prognosis
Ethical Dilemma
Medication Review
Clinical Encounter Sheet
Referral Letter
Record of Achievement
GP Tutor Student Assessment Form
ATP GP Student Assessment Form
Student Evaluation of GP Tutor, ATP & Department
Reflective Account

Assignment Uploads

Two other documents, both assessments completed and signed off by your GP Tutor and ATP Tutor, are to be delivered by hand to the Department of General Practice.

GP EBM 1 Diagnosis

(4) A case study

Bell's palsy

- Paralysis of VII (facial) cranial nerve
- Cause not known
- Inflammation of nerve
- Herpes Simplex or Varicella Zoster virus may play a role

Enigmatic smile or incomplete recovery from Bell's Palsy?

Treatment options

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- Corticosteroid treatment-
  - Salinas, R et al. *Corticosteroids for Bell's Palsy. Three RCTs, 117 patients. Inconclusive*

- Antiviral treatment-
  - Sipe et al *Aciclovir for Bell's Palsy.* August 2001 *Two trials, 200 patients. Data sparsely reported, findings contradictory*

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		Description	Numbers	
Question	**P** atients	Patients with Bell's Palsy		
	I ntervention	Corticosteroids		
	C omparator	Anti-viral therapy		
	O utcomes		CER (%)	IER (%)
		1 Recovery		
		2		
Appraisal	**R**andomized			
	Ascertainment			
	Measures			
Outcomes	RDifference	CER – EER		
	RRR	RD/CER		
	NNT	1/RD		

Clinical Bottom-line:

Further Actions:

Randomised Controlled Trial (RCT) Factorial Design

	Prednisolone 50 mg/day 10 days	Placebo
Aciclovir 2g/day 10 days	Both	Aciclovir only
Placebo	Prednisolone only	Neither

Results

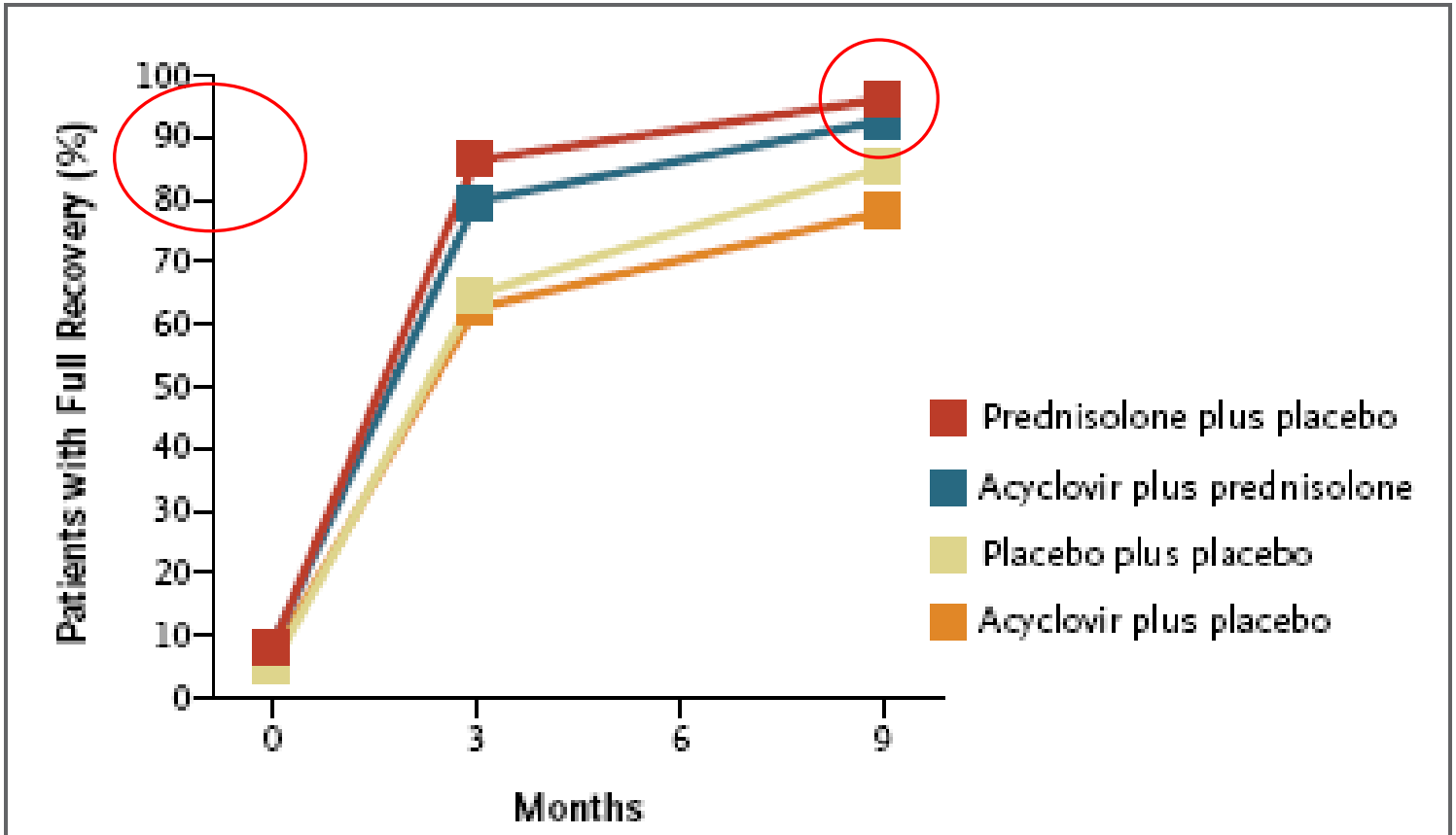

Figure 2. Patients Who Had a Full Recovery at 3 Months and 9 Months, According to Study Group.

ORIGINAL ARTICLE

Early Treatment with Prednisolone or Acyclovir in Bell's Palsy

Frank M. Sullivan, Ph.D., Iain R.C. Swan, M.D., Peter T. Donnan, Ph.D., Jillian M. Morrison, Ph.D., Blair H. Smith, M.D., Brian McKinstry, M.D., Richard J. Davenport, D.M., Luke D. Vale, Ph.D., Janet E. Clarkson, Ph.D., Victoria Hammersley, B.Sc., Sima Hayavi, Ph.D., Anne McAteer, M.Sc., Ken Stewart, M.D., and Fergus Daly, Ph.D.

ABSTRACT

BACKGROUND

Corticosteroids and antiviral agents are widely used to treat the early stages of idiopathic facial paralysis (i.e., Bell's palsy), but their effectiveness is uncertain.

METHODS

We conducted a double-blind, placebo-controlled, randomized, factorial trial involving patients with Bell's palsy who were recruited within 72 hours after the onset of symptoms. Patients were randomly assigned to receive 10 days of treatment with prednisolone, acyclovir, both agents, or placebo. The primary outcome was recovery of facial function, as rated on the House–Brackmann scale. Secondary outcomes included quality of life, appearance, and pain.

RESULTS

Final outcomes were assessed for 496 of 551 patients who underwent randomization. At 3 months, the proportions of patients who had recovered facial function were 83.0% in the prednisolone group as compared with 63.6% among patients who did not receive prednisolone (P<0.001) and 71.2% in the acyclovir group as compared with 75.7% among patients who did not receive acyclovir (adjusted P=0.50). After 9 months, these proportions were 94.4% for prednisolone and 81.6% for no prednisolone (P<0.001) and 85.4% for acyclovir and 90.8% for no acyclovir (adjusted P=0.10). For patients treated with both drugs, the proportions were 79.7% at 3 months (P<0.001) and 92.7% at 9 months (P<0.001). There were no clinically significant differences between the treatment groups in secondary outcomes. There were no serious adverse events in any group.

CONCLUSIONS

In patients with Bell's palsy, early treatment with prednisolone significantly improves

From the Scottish School of Primary Care (F.M.S.), Community Health Sciences (P.T.D., F.D.), and Dental Health Services Research Unit (J.E.C.), University of Dundee, Dundee; the Department of Otolaryngology (I.R.C.S.) and the Division of Community Based Sciences (J.M.M., S.H.), University of Glasgow, Glasgow; the Department of General Practice and Primary Care (B.H.S., A.M.) and the Health Economics Research Unit (L.D.V.), University of Aberdeen, Aberdeen; Community Health Sciences (B.M., V.H.) and the Department of Clinical Neurosciences (R.J.D.), University of Edinburgh, Edinburgh; and St. John's Hospital, National Health Service Lothian, Livingston (K.S.) — all in the United Kingdom. Address reprint requests to Dr. Sullivan at the Scottish School of Primary Care, Mackenzie Bldg., University of Dundee, Kirsty Semple Way, Dundee DD2 4BF, United Kingdom, or at f.m.sullivan@chs.dundee.ac.uk.

N Engl J Med 2007;357:1598-607.

Application of evidence

- Steroids clearly best option
- What about anti-viral therapy?
  - May relate to:
    - Aetiology
    - Severity

	Sullivan, et al[4]	Hato, et al[2]
Setting	Primary and secondary care	University hospital departments only
Blinding	Double-blind	Single-blind (patients only, assessors unblinded)
Randomisation	Independent, automated telephone randomisation service	Envelope method
Intervention	Prednisolone with or without aciclovir *vs* placebo	Prednisolone with or without valaciclovir (no placebo-only group)
Primary outcome measure	House-Brackmann scale	Yanagihara scoring system
Number randomised	551	296
Number analysed in results (%)	496 (90%)	221 (75%)

Table: **Differences between studies**

assessment confound interpretation of their results, and these flaws have been noted before.[5] Most surprisingly, Hato and colleagues neglect to mention the other trial of valaciclovir published in 2007, also from Japan,[3] which did not show any advantage of adding valaciclovir.

Their enthusiasm for antivirals is based on their aetiological prejudices rather than firm evidence. The association between Bell's palsy and viral reactivation does not prove causation, and until better data supporting the use of antivirals becomes available,

University of Edinburgh, Edinburgh EH4 2XU, UK (RJD, BM); University of Dundee, Dundee, UK (FS); University of Aberdeen, Aberdeen, UK (BS); and University of Glasgow, Glasgow, UK (JM)

1 Hato N, Murakami S, Gyo K. Steroid and antiviral treatment for Bell's palsy. *Lancet* 2008; **371**: 1818–20.

2 Hato N, Yamada H, Kohno H, et al. Valacyclovir and prednisolone treatment for Bell's palsy: a multicenter, randomized, placebo-controlled study. *Otol Neurotol* 2007; **28**: 408–13.

3 Kawaguchi K, Inamura H, Abe Y, et al. Reactivation of herpes simplex virus type 1 and varicella-zoster virus and therapeutic effects of combination therapy with prednisolone and valacyclovir in patients with Bell's palsy. *Laryngoscope* 2007; **117**: 147–56.

4 Sullivan FM, Swan IR, Donnan PT, et al. Early treatment with prednisolone or acyclovir in

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Evidence needs to be:

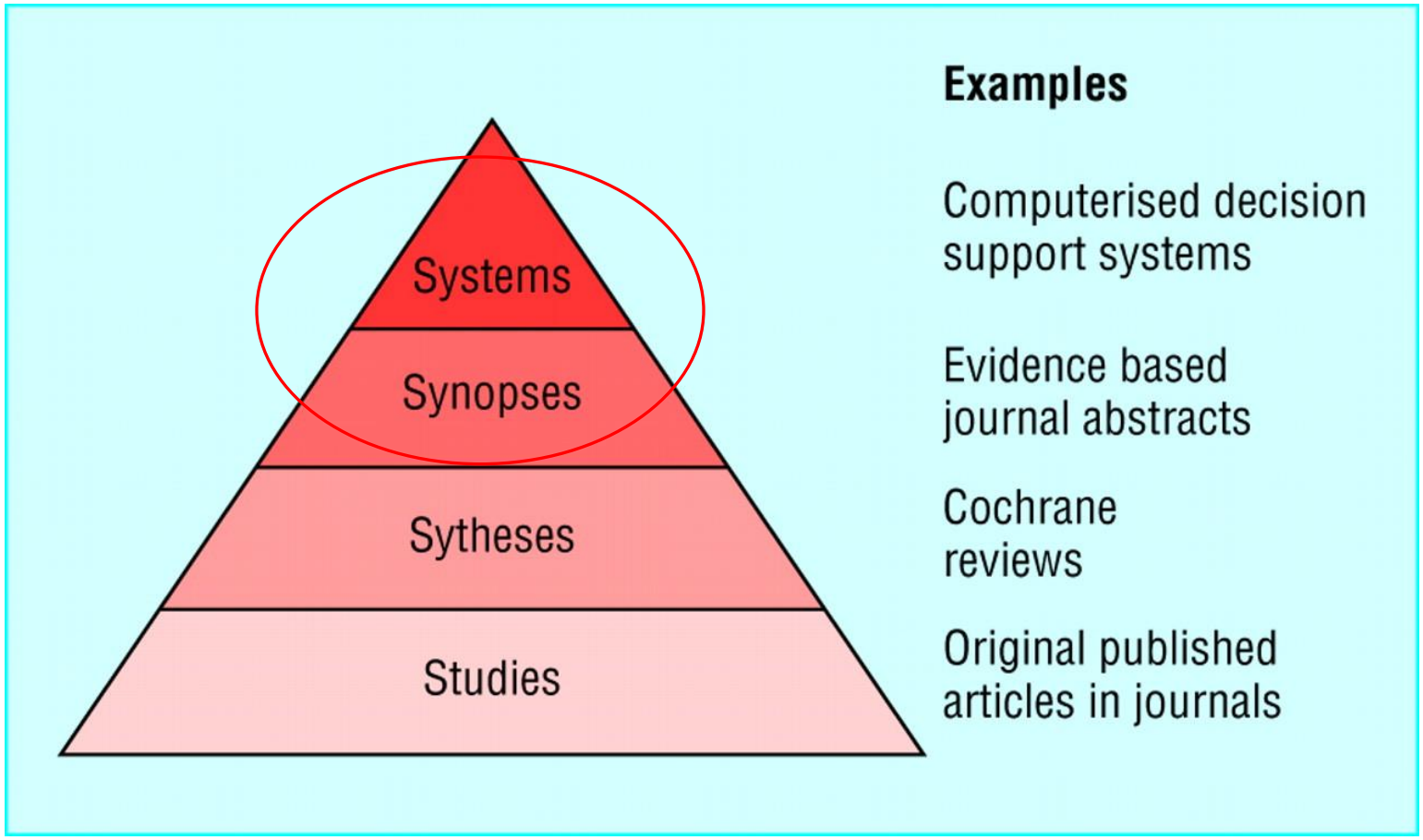
- Complete
- Up-to-date
- Based on the highest form of evidence (RCT for therapeutic interventions)
- Methodologically sound
- Applicable

(4) Future developments & requirements

The future

- Knowledge summaries
- Decision support for health professionals
- Decision aids for patients

Implementation of research evidence



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Published Online
April 30, 2009
DOI:10.1016/S0140-
6736(09)60830-8

ment *Lancet* 2009;
373: 1502

awlins' Viewpoint
of NICE see *Lancet*
hed online April 24.
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Darzi's Next Stage
ttp://www.dh.gov.
tionsandstatistics/
/publicationspolicy
dance/DH_085825

nline Comment on
development see
9; published online
OI:10.1016/S0140-
6736(09)60787-X

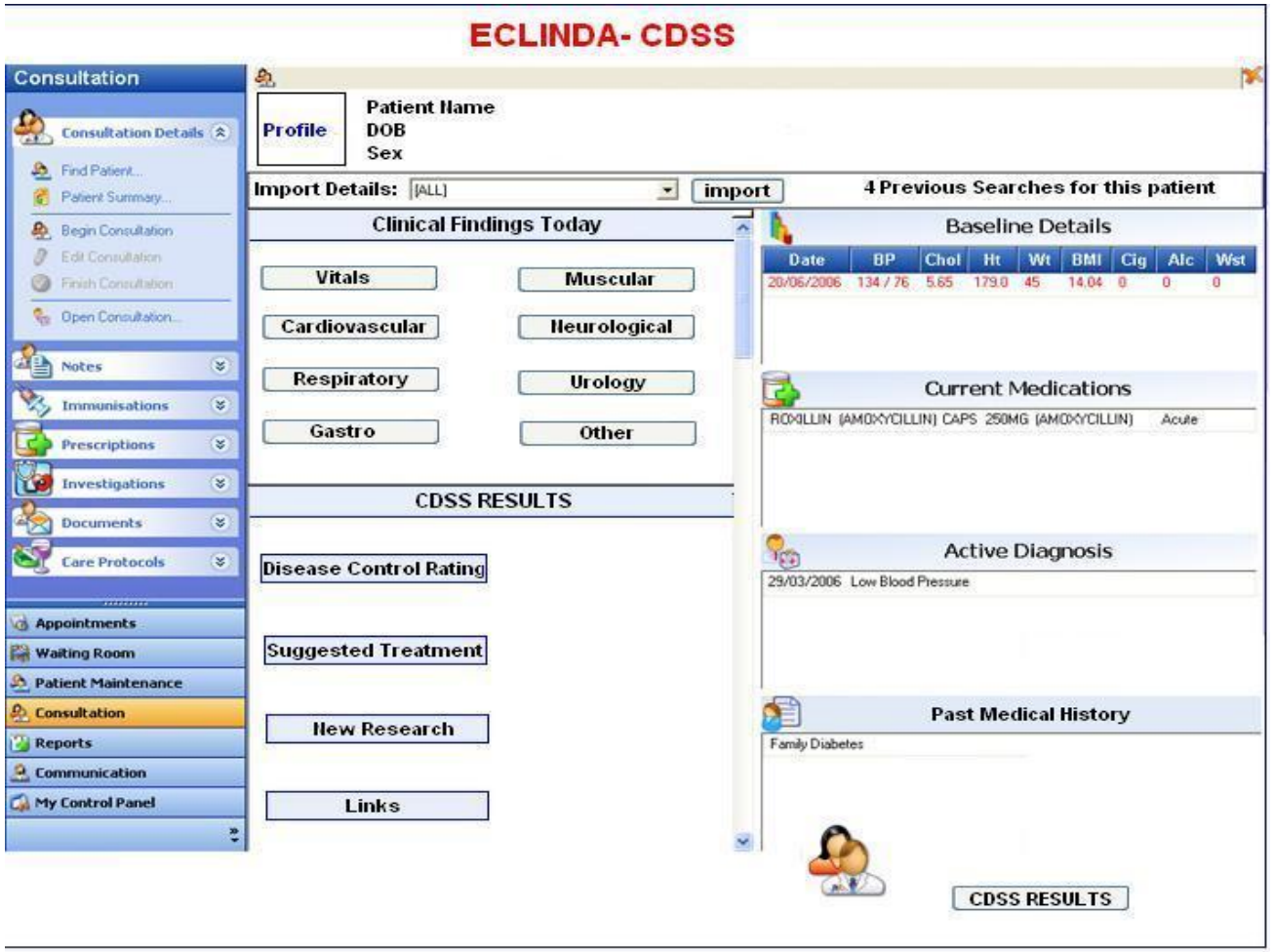
The UK's National Institute for Health and Clinical Excellence (NICE) has been appraising the evidence and publishing clinical and public health advice for 10 years. Last year, NICE was given a new mandate. As part of his review of the National Health Service (NHS), Ara Darzi tasked the organisation with developing a one-stop-shop whereby health-care professionals could readily access reliable and up-to-date advice to inform their daily practice. Enter NHS Evidence.

Launched on April 30, and introduced in a Comment by its Chief Operating Officer, Gillian Leng, NHS Evidence is an ambitious project aimed at creating a Google-like portal through which users—professionals and the public alike—can obtain information ranked in order of quality and relevance. Unlike Google, however, NHS Evidence's ranking will be informed by an independent advisory committee rather than a computer algorithm. Guidance-producing bodies, such as professional organisations and the UK's Royal Colleges, will be subject to an accreditation process which, if passed, gives them the NHS Evidence seal of approval and their guidance a higher rating.

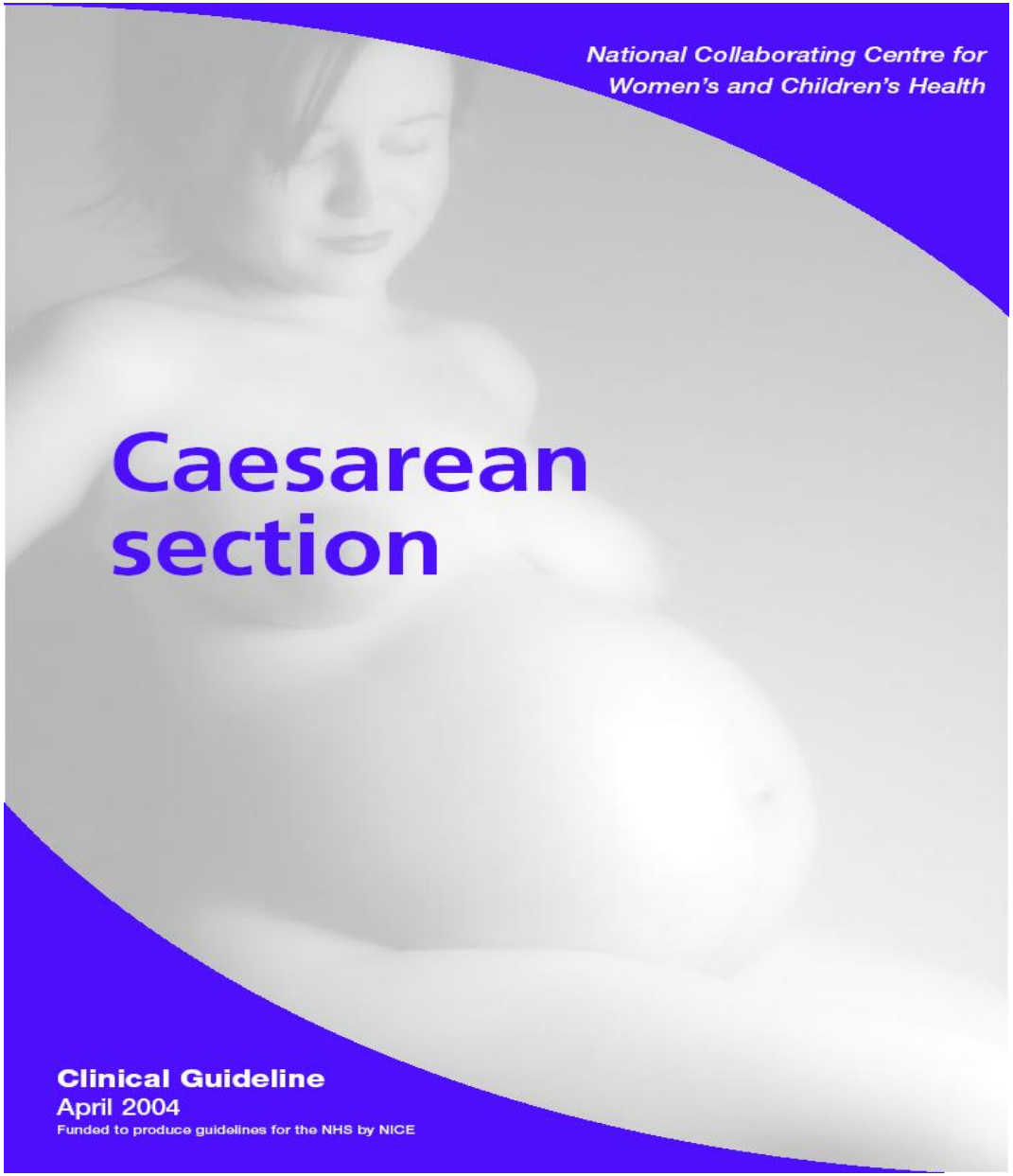
NHS Evidence's role in adjudicating between different guidelines on the same topic has the potential to encourage better practice in guideline development. As illustrated in a Comment by Jack Hirsh and Gordon Guyatt, published online on April 24, professional bodies can differ substantially in their recommendations. Often this difference is due to bias resulting from conflicting interests of the writing committees. One of the domains that NHS Evidence will assess is the independence of such committees; this is a vital step forward.

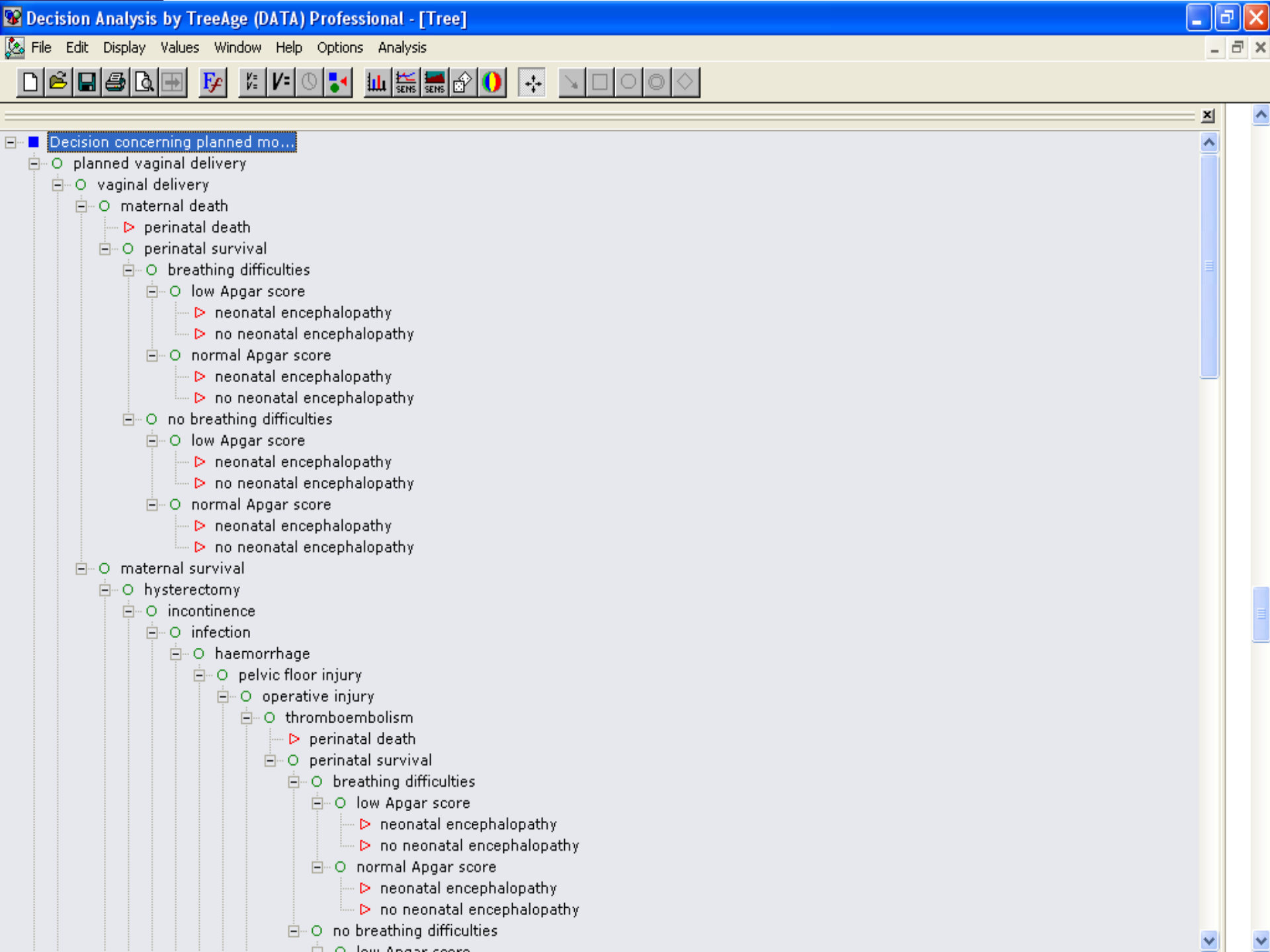
The project team is to be applauded for its clear-sighted and thorough approach to generating such a long-overdue source of credible advice. Lack of time, inclination, and knowledge of where to start reduce the likelihood that a health-care professional will look for guidance, and the concept of NHS Evidence certainly addresses the issues of time and place. What is needed in addition is an equally broad-reaching encouragement and awareness campaign to help persuade the proverbial horse, having been provided with the water, to drink it. ■ *The Lancet*

Computer-based clinical decision support (CDSS)



RCSI


National Collaborating Centre for
Women's and Children's Health
Caesarean section
Clinical Guideline
April 2004
Funded to produce guidelines for the NHS by NICE


Decision Analysis by TreeAge (DATA) Professional - [Tree]
File Edit Display Values Window Help Options Analysis
Decision concerning planned mo...
planned vaginal delivery
vaginal delivery
maternal death
perinatal death
perinatal survival
breathing difficulties
low Apgar score
neonatal encephalopathy
no neonatal encephalopathy
normal Apgar score
neonatal encephalopathy
no neonatal encephalopathy
no breathing difficulties
low Apgar score
neonatal encephalopathy
no neonatal encephalopathy
normal Apgar score
neonatal encephalopathy
no neonatal encephalopathy
maternal survival
hysterectomy
incontinence
infection
haemorrhage
pelvic floor injury
operative injury
thromboembolism
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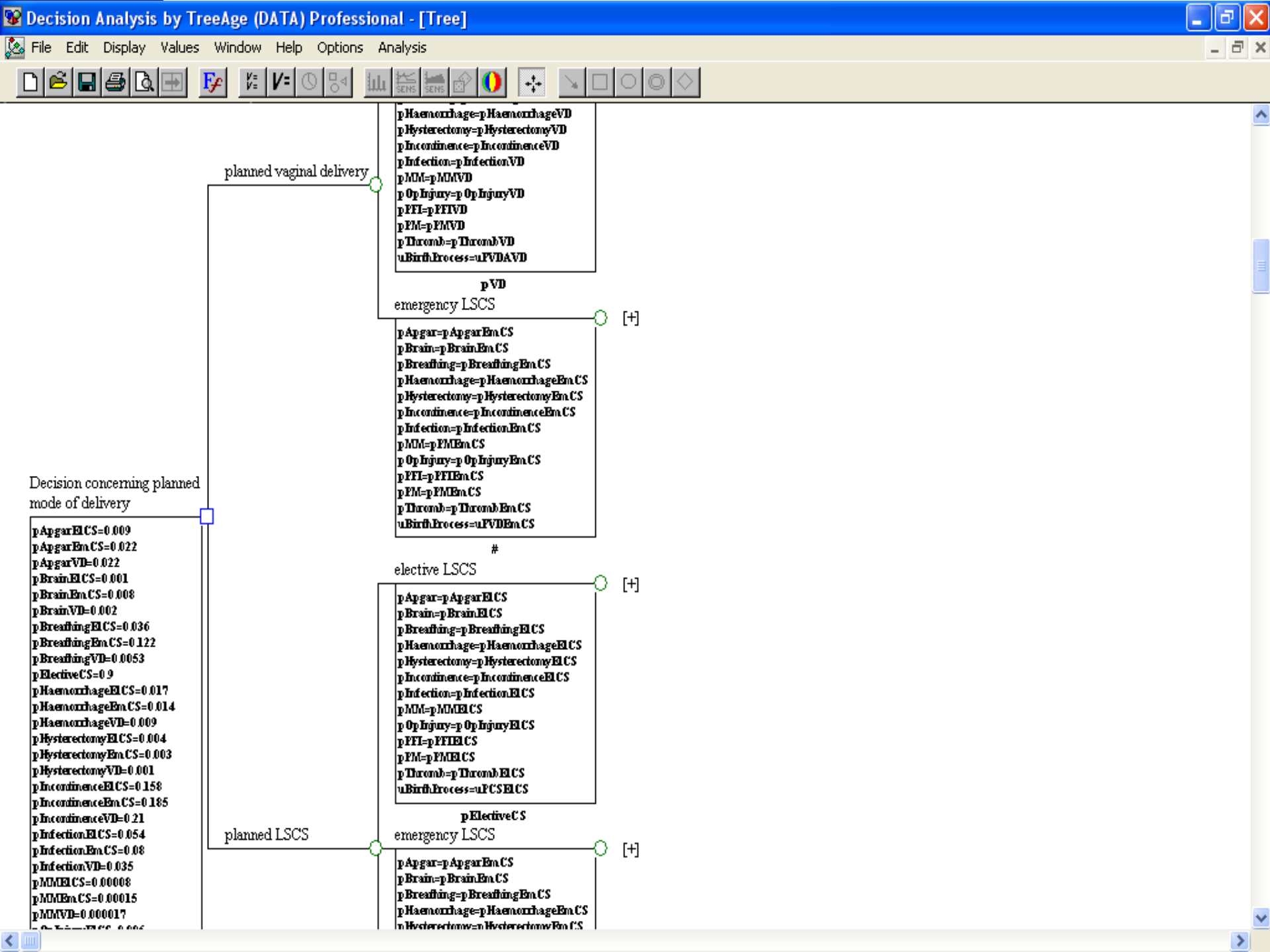
no neonatal encephalopathy
no breathing difficulties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pVD
planned vaginal delivery
emergency LSCS
[+]
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pPM=pPMEmCS
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pMMEmCS=0.00015
pMMVD=0.000017
planned LSCS
emergency LSCS
[+]
pApgar=pApgarEmCS
pBrain=pBrainEmCS
pBreathing=pBreathingEmCS
pHaemorrhage=pHaemorrhageEmCS

Introduction
Frequently Asked Questions
Complications for Mother
Complications for Baby
Non-medical Benefits
Special Circumstances
Glossary

Complications for Mother

Click on the underlined headings to see more

Hysterectomy
Incontinence
Surgical Damage
Severe Perineal Damage
Haemorrhage
Uterine Rupture
Infection
Blood Clots
Delayed Conception
Death of Mother

Hysterectomy

Hysterectomy is the removal of the womb. It may be necessary if there is excessive bleeding, which cannot be controlled with other surgical techniques or drugs. It can occur with either vaginal birth of caesarean section. It means future pregnancy will not be possible.

When you have read enough information please click on Section 2 to rate your preferences

Section 2

Complications for Baby

Click on the underlined headings to see more

Baby Breathing Difficulties
Infant Brain Injury
Death of Baby
Baby in Poor Condition

Baby Breathing Difficulties

The baby relies on its mother for a supply of oxygen while within the womb. It practices breathing movements but the lungs are filled with fluid. During delivery the fluid is gradually squeezed out of the lungs. With the first breath shortly after delivery the baby is usually ready for independent life. Occasionally babies require some assistance with breathing. In mild cases this is called transient tachypnoea of the newborn (TTN). In more severe cases the baby may require assisted breathing with a ventilator, this is called respiratory distress syndrome (RDS).

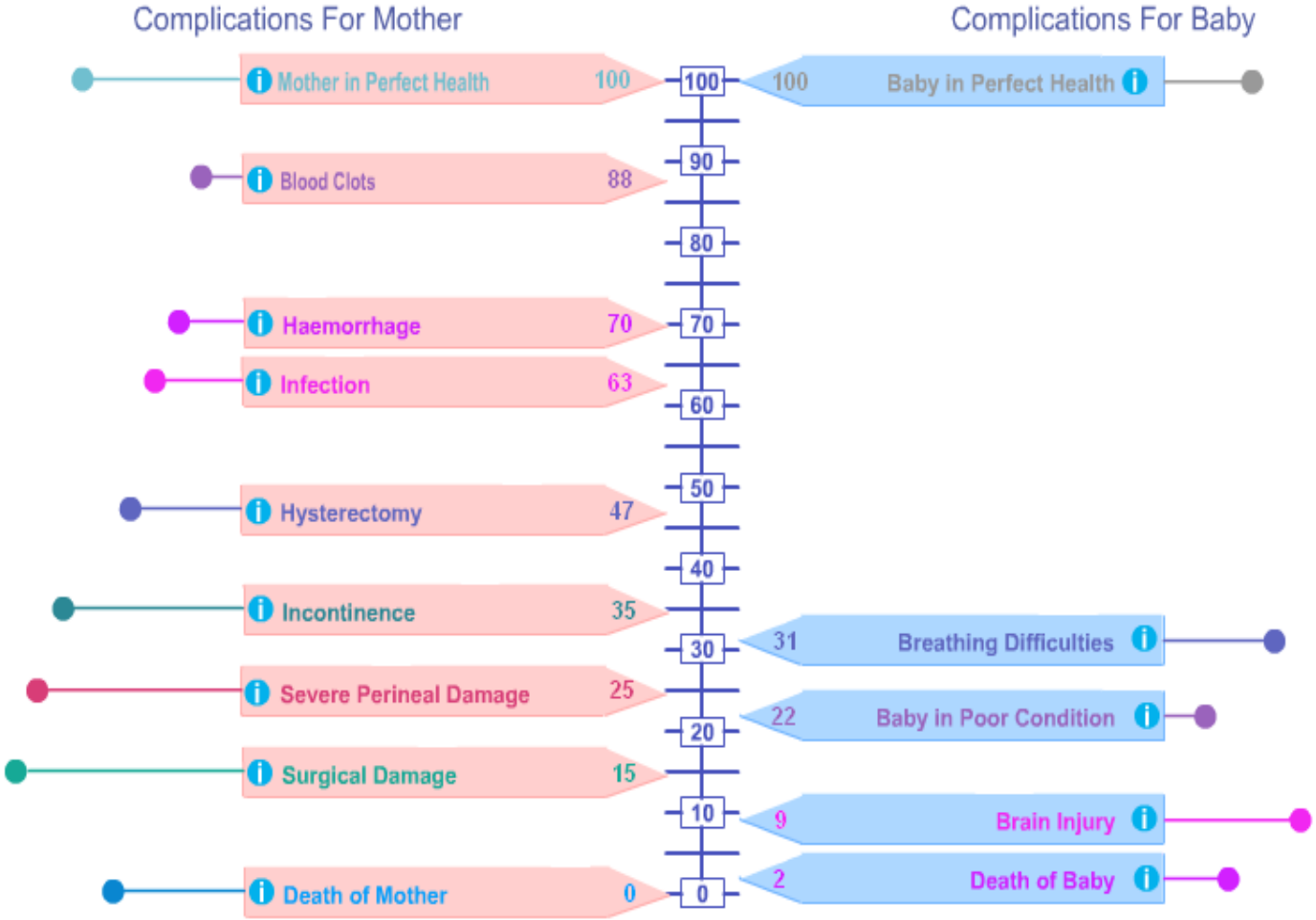
Vaginal Birth
The process of vaginal birth helps to push the liquid out of the baby's lungs, which is beneficial to the baby's breathing at birth.

Caesarean Section
Breathing difficulties are increased the earlier the elective section is performed.

When you have read enough information please click on Section 2 to rate your preferences

Section 2

Possible Health Complications



Section 1

Explanation Screen

When you are finished click 'Delivery Method' to rate your preferences about different types of delivery.

Delivery Method

File Edit View Favorites Tools Help

Back Search Favorites

healthtalkonline

Search...

People's stories: see, hear and read their experiences...

Welcome

Healthtalkonline, an award-winning charity website, lets you share in other people's experiences of health and illness. You can watch or listen to videos of the interviews, read about people's experiences and find reliable information about conditions, treatment choices and support.

The information on healthtalkonline is based on qualitative research into patient experiences, led by experts at the University of Oxford. These personal stories of health and illness will enable patients, families and healthcare professionals to benefit from the experiences of others.

How to use this site...

- Cancer
- Heart disease
- Nerves & brain
- Bones & joints
- Mental health
- Pregnancy & children
- Living with dying
- Carers
- Chronic health issues
- Living with disability
- Intensive care
- Medical research

News

Website of the month - ....
Launch of the Osteoporosis ....
Osteoporosis: launch of new ....

Make a DONATION

Forum

Ovarian Cancer

Welcome to the Healthtalkonline Forum on Ovarian Cancer.

18/05/2009

Bereavement due to suicide

hello

20/05/2009

youthhealthtalk.org

healthtalkonline.org
Teaching & Learning

Tell us your story

You can help support others by sharing your own experiences

Conclusions

- EBM core competency for health professionals
  - Finding, appraising and applying evidence
- Requires inter-professional learning
  - Undergraduate
  - Postgraduate (life long learning)
- Synopses and synopses of evidence into the future