


Decision making in Paediatric OME

Dave Albert
Mark Haggard
Marianne Elloy

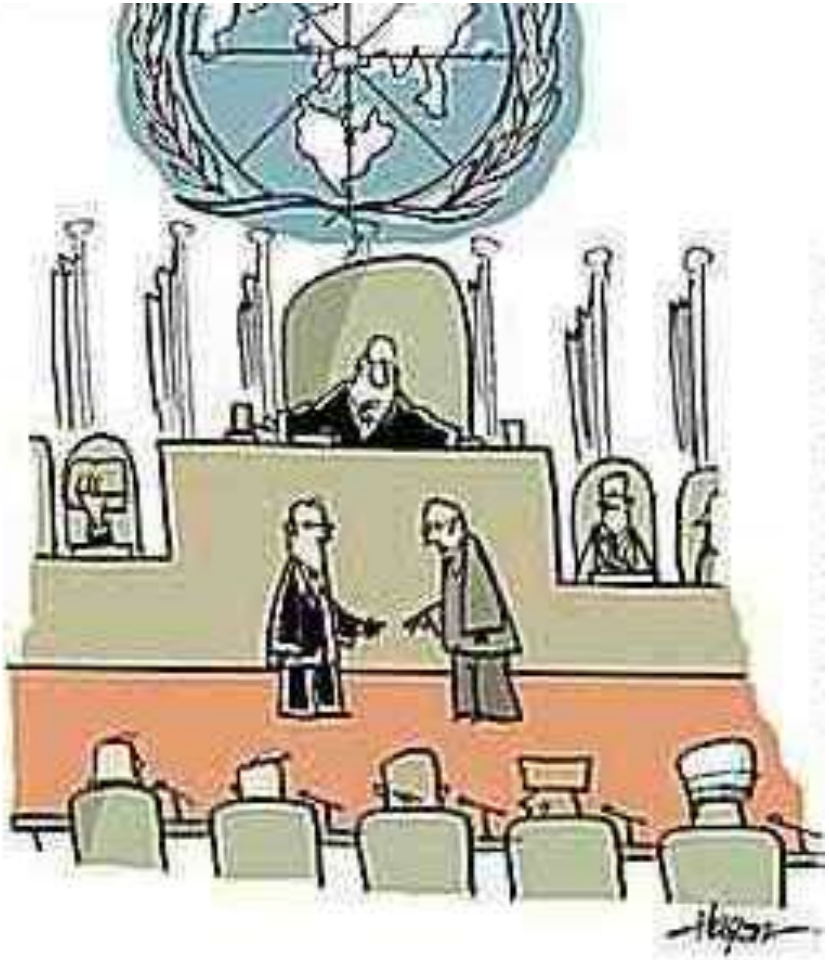
Decision making in OME- a UK Perspective

- How do we make decisions as doctors?

– OME: Overview
- National Guidelines
- Politics/resources
  - Decisions for individuals

Is medicine an Art or a Science?

DECISION MAKING



ROCK BEATS SCISSORS, SANCTIONS IT IS!

Decision Making

Recognition Primed Decision Making

Relies on remembering an effective response to previous situations of a similar type

Advantages

- Very fast
- Requires little conscious thought
- Can provide satisfactory workable option
- Useful in routine situations

Disadvantages

- Requires user to be experienced
- May be difficult to justify after the event

Rule Based Decision Making

Involves identifying the situation and remembering or looking up in a manual the rule or procedure that applies

Advantages

- Good for novices
- Can be rapid if rule has been learnt
- Easy to justify i.e. followed the procedures

Disadvantages

- Time-consuming if the manual has to be consulted
- Not easy to recall or locate relevant procedures
- Rule may be out of date or inaccurate and therefore may cause skill decay
- Does not develop higher level understanding and skills

Choice Through Comparison of Options

Involves identifying options, weighing up their relevant features in terms of a match to the requirements of the situation. Useful in contingency planning and allows for faster recognition-primed decision making

Advantages

- Fully compares alternative course of actions
- Can be justified
- More likely to produce optimal solution

Disadvantages

- Requires time
- Not suited to noisy, distracting environment
- Can be affected by stress
- May produce cognitive overload and 'stall' the decision-maker

Creative Decision Making

Requires devising a novel course of action for an unfamiliar course of action - rarely used in high time-pressure environments unless there are no alternatives.

Ideally forms part of contingency planning where there is time to design and evaluate novel courses of action.

Advantages

- Produces solutions to unfamiliar problems
- New solutions may be invented which have wider application

Disadvantages

- Time consuming
- Untested solutions
- Difficult under noise and distraction
- Difficult under stress
- May be difficult to justify

Experienced consultant

"Old School"

Specialist Nurse

eg grommet clinic

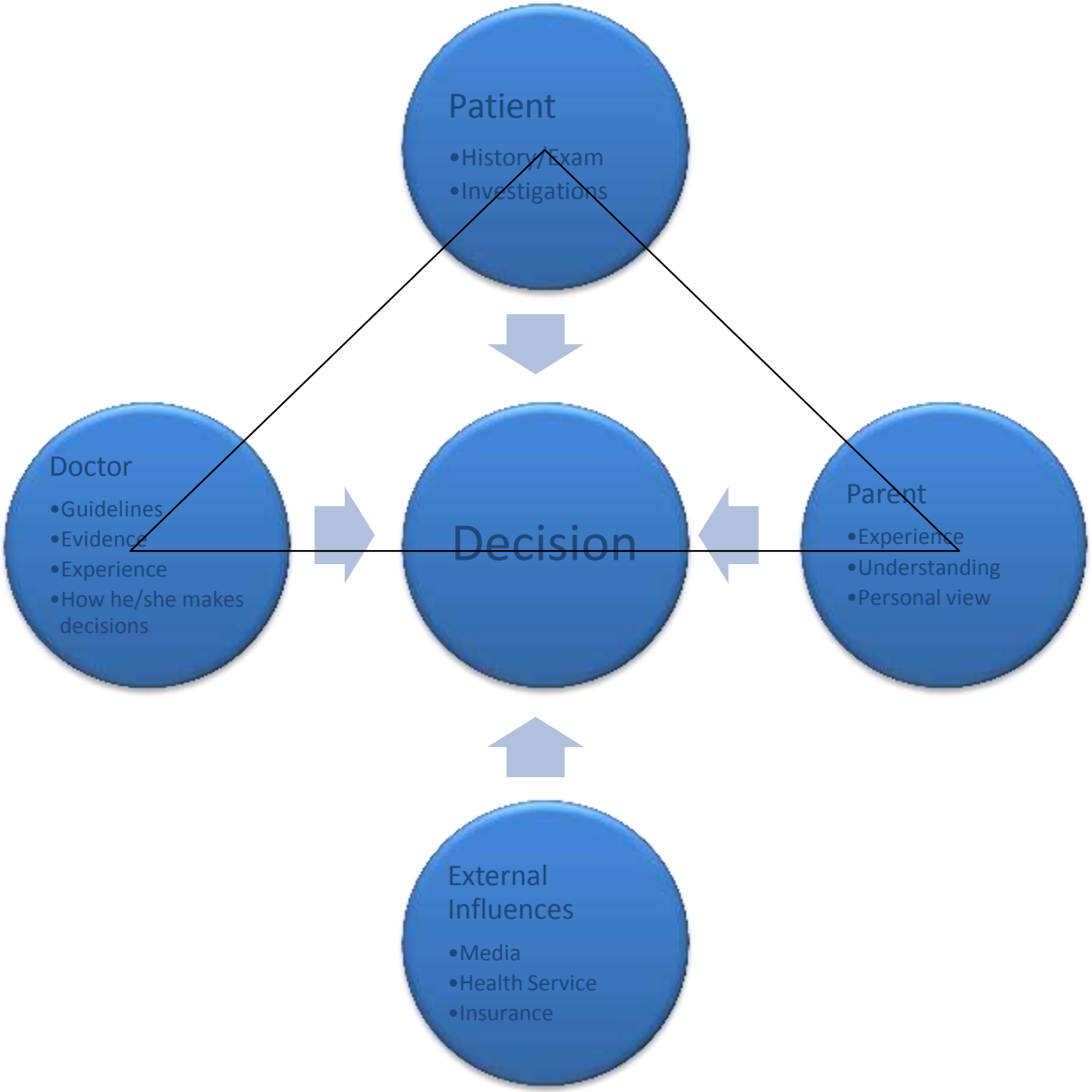
Multi disciplinary Team meeting

"Rogue surgeon"

Innovative

In paediatrics you and parents make decisions *on behalf* of the children

S.D.M.


Patient
•History/Exam
•Investigations
Doctor
•Guidelines
•Evidence
•Experience
•How he/she makes decisions
Decision
Parent
•Experience
•Understanding
•Personal view
External Influences
•Media
•Health Service
•Insurance

Decision making in OME:
often subject to media attention

Great to have easy “sound bite” message

“Ventilation tube insertion is unnecessary”

“Not enough access to ventilation tubes”

Latest: - On Low priority procedure list

Is this a fair assessment of the state of our knowledge?

Often not challenged because of high satisfaction

OME in UK

The need of surgeons to fill the vacuum caused by the decline in the number of adenotonsillectomies, and the fact that a diagnosis of glue ear legitimises the continued use of these operations, may also have contributed to the increase. Finally, glue ear may provide parents with a medical explanation of their children's poor educational performance, as the term dyslexia did in the past. The high social and public costs of this operation demand a reappraisal of its increasing use.

radiometry; greater recognition of the presence of fluid in the middle ear by general practitioners; the availability of more otolaryngologists; and technical advances such as the availability of antibiotics to treat postoperative infections and of flanged tympanostomy tubes (grommets). The need of surgeons to fill the vacuum caused by the decline in the number of adenotonsillectomies, and the fact that a diagnosis of glue ear legitimises the continued use of these operations, may also have contributed to the increase. Finally, glue ear may provide parents with a medical explanation of their children's poor educational performance, as the term dyslexia did in the past. The high social and public costs of this operation demand a reappraisal of its increasing use.

1985 Nick Black

1992 "Jennifer's Ear"

1995 EH Bulletin

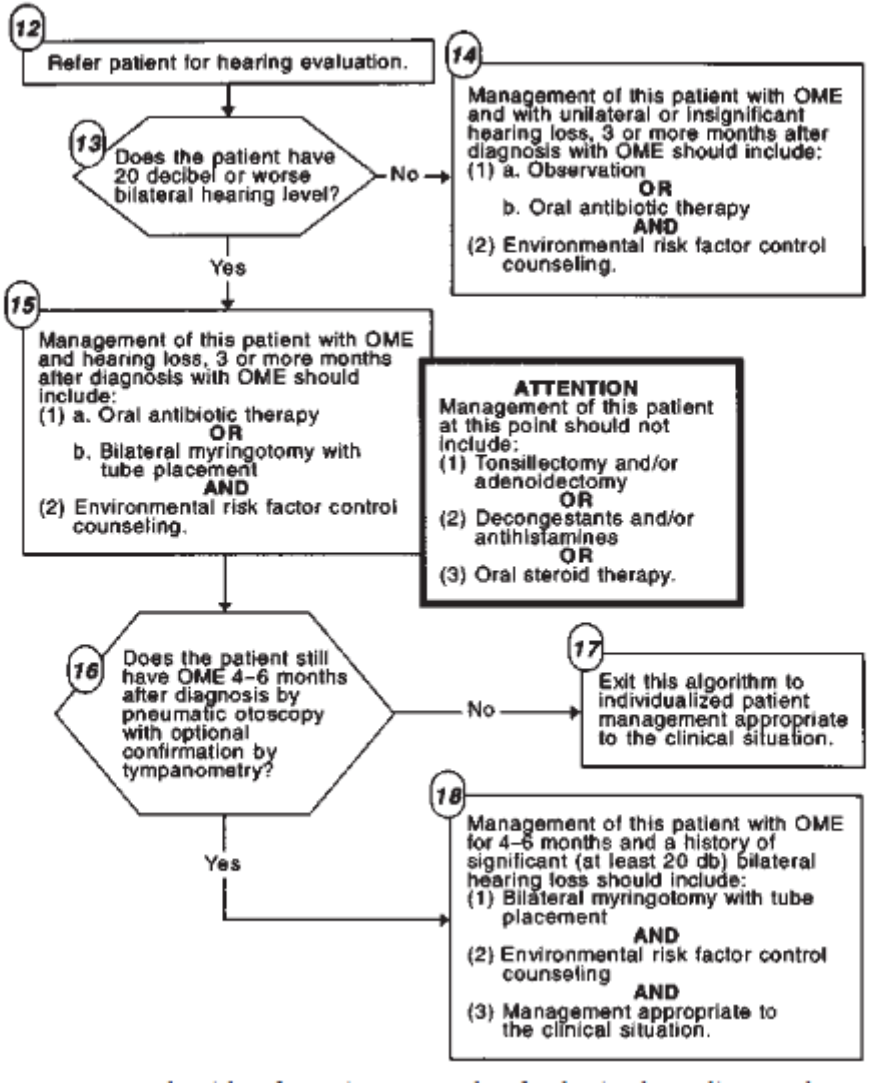
- 2008 NICE Guidelines

- 2011 PCT guidelines
- for "low priority procedures

2011 PCT guidelines for “low priority procedures”

- The PCT will agree to fund treatment with grommets for children with otitis media with effusion (OME) where:
-
- There has been a period of at least six months watchful waiting from the date of
- the first outpatient appointment/appointment with audiologist or /ENT GPSI AND
- the child is placed on a waiting list for the procedure at the **end** of this period AND…OME persists after six months and the child (over three years of age) suffers from at least **one** of the following:
- At least 5 recurrences of acute otitis media in a year
- Delay in speech development
- Educational problems or behavioral problems attributed to hearing impairment which is persistent. With a hearing loss of at least 25dB particularly in the lower tones (low frequency loss)
- A second disability such as Down’s syndrome
- Severe collapse of the ear drum

- 2004 American Academy of Pediatrics (AAP) guidelines on otitis media with effusion (OME)



OME DECISION MAKING IN THE CONSULTING ROOM

OME decisions

Spectrum: Those at either end easy

Most are in the middle

Could argue either: Wait

Medical

Surgical

OME decisions

Need to offer alternatives

Be up front: no perfect option for an individual

Decision based on evidence and guidelines

BUT..

Individualised, include as many factors as possible

OME – The options

Watchful Waiting/resolution

Autoinflation

Antibiotics

Steroids

Ventilation Tubes

Adenoidectomy

Even before the consult

Listening and Looking

"Time to Talk" in the paediatric consultation

"Child first and always"

ENT Examination of children

- Video–otoscope
- Flexible endoscopy
- Oral exam

Decision Making in the consulting room

- Discussions and Diagrams
- Include the child
- Options
  - Conservative / watchful waiting / Homeopathy
  - Medical
  - Surgical
- Also consider: Global Assessment
    - Seasonal variation/allergies/pets/home environment
    - Day Care/frequent travel
    - FH/Gen development

History

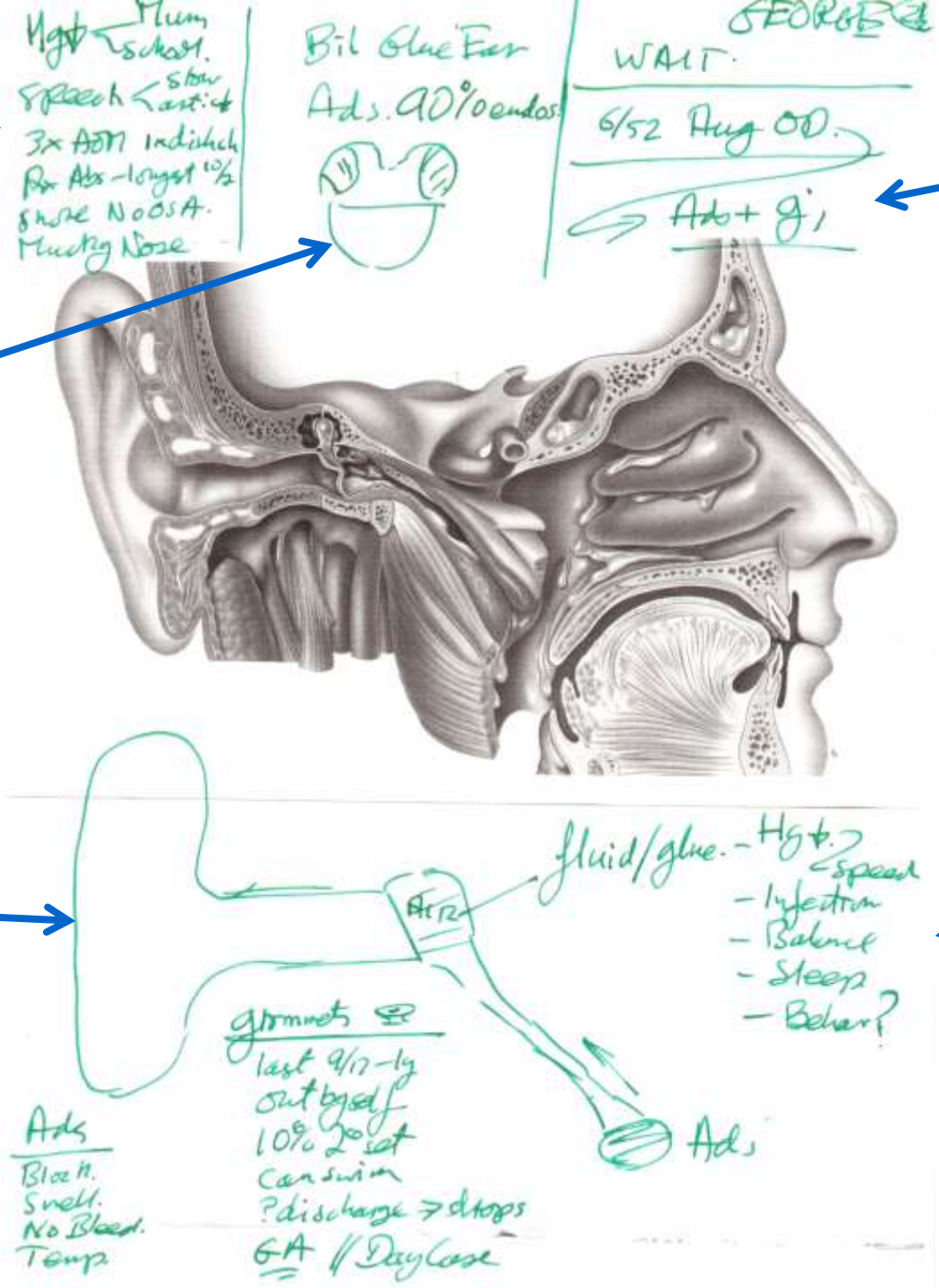
Exam

Diagram

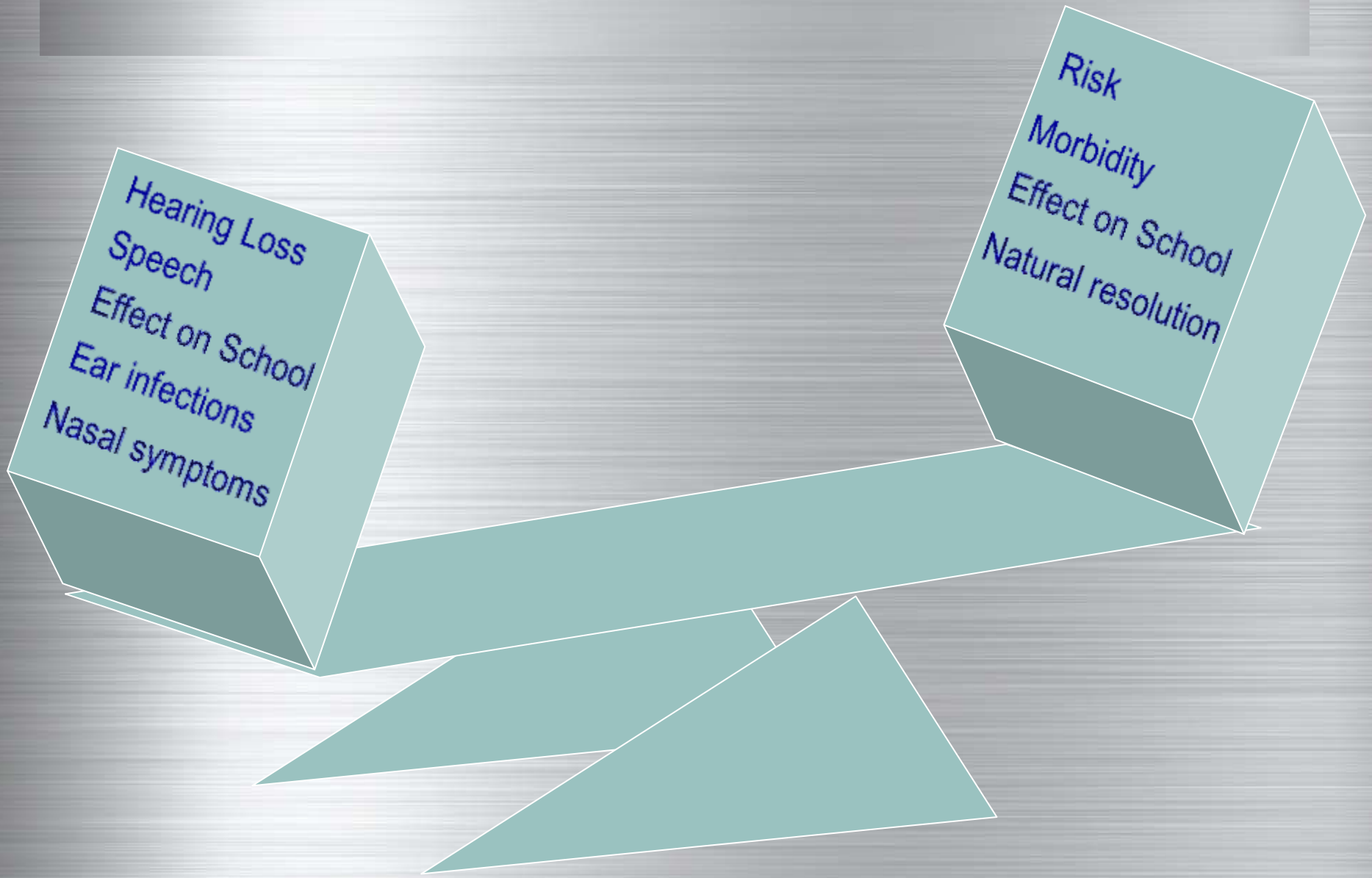
Operative details

Alternatives

Glue Ear



A Question of Balance



Randomised Controlled Trial for Everything?

BMJ

Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomised controlled trials

Gordon C S Smith and Jill P Pell

BMJ 2003;327;1459-1461
doi:10.1136/bmj.327.7429.1459

Need to be able to explain….

- Individual, National/international practice variation
- Outside pressures
- Non medical alternatives
- Benefits to Hearing, Language/general health

But what would you do for your son?

IMPROVING THE WAY WE USE GUIDELINES - SCENARIOS

Scenarios

A way of humanising complex guidelines

Including additional factors

Looking at external pressures (PCT etc)

Scenario 1: case study

Joshua is a 5 year old boy presenting to the Paediatric ENT clinic. His mother is concerned about his hearing. His teacher has noticed a deterioration in his school work over the last term. He has had no ear infections or nasal symptoms. He had a hearing assessment at the audiology led clinic 3 months ago which demonstrated a Pure Tone Average (PTA) of 25dBHL with type B tympanograms.

Scenario 1: Borderline HL

Joshua's repeat hearing assessment today demonstrates a PTA of 22 dbHL and type B tympanograms.

How should you proceed?

Scenario 1: NICE guidance

- Joshua has
  - Had a 3 month period of active observation for OME between initial testing at the audiology led clinic and referral to the Paediatric clinic per NICECG60 OME Care pathway 1.
- The next step on this pathway is to discuss with Joshua's mother the option of:
  - Insertion of ventilation tubes
    - (Adjunctive adenoidectomy is not indicated in the absence of frequent/ persistent upper respiratory tract symptoms)
  - Hearing aids as an alternative

Scenario 1: TARGET summary

Section 5: Benefits to hearing

Good **short term** benefit with ventilation tubes (despite parental expectancy bias) has been demonstrated

However, benefit **decreases** over time

The degree of benefit is proportionate to the extent of the initial hearing loss

The lesser but more enduring further average benefit of 3-4 dBHL from **adjunctive adenoidectomy** over 2 years roughly doubles the benefit.

The NICE criteria acknowledge this benefit for patients with nasal /upper respiratory tract symptoms - a group considered to gain most benefit.

Scenario 1: TARGET summary

Section 2: The present pressures and dilemmas

Pressures from PCTs:

- Some areas are not funding grommet insertion unless the 25dBHL NICE criteria is met.
- In some areas a suggestion of 6 months watchful waiting has been recommended by PCT commissioners

TARGET recommends:

- an audit of numbers of operations with hearing levels below 25dBHL focussing on the NICE list of supplementary considerations (eg educational impact) for cases below 25dBHL and up to 30 dBHL.
- Positive engagement by ENT surgeons with the local PCT commissioners to implement the NICE guidelines in a balanced fashion rather than selectively in a restrictive way

Navigating the Shoals of Surgical Treatment Decisions in OME

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Presentation on the TARGET Trial to BAPO, September 2009

Mark Haggard, Multi-centre Otitis Media Study Group

Not another guideline

- 8 points concentrates on summaries and principles
- synoptic view taken in 2010
- Will need to be updated

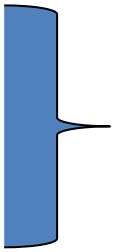
Available on BAPO website in full

Abridged for this presentation by DMA

1. Reasons for evidence gaps, and limitations to overcome

- Some good quality evidence on surgery in OME, but…
- individual presenting child may be outside study norms

- OME
- multi-facetted
- changes over time
- history expensive to document



it's hard to research

- In past current diagnosis assessed rather than of severity/persistence

- Now realise *past history is a predictor of impact*

2 The present pressures and dilemmas

Difficult financial climate

Hearing level and watchful waiting can be as means of rationing

eg 30dB and 6 months – not based on evidence therefore RATIONING

- Unaware of the changes in practice since over- treatment was first rightly criticised in 1985

- 25dB HL cannot be black/white division
- **Should EXPECT some cases listed with HL below 25dB – need to monitor**

- Need to engage with *commissioners and politicians*

3 Differences between caseloads

International

There are large differences between a typical NHS caseload and the samples in two USA trials* with null results

In USA subjects selected by active screening from around 1 year, they were younger and their impact milder than in those that come through primary care gatekeeping in the NHS.

National

- There are analogous differences in severity between UK regions
- Tighter selection criteria (local practice) produces greater benefit.
- Does not imply that less stringent criteria in other areas produces no benefit, only lesser benefit
- Local practice variations ("postcode prescription") can not be eliminated completely
- **Large variation cannot be justified epidemiologically**

- *Discussion of criteria, operation numbers and audit between commissioners and consultants should be based on an understanding of whether the local intervention rate has been high, medium, or low*, relative to national norm for the child population, and attempts should be made to understand the likely reasons for any deviation.

- *Rovers, NL, 2003; Paradise, US, 2005

4 De-medicalisation?

Parents of children with RAOM are now not offered antibiotics

- not effective
- to reduce antibiotic resistance

Surgical treatments; (grommets/tubes) less available

Patents respond by looking for alternative treatments with no evidence at all!

- eg cranial osteopathy

Variable nature of disease and tendency to start treatment at height of cycle convinces them of efficacy

5 Benefits to hearing

Short-term benefits to hearing from VTs are not in question, if 3 months WW // average 24 dB HL, but the difference between treated and untreated groups becomes washed out over time.

Benefit proportional to the initial hearing loss

Short-term HL benefit from VT's is genuine and, in relation to the prognosis if untreated, is large in magnitude.

The benefit of 3-4dB on average from adenoidectomy roughly doubles the accumulated hearing benefit for the period

Reductions in further ENT care required make adjuvant adenoidectomy attractive, and further squeeze the scope for VTs-alone, between continued WW and VTs+ad.

MH – "I have never adopted the purely health-economic stance on this (ie have not recommended adenoidectomy for all), but have sought to move towards co-ordinated criteria for the two procedures that would concentrate and so maximise the benefit from each, within a broader clinical understanding."

6 Nature and location of benefits to general development

Language problems can occur in persistent OME, but have been over-generalised and hence over-sold in the past.

Trials do not find demonstrable benefits to language.

TARGET does find benefit to a broader parent-reported measure of development including behaviour and parent quality of life

This overall benefit is small, and due mostly to ventilation tubes, but supplemented by adjuvant adenoidectomy

- It divides into a moderate benefit to the older (here > 5 yrs) children and virtually none in the younger.

- NB (the TARGET *older children who are **new** patients where identification and referral process has been slower than average) eg selection bias*

7 Physical health in OME

OME and RAOM are a continuum

- Pure OME - The classical glue ear: immunologically abnormal mucosa triggers chronic viscous effusion from a single infection

- TARGET assessed benefit of VT's and Ads on RAOM and URTI

- ***There is a moderate-to-large overall benefit from adjuvant adenoidectomy on URTI and from ventilation tubes on super-added RAOM*.**

- These benefits are strongly related to how severe the specific problem (URTI, RAOM) was in the first place

- Adenoidectomy has other benefits in OME, but the restriction by NICE of the indications to those with severe/frequent URTI was a judicious deferment of the issue, and remains largely consistent with the emerging evidence.

8 Recommendations of a more specific nature, and clinical tools to support and monitor them

- Cost-per-QALY policy decision on these two treatments in OME difficult because of uncertainties over:

(a) The appropriate balance between the above three domains of outcome;

(b) The appropriate balance between short and long terms; and

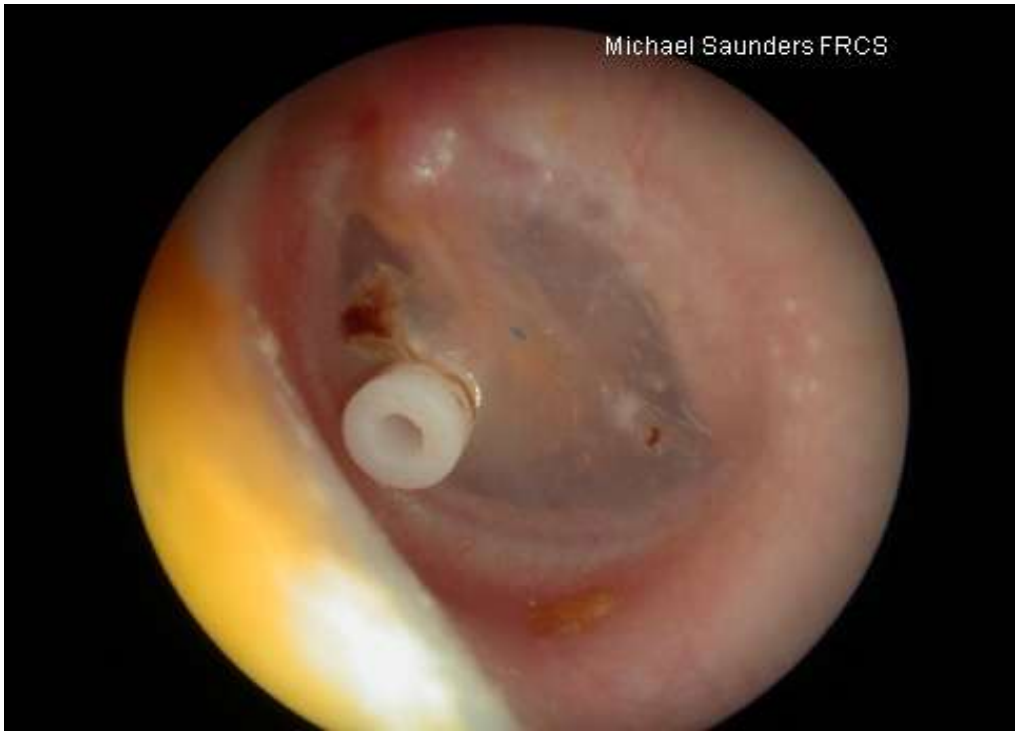
(c) The appropriate balance between benefits and risks/inconvenience with adenoidectomy.

- **Nevertheless evidence is emerging for OME impact proportional to disease severity and duration, and for its reduction by treatment, which should prompt the otolaryngologist to select cases well**.

Presentation to BAPO 2010

- *Mark Haggard, Multi-centre Otitis Media Study Group*

Which OME cases to treat with VTs +/- adenoidectomy ?



>25 dBHL better-ear is the <u>main</u> NICE recommendation – a stop-gap

Why 25 dB?

- Best guess at flip-point in risk/benefit, but
  - No formal analyses of functions & ratios
  - No relation to absolute cost-per-QALY
- Continues traditional reliance on Hearing Level
  - some PCTs' commissioning rules have even suppressed NICE's list of supplementary clinical considerations
- Rationing ? - A rough guess at the level of activity that NHS should pay for in the light of the above

Incorrect assumptions from 1980s that we should now leave behind

- "intervention is very rarely justified"

- "absence of appropriate evidence substitutes for evidence of absence"

- But also

- "in OME, HL is an adequate surrogate for disease impact"

- and many other false assumptions....

Personal

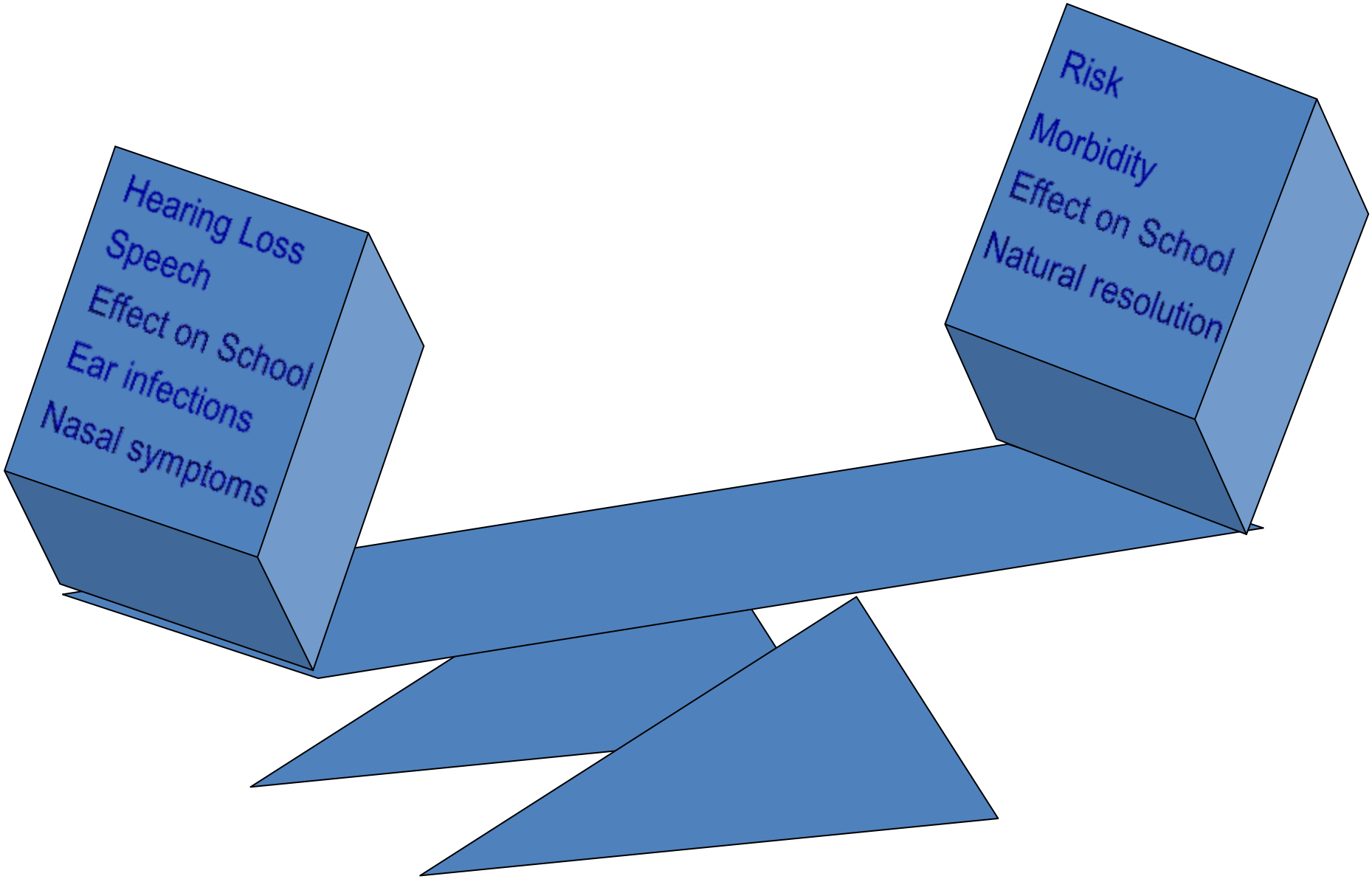
- “Time to Talk”
- Child Friendly
- Also: speech/language/behaviour/sleep/general development/school/nursery/ear infections/URTI/nasal symptoms

Personal

- Time to Talk
- Child Friendly
- Also: speech/language/behaviour/sleep/general development/school/
- Alternatives
- Long term Antibiotics
- Diagrams

- Concept: “not easy”

A Question of Balance



Decision making in OME

- Ear infections and deafness – Trial of long term antibiotics
- Loss > 25dB – few problems: Wait
- Loss > 25dB – with problems: grommets or ?? +Ads
- Loss < 25dB usually wait
- Low threshold to add adenoidectomy - personal

Thank you

eSpo 2012 amSterdam

11th International Congress of the European Society of Pediatric Otorhinolaryngology








20 - 23 May 2012

www.espo2012.com

Pediatric Otorhinolaryngology: From experience-based to evidence-based practice

DATE FOR YOUR DIARY

Saturday 31st May – Tuesday 3rd June 2014

The Convention Centre, Dublin, Ireland

12th INTERNATIONAL CONGRESS OF THE EUROPEAN SOCIETY OF PEDIATRIC OTORHINOLARYNGOLOGY