Information for Decision Making

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EBM will enable faster, timely and inexpensive clinical decisions and also increase the number of patients a doctor can see per day…… EBM boosts the confidence of doctors in making decisions (Nwagwu, 2008)
“Good practice is a combination of both expertise and good evidence. But where is the evidence? No journals, no clinical summaries, no guidelines”. (Nwagwu, 2008)
What is a Decision?

- A choice or judgement that you make after thinking and talking about what is best thing to do (Oxford Dictionary 7th ed.)
- A decision is an irreversible choice among alternative ways to allocate valuable resources
Decisions!

- Decision making is an everyday event
- Decisions are not always easy
- Sometimes decisions are elusive and sometimes they don’t get made
- Decision making is art and science!
Data

- A collection of facts
- Could be in the form of:
  - Numbers
  - Text
  - Images etc

Can be interpreted or processed by humans or machine to give meaning
Information

- Information is data in usable form
- Information is result of data that have been analyzed and interpreted for decision making
- Data + analysis = information
Decision Making & Information

Decision making is therefore the process of deciding about something and information plays a key role in this process.
Information qualities to look for:

- Relevant
- Up-to-date
- Accurate
- Meet the needs of the user
- Reliable
- Right format
- Worth the cost
Examples of use of information

- **Health situation & trend analysis**: data on morbidity, disability & mortality
- **Forecasting**: projections, new trends, preventing epidemics, etc…
- **Surveillance**: health observatories including epidemic diseases, food safety
Use of information

- Management and planning: data for decision making,
- Policy development: evidence-based policies and strategies
Power of Information – driving more effective and efficient healthcare delivery

80% of physicians changed their care as a result of evidence* as follows:

– Avoided hospitalisation in 12%

– Reduced overall length of stay in hospital in 19%

– Changed diagnostic tests in 51% and drug choices in 45%

– Avoided additional tests or procedures in 49%

Lack of Information and knowledge

Tens of thousands of people die every day, often for the simple reason that the parent, carer or health worker lacks the information and knowledge they need to save them (www.hifa2015.org)
What makes a health care decision hard?

- Complexity
- Dynamic effects
- High stakes
- Unclear alternatives
- Uncertainty including limited / lack of information
Isn't the provision of health information the most cost-effective approach to our health care problems which can reap huge positive results?
We need:

A good health information system that ensures timely, available, reliable, good quality and comprehensive data and information for decision-making.
Health Information Systems.....

- “...a combination of people, equipment and procedures organised to provide health information to health workers and others in a way that enables them to make informed decisions” (Boerma, 1991).
How do we use information to influence our decision?
Defining problem

- What is issue to be covered?
- What is the problem?
- What decisions need to be taken?

For each of the causes and effects list info and data that will be required

(Hari Srinivas)
Finding information

- What information is needed?
- Where can you get that information?
- Which aspect of the problem will it help
- Which source can provide best information
- In what format?
- Evaluate sources to see which of them provides the best information
NB: you can have unrecorded information in form of experiences and insights
### Four states of information possession

<table>
<thead>
<tr>
<th>Information you know you have</th>
<th>Information you don’t know you don’t have</th>
</tr>
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<tbody>
<tr>
<td>Information you don’t know you have</td>
<td>Information you know you don’t have</td>
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</table>
Processing the knowledge

- Extract and organise information from the various sources
- Which parts from the collected information needs to be used
- Is there any additional data or information needed?
- Present the information in the best possible way that will help you understand situation and make a decision
Collected information is evaluated and integrated for its:

- relevance
- validity
- interconnectedness
Processing the knowledge

- Information Collected
- Useable Information
  - Additional info needed
  - Value-adding to information
- Information required for Decision-making
Taking the decision

- Involve all concerned parties (interactive and inclusive process)
- Form opinion from information for its efficiency and effectiveness
- Did the decision solve the problem?
- You may need to revisit the decision over time and refine to meet changing needs
Taking the decision
Decision Support Systems

- computer-based information systems including knowledge-based systems that support decision-making
- Clinical DSSs are typically designed to integrate a medical knowledge base, patient data and an inference engine to generate case specific advice [Wyatt J, Spiegelhalter D, 1991]
We have a challenge in Africa:

- Promote a culture of information based decision making
- Information often the forgotten “budget line”
- Need for political support/ will
Role of the Information Professional

- Advocate for recognition of health information as an essential part of the health care system.
- Already possess advanced online searching skills, rapid document retrieval and delivery services, and up-to-date knowledge of the world’s medical information resources and networks (Haines, 1999).
- Become a partner in the decision making process.
Thank you!