Exploring bias in decision-making – what does this mean for parents and professionals?

Ann Porter
Aussie Deaf Kids
“We provided parents with unbiased information so they could make an informed decision.”
Unbiased information

Children who are D/HH
• Information about communication options

Patient Decision-making
• Unbiased = “Presentation in a way that places equal weight on positive and negative information and avoids placing judgment on the information”
Cognitive bias

Systematic patterns of deviation from norm or rational thinking
Cognitive bias

- Faulty interpretations
- Inaccurate conclusions
- Mistaken impressions of fact

Systematic patterns of deviation from norm or rational thinking
unbiased information = informed decision
Heuristic processing
• ‘Rules of thumb’
• Subconscious
• Little or no effort

Systematic processing
• Analytical
• Conscious
• Arduous
• If there are several ways of achieving the same goal, people tend to gravitate to the least demanding course of action.

• In the real world, we make systematic errors in our thinking which bias our decision-making. This is subconscious.
I am an expert.
Confirmation bias

“The tendency to search for, interpret, favour, and recall information in a way that confirms one's pre-existing beliefs or hypotheses.”

Optimism bias

“The tendency to be over-optimistic, overestimating favourable and pleasing outcomes”

Shared information bias

“The tendency for group members to spend more time and energy discussing information that all members are already familiar with (i.e., shared information), and less time and energy discussing information that only some members are aware of (i.e., unshared information)”

Overconfidence bias

“Excessive confidence in one’s own answers to questions.”

Stereotyping bias

“Expecting a member of a group to have certain characteristics without having actual information about that individual.”

Blind spot bias

“The tendency to see oneself as less biased than other people, or to be able to identify more cognitive biases in others than in oneself.”

Authority bias

“The tendency to attribute greater accuracy to the opinion of an authority figure (unrelated to its content) and be more influenced by that opinion.”

Anchoring bias
• The tendency to rely too heavily, or "anchor", on one trait or piece of information when making decisions (usually the first piece of information acquired on that subject)

Bandwagon effect
• The tendency to do (or believe) things because many other people do (or believe) the same

Wishful thinking
• Decision making and formation of beliefs based on what might be pleasing to imagine as opposed to beliefs and decision making approaches formed by appealing to evidence, rationality or reality

Framing effect
• Drawing different conclusions from the same information, depending on how that information is presented.

Debiasing strategies
Debiasing strategies

Simply telling people to be aware of their biases doesn’t work
Debiasing strategies

Metacognition/mindfulness
- Thinking about how we are thinking
- Active practice incorporated in and out of the workplace

Playing devil’s advocate
- Deliberately seeking fault with prevailing views of the group

Routine discussion of biases within teams

Patient decision aids
Debiasing strategies

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Patient decision aids
Patient decision aids

• Shown promise in debiasing information provided by the clinician to the patient

• Tools to provide patients with relevant information, improve their knowledge, help them explore what benefits and risks are important to them and encourage patients to participate in the decision-making process.
Patient decision aids

• Information about the condition
• All reasonable options to address the condition
• Based on best available evidence
• Harms and benefits of each option
• Presented in a balanced manner
Best available evidence

- Information should be based on best available evidence
- Best available evidence = based on a high quality synthesis of the available evidence that is relevant to the patient’s clinical situation and acknowledges where uncertainty exists because of the quality or quantity of that evidence.
Balanced manner

- Information should be based on best available evidence...presented in a balanced manner

- **Balance** = complete, unbiased and neutral presentation of the relevant options and the information about those options – in content, in format, and in display
Balance = complete

- Balance = complete, unbiased and neutral presentation of the relevant options and the information about those options – in content, in format, and in display

- Complete = presentation of all the relevant options (which may include the option of “doing nothing”) and the presentation of information on all aspects of those options (i.e. risks, benefits, uncertainties, procedures, consequences).
Balance = unbiased

• Balance = complete, unbiased and neutral presentation of the relevant options and the information about those options – in content, in format, and in display

• Unbiased = presentation in a way that places equal weight on positive and negative information and avoids placing judgment on the information.
Balance = neutral

• Balance = complete, unbiased and neutral presentation of the relevant options and the information about those options – in content, in format, and in display

• Neutral = presentation in a way that places equal weight on positive and negative information and avoids placing a value judgement on the information.
Balance = content, format & display

• Balance = complete, unbiased and neutral presentation of the relevant options and the information about those options – in content, in format, and in display

• Content – what information is provided

• Format and display – how information is presented and displayed
**Presentation of information**

- **Table format**

<table>
<thead>
<tr>
<th>Compare your options</th>
<th>Have surgery for carpal tunnel syndrome</th>
<th>Try other treatments</th>
</tr>
</thead>
</table>
| **What is usually involved?** | * You have local anesthetic, so you are awake but won’t have pain.  
* You go home on the same day.  
* You need to avoid heavy use of your hand for up to 3 months.  
* If you have open surgery on your dominant hand and you do repeated actions at work, you may be able to return to work in 5 to 8 weeks. If the surgery is on the other hand and you do not do repeated actions at work, you may be able to return to work in 7 to 14 days. If you have endoscopic surgery, you may be able to return to work sooner than with open surgery. | * You can try several home treatments to ease symptoms of carpal tunnel syndrome, including:  
  - Rest.  
  - Ice.  
  - A wrist splint.  
  - New ways of doing tasks.  
  - Yoga.  
  * You may get corticosteroids.  
  * If you are pregnant, you can wait to see if the problem goes away after childbirth. |
| **What are the benefits?** | * Surgery can make symptoms get better or go away for most people.  
* It can prevent lasting nerve damage. | * You don’t have the risks of surgery.  
* You may not have to take time off from work.  
* You don’t have the expense of surgery. |
| **What are the risks and side effects?** | * Surgery doesn’t always help.  
* Your symptoms may come back.  
* Major problems from surgery, such as infection or a problem from anesthia, are rare. | * Other treatments might not work.  
* If you have very bad symptoms and wait too long, you could have lasting nerve damage.  
* Temporary increase in pain, or a small chance of nerve damage, after a corticosteroid shot. |
Probabilities

• Probabilistic information presented as numbers rather than words
  • ‘1 in 1000’ rather than ‘low risk’.

• Avoid percentages – use natural frequency format
  • (1 in 5 people)

• Share uncertainty

• Clear reference class – who and what does the risk refer to?
Patient narratives
Patient narratives

Use with great caution in preference-sensitive decision-making
“Unbiased information”
Ann Porter

- Email: ann.porter@aussiedeafkids.org.au