



Te Kaunihera  
Rata o  
Aotearoa

**Medical  
Council of  
New Zealand**

# Managing uncertainty when AI is used in healthcare



# Overview



What does uncertainty in a medical context refer to?



Why is it important to acknowledge that uncertainty exists in medicine?



Suggestions for managing uncertainty when AI is used in patient care



A cautionary tale: IBM Watson Health

# Uncertainty in a medical context



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Medicine is an inexact science.

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There will always be some unknowns in every clinical encounter.

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Uncertainty remains even when health care is high-tech.

# The three most important words in medicine...

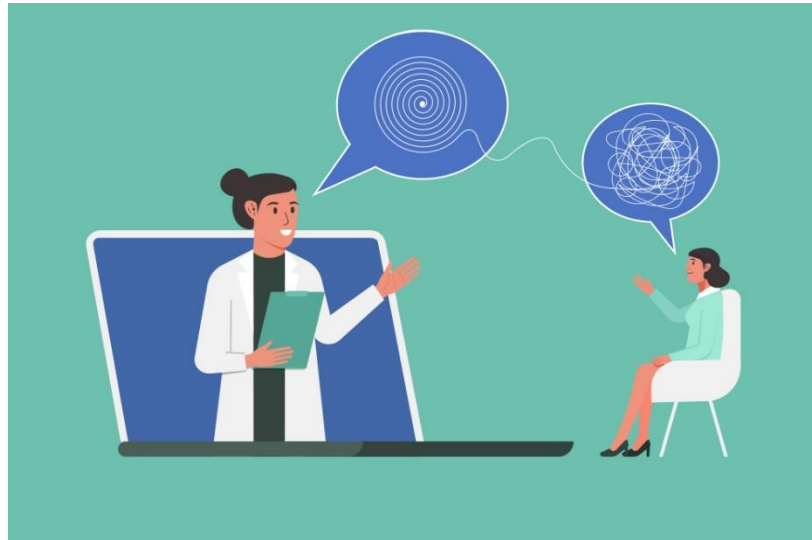


**... I don't know**

我唔知

# Why is it important to acknowledge that uncertainty exists in medicine

- Facilitates dialogue.
- Manages patients' expectations.



# Suggestions for managing uncertainty when AI is used in health care



# Identify one's own cognitive biases

- CB affects how doctors manage clinical encounters
- Awareness of CB is even more crucial when AI is used.
- Ongoing reflection is valuable.





# Resist viewing AI (or any technology) as the panacea for health care



- Good health care also requires:
  - Clear communication
  - Co-ordination of care
  - Collaboration + teamwork.

# Recognise AI's capabilities and limitations

- AI is particularly suited for image-intensive specialties.
- AI could reinforce existing biases and inequities if the input data is biased.
- AI's inner logic could be difficult to uncover and understand.



# Be willing to discuss uncertainty with patients



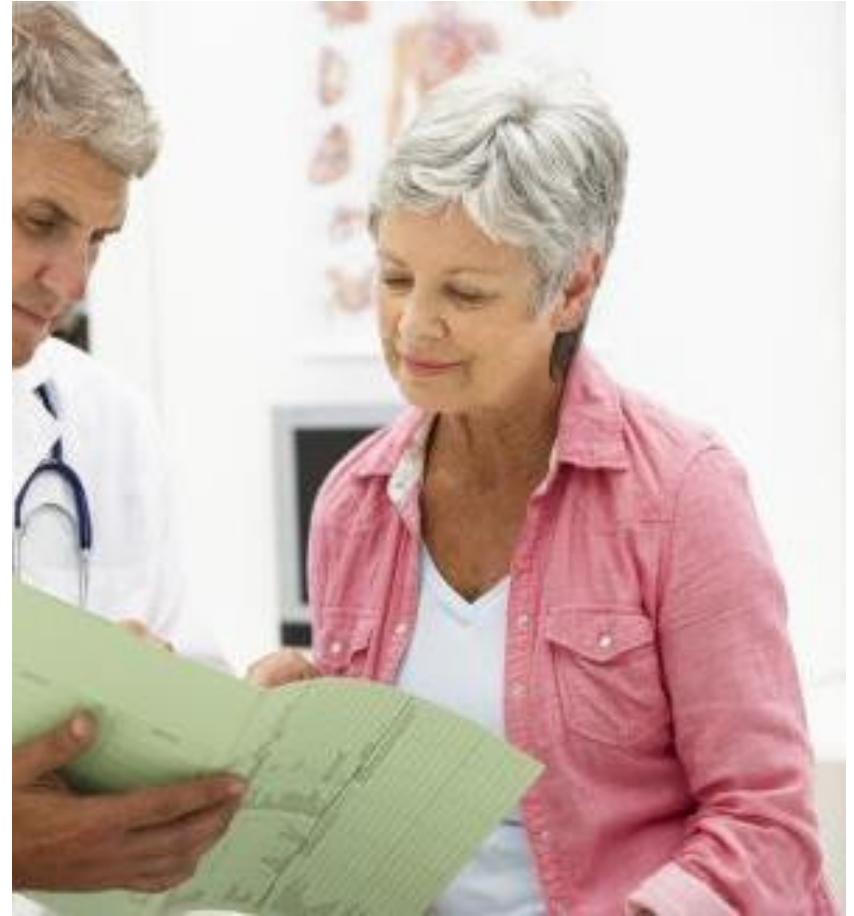
Transparency and trust are essential.



Good bedside manner is vital.

# Facilitate shared-decision making in the face of uncertainty

- Check AI's recommendations.
- Engage with patients.



# Cultivate a tolerance and acceptance of uncertainty

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More clinical information  $\neq$

More tests and treatments.

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Important to steward health resources wisely.



# A cautionary tale



# Lessons from Watson

- Revolution ≠ Reality.
- Replicating a human doctor's expertise is complex.
- Recommendations should be relevant and reliable.
- Ultimately, patients' lives are affected.

# Some closing thoughts

- Uncertainty is inherent in medicine.
- Uncertainty will prevail even with AI.
- Important to understand and manage uncertainty.
- Ensure that the patient remains central.







**Whakahaumaru i te iwi whānui, whakatuarā te kounga o te tikanga rata**  
**Protecting the public, promoting good medical practice**