

GoldNet Research & Teaching Network Event

AI Evidence Tools: Will they transform practice and teaching?

With presentations from:



Dr Ali Davidson
Postdoctoral Research
Fellow, Institute of
Evidence Based
Healthcare, Bond
University. Dietitian



Dr Mitchell Flori
Gold Coast-based GP
Registrar



**Assistant Prof Kieran Le
Plastrier**
Assistant Professor, Faculty
of Health Sciences and
Medicine, Bond University.
Local GP



Professor Nick Zwar
Executive Dean, Faculty of
Health Sciences and
Medicine, Bond University.
Chair of GoldNet Research
and local GP

Chaired by:



Have your registered
your car for parking?



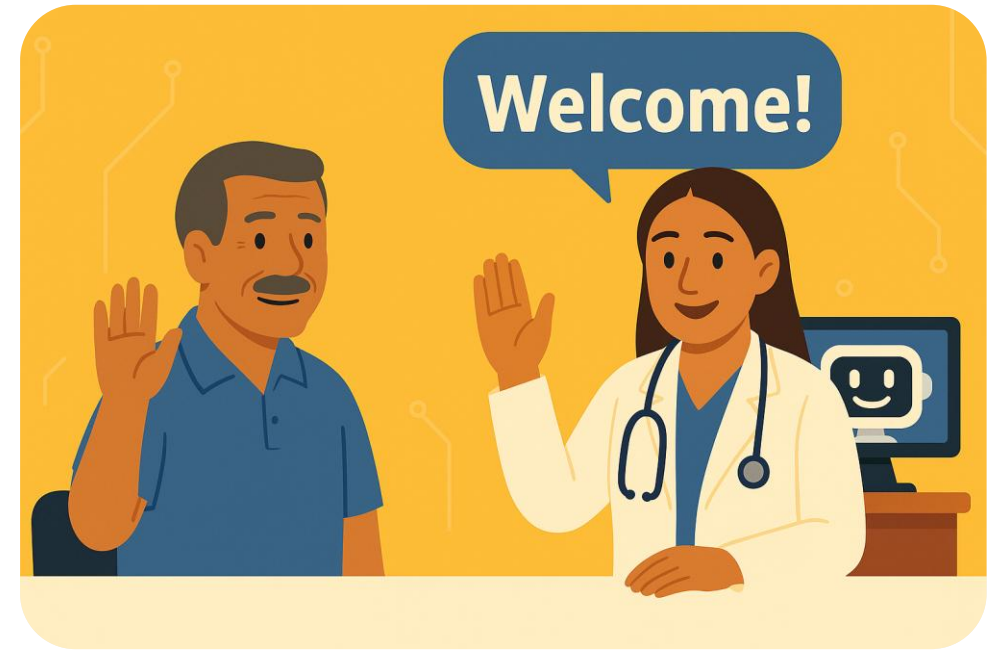


We acknowledge the Kombumerri clan
of the Yugambeh language group as the
traditional custodians of this land.

We pay respect to their Elders –
past and present for their wisdom,
teaching and cultural knowledge.

Artwork *by* Narelle Urquhart 2018

Welcome



Professor Nick Zwar

*Chair of GoldNet Research Steering Committee
Executive Dean of Faculty of Health Sciences and Medicine,
Bond University*

Demonstration using OpenEvidence

Dr Ali Davidson

Postdoctoral Research Fellow, Institute of Evidence Based Healthcare, Bond University. Dietitian

Dr Mitchell Flori

Gold Coast-based GP Registrar, Medical on Miami.





Open Evidence

A practical guide

What is AI

Computer science enabling machines to perform intelligent tasks

Generative and probabilistic instead of deterministic or logical

Machine, Deep, Reinforcement learning and Natural Language processing

Perceive, Reason, Learn, Interact

Scalable, Consistent, Personalisable, Augementable

What is an Agent



Can interpret instructions and autonomously acts within its environment and tool set



Token or text prediction is sufficient to generate instructions



You can equip an LLM with ability to call a tool

Model Context Protocol (MCP) allows for complex tool use like database searching or another agent or AI

Open Evidence – the medical database AI agent



CURRENTLY
AVAILABLE FOR US
AND AU (PAID)



EVIDENCE
RETRIEVAL



USES AI AND
TOOLS TO SEARCH
BASED ON USER
INPUT



GUIDELINE
DISTILLATION



USES AI TO
SUMMARISE A
RESPONSE WITH
REFERENCES

$y = g(x)$
Secant Lines

Tangent Line
T

$x+h$

$$\lim_{h \rightarrow 0} \frac{g(x+h) - g(x)}{h}$$

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

$$f(x) = \lim_{h \rightarrow 0} \frac{(x+h)^2 - x^2}{h}$$

$$= \lim_{h \rightarrow 0} \frac{x^2 + 2xh + h^2 - x^2}{h}$$

$$= \lim_{h \rightarrow 0} \frac{2xh + h^2}{h}$$

$$= \lim_{h \rightarrow 0} h(2x + h)$$

EXAMPLES

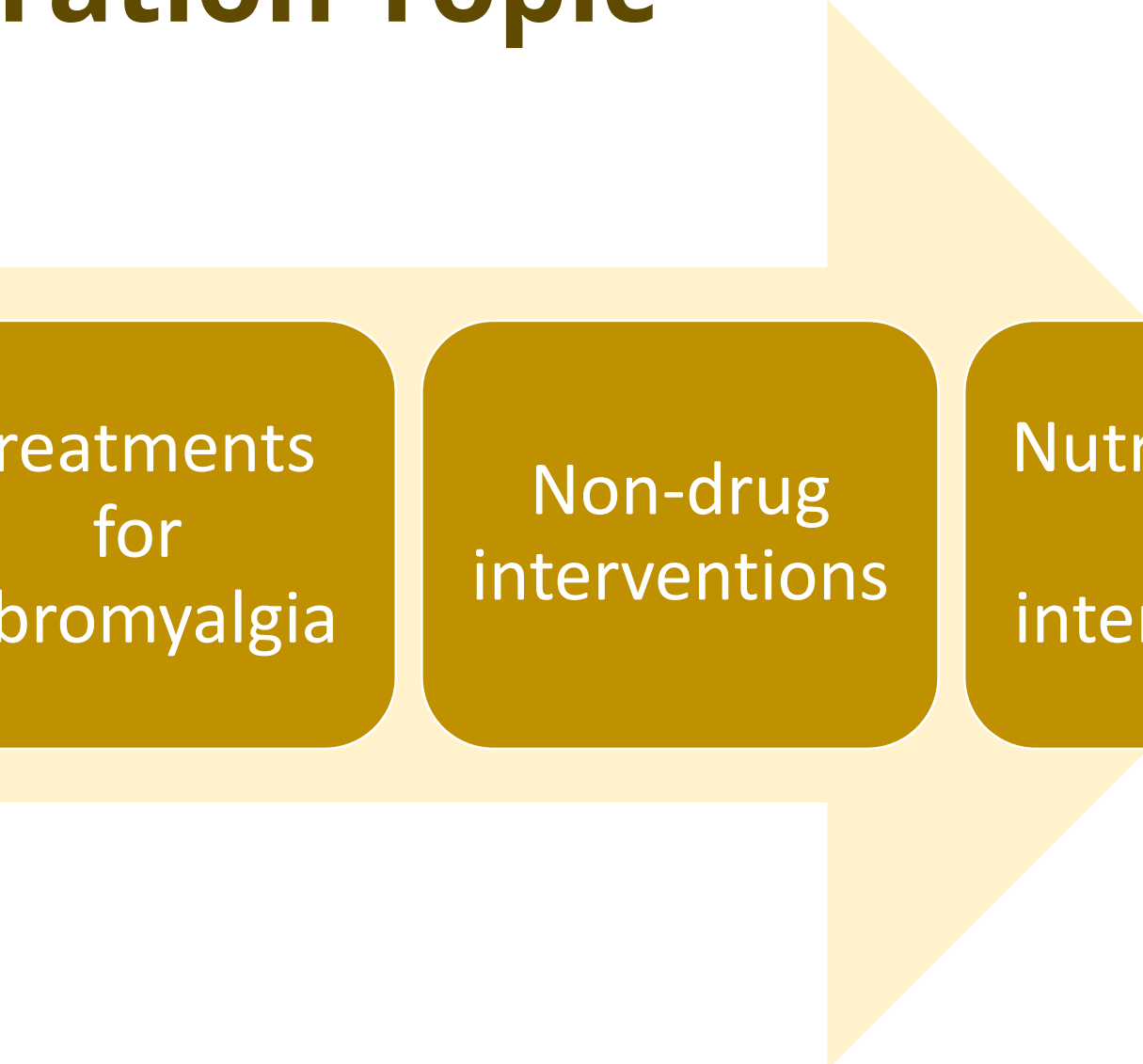


Dangers of AI

Examples

- <https://www.openevidence.com/announcements/mayo-clinic-study-physician-cdm>
- <https://www.openevidence.com/ask/b5a7a94a-b5e7-4a35-a5d7-3ece91ff9c08>
- <https://www.openevidence.com/ask/b3ad1643-dfcc-4479-ae6c-97ab1e9478df>
- <https://www.openevidence.com/ask/d74ceaf9-b3fa-43f5-bdce-79cb50d09e6f>
- <https://www.openevidence.com/ask/9969a872-e9f2-48f6-8cc0-b8ac0b374659>
- <https://www.openevidence.com/ask/9969a872-e9f2-48f6-8cc0-b8ac0b374659>
- <https://www.openevidence.com/ask/cb804db3-4faa-4644-a45e-ff4e1af41b71>
- <https://www.openevidence.com/ask/b6478886-7107-45c4-b6bb-5a4445d2f1f0>
- <https://www.openevidence.com/ask/515b8785-c347-4d60-a194-189889f82cc3>
- <https://www.openevidence.com/ask/2dced20f-219f-4278-b176-0ec05b609475>
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- <https://www.openevidence.com/ask/20fd56dc-64c3-4912-b069-79dd663dab7a>
- <https://www.openevidence.com/ask/80f740a7-4997-4c17-b5c5-9951c777452e>
- <https://www.openevidence.com/ask/9969a872-e9f2-48f6-8cc0-b8ac0b374659>
- <https://www.openevidence.com/ask/d74ceaf9-b3fa-43f5-bdce-79cb50d09e6f>

Registration Topic



Treatments
for
Fibromyalgia

Non-drug
interventions

Nutrition and
diet
interventions

What are the current treatment options for fibromyalgia?

▼ Finished thinking

The current treatment options for **fibromyalgia** are best approached with a multimodal strategy, prioritizing nonpharmacologic interventions as first-line therapy. The American College of Rheumatology and other expert groups recommend **aerobic exercise, cognitive behavioral therapy (CBT), and patient education** as foundational treatments, as these have demonstrated benefit in improving pain, function, and quality of life. Exercise should be individualized and gradually increased, with aerobic and resistance training both supported by evidence.^[1-2]

Pharmacologic therapy is reserved for patients with persistent symptoms despite optimal nonpharmacologic management. The only medications approved by the US Food and Drug Administration for fibromyalgia are **duloxetine, milnacipran, and pregabalin**. These agents provide modest pain relief for a subset of patients, with duloxetine and milnacipran (serotonin-norepinephrine reuptake inhibitors) and pregabalin (an alpha-2-delta ligand) each associated with clinically meaningful pain reduction in approximately 10% of patients over 4–12 weeks. Amitriptyline and cyclobenzaprine are used off-label, with some evidence for benefit, but are limited by side effects.^{[2][4][6-7]}

Other pharmacologic options, such as gabapentin, tramadol, and naltrexone, have been studied but lack robust evidence or are not routinely recommended.^{[2][4][7-8]} Nonsteroidal anti-inflammatory drugs and opioids are not effective and are discouraged due to lack of benefit and potential harm.^{[1][4]}

Combination therapy, integrating pharmacologic and nonpharmacologic modalities, is often necessary for optimal symptom control.^{[2][7]} Novel and investigational treatments, including cannabinoids and digital health interventions, remain under study and are not standard of care.^{[2][8]} ■

What are the nonpharmacologic interventions for fibromyalgia?

▼ Finished thinking

The most up-to-date consensus in the medical literature is that **nonpharmacologic interventions recommended for the management of fibromyalgia** include **aerobic exercise**, **cognitive behavioral therapy (CBT)**, and **patient education** as first-line therapies. The American College of Rheumatology and other expert groups emphasize these interventions due to their consistent benefit in improving pain, function, and quality of life.^[1-3]

Aerobic exercise (such as walking, cycling, or swimming) is the most robustly supported intervention, with evidence for improvement in pain, fatigue, sleep, and overall function. Exercise programs should be individualized and gradually increased in intensity and duration. **Strengthening and mind-body exercises** (e.g., tai chi, yoga, qigong) also show benefit, particularly for fatigue and sleep quality.^{[4][6][7-8]}

Cognitive behavioral therapy (CBT) is the best-studied psychological intervention, with evidence for improvement in pain, sleep, mood, and function. Other psychological therapies, such as mindfulness-based stress reduction and biofeedback, may also be beneficial.^{[4-5][9][6]}

Patient education about fibromyalgia, symptom management, and self-management strategies is essential and should be provided early in the course of care. **Multidisciplinary approaches** that combine exercise, psychological therapy, and education are associated with greater improvements in function and quality of life than single interventions alone.^{[1-2][10][6]}

Additional nonpharmacologic options with supportive evidence include **balneotherapy**, **massage**, and **complementary exercise modalities** (e.g., dance, tai chi), though these should be tailored to patient preference and access. Sleep hygiene and pacing of activities are also commonly recommended as adjunctive strategies.^{[4][8][10]} ■

What are the current nutrition and diet interventions for fibromyalgia?

There is currently **no specific diet therapy recommended as a primary treatment for fibromyalgia**. However, nutritional and dietary interventions are increasingly considered as adjuncts to established nonpharmacologic treatments such as aerobic exercise, cognitive behavioral therapy, and patient education.

Weight management is emphasized, as obesity is associated with increased symptom severity and poorer quality of life in fibromyalgia. Diets rich in high-antioxidant foods (fruits, vegetables), high-fiber content, high-quality proteins, and healthy fats may provide symptomatic benefit. Some studies suggest that plant-based diets, Mediterranean diets, and low-processed food patterns may reduce pain and improve function, but the evidence is limited by small sample sizes and methodological heterogeneity.^[1-4]

Elimination diets (e.g., gluten-free, low FODMAP, monosodium glutamate/aspartame-free) and vegetarian/vegan diets have shown potential benefit in small trials, particularly for patients with comorbid gastrointestinal symptoms or suspected food sensitivities. However, these approaches should be individualized, as robust evidence for their routine use is lacking.^[2-5]

Nutritional supplementation (e.g., vitamin D, magnesium, iron, probiotics) has been studied, but results are inconsistent and do not support routine supplementation unless a deficiency is documented.^{[2][6-7]}

In summary, **weight control, a diet high in antioxidants and fiber, and minimizing processed foods** may be beneficial as part of a comprehensive, multidisciplinary approach to fibromyalgia management, but no single dietary intervention is universally recommended. Dietary changes should be tailored to individual patient needs and preferences, and always integrated with established nonpharmacologic therapies.^{[1-4][6-7]} ■

Using AI with Learners in Your Consultation

Assistant Prof Kieran Le Plastrier

*Assistant Professor, Faculty of Health Sciences and Medicine, Bond University.
Local GP*

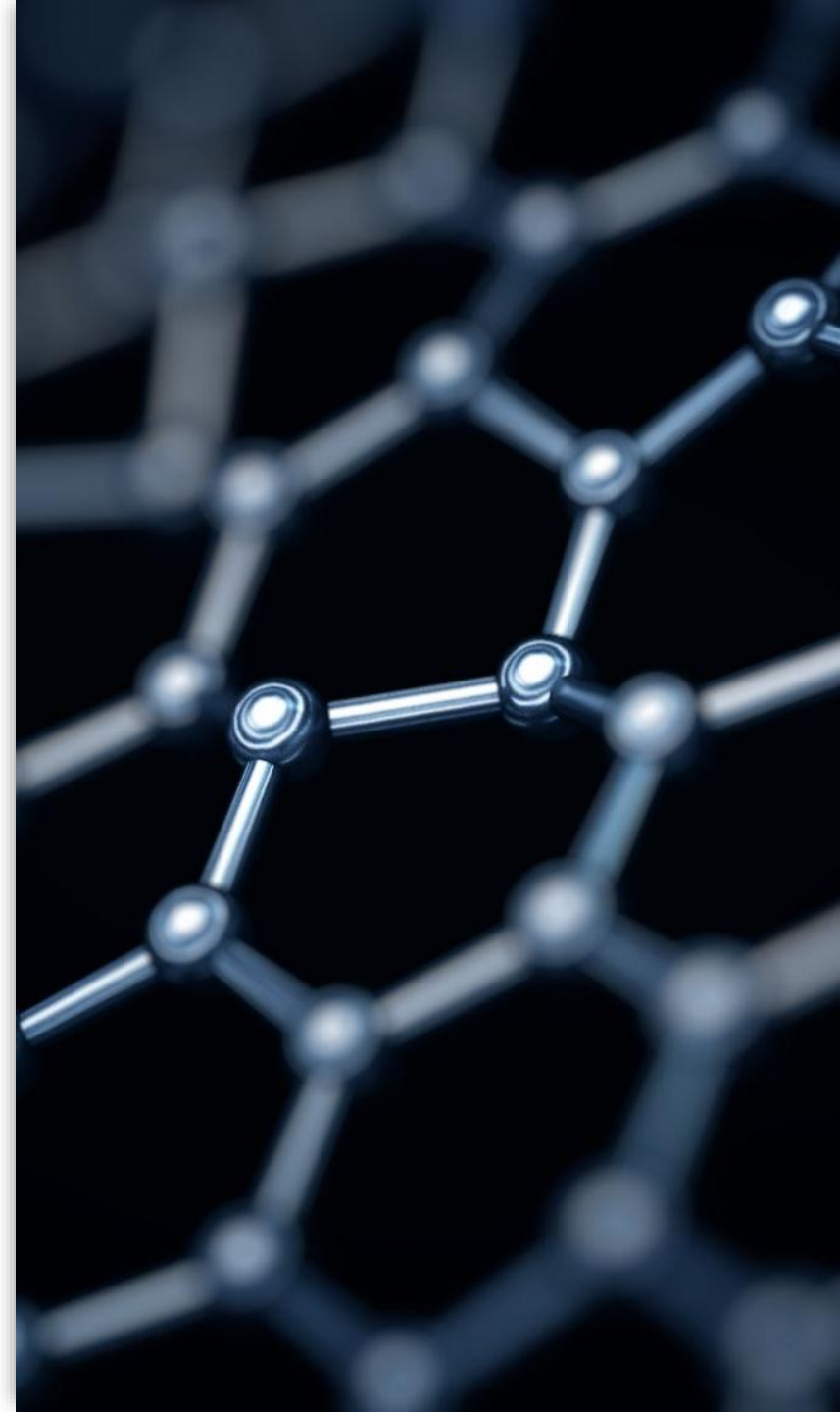


Generative AI for Rapid Evidence Review in Clinical Practice

Clinicians face
information overload
— thousands of new
studies weekly

Gen AI tools can:

- Summarise up-to-date clinical research
- Support decision-making at point-of-care
- Reduce time spent searching guidelines



What Can Generative AI Do — and Not Do?

- Strengths:
 - Saves time summarising research
 - Surfaces guideline-based responses
 - Offers plain language explanations for patient discussions
- Opportunities:
 - Enhanced decision support
 - Continuing education prompts
 - Better shared decision-making
- Risks/Limitations:
 - May hallucinate or cite incorrect studies
 - Not always updated with latest local guidelines
 - Requires clinician judgment: not a substitute for expertise





Putting OpenEvidence to the Test

Instructions:

- Visit: openevidence.com

Ask:

- *What's the best treatment for mild hypertension in over-65s?*
- *Is semaglutide effective for weight loss in people with osteoarthritis?*

Discuss:

- Compare this to an UpToDate Search and RACGP Search. Are the sources cited reliable?
- Is anything missing or unclear?
- Would you feel confident acting on the summary?

Panel Discussion

Our Panel:



Dr Jamie-Lea Whyte
GP at The Varicose Vein Clinic.
Co-chair of GPGC



Dr. Tanisha Jowsey
Associate Professor, Faculty of Health
Sciences & Medicine, Bond University.



Dr Ali Davidson
Postdoctoral Research Fellow, Institute of
Evidence Based Healthcare, Bond
University. Dietitian



Dr Mitchell Flori
Gold Coast-based GP Registrar,
Medical on Miami.



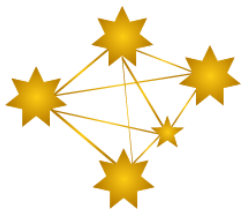
Dr Kieran Le Plastrier
Assistant Professor, Faculty of Health Sciences
and Medicine, Bond University. Local GP

Chair:



Professor Nick Zwar
Executive Dean, Faculty of
Health Sciences and Medicine,
Bond University
Chair of GoldNet Research
Steering Committee

Current Projects



Upskilling in cancer nutrition care: Co-design of a resource for primary care dietitians

You are invited to participate in a research study aimed at co-designing a resource to support primary care dietitians in providing nutritional care for people diagnosed with cancer.

Involvement includes

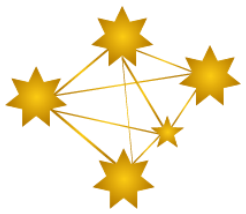
- taking part in up to three 90 min co-design workshops lasting approx.
- Each workshop will focus on a different stage of the project, and all are equally important to its success.
- You will be offered an e-gift card valued at \$75 per workshop.

Ideally, participating in all three will help ensure the greatest impact and contribute to creating a resource that will ultimately benefit cancer survivors.



Scan the QR code for more

Current Projects



Evaluating the use of generative AI to improve the quality of discharge summaries

Calling All Junior Doctors, GPs & Other Specialists!

Can AI write discharge summaries better with doctors? Let's find out—with your help!

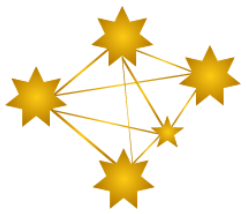
Join our study comparing **AI-assisted discharge summaries** to those written by humans alone. No, the robots aren't replacing us (yet), but we want to see if AI can **support** better patient care and reduce our never-ending paperwork!



Scan the QR code for more



Current Projects



Cancer Survivorship Care in General Practice: a national survey

- This anonymous survey aims to assess **GP** and GP trainee **comfort** with providing **cancer survivorship care** in adult cancer survivors.
- The survey should take no more than 12-15 mins to complete
- All participants are offered the chance to win one of three **\$100 gift vouchers** of their choice.



Scan the QR code for more



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University



Caring
Futures
Institute

Get Involved!



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**How to become a
Clinical Supervisor**