Tōpūtanga Tapuhi Kaitiaki o Aotearoa
NEW ZEALAND NURSES ORGANISATION
Kaitiaki NURSING NEW ZEALAND

PROFESSIONAL

‘Siri, should I take this pill?’ – assessing which AI-driven assistant is best

By Charon Lessing, Marie McKay, Shannon Foster and Deon Johnston

May 19, 2026

Can you take garlic with your lisinopril? As artificial intelligence makes inroads with virtual assistants, researchers examine its efficacy at helping older adults with medicinal questions.

Which AI-assisted virtual assistant offered the best advice when it came to medicines and natural supplements? Photo: AdobeStock

As clinicians and members of the public gain increasing access to artificial intelligence (AI)–enabled tools such as the notetaking applications recently approved by Te Whatu Ora-Health NZ [1] (HNZ) and systems capable of rapidly synthesising emerging evidence, older adults are frequently unable to benefit from these innovations.

Barriers including complex password requirements, visual limitations such as small font sizes, concerns about damaging the device, and exposure to overwhelming volumes of unsolicited content can restrict older adults' ability to use digital technologies to find reliable health information.[2]

Voice assistants (VAs) have been available in Aotearoa since 2011, beginning with the release of Siri on the iPhone 4, followed by the wider availability of Amazon's Alexa as a standalone Echo smart speaker from 2017.[3]

These technologies gained particular uptake among older adults due to their simplicity, hands-free operation and capacity to support everyday tasks such as setting reminders, accessing weather updates, listening to radio content and answering general knowledge queries.

How do natural supplements interact with the likes of blood thinner warfarin? We asked the likes of Siri and Alexa. Photo: AdobeStock.

Although recent technological development has been dominated by advances in chatbots and generative AI (which generates/creates content), resulting in a relative decline in investment in voice assistant platforms, this trend appears to be shifting.

New iterations of VA technologies are currently under development, with several releases scheduled for this year, signaling renewed emphasis within the sector.[4]

Despite their growing presence in domestic settings, relatively little research has examined the safety and accuracy of voice assistants when providing health-related information.

In 2022, the quality of responses generated by Alexa, Siri, and Google Assistant for queries concerning medicines and natural health products in New Zealand was assessed using a scoring algorithm validated in previous studies.[5] [6]

> **'The findings suggest that voice assistants may offer older adults a convenient, accessible means of obtaining information about health conditions and natural remedies.'**

Across devices, performance was generally favourable although notable limitations were observed.

The Auckland University of Technology research group evaluated each VA using a set of questions related to commonly-used natural health products, with particular attention to potential medicine/supplement interactions and relevant cautions.

Table 1: Matrix of natural remedy questions asked of the virtual assistants

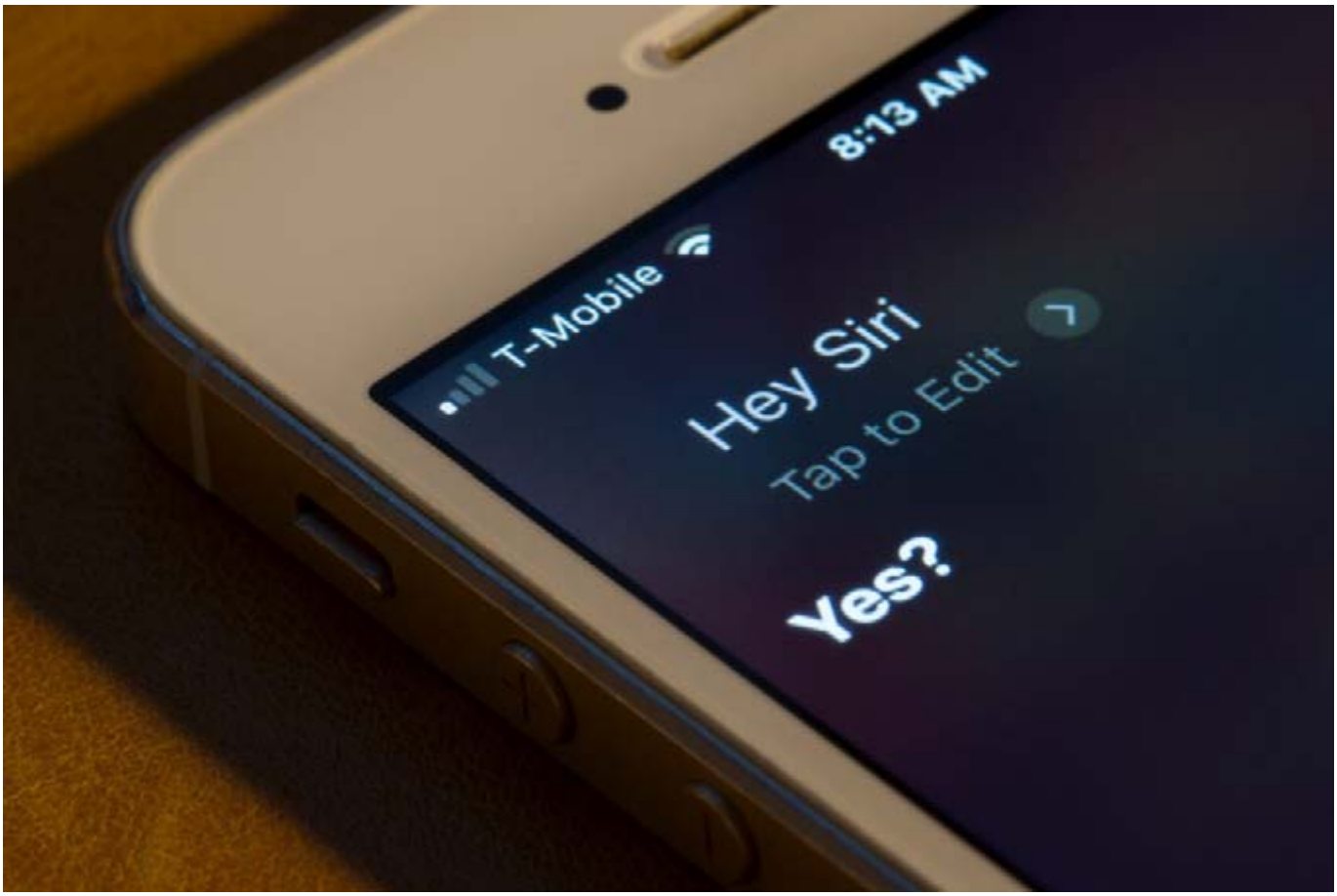
A. In health, what is this substance used for?	**B. Can I take this substance with warfarin?** [a]	**C. Can I take this medicine with the substance in A?**	**D. Can I treat this condition with the substance in A?**	**E. If I am/have this condition, can I take the substance in A?**
1. garlic	garlic	lisinopril	high blood pressure	pregnant
2. fish oil	fish oil	dalteparin	dyslexia	stroke
3. St John's wort	St John's wort	sumatriptan	depression	HIV infection
4. turmeric	turmeric	famotidine	arthritis	gastric ulcer
5. melatonin	melatonin	buspirone	insomnia	pregnant
6. glucosamine	glucosamine	simvastatin	arthritis	diabetic
7. cranberry	cranberry	trimethoprim	urinary tract infection	kidney stones
8. zinc	zinc	alendronate	prevent a cold	diabetes
9. echinacea	echinacea	digoxin	prevent a cold	asthma
10. probiotic	probiotic	ciclosporin	colic in my baby	immune compromised

[a] *modified to 'blood thinners' as none of the VA could recognise 'warfarin'*

Two clinicians—a registered nurse and a pharmacist—independently assessed each response using the New Zealand Formulary (NZF) as the principal reference standard, resolving discrepancies through consensus.

Siri and Google Assistant demonstrated the highest levels of verbal comprehension and clarity. Siri successfully interpreted 96 per cent of spoken queries, with Google Assistant achieving 86 per cent. Alexa, by contrast, recognised only 42 per cent of the questions, often failing to interpret medicine names or medical terminology.

When responses were generated, general information about natural health products was typically accurate and supported by credible, non-commercial sources.



Hey Siri, should I try this pill? Photo: AdobeStock

More than half of the 65 sources cited across all devices were classified as either 'expert with low risk of bias' or 'evidence based', with relatively few references originating from high bias sources such as promotional websites.

Performance was more variable for questions involving medicine interactions. None of the devices recognised the term warfarin, necessitating modification of the query to blood thinners.

With this adjustment, Siri achieved complete comprehension (100 per cent), followed by Google Assistant (90 per cent), whereas Alexa provided a response in only 40 per cent of cases.

When the question was understood, accuracy scores ranged from 4.0 (Alexa, mean 4.5) to 6.0 (Siri, mean 5.7) out of a maximum score of 6.

Scoring accuracy

A maximum of 6 possible points were awarded for understanding the question and providing a response (0 or 1), the source of the answer (0 or 1 depending on likely potential for commercial bias), the underlying resource used to provide an answer (0, 1 or 2 points depending on the evidence base) and finally the accuracy versus NZ Formulary (0, 1 or 2 points).

Comparable results were observed for the remaining supplement/medicine interaction questions. Siri provided responses for eight of 10 questions, Google Assistant for half, and Alexa for none.

Voice assistants shouldn't just be for the young when it comes to seeking health advice. Photo: AdobeStock

When answers were provided, both Siri and Google Assistant achieved near maximum accuracy (scores of 6). Similar patterns were observed for caution related queries.

Table 2: Summary of findings

Voice Assistant (VA)	**Alexa**	**Google Assistant**	**Siri**
VA understood question and provided answer – overall	21/50 (42%)	43/50 (86%)	48/50 (96%)
Mean score – overall	2.1 (4.9) *	4.8	5.3
VA understood question and provided answer -warfarin	4/10	9/10	10/10
Mean score – warfarin interaction	4.5*	5.6	5.7
VA understood question and provided answer – interaction	0/10	5/10	8/10
Mean score – interaction	–	5.8*	5.8*
VA understood potential caution	2/10	9/10	10/10
Mean score potential caution	5.5*	5.3*	5.5

VA understood question on use/place in therapy	5/10	10/10	10/10
Mean score use/place in therapy	5.0*	5.6	5.4

** Mean score for answers where the question was understood; out of maximum possible 6*

Implications and future directions

The findings suggest that voice assistants may offer older adults a convenient, accessible means of obtaining information about health conditions and natural remedies.

When the VA successfully interpreted the spoken query, the resulting information was generally accurate and derived from reputable sources.

However, the study also identified key areas requiring improvement, particularly in relation to speech recognition and comprehension.

For older adults who rely on voice activated technology due to visual or functional limitations, repeated misinterpretation may pose a substantial barrier to effective use. Moreover, given the high prevalence of polypharmacy in this population, failures in comprehension of medicine-related questions could have safety implications.

As AI-driven technologies continue to evolve, next generation voice assistants have the potential to function as trusted tools for supporting health information seeking among older adults.

Ensuring accuracy, safety, and user-centered design will be essential as reliance on these systems increases.

Ongoing evaluation of both the functionality and the clinical accuracy of emerging VA models will be crucial as new versions become available.

Charon Lessing PhD, **Marie McKay DipN, MEd**, **Shannon Foster MEd** and **Deon Johnston DipIS** are from the faculty of health and environmental sciences at Auckland University of Technology's school of community and public health.

References

1. Health New Zealand | Te Whatu Ora. (2025). Generative AI and Large Language Models (https://www.healthnz.govt.nz/health-professionals/guidance-standards/topic/digital-technologies/using-generative-ai-and-large-language-models).
2. Khan S, Webster S., Puxty J., Robertson M. (2026). Key Challenges and Barriers to Digital Literacy for Older Adults: Scoping Review (https://pubmed.ncbi.nlm.nih.gov/41838931/). *JMIR publications*.
3. Slabbert B. (2018). Amazon reveals Echo NZ prices and Alexa's Kiwi jokes (https://www.stuff.co.nz/technology/gadgets/100667451/amazon-reveals-echo-nz-prices-and-alexas-kiwi-jokes). *Stuff*.
4. Nellis S. (2025). Apple says some AI improvements to Siri delayed to 2026 (https://www.reuters.com/technology/apple-says-some-ai-improvements-siri-delayed-2026-2025-03-07/). *Reuters*.

5. Alagha EC., Helbing RR. (2019). Evaluating the quality of voice assistants' responses to consumer health questions about vaccines: an exploratory comparison of Alexa, Google Assistant and Siri (https://pubmed.ncbi.nlm.nih.gov/31767629/). *BMJ Health Care Inform* 26(1).
6. Boyd M., Wilson N. (2018) Just ask Siri? A pilot study comparing smartphone digital assistants and laptop Google searches for smoking cessation advice (https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0194811). *PLOS One* 13(3).