

Understanding, Trust, Awareness, and Readiness for Artificial Intelligence in Arthritis Care: Results From a National Patient Survey

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BACKGROUND

Artificial intelligence (AI) is rapidly transforming health care, yet little is known about how people living with arthritis perceive and interact with AI. As these technologies become embedded in daily life, it is important to understand patient readiness to engage with such tools.

AIM

To examine how people living with arthritis engage with AI, their understanding of AI tools, levels of trust and confidence, and informational needs.

METHODS

A 23-question online survey was conducted by Arthritis Consumer Experts (ACE) from June 18, 2025 to August 10, 2025.

The survey was primarily shared through our email list and social media.

The survey included closed- and open-ended questions asking people living with rheumatic conditions about:

- Sociodemographic variables
- Understanding of AI
- Current use of AI
- Awareness of specific clinical applications
- Trust in AI
- Confidence in AI-generated recommendation
- Gaps in knowledge

Quantitative responses were summarized descriptively, while qualitative comments were analyzed for themes reflecting key concerns.

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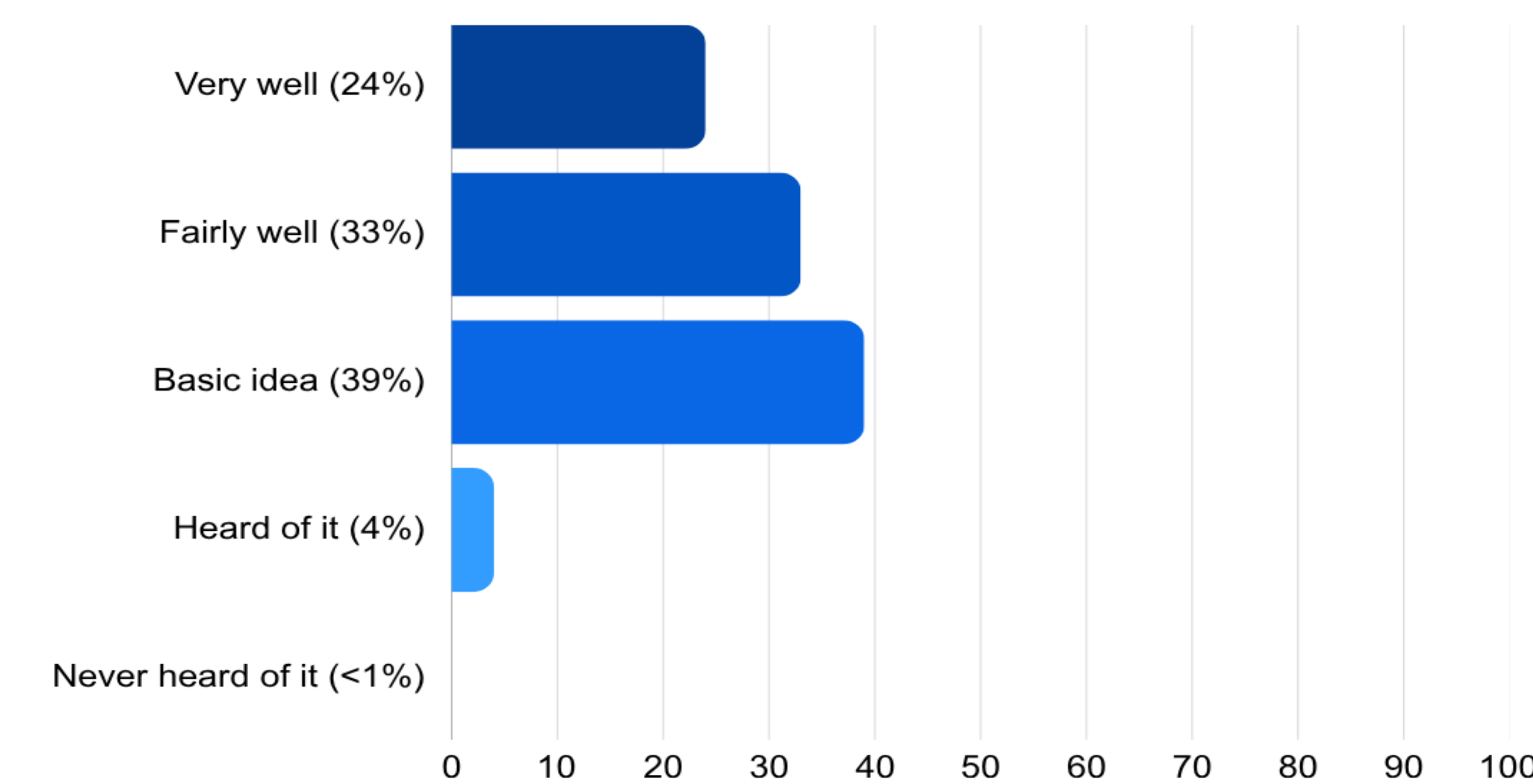
*Please note the (%) in the JHI are reported as absolute values

RESULTS

A total of 282 respondents completed the survey

- 266 (94%) identified as a patient living with rheumatic disease
- The majority were women (83%), university/college educated (72%), living in urban centers (70%)
- 2% identified as Black, 6% as Indigenous, 7% as people of colour

Figure 1: Understanding of AI



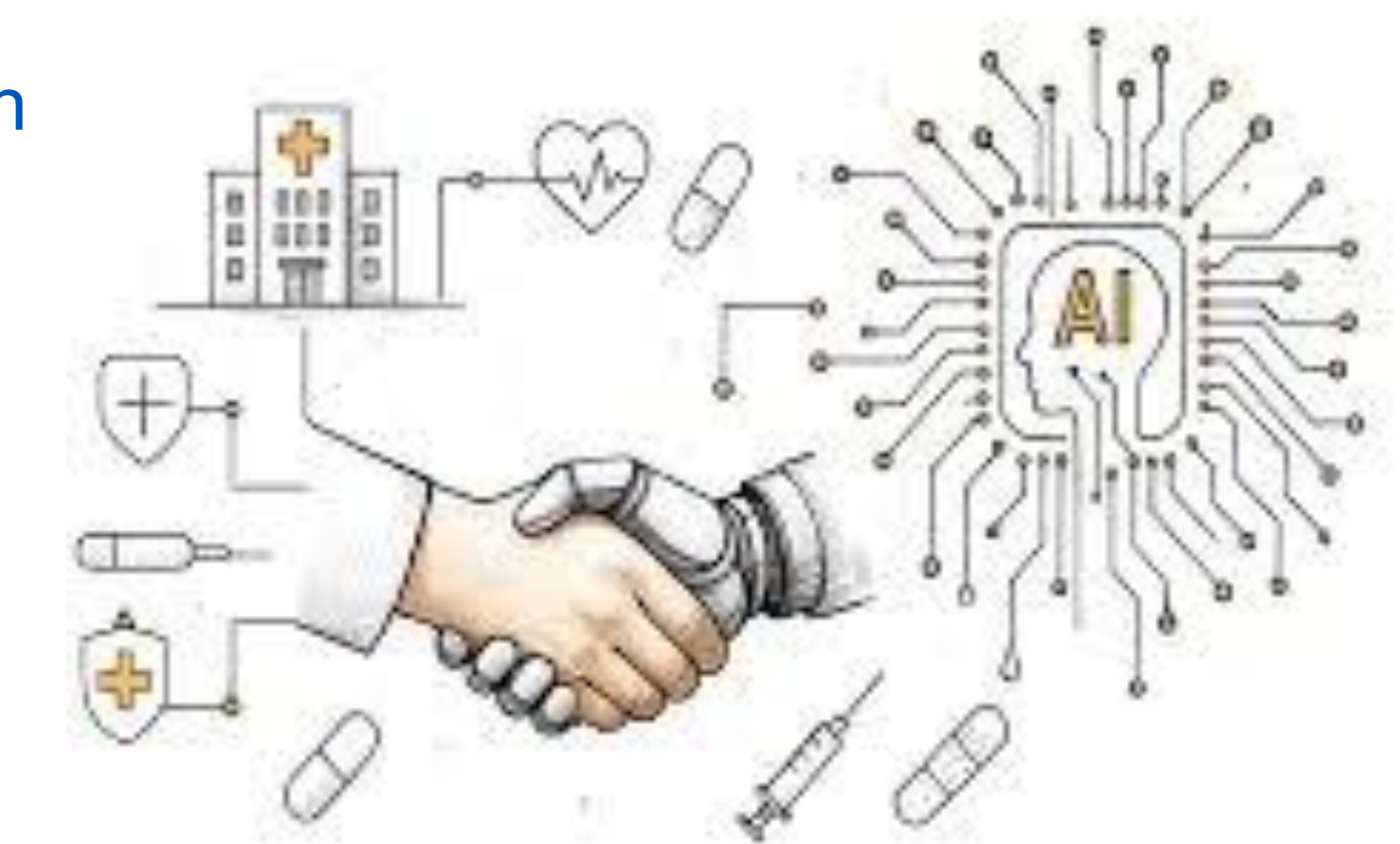
Caption: Respondents were asked: "Do you know what artificial intelligence (AI) is?"

Current Use and Specific Clinical Applications

- 32% of respondents reported using AI-powered tools in their arthritis care
- The most well-recognized were AI scribes (31%), virtual assistants (25%), diagnostic tools (22%), and symptom tracking tools (18%).
- On the other hand, 46% of respondents were 'unsure' how AI is used in arthritis care.

Trust in AI

- Respondents reported moderate-levels of trust in AI to:
 - Accelerate the development of new therapies (78%)
 - Identify possible causes of arthritis (78%)
 - Predict disease flares (78%)
 - Improve access to arthritis care in underserved communities (75%)
 - Detect arthritis (73%)

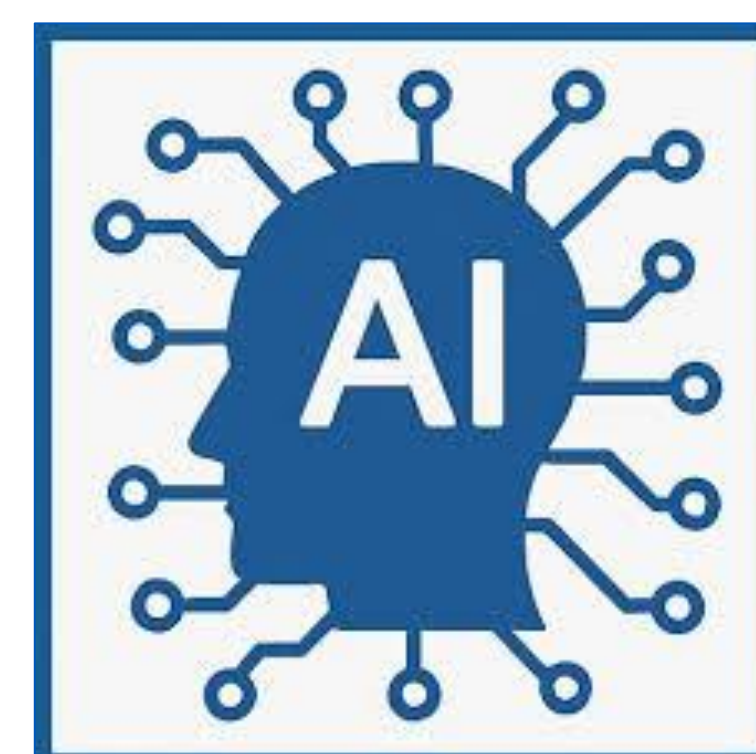


Others voiced concerns about inaccurate health information, lack of human connection, privacy, bias and environmental impact.

Confidence and Gaps in Knowledge

- Overall confidence in AI was low. Factors that would improve confidence included:
 - Assurance from health care provider (72%)
 - Research and science that supports the use of the AI-driven tools (71%)
 - Transparency regarding the dataset used to train AI (68%)
 - Public policies and regulations to protect patients (63%)
 - Easy-to-understand instructions (55%)

CONCLUSIONS



Our national survey demonstrates that while people living with arthritis are curious and reasonably optimistic about AI in arthritis care, important concerns remain:

- Participants viewed AI as a tool to complement, rather than replace, clinician expertise.
- Clear and consistent communication about how AI is being integrated into arthritis care was seen as critical.
- Patient perspectives must be meaningfully integrated into the development, regulation, and implementation of AI in rheumatology.

ACKNOWLEDGEMENT

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