



Board Education: Artificial Intelligence in Health Insurance and Care Delivery

Background information

Health plans and health care providers are rapidly deploying Artificial Intelligence (AI) technologies across a diverse range of applications that directly and indirectly impact members. In March 2025, all eight CalPERS health insurance carriers reported that they have either implemented or are considering implementing AI applications. In 2025, the American Medical Association reported that 2 in 3 physicians are now using health AI, a 78% increase from 2023.¹

The excitement surrounding AI is not unjustified. AI is being used to improve outcomes by enabling faster, more accurate diagnoses, personalizing treatment plans, predicting health risks for early intervention, and improving access through virtual assistants and remote monitoring. It is also streamlining administrative tasks, such as prior authorizations and medical record transcription, with the promise of allowing providers to focus more on patient care. In health insurance, AI is being used to improve efficiency by automating claims processing, providing real-time prior authorizations, detecting fraud, and using chatbots to improve benefits navigation and customer service.

While AI offers promising benefits, it also has the potential to negatively impact member experience without proper oversight. For instance, a 2023 investigation by STAT News alleged that UnitedHealth Group and its subsidiary Optum had over relied on recommendations from a proprietary AI algorithm to prematurely cut off or deny access to post-acute care for its Medicare Advantage populations.²

This July 2025 board education session will explore the emerging opportunities and challenges that AI presents for CalPERS, our members, and our health plans. Joining the discussion are two distinguished experts:

- **Dr. Christina Silcox**, Research Director for Public Health at the Duke-Margolis Institute for Health Policy, whose work focuses on designing and implementing policy solutions to advance innovation in health and health care and improve regulation, reimbursement, and long-term evaluation of medical products, with a focus on digital health and AI.
- **Dr. Keisuke Nakagawa**, Director of Strategic Impact and Growth at UC San Diego's Center for Health Innovation, who brings expertise in the co-development of novel technologies with private and public entities, validation in clinical settings, and maximizing impact through venture, operations, and policy initiatives.

¹ 2 in 3 physicians are using health AI—up 78% from 2023. American Medical Association. February 26th, 2025. <https://www.ama-assn.org/practice-management/digital-health/2-3-physicians-are-using-health-ai-78-2023>

² Denied by AI: How Medicare Advantage plans use algorithms to cut off care for seniors in need. STAT News. March 13th, 2025. <https://www.statnews.com/2023/03/13/medicare-advantage-plans-denial-artificial-intelligence/>

What is AI and Machine Learning?

AI encompasses a family of computer algorithms that can be trained to solve problems that typically require human intelligence by recognizing and replicating patterns in training data. Machine Learning (ML) is a subset of AI that encompasses the processes, techniques, and algorithms used to train an AI. One of the earliest practical applications of ML was Optical Character Recognition (OCR), algorithms trained to read and digitize handwritten or printed text, such as doctors' notes or patient intake forms. ML technology has been widely used to streamline administrative tasks in health care and improve patient outcomes. Applications include:

- Rapidly and accurately analyze medical images to assist in detecting early-stage diseases
- Predicting the progression of disease given a patient's test results and biometrics
- Assessing a patient's risk of disease or hospital readmission
- Automating aspects of health insurance fraud detection, claims processing, and prior authorization

What is Generative AI (GenAI)?

GenAI is a type of AI designed to generate new content like text, images, videos, and sound based on patterns it has learned from training data. One of the most famous examples of GenAI is ChatGPT, a text-based AI model (also known as a Large Language Model or LLM) trained on vast amounts of language data, including books, articles, and online text repositories.³ ChatGPT generates human-like text by iteratively predicting and assembling words that fit the context of your query, one word at a time, like a sophisticated autocomplete algorithm.

Though text-based GenAI models can appear to possess knowledge and reasoning ability, in reality, they do not understand the information they generate. This can lead to accuracy issues, as GenAI models cannot fact check their own outputs,⁴ and overreliance or overtrust problems can arise if users accept GenAI-generated output without sufficient scrutiny.⁵ Incorporating GenAI output into policy analysis, decision-making, or other processes without sufficient caution can have real-world consequences. For example, the Washington Post alleged that a 2025 report from the U.S. Department of Health and Human Services was AI generated after discovering it contained fake scientific citations.⁶

GenAI is being deployed by health care organizations for applications such as:

- Automating provider notes by processing recordings of patient encounters
- Automating provider responses to prior authorization denials or modifications of care
- Chatbots to help members navigate their health plan benefits

How CalPERS is Responding to the Rapid Adoption of AI in Health Care

CalPERS is proactively addressing the growing use of AI in health care through initiatives aimed at increasing transparency and accountability. In March 2025, CalPERS compiled an inventory of Artificial Intelligence (AI) solutions that CalPERS health plans are incorporating into their lines of business. As shown in **Figure 1**, these technologies have a diverse range of applications. Most of these solutions have not yet been fully deployed and

³ *Inside the secret list of websites that make AI like ChatGPT sound smart.* The Washington Post. April 19th, 2025. <https://www.washingtonpost.com/technology/interactive/2023/ai-chatbot-learning/>

⁴ *The perils and promises of fact-checking with large language models.* Frontiers in Artificial Intelligence. February 2024. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10879553/>

⁵ *Trust and reliance on AI — An experimental study on the extent and costs of overreliance on AI.* Computers in Human Behavior. November 2024. <https://www.sciencedirect.com/science/article/pii/S0747563224002206>

⁶ *White House MAHA Report may have garbled science by using AI, experts say.* The Washington Post. May 29th, 2025. <https://www.washingtonpost.com/health/2025/05/29/maha-rfk-jr-ai-garble/>

are still in the development cycle. As shown in **Figure 2**, only around 1/3rd of these solutions were confirmed to be fully deployed in production.

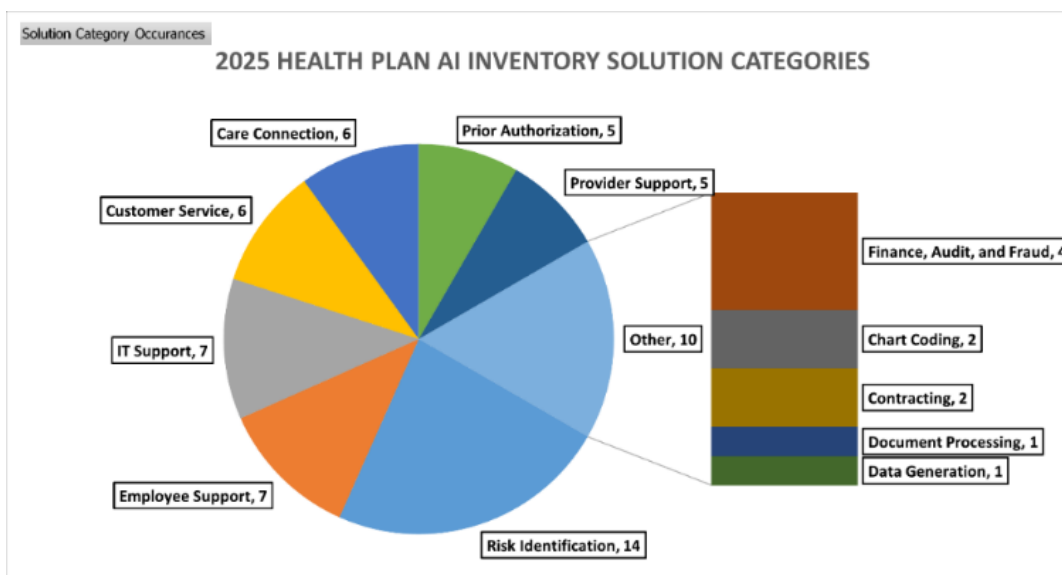


Figure 1. AI solution category distribution for the 2025 CalPERS Health Plan AI Inventory.

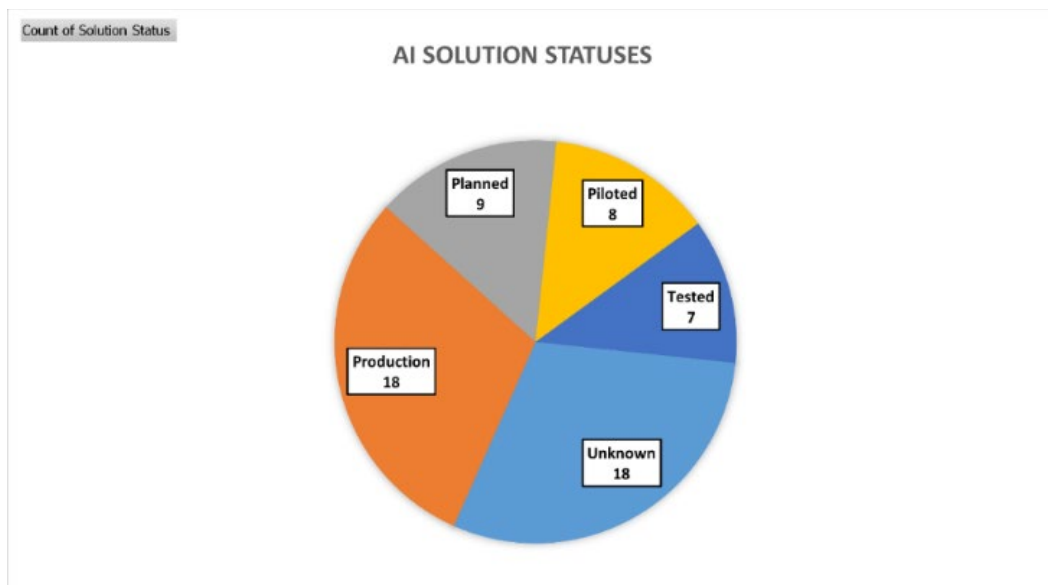


Figure 2. Implementation Status of the AI Solutions.

CalPERS is committed to closely monitoring the evolving role of AI in health insurance and care delivery to ensure it delivers meaningful benefits while safeguarding the interests of our members. In alignment with efforts like those of Covered California, CalPERS is prioritizing transparency around how health plans utilize AI, particularly in decisions that may impact members' access to care. Looking ahead, CalPERS will continue to collaborate with health plans, providers, and national experts (including our panelists) to deepen our understanding of the opportunities and challenges posed by AI, as well as how to best mitigate the risks while fostering the responsible and transparent use of AI across our health plans.