



International Society for  
Quality in Health Care

# AI will transform health services delivery – How will accreditation help leverage the opportunities and address the challenges?

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CARSTEN ENGEL, MD, CEO ISQUA

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# Declarations

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I used ChatGPT 4 to suggest some content for this presentation.



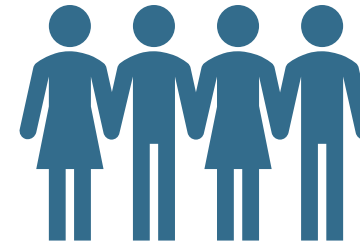
I assume full responsibility for the content.

# Two fundamental principles for use of AI in healthcare

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Transparency



Human accountability

# Some fundamentals about AI

These bullet points were  
suggested by ChatGPT4



**Neural network architecture**



**Training process**



**Data and knowledge**



**Operational use**



**Limitations**

# Neural network architecture

An architecture that mimics the structure of the human brain.

Able to learn by establishing algorithms.

Rule-based:

If A then B.

Probabilistic:

If A then B with probability X%.

# Training process



The LLM learns to predict (probabilistically) the next word in a sentence.



Trained on a huge corpus of texts from diverse sources.



No access to real-time information or proprietary database.



ChatGPT4 is, as of 10 November 2024, updated with knowledge and information until October 2023 but can use tools to browse the web for newer data.

# Data and knowledge

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“Understanding” of data is “statistical”, based on frequency and context of words and phrases in the training data.

→ Can generate coherent and contextually appropriate responses to questions.



# Operational use



Translation



Summarizing texts



Improving texts



Generating creative writing



Answering questions

# Limitations

No consciousness or actual understanding.

“LLMs are storytellers, not truth tellers” (Coiera, 2023).

→ “hallucinations”, inaccuracies and biased responses.

Coiera E et al. We need to chat about artificial intelligence.  
Australian Medical Journal, 2023.

# To summarize: What is an AI doing?

AI “has enormous capacity to see past patterns and process many different ideas very quickly, has little or no common sense, has trouble understanding the logic behind relationships, and doesn’t have emotions. It is simultaneously smart and stupid, helpful and dangerous. It offers great potential and needs to be well-controlled but not blindly followed.”

Source: Ray Dalio: Principles for Dealing with the Changing World Order, 2021.

So, an AI finds  
patterns, BUT

Does not fact-check them

Does not check whether they “make sense”

Does not address underlying reasons for why the patterns are as they are

What it “looks for” is determined by the corpus it was trained on

# AI in healthcare? Not your choice!

Easily available Large Language Models (LLMs), such as ChatGPT can provide medical advice.

For certain, some of your patients and some of your staff use it already!

Patients: Self-care, preparation for visits, and second opinion.

Professionals: Ready access to a huge knowledge bank.

**Question:** I am somewhat overweight and don't care to mind about diet and exercise. Should I use semaglutide?

**Answer by ChatGPT4:** Using semaglutide (often marketed under brand names like Ozempic and Wegovy) for weight loss can be effective, but it's important to consider several factors before starting this medication. Here's a detailed look at what you should know:

Benefits of Semaglutide .....

Considerations and Risks .....

Alternatives and Complementary Approaches .....

### **Consulting a Healthcare Provider**

Before deciding to use semaglutide, it's crucial to consult with a healthcare provider. They can assess your overall health, consider any underlying conditions, and determine if semaglutide is appropriate for you. They can also provide guidance on dosage, monitor side effects, and adjust treatment as needed.

### **Final Thoughts**

Semaglutide can be a powerful tool for weight loss, especially for those who have struggled with traditional methods. However, it's not a magic solution and should be used as part of a comprehensive approach to health. Your healthcare provider can help you weigh the benefits and risks to make an informed decision.

**Question:** I am a physician. One of my patients is somewhat overweight and doesn't care to mind about diet and exercise. How should I advise regarding semaglutide?

**Answer by ChatGPT4:** As a physician, advising a patient on the use of semaglutide (marketed under brand names like Ozempic and Wegovy) requires a balanced and comprehensive approach. Here are the key points to consider when discussing this option with your patient:

Benefits of Semaglutide .....

Considerations and Counseling Points .....

### **Sample Counseling Script**

“Given your current weight and the challenges you've faced with diet and exercise, semaglutide could be a helpful tool. This medication works by reducing your appetite and helping you feel full, which can lead to significant weight loss. However, it's important to understand that it needs to be taken long-term to maintain the benefits, and you might experience some side effects initially, such as nausea. We'll start with a low dose and gradually increase it to minimize these effects.

We'll also need to monitor your progress regularly, both to ensure the medication is working as expected and to manage any side effects. I encourage you to consider making small changes in your diet and physical activity levels over time, as combining these changes with the medication can enhance your results.

Let's discuss any questions or concerns you might have, and we can explore the best way to integrate semaglutide into your treatment plan.”





Dedicated AI-based tools offer a lot of opportunities



# Diagnostic safety – examples



Early detection of sepsis.



Facilitate reading of  
diagnostic images.

Main advantage is speed. Presently,  
performance of AI is not consistently  
equivalent or superior to radiologists.



Rare diseases (often diagnosed with delay of more  
than five years).



Protect against loss of information along chains and  
between silos.



Health status monitoring and alerting (wearables!).

# Finding the right care



**Evidence-based care:** Find relevant randomized trial



**Personalized care:** Suggest individualized care in complex cases based on a large corpus of clinical experience

# Physician's assistant



Summarize notes in patient records.



Create notes from conversations.



Prepare drafts for responses to requests from patients.



Curated Q&A for patients and professionals.

# Optimizing the care pathway



Planning and flow optimization.



Healthily: An example of an app to guide patients' journey (seek the right appointments) – reduce waste.

# Revolutionizing patient safety with artificial intelligence: the potential of natural language processing and large language models

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# Legal aspects of AI use

Define the basis for approval of an AI tool – ultimately based on demonstrated benefit for patients in terms of outcomes that really matter.

What is the accountability for professional user  
using an approved AI based tool?  
using generic AI?

What level of autonomy can a given AI tool be allowed?

# Ethical challenges

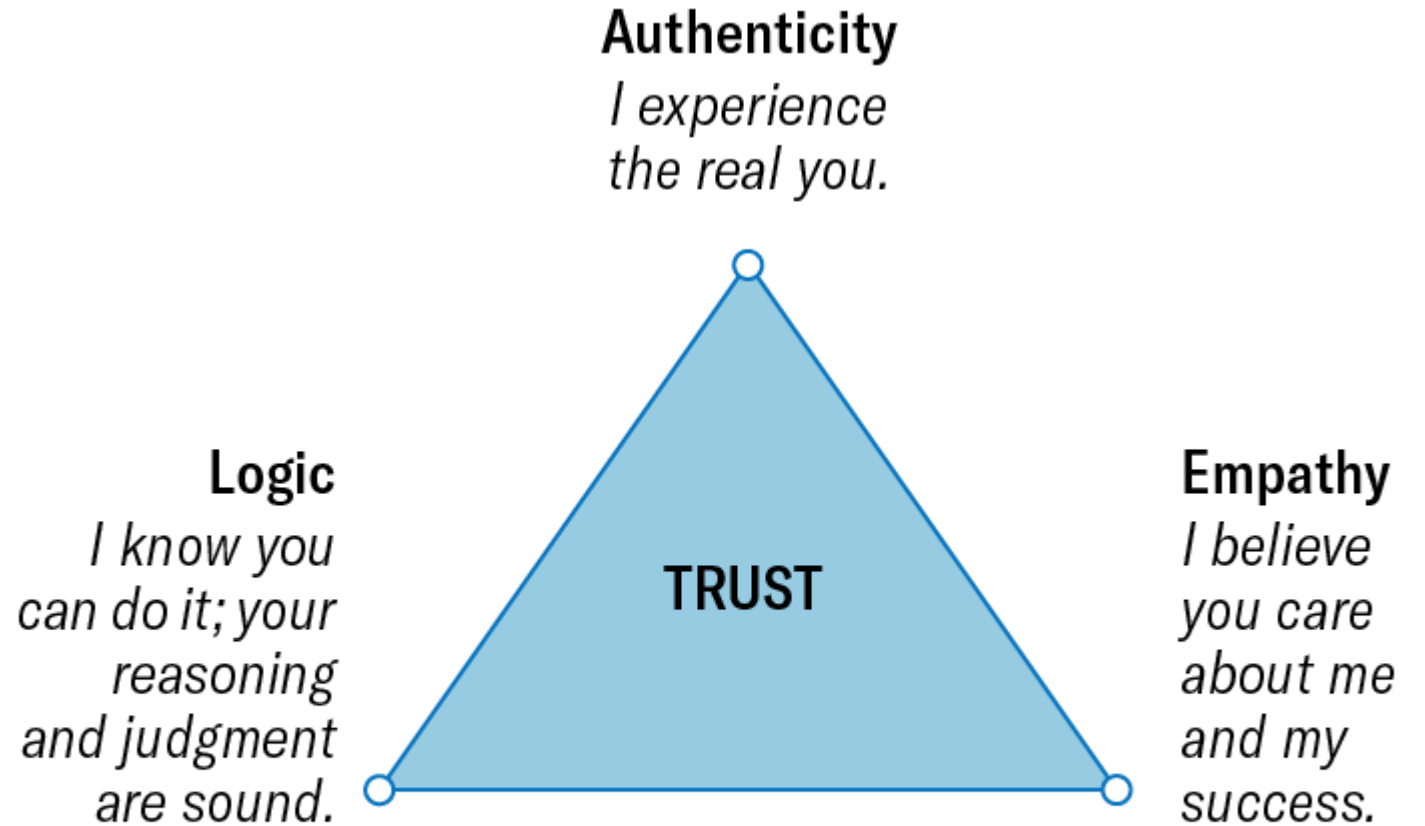
Data privacy and security concerns

Bias in AI algorithms and fairness

Ensuring equitable access to AI tools

Alienation? Or empowerment?

# The Trust Triangle



From: "Begin with Trust," by Frances Frei and Anne Morriss, May-June 2020







# An AI is not able to worry

Hull and Fins. JAMA Cardiology, November 2024, Volume 9, Number 11

# Roles of regulators and accreditors

## Regulators:

- Fit for purpose.

- Legal aspects of use, including of use of generic AI.

## Accreditors:

- Implementation of AI safety and quality practice standards.

Some outcome issues that regulation and accreditation should address



Safety



Benefits for patients in terms of improved outcome that matters

Some process  
issues that  
regulation and  
accreditation  
should address



Training of an AI



Updating An AI



Privacy issues

# About ISQua EEA

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The International Society for Quality in Health Care External Evaluation Association (ISQua EEA) was established by the International Society for Quality in Health Care (ISQua) in 2018 to deliver its external evaluation services.

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ISQua EEA's primary programme is the International Accreditation Programme (IAP).

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The IAP delivers a unique global accreditation service to health and social care external evaluation organisations and standards developing bodies.

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Since 1999, the IAP has provided these organisations with an independent third-party assessment process to validate existing systems and drive continuous quality improvement.

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# The International Accreditation Programme (IAP)

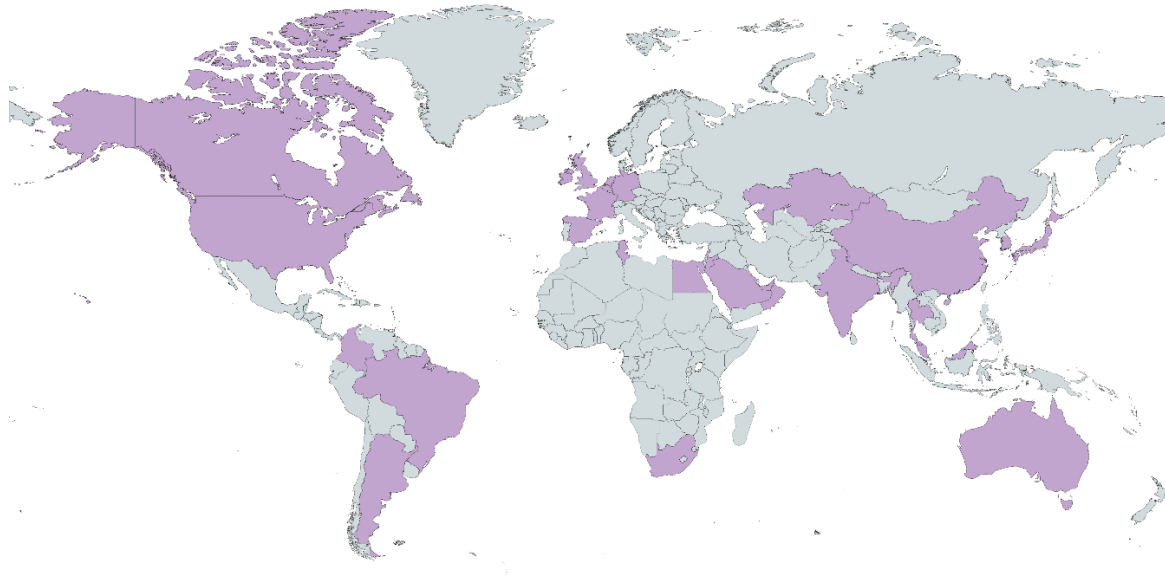
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- We 'Accredit the Accreditors' through three unique programmes:

Programme	Standards/Principles
Accreditation of Health and Social Care Standards (desktop/remote survey)	5 <sup>th</sup> Edition of the Principles for the Development of Health and Social Care Standards
Accreditation of Surveyor Training Programme (desktop/remote survey)	4 <sup>th</sup> Edition of the Standards for Surveyor Training Programmes
Accreditation of External Evaluation Organisations (virtual/on-site survey)	5 <sup>th</sup> Edition of the Standards for External Evaluation Organisations

# International reach

Over 70 organisations from 37 countries/regions have at least one product (standards surveyor training programme or organisational accreditation) with ISQua EEA.



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Digital health will be a focus area for ISQua-based accreditation



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Accreditation does  
not provide  
technical guidance

Accreditation relies  
on statutory rules  
regarding privacy,  
data sharing etc

Accreditation  
serves to ensure  
“good digital  
governance”

# ISQua's approach to accreditation (1)

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The standards require systems for governance, security and monitoring of digital care (which includes telehealth and virtual consultations) and artificial intelligence (AI) systems to assess their effectiveness to support delivery of safe care.

7.1 The standards require organisations to have a documented strategy for the assessment, costing, implementation and ongoing management of digital care systems.

7.2 The standards require that organisations have a process to ensure that the use of digital care does not disadvantage patients/service users who are not able to use digital devices or do not have access to the internet to facilitate use of digital approaches.

# ISQua's approach to accreditation (2)

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7.3 The standards require organisations to have access to technical expertise to support effective use of digital care systems and for AI systems, where these are used.

7.4 The standards require organisations to introduce and manage AI systems in accordance with any national or regional legislation or regulations on use of AI, where these exist, or in their absence, based on available guidance for best practice.

7.5 The standards require organisations to monitor and evaluate the use of AI systems to deliver safe, high-quality care, with mitigation of any unintended consequences.

# ISQua's approach to accreditation (3)

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7.6 The standards require organisations to consult with staff delivering care, prior to introduction of AI systems, to gain understanding of the practical implications and staff training needs.

7.7 The standards require that organisations consider accountability arrangements for all care and treatment delivered with support from AI systems.

7.8 The standards require organisations to inform patients/service users when aspects of care are delivered with the use of AI systems.

Summing it up:

A hospital  
needs to have a  
“Digital Health  
governance  
mechanism”.



Direction – with long-term goals



Framework



Oversight



Accountability

# Are these Principles too vague and high-level?

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The standards I showed you are not the standards you will see as a healthcare provider.



They are the standards we use to assess the standards of accreditors.



They can add more specific advice suited to your country, your legislation and the type of services you are expected to provide.

# AI as a tool to support quality management and quality improvement



Safe



Effective



Equitable



Cost-efficient – reduce waste



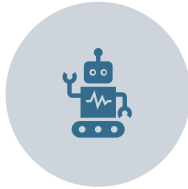
Timely



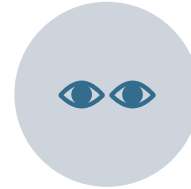
Person-centred

# Take home messages from today

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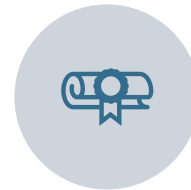
AI is there already, also in healthcare.



We have only seen the beginning.



We rely on robust regulatory mechanism and good governance systems with providers.



Accreditation can support the development of these.



Accreditation can help building trust among service users and staff.



AI has a great potential to support quality management



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“Inclusive Health Systems: Navigating Challenges with Technology and Humanity”



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