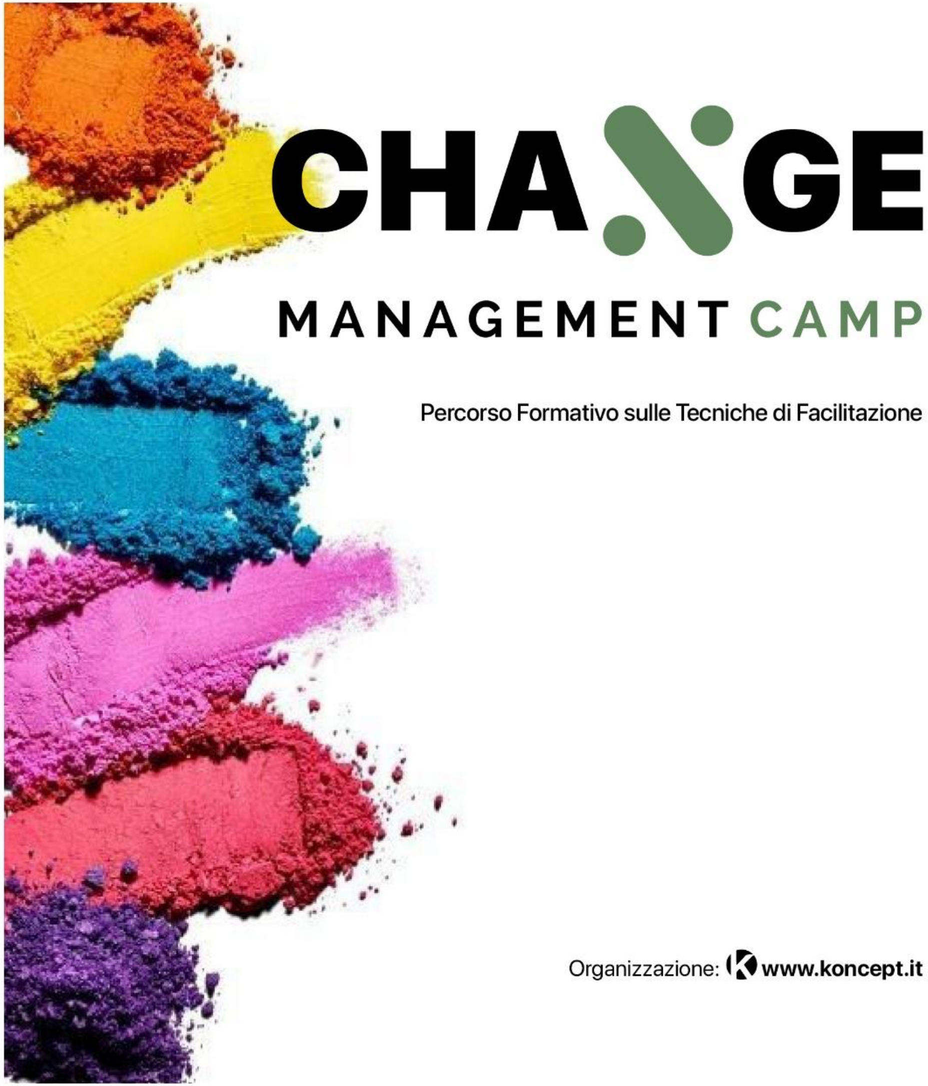

L’IA in Italia: analisi e percorsi per un’adozione sostenibile

Dott.ssa Rossella Di Bidino
Responsabile "Laboratorio di Health Technology Assessment (HTA) ed intelligenza artificiale” - ALTEMS Alta scuola economia management sistemi sanitari
Direzione Tecnica, ICT e Innovazione Tecnologie Sanitarie - Fondazione Policlinico Universitario Agostino Gemelli IRCCS

Ing. Emmanouil Tsiasiotis
Research Associate, Alta Scuola di Economia e Management dei Sistemi Sanitari (ALTEMS), Università Cattolica del Sacro Cuore, Roma – Italy

Next step: la valutazione

CHANGE MANAGEMENT CAMP

Agenda

- Health Technology Assessment
- Peculiarità dell'IA
- Case study

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Health Technology Assessment

A **multidisciplinary process** that uses explicit methods to determine the **value of a health technology** at different points in its lifecycle. The purpose is to inform decision-making in order to promote an equitable, efficient, and high-quality health system.

Note 1: Definition of **health technology.**
Note 2: The process is **formal, systematic and transparent**, and uses state-of-the-art methods to consider the best available evidence.
Note 3: The dimensions of value for a health technology may be assessed by examining the intended and unintended consequences of using a health technology **compared to existing alternatives**.
These dimensions often include clinical effectiveness, safety, costs and economic implications, ethical, social, cultural and legal issues, organisational and environmental aspects, as well as wider implications for the patient, relatives, caregivers, and the population. The overall value may vary depending on the **perspective** taken, the stakeholders involved, and the decision context.
Note 4: HTA can be applied at different points in the **lifecycle** of a health technology, i.e., **pre-market, during market approval, post-market, through to the disinvestment** of a health technology.

Livelli del HTA

- Regolamento Europeo di HTA
- Agenzie nazionali di HTA
- Regioni
- ASL
- Ospedali

- Finalità
- Responsabilità
- Processi decisionali
- Tempistiche
- Stadio di sviluppo della tecnologia

Si valuta l'IA?

HEALTH INFORMATION TECHNOLOGY

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HEALTH AFFAIRS 44, NO. 1 (2025): 90–98

By Paige Nong, Julia Adler-Milstein, Nate C. Apathy, A. Jay Holmgren, and Jordan Everson

Current Use And Evaluation Of Artificial Intelligence And Predictive Models In US Hospitals

Data from the 2023 American Hospital Association Annual Survey Information Technology Supplement to identify **how AI and predictive models are used and evaluated for accuracy and bias in hospitals**.

- **61%** of hospitals that used models evaluated them for **accuracy** using data from their health system (local evaluation).
- Only **44%** reported **local evaluation for bias.**

Descriptive statistics of artificial intelligence (AI) and predictive model use in US hospitals, 2023

	Number	Weighted percent
Use of any machine learning or other predictive models that display in the EHR	2,425	100
Machine learning	887	33
Other non–machine learning predictive models	809	32
Neither	482	23
Do not know	247	11
Specific uses of machine learning or other predictive models, among hospitals that integrated models into the EHR	1,688	100
Predict health trajectories or risks for inpatients	1,569	92
Identify high-risk outpatients for follow-up care	1,380	79
Facilitate scheduling	849	51
Recommend treatments	772	44
Simplify or automate billing procedures	633	36
Monitor health	600	34
Other (clinical use cases)	548	34
Other (operational process optimization)	442	25
Developer of predictive models used by the hospital, among hospitals that integrated models into the EHR	1,689	100
EHR developer	1,381	79
Third-party developer	995	59
Self-developed	909	54
Public domain	77	4.4
Local evaluation of most or all models for accuracy or bias[a]	1,660	100
Model accuracy	1,009	61
Model bias	711	44
Model accuracy and bias	709	44

Le peculiarità dell’IA

Prima di passare al case study, quali aspetti dell’IA applicata in sanità ritenete:

- Essenziali da valutare
- Difficili da valutare

Le peculiarità dell'IA

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Technological

- Laboratory performance versus a **real-world** context of care and services
- **Data quality and representativeness** of the general population or other contexts
- **Black box: how and why the decision is made?**
- Is artificial intelligence (AI) reliable and free of **biases or technical failures**?
- How AI would react in situations where input data **deviate** from initial data?
- Cybersecurity: data and model (algorithm)
- Interoperability: fragmented systems and unstructured data

Clinical

- Actual clinical added value in a real-world context of care and services: **difficult to distinguish the effect of the AI's decision from the rest of the preventive and/or therapeutic strategy**
- The level of accuracy of AI in diagnosis and recommendations (reference standard) in a real-world context of care and services

Le peculiarità dell'IA

Human and cognitive (clinicians)

- How to integrate AI into the electronic health record (EHR) and clinical routine with minimal effort and disruption for clinicians?
- Nonintuitive technologies: weigh-down workflows and burden for clinicians and cognitive overload
- Disruption of interpersonal **communication styles** (eg, clinician-clinician and clinician-patient)
- AI as clinical mind: challenge of clinician's decision-making autonomy
- Absolute confidence in AI: **technical dependence**

Professional and organizational

- How will it fit into the patient care and **services trajectory**?
- How will it be integrated into the **clinical-administrative processes** and workflows of organizations and health system?
- What changes will result in terms of **service organization** (eg, waiting time, primary care and specialized services relationships)?
- How will it impact on professional jurisdictions (eg, reserved activities, **responsibility**, training, new skills, and expertise)?

Le peculiarità dell’IA

CHANGE MANAGEMENT CAMP

Economic

- **Investments** required: continuous performance tests, software and data quality tests, infrastructure and equipment upgrades, human expertise, and training
- Clinical tropism and **reimbursement**/billing biases: costs for patients, clinicians, organizations, and health system
- Need of new financing mechanisms, appropriate **remuneration** and/or reimbursement models, and insurance models

Legal and ethical

- When is AI considered as a **decision-making support tool**? When is it considered as a **decision-making tool**?
- What are the limits of technology and their potential legal implications?
- **If the AI makes a mistake (eg, black box), who will be held responsible? If the patient is harmed, who will pay for the repairs?**
- What would be the consequence if the **clinician does not comply with the recommendations of an AI and this leads to an error**?
- AI needs access to data **from different sources**: **consent** is becoming more complex, as patients will be asked to authorize the use of diversified amounts of data
- Protection and confidentiality: origin of the data, how consent was obtained, and authorization to use and/or reuse the data
- **Who owns the data? Who is responsible for it?** Who can use (or reuse) it and under what conditions?

CHANGE
MANAGEMENT CAMP

Case study

Popolazione: Pazienti adulte con patologia ginecologica che richiede intervento chirurgico

Percorso:
- Pre-ospedalizzazione
- Ricovero
- Intervento
- Dimissione
- Convalescenza domiciliare

Intervento/Tecnologia:
- App gratuita da scaricare sul cellulare
- Integrata con AI
- Sviluppata con dati locali

Case study

Obiettivi:

- Garantire alle pazienti monitoraggio e assistenza continua, monitorando la Sua condizione di salute fuori dall’ospedale
- Rendere sempre più efficace la gestione e l'interazione con il team clinico durante il periodo post-operatorio
- Aiutare la ricerca verso modelli di cura sempre più personalizzati.

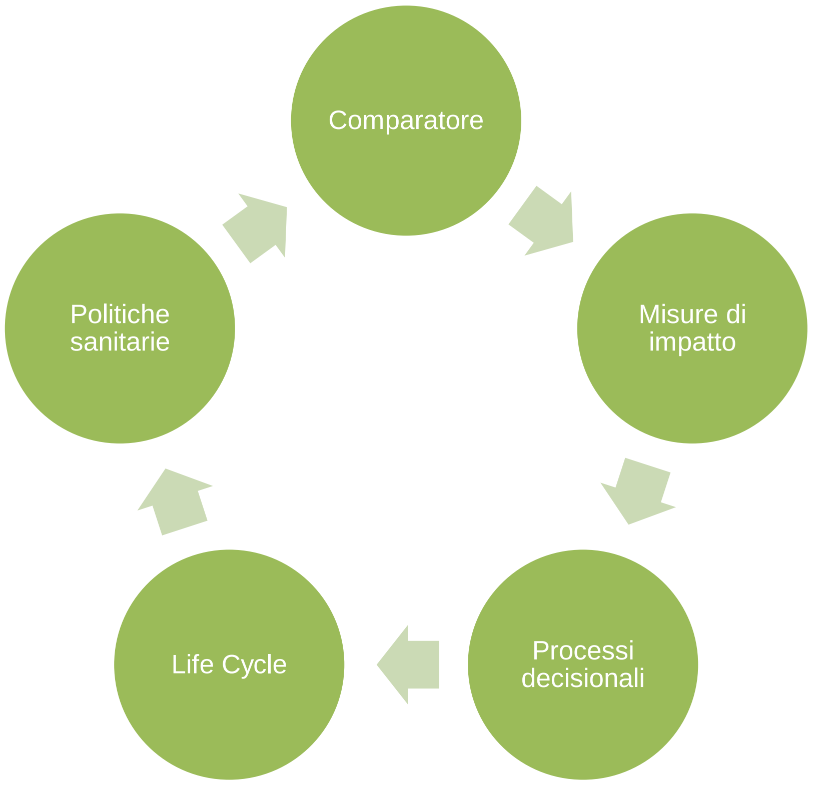
Nella pratica:

- Le pazienti rispondono a brevi questionari e inviare altre informazioni e file tramite l’App.
- I care manager del post-operatorio valutano e gestiscono le pazienti sulla base delle informazioni raccolte.
- Il servizio non gestisce emergenze/urgenze.
- Il servizio integra la normale pratica clinica.

Case study

Cosa valutare per decidere se «acquistare» e come «integrare» nella pratica clinica l'App-AI?

OPEN TALKS



A cosa date la priorità?