Assistant Deputyship of Planning and Organizational Excellence
General Directorate of Research and Studies

Periodical Bulletin
For Recent Trending Scientific Publications of Health Systems & Health Policies

وزارة الصحة
Ministry of Health

THE INSIGHTS
August (I) 2022

The future of artificial intelligence in medicine: Medical-legal considerations for health leaders

As the utility of Artificial Intelligence (AI) expands, medical-legal questions arise regarding the possible legal implications of incorporating AI into clinical practice. Particularly, the unique black box nature of AI brings distinct challenges. There is limited guidance addressing liability when AI is used in clinical practice. Appropriate guidance from professional regulatory bodies may help the medical field realize AI's utility and encourage its safe use. Physicians and health leaders would be prudent to consider the evolving medical-legal context regarding use of AI in clinical practices and facilities.

Jassar S, et al. Healthcare management forum. 2022; 35(3): 185-189.

1
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Emerging point of care devices and artificial intelligence: Prospects and challenges for public health

Risk assessments for numerous conditions can now be performed cost-effectively and accurately using emerging point of care devices coupled with machine learning algorithms. In this article, the case is advanced that point of care testing in combination with risk assessments generated with artificial intelligence algorithms, applied to the universal screening of the general public for multiple conditions at one session, and represents a new kind of in-expensive screening that can lead to the early detection of disease and other public health benefits. Universal, poly-etiological screening is shown to meet the ten WHO criteria for screening programmes.

Andrew Stranieri, et al. Smart Health. 2022; 24: 100279.

2
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1 Disease has serious consequences.	6 Screening test causes little morbidity.
2 Screening population has high prevalence of detectable preclinical phase.	7 Screening test is affordable and available.
3 Screening tests detect little pseudo-disease	8 Treatment exists.
4 Screening test has high accuracy for detecting the detectable preclinical phase.	9 Treatment is more effective when applied before symptoms begin.
5 Screening test detects disease before a critical point.	10 Treatment is not too risky or toxic.

The 10 requirements for effective screening with *Point of Care Testing* (POCT) devices and artificial intelligence inferences.

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The Health Innovation Impact Checklist: a tool to improve the development and reporting of impact models for global health innovations

As new technologies and interventions enter the innovation space to address global health challenges, innovators often need to model their potential impact prior to obtaining solid effectiveness data. Authors propose a universal innovation impact checklist to be used to aid in transparent and aligned modeling efforts. This article describes a new Health Innovation Impact Checklist (HIIC) - a tool developed while evaluating the impact of health innovations. This article describes the core components of HIIC including its strengths and limitations.

Shahid M, et al. Global health action. 2022; 15(1): 2056312.

3

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Shifting paradigms: Developmental milestones for integrated care

Developmental milestones accelerate or decelerate achievement of integrated care. In this article, 5 categories of milestones are identified, and a comprehensive framework for milestones of integrated care is proposed. Implementation strategies should be based on past milestones achieved.

Shaw J, et al. Social science & medicine. 2022; 301: 114975.

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Strategic relational milestones	strategic investments in building inter-personal relationships between key stakeholders who can contribute to the development of integrated care.
Strategic process change milestones	strategic investments to improve practice and understand performance of health care providers and other stakeholders oriented toward further developing integrated care.
Internal structural milestones	changes in organizational structure within a focal organization that support the development of integrated care.
Inter-organizational structural milestones	changes in the legal, operational, or leadership structures that facilitate relationships between organizations that support more integrated care.
External milestones	refer to changes in the social, natural, or political environments in which a model of integrated care is situated that produce changes in the opportunity or resources available for the development of integrated care.

Milestone categories and definitions