《"健康中国"智慧医疗生态体系发展战略研究》参考

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中国工程科技知识中心医药卫生专业分中心
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[动态信息]

1. Partnership Aims to Expand Emergency Care Access Via Telehealth

【mhealthintelligence】A recent partnership between UCM Digital Health and MVP Health Care has led to the launch of the Treatment in Place program, which aims to provide patients with accessible emergency care through the use of telehealth.UCM Digital Health (UCM) leverages a digital platform and a 24/7 telehealth service to provide emergency medicine services.

链接：

[文献速递]

1. Leveraging artificial intelligence in ischemic stroke imaging

作者：Shafaat, Omid; Bernstock, Joshua D.; Shafaat, Amir; Yedavalli, Vivek S.; Elsayed, Galal; Gupta, Saksham; Sotoudeh, Ehsan; Sair, Haris I.; Yousem, David M.; Sotoudeh, Houman;

来源：Journal of neuroradiology

摘要：Artificial intelligence (AI) is having a disruptive and transformative effect on clinical medicine. Prompt clinical diagnosis and imaging are critical for minimizing the morbidity and mortality associated with ischemic strokes. Clinicians must understand the current strengths and limitations of AI to provide optimal

patient care. Ischemic stroke is one of the medical fields that have been extensively evaluated by artificial intelligence. Presented herein is a review of artificial intelligence applied to clinical management of stroke, geared toward clinicians. In this review, we explain the basic concept of AI and machine learning. This review is without coding and mathematical details and targets the clinicians involved in stroke management without any computer or mathematics' background. Here the AI application in ischemic stroke is summarized and classified into stroke imaging (automated diagnosis of brain infarction, automated ASPECT score calculation, infarction segmentation), prognosis prediction, and patients' selection for treatment. (c) 2021 Elsevier Masson SAS. All rights reserved.

链接：

https://pan.ckcest.cn/rcservice//doc?doc_id=112571

2. Enhancing preclinical drug discovery with artificial intelligence

作者：Vijayan, R. S. K.；Kihlberg, Jan；Cross, Jason B.；Poongavanam, Vasanthanathan；

来源：Drug discovery today

摘要：Artificial intelligence (AI) is becoming an integral part of drug discovery. It has the potential to deliver across the drug discovery and development value chain, starting from target identification and reaching through clinical development. In this review, we provide an overview of current AI technologies and a glimpse of how AI is reimagining preclinical drug discovery by highlighting examples where AI has made a real impact. Considering the excitement and hyperbole surrounding AI in drug discovery, we aim to present a realistic view by discussing both opportunities and challenges in adopting AI in drug discovery.

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3. Artificial intelligence and clinical deterioration

作者：James,Malycha; Stephen,Bacchi; Oliver,Redfern;

来源：Current opinion in critical care

摘要：To provide an overview of the systems being used
to identify and predict clinical deterioration in
hospitalised patients, with focus on the current and
future role of artificial intelligence (AI). There are
five leading AI driven systems in this field: the
Advanced Alert Monitor (AAM), the electronic Cardiac
Arrest Risk Triage (eCART) score, Hospital wide Alert
Via Electronic Noticeboard, the Mayo Clinic Early
Warning Score, and the Rothman Index (RI). Each uses
Electronic Patient Record (EPR) data and machine
learning to predict adverse events. Less mature but
relevant evolutions are occurring in the fields of
Natural Language Processing, Time and Motion Studies,

AI Sepsis and COVID-19 algorithms. Research-based AI-driven systems to predict clinical deterioration are increasingly being developed, but few are being implemented into clinical workflows. Escobar et al. (AAM) provide the current gold standard for robust model development and implementation methodology. Multiple technologies show promise, however, the pathway to meaningfully affect patient outcomes remains challenging.

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https://pan.ckcest.cn/rcservice//doc?doc_id=112570

4. Media Review:Deep Medicine: How Artificial Intelligence Can MakeHealthcare Human Again

作者：Ernest Wong

来源：Innov A i T

摘要：What is good about this book?Will artificial intelligence (AI) replace me? This is a concern among

doctors, especially with news like Babylon Health's AI outperforming GPs in the Applied Knowledge Test (AKT) in 2018. Deep Medicine digs deep (no pun intended) into that concern and examines both sides of the AI conundrum with regards to medicine. The book is written by an American cardiologist and for doctors, even those with little knowledge of AI, is very readable. As the author took me on a journey through various milestones of the Fourth Industrial Revolution, I felt a sense of awe at the dizzying rate of change, possibly leading to the end of medicine as I have come to know it. The march of the machines is here, whether we like it or not. AI is already performing better than most physicians in narrow, well defined tasks. But the author offers hope. In a recurring theme throughout the book, the author talks about working in partnership with AI rather than competing head-on with it. As doctors, we are still better at integrating clinical

data and relating to patients on a personal level –
think biopsychosocial medicine. It is hoped that by
harnessing AI, GPs of the future will be liberated to
spend more time facing the patient rather than the
computer screen.

链接：

https://pan.ckcest.cn/rcservice//doc?doc_id=112566

5. Use of Artificial Intelligence in Clinical Neurology

作者：James M. Hillis; Bernardo C. Bizzo;

来源：Seminars in neurology

摘要：Artificial intelligence is already innovating in
the provision of neurologic care. This review explores
key artificial intelligence concepts; their application
to neurologic diagnosis, prognosis, and treatment; and
challenges that await their broader adoption. The
development of new diagnostic biomarkers,

individualization of prognostic information, and improved access to treatment are among the plethora of possibilities. These advances, however, reflect only the tip of the iceberg for the ways in which artificial intelligence may transform neurologic care in the future.

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https://pan.ckcest.cn/rcservice//doc?doc_id=112567

6. Growing Use and Confidence in Artificial Intelligence for Care Delivery

作者：With William Gordon

来源：NEJM catalyst innovations in care delivery.

摘要:A majority of NEJM Catalyst Insights Council members are confident in AI systems' accuracy and say AI has improved patient health. Now including global data. The use of artificial intelligence (AI) and machine learning (ML) in health care delivery is accelerating. Health care

organizations are using AI across a wide range of clinical areas, functional applications, and data types, with provider confidence in the accuracy and effectiveness of AI increasing as clinicians and leaders experience its benefits firsthand. In a December 2021 survey of NEJM Catalyst Insights Council members — who are clinicians, clinical leaders, and executives at organizations around the world that are directly involved in care delivery — 30% of survey respondents globally say that their organization currently uses AI applications, and another 25% report that they will do so within 2 years. Among U.S. respondents, 35% indicate that they currently use AI applications, up eight percentage points over our 2019 survey on the same topic.

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https://pan.ckcest.cn/rcservice//doc?doc_id=112572

7. Trustworthy Artificial Intelligence in Medical

Imaging

作者：Hasani N. ；Morris M.A. ；Rhamim A.；Summers R.M. ；Jones E. ；Siegel E.；Saboury B.；

来源：PET clinics

摘要：Trust in artificial intelligence (AI) by society and the development of trustworthy AI systems and ecosystems are critical for the progress and implementation of AI technology in medicine. With the growing use of AI in a variety of medical and imaging applications, it is more vital than ever to make these systems dependable and trustworthy. Fourteen core principles are considered in this article aiming to move the needle more closely to systems that are accurate, resilient, fair, explainable, safe, and transparent: toward trustworthy AI.

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https://pan.ckcest.cn/rcservice//doc?doc_id=112568

8. BSAC Vanguard Series: Artificial intelligence and antibiotic stewardship

作者：Chang, Amy ； Chen, Jonathan H.；

摘要：Antimicrobial stewardship is a key facet in preventing antimicrobial resistance but can be difficult to put into practice. Frontline providers are faced with the unknowns of pending culture data plus the urgency of appropriate antibiotic choice to prevent sepsis-related mortality; this often leads to broad-spectrum antibiotic prescribing. Currently available resources lack a customized approach to individual patients. Artificial intelligence (AI) focused on antimicrobial stewardship may create a unique opportunity to provide individualized, real-time recommendations to providers on appropriate, but narrower spectrum, antibiotic options. We envision that, with further advances in AI, personalized clinical decision support tools to optimize antibiotic

prescribing could be available within the next decade.

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https://pan.ckcest.cn/rcservice//doc?doc_id=112569