RWD & AI IN THE JOURNALS

June & July 2021 Roundup & links below.

Life-Science:

EMA – on insilico for regulatory decision making, setting baseline terminology for the field (biological, insilico, data driven, agent-based, mechanistic, AI, PopPK or PBPK modelling)

Amgen/Lilly/BMS - discuss RWD in Japan, including profiling the dozen main secondary data sources

Merck – with IQVIA, profile typical designs of extensions studies into RWE rolled over from traditional clinical studies

Apellis Pharma – profile cost and resource utilizations of 150 patients in IBM marketscan with paroxysmal nocturnal hemoglobinuria (PNH) treated with eculizumab

Merck – lever an unnamed Oncology EMR databases to profile castration resistant prostate cancer receiving docetaxel and next gen hormonal agents across 5k patients.

UCB – lever German claims (sick fund data) to profile and Osteoporotic fractures and subsequent fracture risk across 20k patients

Meiji Seika Pharma – use the japan HCEI database containing 20 m records overall, to profile antimicrobial usage for treating pediatric acute otitis media across 10k patients

Janssen – lever the Symphony Health database to profile Corticosteroid and opioid use across 3k Chron's disease patients

Merck – lever MedBase, a French biobank for Melanoma, to examine the Real-world effectiveness of pembrolizumab

Sun Pharma – use IBM Watson to show impact of above label dose escalation for biologics in patients with plaque psoriasis across 7k patients

BI – profile healthcare utilization for 2k patients with Generalized Pustular Psoriasis across the Optim Clinformatics database

Vendors & Data networks:

Flatiron – profile surveillance or channel bias in RWD studies using aNSCLC, by comparing to primary imaging for PFS measurements, finding mostly similar results but up to 10% bias with high image frequency

Flatiron – on generating external control arms in cancer from EMR, including progression-free survival (PFS), overall survival (OS), multi-tumor random effects, Hazard Ratios (HR) in median endpoint calcs.

Flatiron – on immortal time bias in covid-19 convalescent plasma studies, and a general discussion on why proportional cox hazard or propensity scoring is good but insufficient in addressing bias in RWE

TriNetX – on assessing the completeness of the medication record in RWD, and comparing across institutions on drug-diagnosis frequencies to understand if records may be incomplete
WHO AI ethics – an editorial on the recent WHO report on AI in medicines, with recommendations such as leaving final treatment decisions with HCPs and providing AI transparency
Mayo – develop cohorting/phenotyping from EMR for Acute Respiratory Distress Syndrome across 200k patients
VA – on effectiveness of the COVID vaccines, seeing 96% and 98% effectiveness across 50k veterans
MHRA/CPRD – evaluate using Bayesian techniques to generate longitudinal synthetic real-world datasets via a PoC using mobile app patient data
UKPDS – the academic team use new historic RWD to update risk factor equations in this well-respected diabetes model
Maccabi – use claims Israel data describe first antiparkinsonian drug (FAPD) patterns among 5k Parkinson disease (PD) patients and to evaluate disease duration until levodopa (L-DOPA)
Maccabi – a study on pain management for 200k patients with Osteoarthritis, and use of use analgesics including oral NSAIDs
Bluegranite – the IT services vendor profiles a step-by-step guide for how to create an genomics data lake and analytics platforms using MSFT and Azure specific technologies
HDRUK - Drug-gene mining in EMR in the UK EMR to identify possible interactions between 162 biomarkers and 50 commonly used drugs
ISPOR – on the UReQA framework (Use-case specific Relevance and Quality Assessment) and an effort to tie fit-for-purpose assessments of RWE more to specific use cases
Anthem – on causal inference via a case study in T2DM, stratifying multiple sub-groups and adjusting across multiple co-variates to better measure treatment effectiveness
EyeSmart – the Indian ophthalmology EMR vendor proposes an outpatient forecasting model using SARIMA (seasonal auto regressing forecasting models)
Acorn AI (medidata) – profile efforts to build pro-bono integrated dataset especially in the case of evaluating COVID 19
NCI – on EMR and ML for lung cancer detection, describing example HMO projects and reflecting of path forward for AI based CDSS

<u>Academic Medical Science:</u>
EU ADRs – a discussion on the restricted access to various EU ADR databases and potential route to open source access such as with FDA FAERS
AZ Vaccine AEs – an editorial on event ratios (1 in 100k) for major AZ COVID vaccines based on GP data from 2.5m people in the UK
Endpoint adjudication – a team compare using central monitoring or comparison to claims data to validate non-fatal end points, finding similar accuracy across the two methods
RWD a reality check – a discussion that surrogate end-points (e.g., treatment discontinuation) often used with RWD have little correlation with primary end-points (e.g., OS).

An introduction to RWE – a fairly simple articles that outlines RWE studies in opposition to RCT designs
RWE in paediatrics – a general discussion on RWE designs but specific considerations for paediatrics, such as studies often being off-label or difficulty in collecting PROs with children
RWD Challenges radar – a team propose a radar (sunburst) framework to help identify and manage risks in RWE studies
BNT162b2 effectiveness – a meta-analysis of 19 published studies on the vaccine, indicating strong protection albeit slightly lower than original clinical trials
Chinese RWE special issue – in the Journal of PharmacoPV, noting lots good titles but that the articles are mainly in Chinese
Precision medicine – a reflection on how genomics could close disparity in cancer care delivery, and at what stages of care pathway tests would need to be conducted
Time properties Taiwan RWD – in connecting 4 different datasets and in evaluating mammography screening program, an academic team profile how to combine different time properties of datasets
Drug impact / adoption models – a researcher proposes a modelling framework for surveying KOLs and predicting drug usage across payor and healthcare systems
Opiod use disorder & COVID19 – a team lever the Cerner data to profile the increase risk across 50k patients of OUD and higher resource utilization or mortality from COVID19
AI for Haematology diagnostics – a nice simple introduction to AI and how specific areas of diagnostics, like cytomorphology, might be improved

Academic Bioinformatics:
Drug target simulation – a nice piece on functional genomics and pre-clinical drug screening, and the types of data to combine (ctDNA, PDTO/C/X, cellular response…)
Omics analysis – and example of combining metabolomic, genomics and phenotype databases to surface level of influences of genome in low level disease pathways
Genomics data privacy – a consideration of the privacy risk depending on which type of genomics data/techniques to manage risk (federation, synthetics data, etc..)
Graph drug monitoring – using traditional Chinese medicine, a team show how graph and association analysis can be used for medicines monitoring
EMR representation – a team use NLP and embedding techniques to provide topography and representations of diseases in EMR
CV prediction – a Dutch team use LTSM NLP on unstructured medical records and imaging reports to drive a prediction model for recurrence of CV events
XAI – using mental health as a specific and sensitive domain, a team postulate on how eXplainable AI could drive successful application of different tools
AI in health informatics – this journal special issue covers 25 papers; hay fever detection, Chinese herbal medicine in breast cancer management, health service patterns, automatic diagnosis of lung disease
Toxicity mining – an overview of how aggregated prior toxicity studies can be used to evaluate potential new drug targets
Ontological model for care – a Korean team using dementia as an example, propose ontological data models for health records (not transactional) could improve care delivery and coordination

AI for translation – an overview of the state of the field and increasing applications of deep learning, noting lack of training data and transparency for tasks in the medical field
Synthetic data – a 100-page ppt tutorial including basic introductions and programming exercises to understand and begin applying synthetic data

Life-Science:

[PDF] Scientific and regulatory evaluation of mechanistic in silico drug and disease models in drug development: building model credibility FT Musuamba, I Skottheim Rusten, R Lesage, G Russo… - CPT: Pharmacometrics & Systems … … Z), an NC3Rs Infrastructure for Impact Award (to BR, NC/P001076/1) and the TransQST project (Innovative Medicines Initiative 2 Joint Undertaking under grant agreement No

[HTML] Current Status, Challenges, and Future Perspectives of Real-World Data and Real-World Evidence in Japan K Hiramatsu, A Barrett, Y Miyata - Drugs-Real World Outcomes, 2021 The aim of this article is to help develop a common understanding of the current status, challenges, and future perspectives of real-world data (RWD) and real-world evidence (RWE) in Japan. RWD and RWE are very widely used

[HTML] A Framework for Extension Studies Using Real-World Data to Examine Long-Term Safety and Effectiveness M Burcu, CB Manzano-Salgado, AM Butler… - Therapeutic Innovation & …, 2021 Understanding the long-term benefits and risks of treatments, devices, and vaccines is critically important for individual-and population-level healthcare decision-making. Extension studies, or 'roll-over

[HTML] Real-World Healthcare Resource Utilization (HRU) and Costs of Patients with Paroxysmal Nocturnal Hemoglobinuria (PNH) Receiving Eculizumab in a US Population WY Cheng, SP Sarda, N Mody-Patel, S Krishnan… - Advances in Therapy, 2021 To evaluate the economic burden and treatment patterns of patients with paroxysmal nocturnal hemoglobinuria (PNH) treated with eculizumab, a C5 inhibitor,.

Beyond Frontline Therapy with Abiraterone and Enzalutamide in Metastatic Castration-Resistant Prostate Cancer: A Real-World US Study ND Shore, R Ionescu-Ittu, F Laliberté, L Yang… - Clinical Genitourinary …, 2021 … This retrospective longitudinal observational study using real-world data from the US aimed to describe patient characteristics, treatment patterns, time on treatment (ToT), overall

[HTML] Osteoporotic fractures and subsequent fractures: imminent fracture risk from an analysis of German real-world claims data P Hadji, B Schweikert, E Kloppmann, P Gille, L Joeres… - Archives of Gynecology and …, 2021 In osteoporosis, prior fracture is a strong predictor of subsequent fracture. This study aimed to assess the imminent risk of subsequent fracture following.

[HTML] Improvement in the appropriate antimicrobial usage for treating pediatric acute otitis media in Japan: A descriptive study using nation-wide electronic medical record … M Kono, G Sugita, K Itahashi, Y Sasagawa, Y Iwama… - Journal of Infection and …, 2021 Objectives We investigated changes in prescriptions for antimicrobial agents to treat children with acute otitis media (AOM). Methods A descriptive

[HTML] Real-World Persistence, Maintenance Dosing, and Pre-Post Corticosteroid and Opioid Use Among Crohn's Disease Patients with Prescription Claims for Ustekinumab … Z Ding, C Obando, E Muser, C Kozma, T Slaton - Drugs-Real World Outcomes, 2021 … US Crohn's disease (CD) patients use ustekinumab is limited. Objectives. The aim of this study was to describe the persistence, maintenance dosing, and

[PDF] Real-world effectiveness of pembrolizumab in advanced melanoma: analysis of a French national clinicobiological database E Casarotto, S Chandwani, L Mortier, O Dereure… - Immunotherapy, 2021 Login to your account. Email: Password. Forgot password?

[PDF] Dose escalation and associated costs in biologic treatment of psoriasis based on real-world data J Bagel, B Glick, JJ Wu, I Chopra, X Song, M Brouillette… - Journal of Medical …, 2021 Objectives This study documents real-world patterns and additional costs of above-label (≥ 10% above the recommended maintenance dose) use of biologics in patients with plaque psoriasis. Materials and Methods This was a

Clinical characteristics and healthcare resource utilization in patients with generalized pustular psoriasis: real-world evidence from a large claims-based dataset J Crowley, AK Golembesky, N Kotowsky, R Gao… - Journal of Psoriasis and …, 2021 Background:Generalized pustular psoriasis (GPP) is a rare, severe neutrophilic skin disease with significant unmet clinical need. Historically, GPP has not been well

Vendors & Data networks:

Differential Frequency in Imaging-Based Outcome Measurement: Bias in Real-World Oncology Comparative-Effectiveness Studies. BJS Adamson, X Ma, SD Griffith, EM Sweeney… - … and Drug Safety, 2021 Comparative-effectiveness studies using real-world data (RWD) can be susceptible to surveillance bias

Emulating control arms for cancer clinical trials using external cohorts created from electronic health record-derived real world data K Tan, J Bryan, B Segal, L Bellomo, N Nussbaum… - Clinical Pharmacology & … Electronic health record (EHR)-derived real world data (RWD) can be sourced to create external comparator cohorts to oncology clinical trials. This exploratory study assessed whether EHR-derived patient

[HTML] Time-Related Biases in Nonrandomized COVID-19–Era Studies Using Real-world Data GS Calip, RA Miksad, S Sarkar - JAMA oncology, 2021 The urgent response to the COVID-19 pandemic has highlighted the importance of diverse, real-world data sources, such as electronic health records, insurance claims, and patient registries, to further inform evidence-based care amid an evolving

Assessing Real-World Medication Data Completeness L Evans, JW London, MB Palchuk - Journal of Biomedical Informatics, 2021 … Abstract. Objective. Analysis of healthcare Real-World Data (RWD) provides an opportunity to observe actual patient diagnostic, treatment and outcomes events

[PDF] WHO Offers Guidance on Use of Artificial Intelligence in Medicine J Stephenson - JAMA Health Forum, 2021 “Companies and governments should introduce AI technologies only to improve the human condition and not for

objectives such as unwarranted surveillance or to increase the sale of unrelated commercial goods and services," the report

[HTML] Rule-Based Cohort Definitions for Acute Respiratory Distress Syndrome: A Computable Phenotyping Strategy Based on the Berlin Definition H Li, YE Odeyemi, TJ Weister, C Liu, SJ Chalmers… - Critical Care Explorations, 2021 OBJECTIVES: Accurate identification of acute respiratory distress syndrome is essential for under.

[PDF] SARS-CoV-2 Vaccine Effectiveness in a High-Risk National Population in a Real-World Setting AA Butt, SB Omer, P Yan, OS Shaikh, FB Mayr - Annals of Internal Medicine, 2021 … infection with the Beta (previously known as the B1.351) strain (4). Other reports from select population groups have noted a sharp decrease in infections among vaccinated persons, although vaccine effectiveness is

Evaluating a Longitudinal Synthetic Data Generator using Real World Data Z Wang, P Myles, A Jain, JL Keidel, R Liddi… - 2021 IEEE 34th …, 2021 Synthetic data offer a number of advantages over using ground truth data when working with private and personal information about individuals. Firstly, the risk of identifying individuals is reduced considerably, which enables the sharing of data for

[PDF] WHO Offers Guidance on Use of Artificial Intelligence in Medicine J Stephenson - JAMA Health Forum, 2021 "Companies and governments should introduce AI technologies only to improve the human condition and not for objectives such as unwarranted surveillance or to increase the sale of unrelated commercial goods and services," the report

Estimating risk factor progression equations for the UKPDS Outcomes Model 2 (UKPDS NN) J Leal, M Alva, V Gregory, A Hayes, B Mihaylova… - Diabetic Medicine … Ruth Coleman and Ian Kennedy at the Diabetes Trials Unit for comments and advice on data and analysis. Funding sources: JL acknowledges support from the Innovative Medicines Initiative 2 Joint Undertaking under gran

Real World Pharmacological First Treatment Patterns of Patients With Parkinson Disease and Disease Duration: A Large-Scale Cohort Study Using an Health … A Faust-Socher, T Gurevich, V Rozani, N Giladi… - Clinical …, 2021 Objectives Real-world data were used to describe first antiparkinsonian drug (FAPD) prescription

[HTML] Pain Pharmacotherapy in a Large Cohort of Patients with Osteoarthritis: A Real-World Data Analysis N Fallach, G Chodick, M Tirosh, E Eisenberg… - Rheumatology and Therapy, 2021 There is limited evidence on the consumption of analgesics in real-world large cohorts of patients with osteoarthritis (OA), especially in those with como

PDF] Building a Genomics Data Lake in Azure CT Ford, L Baker – 2021 It's hard to believe that the first draft of the human genome was completed 19 years ago 1. In 2001, we had high hopes for what this body of knowledge would unlock in the understanding of our own being. Nearly two decades later, researchers like yo

Utilising large electronic medical record datasets to identify novel drug-gene interactions for commonly used drugs MA Malki, AY Dawed, C Haywood, A Doney… - Clinical Pharmacology & … Real-world prescribing of drugs differs from the

experimental systems, physiological- pharmacokinetic (PK) models and clinical trials used in drug development and licensing, with drugs often used in patients with

[PDF] Causal Deep Learning on Real-world Data Reveals the Comparative Effectiveness of Anti-hyperglycemic Treatments C Belthangady, S Giampanis, W Stedden, P Alves… - 2021 Type 2 Diabetes is associated with severe health outcomes, the effects of which are responsible for approximately 1/4 of total US healthcare spending. Current treatment guidelines endorse a massive number of potential anti-

Forecast of Outpatient Visits to a Tertiary Eyecare Network in India Using the EyeSmart Electronic Medical Record System G Sai Prashanthi, N Molugu, P Kammari, R Vadapalli… - Healthcare, 2021 India is home to 1.3 billion people. The geography and the magnitude of the population present unique challenges in the delivery of healthcare services. The implementation of electronic health records and tools for

PIN83 The COVID-19 Research Database: Building One of the Largest PRO Bono Real-World DATA Repositories A Talwai, V Wing, Y Itzkovich, A Galaznik, A Chatterjee… - Value in Health, 2021 Objectives The creation of an integrated data repository to capture the comprehensive patient journey across multiple data sources has always held promise in principle but has been stymied in practice due to the

[PDF] EHRs and Machine Learning for Early Detection of Lung Cancer and other Conditions: Thinking about the Path Ahead P Pinsky - American Journal of Respiratory and Critical Care …, 2021 … predictive models and their resultant interventions as proof of concept. For such RCTs, pragmatic trials could potentially be performed, with issues such as the need for patient consent decided on by IRBs.

Academic medical science:

[HTML] Research on the Opening of Adverse Drug Reaction Data in the EU Y Ding, Y Chen, P Liu - Open Journal of Preventive Medicine, 2021 … Drug Safety, 41, 665-675. https://doi.org/10.1007/s40264-018-0647-1. [8], Innovative Medicines Initiative (2015) PROTECT: Pharmacoepidemiological Research on Outcomes of Therapeutics by a European Consortium. [9], Candore, G., Slattery, J., Kurz, X., et al

Covid-19: AstraZeneca vaccine linked with small risk of ITP, real world data show J Wise – 2021 The autoimmune bleeding disorder is characterised by a decrease in the number of platelets, which can cause minor bruising in some patients and excessive bleeding and long term illness in others. The authors of the study, published in Nature

Ascertaining Nonfatal Endpoints in Clinical Trials: Central Adjudication Versus Patient Insurance Claims. EL Eisenstein, MN Zozus, SF Terry, L Davidson-Ray… - Therapeutic innovation & …, 2021 … Abstract. Background. The 21st Century Cures Act allows the US Food and Drug Administration (FDA) to utilize real-world data (RWD) to create real-world evidence (RWE) for new indications or post approval study

[HTML] Assessing Clinical Outcomes in a Data-Rich World—A Reality Check on Real-World Data JC Hong, AJ Butte - JAMA Network Open, 2021 Advancements in health

information technology and data aggregation have led to the emergence of real-world data and real-world evidence (RWE). The 21st Century Cures Act1 broadly defined RWE as “data regarding the usage, or the potential …

[HTML] Introduction to real-world evidence studies D Chodankar - Perspectives in Clinical Research, 2021 Side effects which are less frequently seen can be studied better with a RWE study as compared to RCT since RCT is conducted in a smaller population and with a shorter duration … Comparative effectiveness research of Indian prescribed dose as compared

Real-World Evidence for Assessing Treatment Effectiveness and Safety in Pediatric Populations DB Horton, MD Blum, M Burcu - The Journal of Pediatrics, 2021 DH is supported by the National Institute of Arthritis and Musculoskeletal and Skin Diseases of the National Institutes of Health (K23AR070286 and R01AR074436) and received grant funding from Danisco USA Inc. M. Bu. is a full-time employee of

[HTML] The Real-World Data Challenges Radar: A Review on the Challenges and Risks regarding the Use of Real-World Data F Grimberg, PM Asprion, B Schneider, E Miho… - Digital Biomarkers, 2021 Background: The life science industry has a strong interest in real-world data (RWD), a term that is currently being used in many ways and with varying definitions depending on the source. In this review

[HTML] Real-world effectiveness of BNT162b2 mRNA vaccine: a meta-analysis of large observational studies CS Kow, SS Hasan - Inflammopharmacology, 2021 This paper aims to summarize through meta-analyses the overall vaccine effectiveness of the BNT162b2 mRNA vaccine from observational studies. A systematic.

Ethical Risks of Real-World Data in Post-Marketing Drug Safety Studies LIU Yuqiang, Q Rui, Z Lin, M Ruogu, SUN Feng… - Chinese Journal of …, 2021 Objective To provide a reference for making better use of real-world data (RWD) ethical requirements to carry out post-marketing drug safety monitoring and evaluation. Methods From the perspective of patient safety and data security, discuss

[HTML] Addressing health disparities in cancer with genomics OD Balogun, OI Olopade - Nature Reviews Genetics, 2021 0123456789 ();: to begin colonoscopy at 45 years old. However, African American individuals are about 20% more likely to get colorectal cancer and about 40% more likely to die from it than most other racial groups. Although some of this disease

[HTML] Cost-effectiveness evaluation of mammography screening program in Taiwan: Adjusting different distributions of age and calendar year for real world data CN Lin, KT Lee, SM Chang, JD Wang - Journal of the Formosan Medical Association, 2021 Background/Purpose We estimated loss-of-life expectancy (LE) and lifetime medical expenditures (LME) stratified by stages to evaluate the cost-effectiveness of

A Medicine Adoption Model for Assessing the Expected Effects of Additional Real-World Evidence (RWE) at Product Launch R Jandhyala - Current Medical Research and Opinion, 2021 Introduction: The optimal launch and adoption of novel medicines require effective navigation of the commercial and regulatory landscape, including three key gatekeeper groups: regulators, payors, and prescribers.

[HTML] Opioid use disorder and health service utilization among COVID-19 patients in the US: A nationwide cohort from the Cerner Real-World Data F Qeadan, B Tingey, R Bern, CA Porucznik, K English… - EClinicalMedicine, 2021 Background Both opioid use and COVID-19 affect respiratory and pulmonary health, potentially putting individuals with opioid use disorders (OUD) at risk for complications from

[HTML] How artificial intelligence might disrupt diagnostics in hematology in the near future W Walter, C Haferlach, N Nadarajah, I Schmidts… - Oncogene, 2021 Artificial intelligence (AI) is about to make itself indispensable in the health care sector. Examples of successful applications or promising approaches range from the application of pattern recognition software to pre-process and analyze digital

Academic bioinformatics:

[PDF] Functional genomics approaches to improve pre-clinical drug screening and biomarker discovery LV Nguyen, C Caldas - EMBO Molecular Medicine, 2021 Advances in sequencing technology have enabled the genomic and transcriptomic characterization of human malignancies with unprecedented detail. However, this wealth of information has been slow to translate into clinically meaningful outcomes

[HTML] Integration of metabolomics, genomics, and immune phenotypes reveals the causal roles of metabolites in disease X Chu, M Jaeger, J Beumer, OB Bakker… - Genome Biology, 2021 Recent studies highlight the role of metabolites in immune diseases, but it remains unknown how much of this effect is driven by genetic and non-genetic host factors. We systematically investigate circulating metabolites in

[PDF] Privacy considerations for sharing genomics data M Oestreich, D Chen, JL Schultze, M Fritz, M Becker - EXCLI Journal, 2021 An increasing amount of attention has been geared towards understanding the privacy risks that arise from sharing genomic data of human origin. Most of these efforts have focused on issues in the context of genomic sequence data, but the

[HTML] Design and Evaluation of a Prescription Drug Monitoring Program for Chinese Patent Medicine based on Knowledge Graph W Xiong, J Cao, X Zhou, J Du, B Nie, Z Zeng, T Li - Evidence-Based Complementary …, 2021 … en, the named entity recognition model extracted the key information from the electronic medical record to be monitored and matched the knowledge graph to realize the

[HTML] Patient Representation From Structured Electronic Medical Records Based on Embedding Technique: Development and Validation Study Y Huang, N Wang, Z Zhang, H Liu, X Fei, L Wei… - JMIR Medical Informatics, 2021 Background: The secondary use of structured electronic medical record (sEMR) data has become a challenge due to the diversity, sparsity, and high dimensionality of the data

[HTML] Automatic Prediction of Recurrence of Major Cardiovascular Events: A Text Mining Study Using Chest X-Ray Reports A Bagheri, TKJ Groenhof, FW Asselbergs, S Haitjema… - Journal of Healthcare …, 2021 Page 1. Research Article Automatic Prediction of Recurrence of Major Cardiovascular Events: A Text Mining Study Using Chest X-Ray Reports Ayoub Bagheri ,1 T. Katrien J. Groenhof,2 Folkert W.

[HTML] Taming the chaos?! Using eXplainable Artificial Intelligence (XAI) to tackle the complexity in mental health research V Roessner, J Rothe, G Kohls, G Schomerus, S Ehrlich… - 2021 Mental disorders cause a significant degree of burden to affected individuals and to society at large. Reasons for this are their high prevalence (one in every two people suffers from a mental disorder at some point in their

[HTML] Guest Editorial: Special issue on "Artificial Intelligence in Health Informatics" S Siuly, U Aickelin, E Kabir, Z Huang, Y Zhang – 2021 Globally, Artificial intelligence (AI) has been playing a robust and the fastest growing role in Health Informatics (HI) the last few decades. AI enables computers and machines to mimic the perception, learning, problemsolving, and decision-making

[HTML] Large scale meta-analysis of preclinical toxicity data for target characterisation and hypotheses generation J Munoz-Muriedas - PloS one, 2021 … or persons. GlaxoSmithKline is a global healthcare company with a portfolio of medicines in respiratory, HIV, immune-inflammatory and oncology therapeutic areas in addition to vaccines and healthcare products. Jordi Munoz

[HTML] A Care Knowledge Management System Based on an Ontological Model of Caring for People With Dementia: Knowledge Representation and Development Study G Kim, H Jeon, SK Park, YS Choi, Y Lim - Journal of Medical Internet Research, 2021 Background: Caregivers of people with dementia find it extremely difficult to choose the best care method because of complex environments and the variable

[HTML] Language Translation, Deep Learning and Artificial Intelligence Y Sun Artificial Intelligence, also widely known as 'AI', is intelligence executed by machines which take actions to achieve the prescribed goals to the maximum extent based on the perceived environment [1, 2]. The latest applications and products in many fi

[PDF] Anonymisation of data by synthesising data M Templ - Sciences, 2021 … Instead, almost any situation where real-world healthcare data is used can and probably is being represented with synthetic data. That al- lows for the low-cost, low-burden testing environment that then can be validated using real-world data." (Robert Lie- berthal)