Coalesce Research Group

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Joint Event

2nd International Conference on

EPIDEMIOLOGY AND PUBLIC HEALTH

&

International Conference on

RARE DISEASES AND ORPHAN DRUGS

March 25-26, 2024 | London, UK

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Scientific Program

Scientific Program

Monday
March 25, 2024

2nd International Conference on
Epidemiology and Public Health
&
International Conference on
Rare Diseases and Orphan Drugs

Day-1 : March 25, 2024	
Metting Hall: Windsor Suite	
08:00 - 08:45	Registrations
08:45 - 09:00	Introduction
Keynote Presentations	
09:00 - 09:40	Title: Demographic and Clinical Characteristics Associated with Advanced Stage Colorectal Cancer: An Epidemiological Analysis
	Robert M West, University of Leeds, UK
09:40 - 10:20	Title: Long-Term Consequences of Environmental Lead Exposure in Kosovo: Effects of Pre and Postnatal Lead Exposure in Early Adulthood
	Camaj R Pashko, William Paterson University, USA
Oral Presentations	
Session Chair:	**James McHale,** University of South Florida, USA
Session Chair:	**Mohammad Intakhab Alam,** Diagnomed GmbH, Germany
Session Chair:	**Evrim Anik,** University Leeds, UK
Sessions:	Epidemiology and Disease Control | Observational Epidemiology | Cancer Epidemiology | Public Health| | Public Health and Safety | Social and Behavioural Sciences | Occupational Safety and Health | Clinical Epidemiology | Nutritional Epidemiology | Clinical Case Reports and Case Studies
10:20 - 10:45	Title: Control Banding and the Global Rise of Qualitative Risk Assessment Strategies
	John M Cala, Lawrence Livermore National Laboratory, USA
Networking and Refreshments @ York Lobby (10:45 - 11:10)	
11:10 - 11:35	Title: The Measurement Invariance Across Sociodemographic, Health and Time Points Variable Groups in Quality of Life in England
	Ali Alittas, University of Leeds, UK
11:35 - 12:00	Title: The Case for Lead and Cadmium Heavy Metal Screening
	Daniel Glicklich, New York Medical College, USA
12:00 - 12:25	Title: How To (Or Not To) Optimize Research Processes Using Lean
	Caroline Ariane Dahl Wraae, University of Southern Denmark, Denmark
12:25 - 12:50	Title: The Challenge of Rare Diseases In Dentistry
	Jose Maria Diosdado Cano, University of Salamanca, Spain
Group Photo (12:50 - 13:10)	
Lunch Break @ Market Garden Restaurant (13:10 - 14:00)	
14:00 - 14:25	Title: Framework for Pandemic Response: Lessons from Rapid Conceptualisation and Implementation of a Large-Scale Emergency COVID-19 Community Care Facility in Singapore
	Chong Boon Teo, National University of Singapore, Singapore

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14:25 - 14:50	Title: Uncovering Health Inequalities: A Czech Republic Case Study
	Alice Kozumplíková, Mendel University in Brno, Czech Republic
14:50 - 15:15	Title: Investigating the Relationship Between Dietary Intake Patterns and the Rome IV Irritable Bowel Syndrome in 26 Countries
	Hussain Jaafari, University of Leeds, UK
15:15 - 15:40	Title: Creating Safe and Respectful Workplaces: Eliminating Workplace Sexual Harassment
	Leanne Lester, University of Western Australia, Australia
15:40 - 16:05	Title: Prevalence and Factors Associated with Situations of Insult, Threat, Extortion and Physical Aggression, Last 12 Months: Population-Based Health Survey in the City of Sao Paulo, ISA-Capital SP 2015
	Edige Felipe de Sousa Santos, University of Sao Paulo, Brazil
Networking and Refreshments @ York Lobby (16:05 - 16:30)	
16:30 - 16:55	Title: Effects of Exercise Interventions on Executive Function in Old Adults with Mild Cognitive Impairment: A Systematic Review and Meta-Analysis of RCTs
	Lin Miaoran, Fujian Medical University, China
16:55 - 17:20	Title: Quantifying the Impact of Community Health Workers' Perinatal Behaviour on their Clients' Decision-Making
	Faiz A Hashmi, The University of Texas at Austin, USA
Day 1 Concludes followed by Award Ceremony	

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Day-2 : March 26, 2024	
Metting Hall: Windsor Suite	
Keynote Presentations	
09:30 - 10:10	Title: WHO R&D Blueprint Viral Pathogens: Are We Prepared for the Next Pandemic with Precise Diagnostics, Vaccines and Therapeutics?
	Mohammad Intakhab Alam, Diagnomed GmbH, Germany
10:10 - 10:40	Tittle: Persistent Psychological Trauma Associated with COVID-19 Hospitalization: Findings from the PHOSP-COVID Cohort Study
	Evrim Anik, University of Leeds, UK
Networking and Refreshments @ York Lobby (10:40 - 11:05)	
11:05 - 12:00	Title: Design and Delivery of Culturally Sensitive Preventive Infant Mental Health Services for Black/African American Families "Meeting Families Where They Are"
	James McHale, Kimberly Brown-Williams, Carole Alexander, University of South Florida, USA
Oral Presentations	
Session Chair:	**Robert M West,** University of Leeds, UK
Session Chair:	**Pashko Camaj,** William Peaterson University, USA
Session Chair:	**Gotabhaya Ranasinghe,** National Hospital of Sri Lanka, Sri Lanka
Sessions:	Mental Health | Primary Health Care | Epidemiology and disease control | Promotion of Health | Public Health | Immunology and Vaccines | Clinical Case Reports and Case Studies | Introduction and Causes of New Rare Diseases | Rare Autoimmune Disorders
12:00 - 12:25	Title: Association Between Burnout and Empathy in Healthcare – An Asian Multi-Professional Study
	Song He, KK Women's and Children's Hospital, Singapore
12:25 - 12:50	Title: Examining Associations between Caregiver Burden and Caregiver Mental Health in Three Governorates in Lebanon
	Suzanne Charbaji, American University of Beirut, Lebanon
12:50 - 13:15	Title: Vaccine Wastage in Ghana, Mozambique and Pakistan: An Assessment of Wastage Rates for Four Vaccines and the Context, Causes, Drivers and Knowledge, Attitudes and Practices for Vaccine Wastage
	Naeem Asghar, UNICEF, Pakistan
Lunch Break @ Market Garden Restaurant (13:15 - 14:10)	

Scientific Program

Tuesday
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14:10 - 14:35	Spontaneous Coronary Artery Dissection with Leucoencephalopathy associated with Thrombospondin Type 1 Domain containing 1 Gene Mutation: A Case Report
	Gotabhaya Ranasinghe, National Hospital of Sri Lanka, Sri Lanka
14:35 - 15:00	Rapid-Onset Obesity with Hypothalamic Dysregulation, Hypoventilation and Autonomic Dysregulation (ROHHAD) A Rare Disease and Challenges to An Intensivist
	Namrata Maheshwari, Medway Maritime Hospital, United Kingdom
15:00 - 15:25	Title: Public Health Priority to Enhance Equitable Access to Diagnosis and Treatment of Individuals with Rare Diseases in Malaysia
	Noor Aziah Zainal Abidin, Management and Science University, Malaysia
15:25 - 15:50	Title: A Case Report of Gastric Amyloidosis With Multiple Organ Involvement
	Ahlam Muthanna, Barts Health Trust, London, UK
15:50 - 16:15	Title: Barriers and Facilitators to Cardiac Rehabilitation: A Qualitative Study from China
	Ying Zou, University Medical Center Groningen, Netherlands
	Networking and Refreshments @ York Lobby (16:15 - 16:40)
16:40 - 17:05	Title: Characteristics of Bacterial Strains Isolated from the Hypothermal Healing Spring Waters from France and Bulgaria
	Nedyalka Valcheva, Trakia University, Bulgaria
17:05 - 17:30	Acute Disseminated Encephalomyelitis: A Fulminant Course
	Saurabh Pradhan, King's College Hospital NHS Trust, United Kingdom
	Poster Presentations
POSTER 01	Title: Where Do 15- To -17-Year-Olds in Canada Get their Sexual Health Information?
	Michelle Rotermann, Statistics Canada, Canada
POSTER 02	Title: Quantification of Beta Cell Carrying Capacity in Prediabetes
	Aurore Woller, Universite Libre de Bruxelles, Belgium
	E-Poster Presentation
E-Poster	Title: Obstetrician/Gynaecologists Vaccine Perceptions, Hesitancy and Recommendation to Pregnant Women: A Systematic Review
	Panagiota Kalatzi, University of Peloponnese, Greece
	Video Presentation
Video Presentation	Title: An In-Depth Investigation of Nutritional Dynamics Between Canine Companions and Their Owners through the Lens of Nutritional Epidemiology
	Ionela Hotea, University of Life Sciences, King Mihai I'' from Timisoara, Romania
	Day 2 Concludes followed by Vote of Thanks & Awards Ceremony

Scientific Program

Monday
March 25, 2024

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Virtual Presentations	
March 25, 2024 Greenwich Mean Time (GMT) - Starts at 10:00 AM	
10:00 - 10:20	Introduction
Keynote Presentation	
10:20 - 10:50	Title: Does Social Support Protect Healthcare Professionals from Fatigue and Restrictive Quality of Life? A Cross Sectional Study in Greece
	Paraskevi Theofilou, Hellenic Open University, Greece
Presentations	
10:50 - 11:15	Title: Searching For Biomarkers in the Blood of Patients at Risk of Developing Parkinson's Disease at the Prodromal Stage
	Marianna V Selikhova, Michael V Ugrumov and Elena A Katunina Pirogov Russian National Medical University, Russia
11:15 - 11:40	Title: Comparison of QuantiFERON Gold Plus and QuantiFERON Gold in Tube Diagnostic Performance in Detecting Tuberculosis Infection: Evidence from A Meta-Analysis
	Nouira Mariem, Tunis-University of Tunis El Manar-Tunisia, Tunisia
11:40 - 12:05	Title: Targeting The Spike Glycoprotein Receptor Binding Domain of SARS-Cov-2 Delta (B.1.617.2) Variant by Chicoric Acid from *Echinacea purpurea* Using Molecular Docking
	Selma Houchi, University of Ferhat ABBAS setif-1, Algeria
12:05 - 12:30	Title: Exclusive Breastfeeding Practice in North African Countries: Evidence from A Meta-Analysis
	Nouira Mariem, Tunis-University of Tunis El Manar-Tunisia, Tunisia
12:30 - 12:55	Title: Role of Mass Media in Understanding About Cervical Cancer and Its Screening Among Married Women
	Ayesha Shahid, Consultant Gynecologist, Pakistan
12:55 - 13:20	Title: Prevalence And Trend of Breastfeeding Indicators in Tunisia: Evidence from Repeated National Surveys (2000-2018)
	Nouira Mariem, Tunis-University of Tunis El Manar-Tunisia, Tunisia
13:20 - 13:45	Title: Integration Of Correlative and Explanatory Model Methods for Predicting the Growth of Biological Systems
	Carlos Oscar Rodríguez Leal, University of Guadalajara, Mexico
13:45 - 14:10	Title: Usefulness of the Tuberculin Skin Test for The Detection of Active Tuberculosis: Results from A Large Tunisian Multicentre Case-Control Study
	Nouira Mariem, Tunis-University of Tunis El Manar-Tunisia, Tunisia

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14:10 - 14:35	Measles in Mexico 2020: An Epidemiological Profile and Future Prevention Strategies Amidst Challenges
	Alejandro Cárdenas-Cantero and Ana Karen Angoa-González ,Universidad de Guadalajara, Mexico.
14:35 - 15:00	Characterization, Antibacterial and Cytotoxic Activities of Silver Nanoparticles Using the Whole Biofilm Layer as A Macromolecule in Biosynthesis
	Aghapy Yermans Yakoup, Zewail University of Science and technology
15:00 - 15:25	Title: Optimizing Dual-Antiplatelet Therapy in the Perioperative Period for Spine Surgery After Recent Percutaneous Coronary Intervention: A Comprehensive Review, Synthesis, And Catalyst for Protocol Formulation
	Brandon Lucke-Wold, University of Florida, USA
15:25 - 15:50	Title: Hepatitis B in Northern Vietnam
	Evgeniia Lichnaia, Saint-Petersburg Pasteur Institute, Russia

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Established a special issue with 2nd International Conference on **Epidemiology and Public Health** to be held from **March 25-26, 2024** in **Renaissance London Heathrow Hotel, London, UK** as the theme "**Current research on Epidemiology and Public Health".**

Conference Special Issue Link https://www.aimspress.com/aimsph/article/6614/special-articles

Day-1
Keynote Presentations

DEMOGRAPHIC AND CLINICAL CHARACTERISTICS ASSOCIATED WITH ADVANCED STAGE COLORECTAL CANCER: AN EPIDEMIOLOGICAL ANALYSIS

Robert M West[1], Norah Alsadhan[1,2], Farag Shuweihdi[1], Cathy Brennan[1] and Sultana Alhurishi[2]

[1]Leeds Institute of Health Sciences, University of Leeds, UK
[2]King Saud University, KSA

Abstract

Background: In Saudi Arabia, approximately one-third of colorectal cancer (CRC) patients receive a diagnosis at a distant stage of the disease. Late diagnosis, that is with distant stage, often leads to significantly poorer outcomes for patients. Understanding the characteristics of patients associated with presenting at a late stage of CRC is crucial for developing targeted interventions, enabling earlier detection, and thereby improving patient outcomes.

Methods: For this retrospective population-based cohort study, we utilized CRC data from the Saudi Cancer Registry, encompassing 17,542 patients recorded between 1997 and 2017. Initial population splitting, guided by classification trees, was followed by separate logistic regressions permitting variation in risk factors.

Results: Various classification trees were employed, all indicating a population split based on region and sex. The use of two groups of regions led to the fitting of four logistic regressions, with groups 1 and 2 segregated by male and female patients. Certain risk factors, such as the date of diagnosis, demonstrated consistency across the four logistic regressions. Some regions showed evidence of earlier detection, while in others, young age emerged as a notable risk factor for women. Note that this was for some regions only.

Conclusion: Our study has unveiled significant associations between distant-stage colorectal cancer and several patient characteristics. The evidence of varying risk factors by region and sex will aid in the development of targeted early detection strategies. In particular younger women might be targeted in some regions. Further research is warranted to delve deeper into these relationships and formulate effective prevention strategies.

Biography

Robert West is a Professor of Biostatistics at the University of Leeds, UK. His research interests revolve around the application of statistics in applied health research. He specializes in utilizing observational data, including routine NHS data, to support health research, navigating the challenges and advantages of working with such datasets. Dealing with large datasets with complex structures and addressing issues related to missing data and causal inference are areas where he exercises caution. In addition to his own research, Robert supervises PhD students who are involved in diverse research projects related to frailty, aging, orthopedics, cancer epidemiology, and health informatics. He has served on an NHS Research Ethics Committee and international funding boards, including the National Institute for Health Research Public Health Research and Health Services and Delivery Research funding boards. Further, Robert contributes to the academic community as an associate editor of the Annals of Clinical Biochemistry.

LONG-TERM CONSEQUENCES OF ENVIRONMENTAL LEAD EXPOSURE IN KOSOVO: EFFECTS OF PRE AND POSTNATAL LEAD EXPOSURE IN EARLY ADULTHOOD

Pashko R Camaj
William Paterson University, USA

Abstract

Background: In the field of environmental health, exposure to lead (Pb) has remained one of the most studied topics. However, even with persistent research on this topic, and continued efforts to reduce exposure, long term effects of Pb on public health still require more adequate attention. More specifically, analyses of relationships between prenatal and early childhood Pb exposure and blood pressure and effects on erythropoietin production later in life are not adequate. A significant study undertaken in two Kosovo towns beginning in the mid-1980s shed much light on these topics and produced numerous landmark publications that contributed to the implementation of environmental policies. Following up with a study of a representative sample from that cohort, when they reached age 25, we reported the lasting effects of prenatal and early childhood exposure to environmental lead exposure.

Study aims: Epidemiologic studies examining the relationship between environmental lead exposure and blood pressure (BP) generally report small associations between blood lead concentration (BPb) and BP. However, these studies are predominantly cross-sectional and do not evaluate whether Pb exposure in early life is associated with BP later in life. In addition, no epidemiologic studies evaluate associations between either current or past Pb exposure and serum levels of markers of systemic inflammation and endothelial dysfunction, including soluble vascular adhesion molecule (sVCAM-1) and soluble intercellular cell adhesion molecule (sICAM-1). In addition, we examined the association between prenatal, early childhood, and concurrent Pb exposure and EPO concentration in young adulthood.

Methods: From our prospective birth cohort study in Mitrovica (a mining town) and Pristina (a control town) Kosovo, from 1985-1998, we located and assessed blood lead concentration (BPb) and serum EPO in 101 participants (mean age 24.9 years old) in 2011.

Results: We found small, adjusted associations between concurrent BPb and systolic BP (sBP). In addition, the associations between earlier BPb measures and BP at age 25 were small and not statistically significant. We found highly statistically significant association between concurrent BPb and sVCAM-1 in men, and a marginally significant association between concurrent PBb and sICAM. -1 in women. We did not find evidence of mediation. In addition, our results resembled the findings in the original full cohort at 4.5 and 6.5 years of age, at which time we reported that the maintenance of a normal Hgb required increased EPO production among participants exposed to high levels of environmental Pb. In contrast, when the original cohort was 9.5 and 12 years of age, they were no longer capable of hyper-production of EPO in order to maintain normal levels Hgb, suggestive of cumulative toxicity to the peritubular cells of the kidney that are responsible for EPO synthesis.

Conclusion: Current study results, along with previously reported findings on this cohort, provide evidence for the hypothesis that exposure to Pb leads to small increases in sBP and perhaps to increased

circulating levels of sVCAM-1. Our study, along with previously reported findings on this cohort, suggest that a dramatic reduction of Pb exposure may allow for a reversal of the impact that prolonged Pb exposure may have on EPO production.

Biography

Pashko R Camaj - Currently, I am an adjunct professor at William Paterson University in Paterson, NJ, USA, where I teach epidemiology, public and environmental health sciences for the Public Health Program students, bachelor's, and master's degrees. My research work with Columbia University's Mailman School of Public Health explored the long-term effects of lead from exposure during early childhood. Two studies have recently been published (see links below). To my knowledge these two studies are some of only few that have the benefit of following up on a cohort of 500 plus children that had been longitudinally examined, from birth through age of 12. We then cross-sectionally evaluated a representative sample of the same cohort at age of 25. I am also serving as a VP of the Department of Safety & Health within MTA B&T, one of the divisions of the regional public transportation agency in New York City with thousands of employees and millions of our transit costumers.

Day-1
Oral Presentations

CONTROL BANDING AND THE GLOBAL RISE OF QUALITATIVE RISK ASSESSMENT STRATEGIES

John M Cala, Juliana H Halbach, Samuel Y Paik and David M Zalk

Lawrence Livermore National Laboratory, USA

Abstract

Purpose of Review Control banding (CB) is a risk assessment strategy that has been applied globally to a variety of occupational hazards. This article describes how this method can be applied, recent developments in the CB literature, an example of how it is utilized for a large, diverse worksite, and where the future of CB is headed.

Recent Findings Over the past several years, the applications of CB have widened significantly and have accordingly helped bolster the public and occupational safety, health, and hygiene (OSHH) professionals' understanding of occupational exposure to various hazards. The fields of workplace chemicals, nanomaterials, and airborne pathogens (i.e., COVID-19), specifically have seen remarkable increases in the development of CB tools. Extensive CB tool validation efforts have also lent increasing credibility to this alternative approach.

Summary CB is a simplified strategy of assessing occupational exposures and providing commensurate controls and solutions to reduce workplace risks. CB can be used as a primary or tiered risk assessment and risk management approach which can be utilized by both OSHH professionals and nonexperts alike to identify solutions for reducing work-related exposures. The need for health and safety expertise will continue to grow as technological advancements, environmental changes, and economic forces increase workplace hazard complexity, and CB will continue to be a useful tool for those performing risk assessments.

Biography

John M Cala, MS, CIH is an Industrial Hygienist and Team Leader with Lawrence Livermore National Laboratory (LLNL) where he also serves as the Nanomaterials subject matter expert. Mr. Cala has a B.A. in Environmental Studies from the University of Pittsburgh and a M.S. in Chemistry from the University of North Carolina Wilmington. He is a Certified Industrial Hygienist and has 10 years of comprehensive experience in Environmental, Health, and Safety in both public and private sectors. Mr. Cala is an active member in the American Industrial Hygiene Association and a member of the Future Leaders Institute (FLI) Class of 2022. At LLNL he has supported the construction group, plutonium and tritium facilities, and is currently the ES&H team leader for the Global Security Directorate.

THE MEASUREMENT INVARIANCE ACROSS SOCIODEMOGRAPHIC, HEALTH AND TIME POINTS VARIABLE GROUPS IN QUALITY OF LIFE IN ENGLAND

Ali Alattas, Kate Best, Farag Shuweihdi, Silviya Nikolova and Robert M West
University of Leeds, UK

Abstract

Background: The concept of quality of life (QoL) is complex and poses measurement challenges. Responses my differ for those of different age, sex, or other characteristics so that comparison may not be valid. Focusing on a specific population, such as older people, could facilitate more consistent measurement. CASP-12, a QoL measure tailored to older individuals, considers various aspects of their lives based on Maslow's psychological theory, targeting those aged 65 to 75.

Objective: The objective of this study was to assess whether respondents of different ages, sex, wealth levels, and health conditions interpreted the CASP-12 questionnaire similarly. Data were extracted from the English Longitudinal Study of Ageing (ELSA), involving individuals aged over 50 residing in England. A large sample drawn from 16,806 households.

Methods: Data were drawn from the English Longitudinal Study of Ageing (ELSA), with information on demographic and health indicators of individuals over 50 years of age residing in England. A large sample of 16,806 households was selected. Data were analysed using a multi-group confirmatory factor analysis (MG-CFA) approach.

Results: CASP-12 was consistent across genders and satisfied the strict level invariance criteria. Additionally, the questionnaire demonstrated strong partial invariance in age, net wealth, time points and LTCs. CASP-12 did not meet the strong invariance requirements for frailty levels, either wholly or partially. A modified version of CASP-12 was devised, dividing the participants into (fit/mild) and (moderate/frail) groups. The modified version achieved strong invariance across all six groups and strict invariance in most cases.

Conclusion: The modified CASP-12 questionnaire exhibited a high level of consistency among various variable groups, making it a suitable tool for health research applications. By accounting for frailty, the modified version ensures a more consistent assessment of quality of life, particularly among older populations, and provides valuable insights for enhancing well-being in this demographic.

Biography

Ali Alattas is a lecturer in health sciences at King Saud bin Abdulaziz for Health Sciences, Saudi Arabia, and a final-year PhD student at the University of Leeds, UK. He has recently focussed on the use of modern statistical and machine learning techniques in the analysis of health data, especially longitudinal modelling within cohort studies. Concepts of frailty and of quality of life have featured in his PhD work. Ali has expertise in evaluation and a passion for improving health and well-being. Research interest is about Statistical modelling.

THE CASE FOR LEAD AND CADMIUM HEAVY METAL SCREENING

Daniel Glicklich

New York Medical College, USA

Abstract

Objective/Methods: literature review to assess extent, clinical importance and published treatment trials of cadmium and lead toxicity.

Background: Exposure to cadmium and lead is widespread, and is related to environmental contamination, occupational sources, food, tobacco and other consumer products. Lower socioeconomic status increases the risk of heavy metal exposure and the diseases associated with cadmium and lead toxicity. Concurrent toxicity with both cadmium and lead is likely but has not often been assessed. There is now substantial evidence linking cadmium and lead to many diseases including hypertension, diabetes mellitus, obesity, cancer, coronary artery disease, chronic kidney disease and lung disease.

Results: Both chronic renal failure and ischemic heart disease patients have been treated separately in recent studies with ca edta chelation therapy (<50 mg/kg/week). In patients with CKD, serum creatinine 1.5-4.0 mg/dl, and increased body lead burden, weekly low dose chelation with ca edta slowed the rate of decline in renal function in diabetics and non-diabetics. In patients with a history of myocardial infarction, the tact study showed that ca edta chelation decreased the likelihood of cardiovascular events, particularly in diabetics. In the past, acute renal failure associated with much higher dosage was reported.

Conclusion: CA EDTA chelation administered carefully at lower dosage (<50 mg/kg per week) is generally safe. Evidence suggests efficacy of chelation therapy in selected groups. We suggest that the preponderance of the evidence favours a more activist approach towards diagnosis and possible intervention in heavy metal toxicity.

Biography

Daniel Glicklich has been a Practicing Nephrologist for 40yr.He Is Medical Director of the Renal Transplant Program Westchester Medical Centre, New York Medical College Valhalla, New York And Professor of Clinical Medical Medicine at New York Medical College. He has been interested in factors that contribute to and are associated with chronic renal failure in transplant patients

HOW TO (OR NOT TO) OPTIMIZE RESEARCH PROCESSES USING LEAN

Caroline Ariane Dahl Wraae
University of Southern Denmark, Denmark

Abstract

Background: "We need less research, better research, and research done for the right reasons" . Waste in medical research has been a well discussed topic for some time now, however initiatives to reduce it are scarce. For this reason, a new Lean model was developed into hospital research units at the Odense University Hospital in Denmark.

Originally Lean Management methodologies was developed for the industrial manufacturing industries, and later within healthcare where the results are positive in terms of greater efficiency within treatments and patient care. Given that research forms the foundation for treatments provided to the patients, it is paramount to identify approaches to create efficiency within research procedures.

Objective: To provide an overview of the current knowledge about the use of - and consequences of using - Lean models on healthcare research processes and to share experiences from our local case of implementing the Model of Improvement in hospital research units.

Methods: A scoping review following the framework of Arksey and O'Malley for conduction of scoping reviews (PRISMA-ScR) and a questionnaire sent out to 44 hospital research units regarding they perception and use of the Model of Improvement.

Results: As there only exist very few initiatives to reduce waste in research, the expected result from this study is to find few similarly studies to match our local case. Preliminary findings reveal that Lean models is most used within research processes. We further expect a broad range of opinions from the clinical researchers from their hands on experience with the Model of Improvement.

Conclusion: We expect to conclude what types of Lean methodologies that are most used is healthcare research processes as well as the advantages and disadvantages of doing so.

Biography

Caroline Ariane Dahl Wraae is a PhD student with a passion for health and expertise in Lean methodologies within research process. The PhD project creates new opportunities to create better research, where quality research is prioritized above quantity. Lastly, research should always be conducted with the patients is always at heart. To goal is to create better workflow for researchers in healthcare research.

THE CHALLENGE OF RARE DISEASES IN DENTISTRY

Jose Maria Diosdado Cano, Cano-Rosas M, De Vicente-Jimenez J and Gallas-Torreira M

University of Salamanca, Spain

Abstract

Introduction: Patients with rare diseases are patients who require a special and multidisciplinary approach and a specific protocol. These syndromes often present oral manifestations such as skeletal malformations, dental alterations such as agenesis and changes in the position of teeth.

Aim: The objective of the work is to review the oral and orthodontic alterations that people with rare diseases have.

Material and Method: Two types of searches were carried out: A systematic review of the quality of life in patients with rare diseases in need of orthodontic treatment: papers in all languages were selected in the PubMed/MEDLINE, EMBASE (Scopus) and Cochrane Library databases. The keywords were: "Orthodontic" AND "Treatment" AND "In" AND "Patients" AND "With" AND "Rare" AND "Syndromes". The research question (PICO) was defined as: What is the quality of life of a patient with rare diseases in orthodontics? Exclusion and inclusion criteria were defined and the PRISMA scale was used. A systematic review of oral alterations in people with Incontinentia Pigmenti (IP): a search was carried out in Pubmed/MEDLINE, Scopus and Scielo, using as inclusion criteria papers that incorporated the assessment of oral involvement of IP, systematised reviews of oral involvement in IP and studies that contained original data with a review of at least three patients, published in English and Spanish. The search terms "incontinentia pigmenti" and "review" or "oral disease" or "oral anomalies" were used.

Results: In the systematic review of the quality of life in patients with rare diseases in need of orthodontic treatment, a total of 253 articles were identified, of which 12 were finally selected according to the PICO scale and PRISMA criteria. The results show that patients with rare diseases must have multidisciplinary and orthodontic treatment, in many cases being a prior step to prosthetic-restorative treatments.

In the systematic review of oral disorders in people with incontinentia pigmenti, of the 350 articles found, only three fit the search criteria. After analysing the selected papers, it was observed that between 70 and 100% of patients had some type of orodental involvement.

Conclusion: From the analysis of the results, a significant orodental involvement was observed in patients with rare diseases that fully justifies the evaluation by a dental specialist on an ongoing basis and from the moment that the diagnosis of these patients is established.

In IP, oral and dental alterations represent the most frequent minor criteria for its diagnosis.

Biography

Jose Maria Diosdado Cano obtained his BDS in 2015 in the University of Salamanca. Afterwards, he studied Oral Surgery in the University of Seville and specialised in Oral Surgery in the GDC in 2021. He obtained postgraduate certificates as well in the fields of periodontics and endodontics and works in Spain and England.

FRAMEWORK FOR PANDEMIC RESPONSE: LESSONS FROM RAPID CONCEPTUALISATION AND IMPLEMENTATION OF A LARGE-SCALE EMERGENCY COVID-19 COMMUNITY CARE FACILITY IN SINGAPORE

Chong Boon Teo[1], Elliot Y Chong[2], Fan Shuen Tseng[2], Chang Siang Lim[1], Pin Sym Foong[1] and Gerald CH Koh[1,2]

[1]National University of Singapore, Singapore
[2]Ministry of Health Holdings, Singapore

Abstract

Introduction: The Community Care Facility @ Expo (CCF@Expo) is the largest community isolation facility in Singapore and played a crucial role in augmenting healthcare capacity to cope with the initial surge in COVID-19 transmission. CCF@Expo provided primary level healthcare for recovering COVID-19 patients whose swabs remain positive, and for low-risk patients with mild symptoms in the early stages of infection. This novel pandemic care model has been proven to be efficacious and widely adopted in various countries, but existing publications are mainly descriptive and from the clinical perspective.

Methods: We interviewed leaders from the clinical, operations and technological teams who spearheaded the conceptualisation, setup, and operations of CCF@Expo. We collated lessons into principles and laid out a holistic pandemic response framework centred on the novel concept of a large-scale community care facility for stable COVID-19 patients.

Results: We identified five principles contributed from the perspectives of various stakeholders that served as the bedrock for this model: 1) Effective Leadership and Communication, 2) Employing Clear Protocols, 3) Flexible Manpower Resourcing, and 4) Productive Use of Technology, all of which centre around 5) Maintaining Patient-Centred Care. These principles enabled the successful application of a community-based isolation strategy and allowed for rapid containment of the pandemic.

Conclusion: Community-based isolation is a viable model, especially in emerging pandemics. The five highlighted principles, consolidated from the learning points gained in the CCF@Expo experience, can be translated to other contexts to enable swift conceptualisation and operationalisation of a similar facility in an effective and multi-prong approach.

Biography

Chong Boon Teo is a fifth-year medical student at NUS. He is invested in the holistic wellbeing of doctors-in-training and also passionate about community service. Chong Boon is Chairperson Pro-Tempore of the TriMedSoc Alliance and President of 72nd NUS Medical Society. He is also a Public Service Commission (PSC) Medicine Scholarship recipient.

UNCOVERING HEALTH INEQUALITIES: A CZECH REPUBLIC CASE STUDY

Alice Kozumplikova, Dana Hubelova, Jan Caha and Lenka Janosikova

Mendel University in Brno, Czech Republic

Abstract

Background: Health inequities persist at various levels within and between societies. While European Union countries have made overall improvements in health, disparities persist among socially, economically, and societally disadvantaged individuals. This study aims to construct a model of health determinants to investigate the intricate relationship between these determinants and their impact on health inequalities.

Objective: To assess health inequalities and conditions at the territorial level of Local Administrative Units (LAU1) in the Czech Republic using publicly available data. To compare data from two periods: 2001–2003 and 2016–2019. Our objective was to understand how these determinants evolve over time and their association with health conditions.

Methods: Our methodology involved a range of techniques, including creating composite indicators, correlation analysis, the Wilcoxon test, aggregate index calculation, cluster analysis, and data visualization using the LISA method.

Results: We found unveiled robust relationships among health inequality categories in both time periods. Notably, significant associations were found between Economic status and social protection and Education in the first period, although these associations weakened over time. Data visualization identified persistent or worsening health inequalities in specific LAU1 areas, particularly related to Economic status and social protection, Education, Demographic situation, Environmental status, Individual living status, and Road safety and crime.

Conclusion: Spatial health inequalities endure in the Czech Republic, influenced by economic, social, demographic, and environmental factors, as well as local healthcare accessibility. Contrary to assumptions, both inner and outer peripheries exhibit poor health outcomes. Combining poverty and vulnerabilities exacerbates these disparities. Despite low rates of social exclusion and poverty, regional health inequalities persist.

Biography

Alice Kozumplíková specializes in evaluating and improving the quality of life, with a particular focus on environmental health. The spatial model proposed for assessing health disparities provides a comprehensive understanding of the factors contributing to regional and internal health variations. Alongside her colleagues, she developed this model as part of their applied research and now routinely shares their findings with university students and professionals through webinars and face-to-face meetings. The model and its visualizations have received acclaim from relevant authorities and are actively employed in practical applications.

DIFFERENCES IN DIETARY INTAKE PATTERNS CONTRIBUTE TO VARIATIONS IN THE WORLDWIDE PREVALENCE OF ROME IV IRRITABLE BOWEL SYNDROME

Hussain Jaafari[1,2], Lesley A Houghton[1,3], Robert M West[1], Farag Shuweihdi[1], Silviya Nikolova[4], Alexander C Ford[1], Peter J Whorwell[5,6], Shrikant I Bangdiwala[7], Olafur S Palsson[8], Ami D Sperber[9] and Dipesh H Vasant[5,6]

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[2]Umm Al-Qura University, KSA
[3]Mayo Clinic, Jacksonville, USA
[4]EMEA Real World Methods & Evidence Generation, IQVIA
[5]University of Manchester, UK
[6]Manchester University NHS Foundation Trust, UK
[7]McMaster University, Canada
[8]University of North Carolina-Chapel Hill, USA
[9]Ben-Gurion University of the Negev, Israel

Abstract

Background: Diet plays an important role in irritable bowel syndrome (IBS). Whether regional dietary habits influence the prevalence of IBS remains unclear. Previous studies focused on individual foods. We examined food frequency patterns by the prevalence of IBS.

Aim: To understand if dietary patterns are associated with the prevalence of IBS.

Methods: 54,127participants from 26 countries completed online questionnaires including the Rome IV diagnostic questionnaire and the consumption frequency of 10 food groups, within the Rome Foundation Global Epidemiology Study (RFGES). Latent class analysis (LCA) of the food groups adjusted for Rome-IV IBS status and country, provided dietary patterns. Correspondence analysis helped graphically differences.

Results: We identified four patterns showing geographical differences in dietary patterns and differing IBS prevalence (P<0.001). Cluster A had the highest IBS prevalence at 5.5% (95%CI: 5.1-5.9) with a diet rich in bread, pasta, fruit and eggs, followed by cluster B with an IBS prevalence of 5.0% (95%CI: 4.5 - 5.5) with diet including high consumption of dairy, fruits, and vegetables. Regions most represented in these two high-prevalence clusters included South American, Latin American, African and Mediterranean countries. These were followed by cluster C predominantly represented by European and North American countries (USA and Canada), as well as Australia, with a mean IBS prevalence of 3.5% (95% CI: 3.3 - 3.7) and a diet with lower consumption of tofu, rice, and eggs. Lastly, cluster D with the lowest IBS prevalence of 2.6% (95%CI: 2.3 - 2.9) had high consumption of rice, eggs, fish, tofu, and vegetables, strongly represented by Asian countries.

Conclusion: This study demonstrates the impact of national and regional dietary habits on the global prevalence of Rome-IV IBS. The utilization of RFGES, a robust and diverse dataset, enhances the study's findings' generalizability and validity.

Biography

Hussain Jaafari, PhD student at Leeds Institute of Health Sciences, has a keen interest in epidemiological research, particularly nutritional studies. Through his contributions to publications in this field, Hussain has gained valuable academic experience. His involvement in analyzing and exploring data from the Rome Foundation Global Epidemiology Study (RFGES) has led to contributions to publications in this domain. Hussain's passion for epidemiology and public health is evident as he eagerly anticipates the 2nd international conference, where he looks forward to sharing insights and engaging in discussions with fellow professionals.

CREATING SAFE AND RESPECTFUL WORKPLACES: ELIMINATING WORKPLACE SEXUAL HARASSMENT

Leanne Lester

University of Western Australia, Australia

Abstract

Workplace sexual harassment (WSH) is prevalent and pervasive; it occurs in every industry, across locations and at every level in workplaces. Workplace Sexual Harassment (WSH) is a workplace health hazard and is grossly underreported – only 17% of people report an incident. People who are targeted by WSH experience trauma and other psychological harm, physical and social impacts, and reduced quality of life. The financial cost of WSH is also incredibly high, contributing to a colossal loss of resources and revenue in Australia. The new Positive Duty Legislation imposes a legal obligation on organisations and businesses to take proactive and meaningful action in preventing WSH.

This current research focussed on identifying and understanding the prevalence, nature, and occurrence of workplace sexual harassment (WSH) and discrimination, and developing recommendations for employees, employers, providers of legal services and the justice system.

A mixed methods research methodology involved surveys of organisations, and interviews with people with lived experience, organisations providing legal advice and support services. Key findings reveal women and gender-diverse people, people of colour, LGBTQI+ people, and Aboriginal and/or Torres Strait Islander people are at greater risk of experiencing harm from WSH. Results also showed underreporting due to systemic barriers, and the need for a more effective legal and regulatory framework. Recommendations encompass organisational, legal, and systemic reforms, emphasising trauma-informed approaches, clear reporting pathways, and increased responsive and person-centered support for those affected by WSH beyond traditional reporting mechanisms.

Biography

Leanne Lester is the research manager at the Centre for Social Impact at the University of Western Australia (UWA). She is a senior research fellow at UWA, an epidemiologist and biostatistician who has over 25 years' experience in evaluation. Leanne provides specialised research methodology, data collection, linkage and data analysis expertise for business, not-for-profits, school and community-based research, education and advocacy. Leanne's research is varied, with current evaluations ranging from mental health, workplace sexual harassment, family and domestic violence, child advocacy, Out of Home Care services, women's refuge services and homelessness.

PREVALENCE AND FACTORS ASSOCIATED WITH SITUATIONS OF INSULT, THREAT, EXTORTION AND PHYSICAL AGGRESSION, LAST 12 MONTHS: POPULATION-BASED HEALTH SURVEY IN THE CITY OF SAO PAULO, ISA-CAPITAL SP 2015

Edige Felipe de Sousa Santos[1], Bruno Holanda Ferreira[1], Marilisa Berti de Azevedo Barros[2], Moisés Goldbaum[1] and Chester Luiz Galvao Cesar[1]

[1]University of Sao Paulo, Brazil
[2]Universidade Estadual de Campinas (Unicamp) – Campinas (SP), Brazil

Abstract

Background: Situations of violence have profound significance, as they reflect social inequality, with higher rates observed in poorer areas, with greater social vulnerability and low income.

Objective: To evaluate the prevalence of situations of insult, threat, extortion and physical aggression, in the population aged 20 and over living in the city of São Paulo, in the period of 2015 and, also, to identify the associated factors, according to demographic, socioeconomic characteristics and health conditions.

Methods: This is a population-based health survey, carried out with data from the 2015 edition of the Health Survey in the Municipality of São Paulo (ISA-Capital SP). The outcome variable was the prevalence of having been a victim of some type of violent situation, such as: insult, threat, extortion and physical aggression in the last 12 months. The associated factors were measured by the variables: gender, age group, skin color/race, religion, marital status, level of education, place of residence, presence of emotional problems and, also, the level of self-perceived health. For statistical analysis, the Poisson regression model was used to estimate the adjusted prevalence ratios (PRa).

Results: 7.90% of participants were victims of some violent situation in the last 12 months. People aged 20-39 years (8.80%;PRa=1.03), black skin color (11.99%;PRa=1.03), no religion (11.00%;PRa=1.04), single (9.62%;PRa=1.05) or separated (9.78%;PRa=1.06), with higher education (8.95%;PRa=1.02), with the presence of emotional problems (15.75%;PRa=1.05) and, also, with worse self-perceived health (13.44%;PRa= 1.06) showed a higher prevalence of having been victims of some violent situation in the last 12 months.

Conclusion: Factors associated with situations of violence in the last 12 months were identified. These findings point to the need to strengthen multisectoral public policies to reduce the determining factors of violence, with the health sector responsible for producing knowledge to highlight who these people are and where they live.

Biography

Edige Felipe de Sousa Santos is a Researcher and Epidemiologist, Master in Health Sciences and PhD in Epidemiology. He is currently doing a Post-Doctorate at the Faculty of Public Health at the University of São Paulo. It has 34 scientific articles accepted and/or published in the following journals: Clinics, World Journal of Paediatrics, Medicine, World Journal of Paediatric Surgery, Journal of Human Growth and Development, Journal of Clinical Oncology, Translational Paediatrics, Cadernos de Saude Pública, PLoS One, Scientific Reports, BMC Women's Health, Revista de Saude Pública, Cadernos Saúde Coletiva, International Journal of Women's Health, Revista Interfaces: Saúde, Humanas e Tecnologia. Additionally, he is a reviewer for the journal PLOS ONE. He has experience in research in the area of Epidemiology and Biostatistics, with an emphasis on time series analysis, measurement, monitoring and analysis of social inequalities in health, in population-based Health Surveys, using statistical software's.

EFFECTS OF EXERCISE INTERVENTIONS ON EXECUTIVE FUNCTION IN OLD ADULTS WITH MILD COGNITIVE IMPAIRMENT: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RCTS

Lin Miaoran

Fujian Medical University, China

Abstract

To date, there is no comprehensive review to identify whatever exercise benefits may differ across specific subdomains of executive function (EF) in older adults with mild cognitive impairment (MCI). The integrative evidence to deeply evaluate the effects of exercise on EF subdomains of MCI and whatever such effect can be modulated by the exercise prescriptions remains largely unknown. Therefore, the study was designed to determine the effects of exercise interventions on subdomains of EF in old adults with MCI.

Methods: Nine electronic databases were comprehensively searched from their inception to February 2021. Randomized controlled trials examining the effect of exercise training on EF in MCI were included.

Results: Twenty-four eligible articles involving 2278 participants were identified. The results showed that exercise interventions had a positive benefit on working memory, switching and inhibition in MCI. Subgroup analysis based on exercise prescriptions revealed that both aerobatic exercise and mind-body exercise had similar positive effect size on working memory. However, only mind-body exercise had significant effect on switching. Exercise training with moderate frequency (3~4 times/week) had larger effect size than low frequency (1~2 times/week) and only moderate frequency had positive benefit on switching. Both short (4~12 weeks), medium (13~24 weeks) and long (more than 24 weeks) exercise duration significantly ameliorates working memory and switching however with short duration having slightly larger effect sizes than medium and long.

Conclusion: Exercise significantly improves three subdomains of EF in MCI, especially mind-body exercise. Exercise training sticking to at least 4 weeks with 3~4 times a week tends to have larger effect size.

Biography

Lin Miaoran is a lecturer of Rehabilitation and Nursing at Fujian Medical University with research area of interests in Tai chi exercise on cognitive protection. She got her master's degree from Fujian Medical University and her doctorate from Fujian University of Traditional Chinese Medicine. She has considerable experience with clinical research. In terms of epidemiology, her research particularly focuses on the prevention, intervention and health management of cognitive impairment in old adults in dwelling. She had participated in several national scientific studies and presided over a research project in region in promoting community health.

QUANTIFYING THE IMPACT OF COMMUNITY HEALTH WORKERS' PERINATAL BEHAVIOR ON THEIR CLIENTS' DECISION-MAKING

Faiz A Hashmi, Oskar Burger and Cristine H Legare

The University of Texas at Austin, USA

Abstract

Background: In last 20 years, India has seen improvements in public health, particularly in perinatal behaviors related to pregnancy and childbirth. Yet, disparities persist in service access and utilization, with areas like antenatal care still lagging. The Accredited Social Health Activist (ASHA) program, with ~1 million Community Health Workers (CHWs), aims to enhance rural primary health care. However, its impact varies. A significant gap exists in guiding ASHAs to utilize their socio-cultural strengths in rural India's health. Many ASHA evaluations center on health knowledge, but deeper exploration is needed into how ASHAs can drive behavior change.

Objective: To investigate the relationship of ASHAs' maternal experiences on their mother clients' perinatal behaviors and assess their role as cultural facilitators in community health.

Methods: In 2019, the study interviewed 400 ASHAs and 1,166 mother clients (with recent deliveries) from different regions of Bihar, India. Merging ASHA and clients' datasets with unique IDs, a multivariate multilevel logistic model assessed 14 perinatal behaviors (7 biomedical, 7 traditional), controlling for sociodemographic variables and ASHAs' experience.

Results: Findings reveal that ASHAs' personal experiences as mothers significantly predict many of their clients' perinatal behaviors. Early pregnancy registration and timely initiation of breastfeeding are examples of biomedical behaviors where clients showed a clear tendency to adopt the same practices as ASHAs (OR = 1.42, p = 0.030 and OR = 1.33, p= 0.042, respectively). Similarly, in traditional behaviors, clients were significantly more likely to emulate ASHAs such as hiding pregnancy to avoid evil eye (OR = 5.08, $p<0.001$). These results highlight the pivotal influence of ASHAs in guiding both biomedical and traditional perinatal behaviors among their clients.

Conclusion: Public health systems must integrate community health workers' personal and cultural experiences into maternal and child health strategies. This approach builds trust, encourages behavior change, and yields lasting health results.

Biography

Faiz A Hashmi is a doctoral candidate in Experimental Psychology from The University of Texas at Austin and working as a research scientist at The Center for Applied Cognitive Science. His work with organizations such as Care India and Project Concern International encompasses cross-cultural research, social learning, public health, and human-centered design. Faiz has MAs in psychology and development Studies. He is interested in exploring the impact of cognitive and cultural factors on various aspects of public health and gender.

Day-2
Keynote Presentations

WHO R&D BLUEPRINT VIRAL PATHOGENS: ARE WE PREPARED FOR THE NEXT PANDEMIC WITH PRECISE DIAGNOSTICS, VACCINES AND THERAPEUTICS?

Mohammad Intakhab Alam

Diagnomed GmbH, Cologne, Germany

Abstract

In addition to COVID-19, Ebola, Marburg, Crimean-Congo haemorrhagic fever (CCHF), Lassa fever, Middle East respiratory syndrome coronavirus (MERS-CoV), severe acute respiratory syndrome (SARS), Nipah, Henipavirus, Rift Valley fever, Zika and other emerging viruses such as monkeypox (Mpox) are WHO priority viral diseases with the potential for epidemics/pandemics for which there are currently no correct diagnosis, vaccines and therapeutics (DVT). Bacterial blueprint pathogens, including AMR (not discussed in detail here), also represent a potential for future epidemics and pandemics. The full updated list of WHO priority diseases and their pathogens is expected by mid-2024.

In order to cope with sudden epidemiological crises and to be prepared for the next epidemics/pandemics, accelerated and continuous research and development (R&D) against such pathogens is urgently needed, as DVT developed in the short term without sufficient clinical trials offer no guarantee of safety, efficacy and performance.

To satisfy the curiosity of the public, health professionals and scientists about the current state of R&D on these viral pathogens, we provide here a comprehensive overview of these priority viral pathogens and the ongoing global efforts to develop DVT to prevent and control future epidemiologic crises.

Biography

Mohammad Intakhab Alam a virologist, currently CEO of Diagnomed GmbH a pandemic competent premise company in the City of Cologne Germany, an Associate Editor for the Journal of Cellular and Molecular Medicine, a full member of the American Society for Virology and a lecturer for the Clinical Research/Trials professionals. By education I have degrees in pharmaceutical sciences, Biotechnology and Medical Virology. My professional experiences and everlasting interests fall in the area of infectious diseases, mechanism of disease pathogenesis, prophylaxis, diagnosis and therapies with special emphasis on antiviral/antimicrobial drug development. My significant experiences are also within the area of in-vitro diagnosis, medical device and pharmaceutical drug related regulatory affairs and new medical products launching.

2nd International Conference on Epidemiology and Public Health
&
International Conference on Rare Diseases and Orphan Drugs
March 25-26, 2024 | Renaissance London Heathrow Hotel, London, UK

PERSISTENT PSYCHOLOGICAL TRAUMA ASSOCIATED WITH COVID-19 HOSPITALIZATION: FINDINGS FROM THE PHOSP-COVID COHORT STUDY

Evrim Anik, Max Henderson and Robert M West
University of Leeds, UK

Abstract

Background: Trauma symptoms, including anxiety, sleep disturbances, and irritability, are prevalent among general hospital patients. However, the specific impact of COVID-19 hospitalization on mental health remains poorly understood. Understanding the factors associated with trauma symptoms in COVID-19 patients is crucial for future pandemic preparedness.

Objective: This study aims to provide insights into the psychological trauma experienced by COVID-19 patients after hospitalization.

Methods: The Post-hospitalization COVID-19 (PHOSP-COVID) study is a multicentre cohort investigation in the UK that assesses adults discharged from hospitals with a COVID-19 diagnosis. Participants completed psychological trauma assessments using the PTSD Checklist for DSM-5 (PCL-5) during two research visits, three and twelve months after hospital discharge. Descriptive statistics regarding sociodemographic characteristics of the population were provided. Logistic regression was used to identify putative risk factors associated with psychological trauma following admission with COVID-19.

Results: A subset of 1565 patients from the total cohort of 8010 participated in both research visits and filled out the PCL-5 tool. The majority of participants were male, of White background, had lower education, were in a relationship, and employed full-time. Some individuals reported that they had not fully recovered from COVID-19 after 12 months. The logistic regression analysis indicated that persistent psychological trauma was associated with being younger than 51 years old, having lower income, being admitted to the Intensive Care Unit (ICU), and experiencing depression (defined by PHQ-8) or anxiety (defined by GAD-7).

Conclusion: These findings highlight the need for preventative strategies, early detection, and targeted interventions to reduce the prevalence and impact of trauma symptoms in COVID-19 patients.

Biography

Evrim Anik has her expertise in mental health, clinical trials, culturally adapted psychotherapies for treatment of depression and big data analysis. She has been working on PHOSP-COVID project as a data analyst with a team of experts. Sha has used clustering methods, data visualisation methods, generalised regression methods, classification and regression trees, survival analysis, Rasch analysis and Item Response Theory.

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DESIGN AND DELIVERY OF CULTURALLY SENSITIVE PREVENTIVE INFANT MENTAL HEALTH SERVICES FOR BLACK/AFRICAN AMERICAN FAMILIES "MEETING FAMILIES WHERE THEY ARE"

James P McHale, Kimberly Brown-Williams, Carole Alexander and Carla Stover

University of South Florida, USA

Abstract

Background: Historical analyses reveal how structural racism in the United States, rooted in a legacy of slavery and still active in 2024, has harmed Black families and disenfranchised Black men and fathers. Racial discrimination is tied to parents' depressive symptoms, and chronic stress associated with structural factors has a weighty impact on men's non-residency with their children. Yet the infant mental health field has given no conceptual attention to coparenting and family adaptations of non-white family systems, with no evidence-based, community-informed coparenting interventions responsive to unmarried Black mothers' and fathers' life circumstances.

Objective: To overview culturally responsive factors maximizing reach and engagement success.

Methods: Numerous approaches will be outlined; partnership with a panel of community elders, mentors, advocates, clergy members and healthcare professionals on curricular design and programming; stratagems for documenting and integrating voices of community members - both fathers and mothers of infants and young children in an urban community in the southeastern United States - toward greater responsiveness in "meeting families where they are"; successes in offering community centered, accessible, non-pathologizing, service delivery in manageable increments prioritizing racial concordance from community interventionists who share lived experience.

Results: Recruitment success for dyadic interventions with unmarried coparents was 52% in an initial demonstration study, with successful recruitment of fathers in 84% of cases where mother expressed interest. Overall recruitment success with both father and mother consenting to participate improved to 57% in a larger scale community RCT. One-year post-intervention infant-family mental health outcomes from RCT analyses included coparenting teamwork, reductions in interparental psychological aggression and enhanced infant social-emotional adjustment (low aggression, negative emotionality). Conclusion: Work to date has established parameters for successfully connecting with families in a manner that honors well-founded wariness of Black/African heritage parents regarding government sponsored programs that pledge help but ultimately disappoint and intrude too invasively into the family's private domain. Ongoing challenges and means of approaching and seeking progress in addressing them are also highlighted.

Biography

James P McHale is Professor of Psychology and Director of the Family Study Center at the University of South Florida. He is a former Director of Clinical Training (Clark University, USA) and was Founding Chair of USF St. Petersburg's department of Psychology. He has published over 100 peer-reviewed articles, books and manuscripts on coparenting in diverse family systems, and in 2004 was the World Association for Infant Mental Health's "Decade of Behaviour" lecturer. He currently guides an International Coparenting Collaborative involving infant-family mental health experts from North America, Europe and the Middle East working to establish common standards for approaching mental health encounters with families of infants and young children from a coparenting and family systems frame.

Day-2
Oral Presentations

ASSOCIATION BETWEEN BURNOUT AND EMPATHY IN HEALTHCARE – AN ASIAN MULTI-PROFESSIONAL STUDY

Song He[1], Rehena Ganguly[2], Zann Foo[3], Joo Ying Tang[3], Mabel Sim[3] and Kok Hian Tan[3]

[1]KK Women's and Children's Hospital, Singapore
[2]Duke-NUS Medical School, Singapore
[3]Sing Health Duke-NUS Institute for Patient Safety & Quality (IPSQ), Singapore

Abstract

Background: The aim of the study was to study the association between burnout and empathy in healthcare professionals in Singapore and among the different professions: doctors, nurses, and allied health professionals.

Methods: An online survey questionnaire was conducted from July 2019 to January 2020 in a healthcare cluster in Singapore using the Jefferson scale of empathy (JSE) as a measure of empathy, and the Maslach Burnout Inventory - Human Services to measure three categories of burnout: emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA). Correlation analysis was performed to assess the association between JSE score and the three categories of burnout.

Results: The survey was completed by 4,188 healthcare professionals (Doctors (n=569), Nurses (n=3032), Allied Health professionals (n=587)) out of 9348 of target survey population, with a response rate of 44.8%. The study showed that for the whole cohort, higher EE was associated with lower empathy ($r=-0.221$, $p<0.0001$), higher DP was associated with lower empathy ($r=-0.308$, $p<0.0001$), and higher PA was associated with higher empathy ($r=0.435$, $p<0.0001$). Subgroup analyses showed that higher EE was associated with lower empathy among doctors ($r=-0.337$, $p<0.0001$) and nurses ($r=-0.247$, $p<0.0001$), higher DP was associated with lower empathy among all groups (doctors ($r=-0.396$, $p< 0.0001$); nurses ($r=-0.350$; $p< 0.0001$), allied health ($r=-0.179$; $p< 0.0001$)), and higher PA was associated with higher empathy in all groups (doctors ($r=0.470$, $p< 0.0001$); nurses ($r=0.427$; $p< 0.0001$), allied health ($r=0.393$; $p< 0.0001$)).

Conclusion: Our study showed that there was a significant negative association between burnout and empathy in healthcare professionals in Singapore. This was consistent with findings of studies elsewhere. Interventions designed to foster empathy may be an essential step in reducing burnout.

Biography

Song He graduated from Duke-NUS Medical School Singapore with an M.D. She was admitted as a Member of the Royal College of Obstetricians and Gynecologists (MRCOG) UK and attained her Master of Medicine (MMED) in Obstetrics and Gynecology in 2021. She was subsequently accredited as a Specialist in Obstetrics and Gynecology in Singapore. She practices in KK Women's and Children's Hospital, Singapore. One of her research interests is public health, empathy, and burnout among healthcare professionals.

EXAMINING ASSOCIATIONS BETWEEN CAREGIVER BURDEN AND CAREGIVER MENTAL HEALTH IN THREE GOVERNORATES IN LEBANON

Suzanne Charbaji, Monique Shaya, Khalil El Asmar, Stephen McCall and Ghada Saad

American University of Beirut, Lebanon

Abstract

There is a global aging trend and the share of older adults is expected to double by 2050. This trend will be accompanied by a higher demand for caregivers who need to be around older adults to provide assistance in various day to day activities. Caregivers who care for older adults often face physical and mental health ailments, financial struggles and social withdrawal. This can affect the quality of their lives and increase the risk of the elderly being institutionalized as the caregiver is no longer able to provide the adequate care and support. To that end, many studies have focused on the challenges and consequences of caregiving to highlight the importance of providing the necessary resources to caregivers to help them cope with the demanding nature of their role. Gender of caregiver has been looked at as an effect modifier on caregiver burden. Several theories such as Wuest's feminist caring theory and social constructivist theory have argued that the effect of caregiving on females is different from males because of the gendered nature of caregiving experience and the societal construction of the caregiving role. Gerain and Zech propose the "Informal Caregiving Integrative Model" as a theoretical framework to understand the impact of caregiving.

Lebanon has the highest proportion of older adults among Arab countries and this percent is expected to increase to 21% by 2050. The projected increase in the proportion of the elderly, accompanied by the expected increase in the demand for caregivers, emphasizes the importance of understanding the factors associated with care giver burden and care giver mental health. Studies available in Lebanon are scarce and indicate the need to further investigate burden of care and its effect on caregivers in order to provide evidence that would support development of interventions or policies for caregivers. The current study aims to examine the direct and indirect effects between caregiver burden and caregiver mental health.

Hypothesis

An increased Zarit burden score is associated with higher likelihood of mental health.

Association between caregiver burden and caregiver mental health is modified by gender.

The study will be based on data collected from two cross sectional studies conducted between 2013 and 2017 on a total of 739 informants of older adults (65 and older) from three governorates in Lebanon (Beirut, Mount Lebanon and Bekaa). From this sample, 144 informants who took care of older adults occasionally or much of the time will be studied. Based on previous research and logical basis, the researchers in this investigation decided to test a modified model of the "Informal Caregiving Integrative Model". The implications of the investigation are three folds:

1. At a macro level, evidence generated by this study could guide policies by providing evidence on the magnitude and relation among the various factors. This will help address the needs of an aging pop-

ulation and improve the well-being of society, promote social equity and reduce burden on health care systems.

2. At a micro level, this study will identify modifiable factors or identify groups of risk to build targeted interventions to reduce mental health and enhance the wellbeing of caregivers and care recipients.
3. Moreover, this investigation will provide recommendations and implications for further research.

Biography

Suzanne Charbaji is a final year MS student at the Department of Epidemiology and Population Health at the American University of Beirut (AUB). She holds a Master of Business Administration (MBA) and a Bachelor of Computer Science degrees from AUB. She has around 8 years of multi-disciplinary experience across different sectors and industries. She has published 8 articles some of which are Scopus indexed. Her research has mainly focused on business and economic problems but recently she has been involved in several research projects related to public health in general and mental health in particular. She is also the recipient of the Beta Gamma Sigma award for business excellence.

VACCINE WASTAGE IN GHANA, MOZAMBIQUE, AND PAKISTAN: AN ASSESSMENT OF WASTAGE RATES FOR FOUR VACCINES AND THE CONTEXT, CAUSES, DRIVERS, AND KNOWLEDGE, ATTITUDES AND PRACTICES FOR VACCINE WASTAGE

Naeem Asghar
UNICEF, Pakistan

Abstract

Background: Vaccine procurement costs comprise a significant share of immunization program costs in low- and middle-income countries, yet not all procured vaccines are administered. Vaccine wastage occurs due to vial breakage, excessive heat or freezing, expiration, or when not all doses in a multidose vial are used.

Objective: To better estimates of vaccine wastage rates and their causes could support improved management of vaccine stocks and reduce procurement costs.

Methods: This study examined aspects of wastage for four vaccines at service delivery points in Ghana (n = 48), Mozambique (n = 36), and Pakistan (n = 46). We used prospective data from daily and monthly vaccine usage data entry forms, along with cross-sectional surveys, and in-depth interviews

Results: The analysis found that estimated monthly proportional open-vial wastage rates for vaccines in single-dose vials (SDV) or in multi-dose vials (MDV) that can be kept refrigerated up to four weeks after opening ranged from 0.08 % to 3 %. For MDV where remaining doses are discarded within six hours after opening, the mean wastage rates ranged from 5 % to 33 %, with rates being highest for measles containing vaccine. Despite national-level guidance to open a vaccine vial even when only one child is present, vaccines in MDV that are discarded within six hours of opening are sometimes offered less frequently than vaccines in SDV or in MDV where remaining doses can be used for up to 4 weeks. This practice can lead to missed opportunities for vaccination. While closed-vial wastage at service delivery points (SDPs) was relatively rare, individual instances can result in large losses, suggesting that monitoring closed-vial wastage should not be neglected.

Conclusion: Health workers reported insufficient knowledge of vaccine wastage tracking and reporting methods. Improving reporting forms would facilitate more accurate reporting of all causes of wastage, as would additionally training and supportive supervision. Globally, decreasing doses per vial could reduce open-vial wastage

Biography

Naeem Asghar is a Immunization Specialist in UNICEF Country Office Pakistan, I have passion to contribute for the better health of Mothers and Children of Pakistan. I played vital role in improving immunization covering against vaccine preventable diseases and helped to improve vaccine utilization the above publication is one of the milestones in this field. I also added value in efficient delivery system and vaccination response in Children an adult for COVID 19 vaccine during the pandemic. I am capable to work in multisectoral and multicultural environment.

SPONTANEOUS CORONARY ARTERY DISSECTION WITH LEUCOENCEPHALOPATHY ASSOCIATED WITH THROMBOSPONDIN TYPE 1 DOMAIN CONTAINING 1 GENE MUTATION A CASE REPORT

Gotabhaya Ranasinghe

Institute of Cardiology, National Hospital of Sri Lanka, Sri Lanka

Abstract

Background: Spontaneous Coronary Artery Dissection (SCAD) is increasingly diagnosed as one of the infrequent causes of Acute Coronary Syndrome (ACS). Almost no cause identified in half of the cases. Here, we report a rare case of spontaneous coronary artery dissection with leukoencephalopathy (SCADLE) associated with a mutation of the thrombospondin Type 1 Domain Containing 1 (THSD1) gene.

Case summary: A 36-year-old lady who presented with ischaemic type chest pain for 4 hours duration and found to have anterior STEMI. She was thrombolysed with Teneteplace and had good resolution. Her coronary angiogram revealed a spontaneous dissection in the left anterior descending artery with TIMI 3 flow. Intra-vascular ultrasound study (IVUS) confirmed the LAD spiral dissection and intramural hematoma. She has had recurrent TIAs 5 years and 7 years ago and there was a significant family history of young stroke. Her MRI brain showed peri-ventricular white matter hyper intensities and lacunar infarcts suggestive of leucoencephalopathy. An association with Cerebral autosomal dominant arteriopathy with subcortical infarcts and leucoencephalopathy (CADASIL) and SCAD was suspected, and exome gene sequencing followed by genetic analysis was performed. It identified a variant c.670C>G (p. Arg224Gly) in the THSD1 gene with normal NOTCH gene

Discussion: THSD1 gene encodes proteins involving in the extracellular matrix (ECM). This THSD1 mutation is inherited as an autosomal dominant fashion and associated with arterial dissections (rare), fibro muscular dysplasia, intracranial aneurysm and subarachnoid haemorrhages. Therefore, SCADLE could be result of arteriopathy secondary to dysfunction of ECM proteins in cerebral and coronary vasculature resulting in neurological manifestations and MRI features like in CADASIL and SCAD.

Biography

Gotabhaya Ranasinghe, Sri Lanka

Education and Training: MBBS (Honors) : University of Peradeniya, Sri Lanka, MD : University of Colombo, Sri Lanka , MRCP : London, UK, FRCP : Fellow of the Royal College of Physicians, FCCP : Fellow of Ceylon College of Physicians, FAPSIC : Fellow of Asia Pacific Society of Interventional Cardiology, FACC : Fellow of the American College of Cardiology, FESC : Fellow of the European Society of Cardiology, FSCAI : Fellow of the Society for Cardiovascular Angiography and Interventions. Post-MD training at John Radcliffe Hospital, Oxford, UK

Present Position :

- Consultant in General & Interventional Cardiology at the Institute of Cardiology, National Hospital of Sri Lanka, Colombo
- Honorary Consultant Cardiologist, Surgeon Rear-Admiral - Sri Lanka Navy Hospital, Welisara

Memberships

- Director/ Co-Founder – Sri Lanka STEMI Forum
- National Research Council – Member

Recent Awards:

- Winner of the 3rd National APEX awards of the Organization of Professional Associations of Sri Lanka (OPA) - Health and Medical Services Category (2022)

RAPID-ONSET OBESITY WITH HYPOTHALAMIC DYSREGULATION, HYPOVENTILATION, AND AUTONOMIC DYSREGULATION (ROHHAD) A RARE DISEASE AND CHALLENGES TO AN INTENSIVIST

Namrata Maheshwari, Rupinder Kaur and Nandita Divekar
Medway Maritime Hospital, UK

Abstract

Introduction: Rapid-onset obesity with hypoventilation, hypothalamic dysfunction, autonomic dysregulation (ROHHAD) syndrome is a rare disease with unknown and debated aetiology, characterized by precipitous obesity in young children, hypoventilation and autonomic dysregulation with various endocrine abnormalities. Neuroendocrine tumours can be associated in more than half of the cases. This rare condition has a severe outcome because of high morbidity and mortality. We provide a case report of a patient presenting in critical care with challenges to an intensivist.

Case Description: 32-year female known to have ROHHAD syndrome and presented to intensive care unit recurrently with type 2 respiratory failure and dyselectrolytemia specially hypo and hypernatremia and the meticulous management of this in Laison with endocrinologist. Airway challenges faced and long-term ventilation plan in such rare cases.

Discussion: Rapid-onset obesity with hypothalamic dysfunction, hypoventilation, and autonomic dysregulation (ROHHAD) is an ultra-rare disorder of respiratory control and autonomic nervous system (ANS) regulation, with endocrine system abnormalities. Respiratory control is a function of the ANS that is responsible for changing breathing in response to varied activities of daily living (ex. exercise, sleep, eating) and in response to changes in oxygen and carbon dioxide. The ANS is the portion of the nervous system that controls or regulates many automatic involuntary body functions including breathing, heart rate, blood pressure, temperature regulation, bowel and bladder control, and more. The endocrine system is regulated by the hypothalamus, and through hormones it controls growth, energy and water balance, sexual maturation and fertility as well as response to stress.

Conclusion: This case summarizes the rarity and complexity of ROHHAD management and challenges to intensivist.

This report emphasizes on awareness among intensivists and physicians about ROHHAD as only 158 case reports have been reported worldwide.

Biography

Namrata Maheshwari is working as a speciality doctor at Medway Maritime hospital since 2021. She have vast experience in the field of Critical care and my special interests is Ultrasound and Simulation in critical care.

PUBLIC HEALTH PRIORITY TO ENHANCE EQUITABLE ACCESS TO DIAGNOSIS AND TREATMENT OF INDIVIDUALS WITH RARE DISEASES IN MALAYSIA

Noor Aziah Zainal Abidin[1], Jafanita Jamaludin[2] and Lock-Hock Ngu[3]

[1]Management and Science University, Malaysia
[2]Ministry of Health, Malaysia
[3]Hospital Kuala Lumpur, Malaysia

Abstract

Background: Rare Diseases (RDs) represent an emerging public health priority. The General Assembly of the United Nations in 2021 formally adopted a resolution on rare diseases (RDs), understanding that over 300 million people globally are living with a rare disease. This presents an opportunity for public health policymakers to extend universal healthcare provisions within their jurisdictions to combat the challenges and disparities faced by RD patients, their caregivers, and families. The history of limited discussion about RDs by policymakers and the public in Malaysia has led to a lack of access to diagnosis and treatment for individuals with RDs. However, in recent years, Malaysia has made significant strides in the management of RDs, led by the Ministry of Health, patient advocacy groups, academicians, pharmaceutical partners, and other stakeholders.

A national committee has been established to oversee the governance of RD management. In Malaysia, RD is defined as any chronic debilitating disease with a prevalence of less than 1 in 4,000 people in the community. To date, there are 13,000 RD patients with 492 types of RDs listed in the Malaysian Rare Disease List. An annual budget is dedicated to improving the holistic management of RD, encompassing diagnostic, therapeutic, counseling, rehabilitative, and preventive aspects of patient care. A management guideline for orphan drugs has been introduced to facilitate the timely approval and procurement of lifesaving drugs for RDs. Public educational campaigns have been increasingly carried out to raise awareness about RDs. Challenges and opportunities for development in critical areas of RDs, including epidemiological research, national policy, and the clinical application of genomic medicine for personalized medicine, still remain.

We strive to improve the quality of life for RD patients in Malaysia, keeping pace with the global trend. The burden and prevalence of rare diseases remain poorly researched in Malaysia, as in many countries, leaving a significant gap in healthcare provision. Despite advancements in medical research, these conditions often go undiagnosed or misdiagnosed, leading to a lack of targeted treatment options and support for affected individuals.

Objective: This presentation aims to outline the landscape of rare diseases in Malaysia, focusing on epidemiology, the challenges in healthcare provision, and potential pathways for improving patient outcomes.

Methods: The approach includes a review of existing literature and data from Malaysian healthcare databases. Case studies of rare disease patients in Malaysia were also analysed to illustrate the real-world impact of current healthcare practices.

Results: Preliminary findings indicate a significant disparity in resources and expertise for rare dis-

eases across different regions in Malaysia. The research also highlights major challenges in diagnosis, treatment accessibility, and societal support for patients and their families.

Conclusion: Addressing rare diseases in Malaysia requires a multifaceted approach, involving improved diagnostic techniques, better access to specialized care, and increased awareness among healthcare professionals and the public. It's crucial to emphasize the ongoing importance of strengthening the existing national framework, which has already been implemented in stages, to further support individuals affected by rare diseases

Biography

Noor Aziah Zainal Abidin shows a deep commitment to managing rare diseases and enhancing public health education in Malaysia. She holds a medical degree from Universiti Kebangsaan Malaysia (1986) and a Master's in Public Health from the University of Malaya (1999). Her expertise in public health, particularly in hospital management, has been significant in the development and management of guidelines and Standard Operating Procedures (SOPs) for Obstetrics & Gynaecology and Paediatric services.

Currently, she serves as an Associate Professor and the Head of the Department of Community Medicine at the International Medical School, Management and Science University in Shah Alam. In addition, she leads the MPH/PhD program in Public Health. Her previous role as Senior Principal Assistant Director and Head of O&G and Paediatric Services Unit at the Ministry of Health (2000-2021) underscores her substantial contributions to national healthcare policies and program implementation, including rare diseases.

Noor Aziah has been actively involved in developing the National Framework for the Rare Disease Programme, in drafting guidelines for Enzyme Replacement Therapy and her previous role as the secretariat of the National Committee for Rare Diseases at the Ministry of Health further highlights her dedication. Her numerous lectures on public health policies regarding various obstetrics & gynaecology and paediatric issues demonstrate her commitment to enhancing healthcare quality and advancing rare disease management.

A CASE REPORT OF GASTRIC AMYLOIDOSIS WITH MULTIPLE ORGAN INVOLVEMENT

Ahlam Muthanna

Barts Health Trust, London, UK

Abstract

Background: Diagnosis of amyloidosis is often delayed due to the vague clinical presentation and should be considered in patients presenting with recurrent symptoms and multiple organ failure. Here, we present a case of gastric amyloidosis with liver, spleen, bone marrow, heart and probable renal involvement.

Objective: To elucidate the clinical picture and laboratory investigations in a patient with amyloidosis who presented with prominent recurrent gastrointestinal symptoms.

Methods: We summarize the chronological presentation of the clinical picture, the cardinal gastro-intestinal symptoms, hospital admissions and investigations.

Results: We describe a seventy years old patient, who started to develop recurrent chest infections in 2020 and 2021 requiring multiple GP visits, ED attendances and hospital admissions. In 2022, she was admitted with vomiting, abdominal pain and weight loss, initial OGD was negative. This admission was complicated with aspiration pneumonia, septic shock and multiple organ failure requiring ITU admission. After ITU stepdown, she continued to have retching and vomiting and heavy proteinuria with subsequent bilateral lower limb oedema. Gastroscopy findings was suggestive of gastroparesis with large bolus of food in the fundus. Rest of mucosa was normal. No biopsy was taken. Gastric emptying studies showed sseverely delayed gastric emptying of 13%. In the absence of diabetic associated neuropathy, aetiology pointed to amyloidosis. Congo Red was focally positive around a vessel in rectal biopsy which suggested focal amyloid deposition. Bloods showed 10 g paraprotein, IgG lambda paraprotein measuring 8g/L with lambda light chain of 430.6, Kappa light chain of 62.2 and a K:L ratio of 0.14. CT skeletal survey showed no lytic lesions to suggest multiple myeloma. Bone marrow trephine biopsy results were in keeping with low level bone marrow involvement by a plasma cell neoplasm (7-10%). Congo red was focally positive. SAP showed large amyloid in liver and spleen, kidneys. The patient also developed chest pain with ssignificantly raised BNP (12000) and up and down Troponin 70-150. Cardiac MRI was consistent with cardiac amyloidosis with biventricular involvement, with raised the ECV (extracellular volume fraction) 41%.

Conclusion: GI amyloidosis should be in the differentials of long standing and recurrent GI symptoms not explained by the underlying background illness and with normal OGD.

Biography

Ahlam Muthanna is a respiratory registrar with interests in research and teaching. She has previous publications in the field of infectious diseases where she published a work on Cutaneous Leishmaniasis in Yemen and another work on skin infections in HIV in Malaysia. She is also interested in case reporting of rare cases that she encounters in the medical field. She also conducted research on research with focus on Global Health where barriers to health research leadership from Global South was studied.

BARRIERS AND FACILITATORS TO CARDIAC REHABILITATION: A QUALITATIVE STUDY FROM CHINA

Ying Zou, Janus SIM, Du J and Zuidema SU

University of Groningen, The Netherlands

Abstract

Background: Although recommended by guidelines worldwide, Cardiac Rehabilitation (CR) is still unavailable and underutilized, especially in Low- and Middle-Income Countries (LMICs). Among LMICs, middle income countries are in the state of changing, in terms of the implementation of CR services. However, the changing progress is influenced by both barriers and facilitators. These factors have not yet been investigated comprehensively in middle income countries.

Objective: To identify the barriers and facilitators to CR in a middle-income country, China.

Methods: An exploratory qualitative study was conducted using semi-structured interviews between March and June in 2022. Participants were purposefully sampled from two regions Tianjin and Xi'an to represent CR stakeholders, namely hospital director, health professional, cardiac patient, family member, rehabilitation lecturer and employer. Thematic Analysis was applied for data analysis.

Results: Fifteen CR stakeholders were interviewed. According to the participants, the delivery of CR is impeded due to lack of resources, lack of CR professionals, and lack of coordination between health institutions. Besides, the attendance of CR was hindered by lack of awareness by patients and healthcare professionals, lack of reimbursement, lack of access to CR (e.g. informal caregiver's need to accompany patient). However, participants also mentioned facilitating factors to CR, namely a positive attitude of stakeholders, high motivation of some patients, policy support, and affordability of CR.

Conclusion: More awareness regarding the effectiveness of CR is needed. Currently, healthcare professionals and patients seem to think that surgery alone is sufficient. Therefore, our findings reveal factors that need to be taken into account by policy makers to deliver CR on a wider scale in China.

Biography

Ying Zou research interest is in healthcare service delivery and health economics. She sees the gap between developed countries and developing countries regarding the access to healthcare services and health inequity. Specifically, she has passion in implementing the western style rehabilitation model in China, while taking into account the culture differences and the local context. The benefit of CR is proved in developed countries, but not yet in most developing countries. She aims to provide evidence-based results regarding the benefits of CR in Chinese population, and to promote rehabilitation services in China.

CHARACTERISTICS OF BACTERIAL STRAINS ISOLATED FROM THE HYPOHERMAL HEALING SPRING WATERS FROM FRANCE AND BULGARIA

Nedyalka Valcheva
Trakia University, Bulgaria

Abstract

Intensive use of water resources as well as the ever-increasing amount of wastewater can exhaust the self-cleaning capabilities of natural water sources, disrupt the natural balance in water and make the water balance unusable. Along with wastewater, pathogenic microorganisms that create a potential epidemic situation, as a result of which water plays an essential role in the spread of bacterial and viral infections. The aim of the present works investigate the bacterial research from one hypothermal healing spring waters in Paris region, France, and from 10 hypothermal healing spring waters in Stara Zagora, Bulgaria. 19 bacterial strains were isolated and their colonial and morphological characteristics were determined, and the studied strains were identified. The data showed that the isolated 9 strains from the hypothermal healing spring waters in Paris region, France is identified as *Lisinibacillus pakistanensis, Serratia marcescens* (four strains), *Staphylococcus hominis*, *Staphylococcus haemoliticus*, *Bacillus pumilus* and *Bacillus cereus*. The isolated 10 strains from the hypothermal healing spring waters in Stara Zagora region, Bulgaria belong to spore forming bacteria of the genera *Bacillus: B. thuringiensis* B62 (two strains), *B. vallismortis*, *Bacillus amyloliquefaciens* (three strains), *Bacillus altitudinis/pumilus* (two strains) and *Bacillus cereus group* (two strains). The difference in the type of strains identified can be explained by the influence of the composition of the water, the type of soil and the rocks through which it passes.

Biography

Nedyalka Valcheva is a senior expert in the Department of Biochemistry, Microbiology, Physics, Faculty of Agrarian Sciences, University of Thrace. I am working on the Microflora of healing and spring waters in Bulgaria. Determination of the physicochemical and microbiological characteristics of the studied springs. Application of isolated microorganisms from spring water.

ACUTE DISSEMINATED ENCEPHALOMYELITIS: A FULMINANT COURSE

Saurabh Pradhan and Elizabeth Dunne

King's College Hospital NHS Trust, UK

Abstract

Acute disseminated encephalomyelitis (ADEM) is a rare neurological disorder that is rapidly progressive in nature. It is characterized by an autoimmune insult in response to infection or immunization, resulting in demyelination of the neurons in the central nervous system. ADEM is a diagnosis of exclusion and requires clinical suspicion and imaging findings in Magnetic Resonanace Imaging (MRI). The condition predominantly occurs in pediatric population, in which case the symptoms may improve spontaneously but full recovery is incomplete without immunomodulatory therapy. However, the prognosis of ADEM in adults is not as favourable as in children. Here, we present a fulminant case of ADEM in an adult, which posed a diagnostic and therapeutic challenge.

Biography

Saurabh Pradhan is an intensivist with MD in anesthesiology and critical care, and DM in critical care medicine. He had also done fellowship in ECMO. He is currently working as International Clinical Fellow in Critical Care in King's College Hospital, London. Prior, he was working in Nepal, where he was Associate Professor and Head of Critical Care Unit in Nepal Medical College. He is also a regular instructor in acute care ultrasound, basic ventilator training and BASIC course.He has contributed to several journal publications and book chapters, and a regular peer reviewer of BMC journals. For his research he has been honored with the award of Asia's Best Researcher in Category of Medicine, 2023. He has also been awarded with "Prabal Janasewa Shree Chaturtha" by the Right Honorable President of Nepal for his contribution to the society during COVID-19. sss

Day-2
Poster Presentations

WHERE DO 15- TO -17-YEAR-OLDS IN CANADA GET THEIR SEXUAL HEALTH INFORMATION?

Michelle Rotermann and McKay Alex
Statistics Canada

Abstract

Background: Sexual health education delivered in school, provided by parents, or provided by other formal sources has been associated most closely with increased rates of condom use and improvements in many other sexual risk behaviors. Friends and the internet are other information sources, although quality and accuracy are not always as high. Nationally representative Canadian data about where adolescents obtain their sexual health information are lacking.

Data and methods: Weighted data from the 2019 Canadian Health Survey on Children and Youth were used to examine the sources typically used to obtain sexual health information by 15- to 17-year-olds, as well as the prevalence and characteristics of adolescents reporting not having an adult to talk with about sexual health and puberty.

Results: Most 15- to 17-year-olds in Canada reported having at least one source of sexual health information (96.6%). More than half identified school (55.6%) and parents or guardians (51.2%) as sources of sexual health information. The internet (45.9%), friends (36.2%), and health care professionals (20.9%) were other common sources. Whereas 61.2% of adolescents identified more than one source of sexual health information, 3.4% reported not having any source. Nearly 15% of adolescents reported not having an adult to talk with about sexual health or puberty. Differences in sources consulted and having an adult to talk with depended on many factors, including sexual attraction and/or gender identity, sex, immigrant status, racialized status, lower-income status, strength of parent–adolescent relationship, region of residence, and mental health.

Interpretation: An improved understanding of the sources of sexual health information used by adolescents and identification of characteristics associated with adolescents reporting not having an adult to talk with could help develop strategies to improve sexual health outcomes via better access to sexual health promotion and educational resources.

Biography

Michelle Rotermann is a Senior Research Analyst with the Health Analysis Division at Statistics Canada. She has contributed to the development of many survey and research programs over her more than 20 years at Statistics Canada, such as those about sexual health, data linkage and validation, and substance use. Using survey, administrative, census and linked data sources she has published over 50 articles on various topics including health behaviours, health care utilization, and health status. Her current research interests include: sexual health, cannabis, and other substance use.

QUANTIFICATION OF BETA CELL CARRYING CAPACITY IN PREDIABETES

Aurore Woller

Universite Libre de Bruxelles, Belgium

Abstract

Prediabetes, a subclinical state of high glucose, carries a risk of transition to diabetes. One cause of prediabetes is insulin resistance, which impairs the ability of insulin to control blood glucose. However, many individuals with high insulin resistance retain normal glucose due to compensation by enhanced insulin secretion by beta cells. Individuals seem to diner in their maximum compensation level, termed beta cell carrying capacity, such that low carrying capacity is associated with a higher risk of prediabetes and diabetes. Carrying capacity has not been quantified using a mathematical model and cannot be estimated directly from measured glucose and insulin levels in patients, unlike insulin resistance and beta cell function which can be estimated using HOMA-IR and HOMAB formula. Here we present a mathematical model of beta cell compensation and carrying capacity, and develop a new formula called HOMA-C to estimate it from glucose and insulin measurements. HOMA-C estimates the maximal potential beta cell function of an individual, rather than the current beta cell function. We test this approach using longitudinal cohorts of prediabetic people, finding 10-fold variation in carrying capacity. Low carrying capacity is associated with higher risk of transitioning to diabetes. We estimate the timescales of beta cell compensation and insulin resistance using large datasets, showing that, unlike previous mathematical models, the new model can explain the slow rise in glucose over decades. Our mathematical understanding of beta cell carrying capacity may help to assess the risk of prediabetes in each individual.

Biography

Aurore Woller is Belgian computational biologist. She did her PhD under the supervision of Marc LeFranc in Lille (France) where she studied the interplay between the circadian clock and metabolism. She then did a first post-doc in Paris where she studied bacterial dynamics with Claude Loverdo and a second postdoc in the group of Uri Alon in Israel where she focused on the glucose-insulin-beta cell circuit and its impairment leading to (pre)diabetes. Back as a senior post-doc in Brussels (ULB), she currently investigates the coupling between the circadian clock and the regulation of glucose.

Day-2
E-Poster Presentation

OBSTETRICIAN/GYNECOLOGISTS' VACCINE PERCEPTIONS, HESITANCY, AND RECOMMENDATION TO PREGNANT WOMEN: A SYSTEMATIC REVIEW

Panagiota Kalatzi, Maria Iliadou, Alexandros Mihopoulos, Evanthia Sakellari, Panagiota Kyriaki and Styliani Tziaferi

University of Peloponnese, Greece

Abstract

Background: Obstetrician- gynecologists (OB/GYN) have a key role in providing appropriate information and immunization recommendations to improve maternal vaccination coverage1.

Objective: To investigate OB/GYN vaccine perceptions, knowledge and skepticism and how these attitudes affect their routine vaccination practices.

Methods: This systematic review was performed in accordance to PRISMA guidelines. PubMed/Medline and Embase databases were screened from inception to 20 February 2024 for the identification of English written, primary research articles that reported OB/GYN views, knowledge, hesitancy, or practices relating to maternal immunization and explored the impact on their communication with or recommendation to pregnant women. A narrative synthesis approach was used to analyze studies included in the review. The risk of bias assessment was conducted according to the Joanna Briggs Institute critical appraisal tool.

Results: Out of the 5366 studies identified through international literature, 9 studies from six countries (Germany, India, Italy, Korea, Lebanon, USA) assessing 3.339 OB/GYN were included in this review, covering 2 vaccines (influenza and Tdap)2-10. The included studies were published between 2009 and 2023 and followed a quantitative approach using standardized questionnaires. Recommendation was positively associated with OB/GYN knowledge and perceptions of vaccine safety and efficacy. Main barriers included the inadequate information on effects of vaccines on fetus, misconceptions about the need for vaccination, suboptimal knowledge of the vaccination program for pregnant women and vaccine safety concerns.

Conclusion: Improving OB/GYN knowledge on vaccine safety and efficacy, and raising their awareness about immunization guidelines in pregnancy, it is possible to overcome barriers to vaccine recommendations and ensure optimal immunization coverage for expectant mothers.

Biography

Panagiota Kalatzi is a registered nurse with fourteen years of working experience in the clinical field. She holds a Ph.D. degree in public health from the University of Peloponnese in Greece. Her research interests are focused on public health and infection prevention. She works as an infection preventionist at the general hospital of Sparta, Greece.

Day-2
Video Presentation

AN IN-DEPTH INVESTIGATION OF NUTRITIONAL DYNAMICS BETWEEN CANINE COMPANIONS AND THEIR OWNERS THROUGH THE LENS OF NUTRITIONAL EPIDEMIOLOGY

Ionela Hotea, Ana-Maria Plotuna, Adina Berbecea, Monica Dragomirescu and Isidora Radulov

University of Life Sciences, King Mihai I" from Timisoara, Romania

Abstract

Background: This study explores the nutritional behaviors within the human-canine relationship through nutritional epidemiology. Utilizing a multiple-choice test, the research delves into health issues, dietary choices, food rewards, and emotional bonds among dog owners.

Objective: The primary objective is to comprehend the interconnectedness of health, nutrition, and emotional bonds between dogs and their owners. Through the test responses, the study aims to identify prevalent patterns and potential areas for targeted interventions.

Methods: A distribution of responses was generated based on information collected from study contributors. Participants, predominantly aged 31-45, presented diverse demographics, providing insights into age, gender, occupation, and dog breeds. Sections covered health observations, veterinary involvement, food rewards, emotional bonds, nutritional knowledge, and practices.

Results: Health issues were frequently observed in dogs, highlighting the significance of addressing common conditions like obesity. Owners reported lower personal health issues related to diet, emphasizing the distinct health dynamics between humans and dogs. Regular veterinary visits and guidance were prevalent, indicating responsible pet ownership practices.

The use of food treats as rewards was common, with a preference for commercial dog treats. Owners perceived a positive influence on the emotional bond through sharing food or treats, underscoring the potential impact of dietary practices on the human-animal relationship.

Moderate nutritional awareness among owners suggests opportunities for targeted education. The willingness to make dietary modifications for dogs, particularly to address health concerns, aligns with a positive attitude toward prioritizing canine health. The likelihood of seeking professional dietary advice indicates receptiveness to expert guidance.

Conclusion: This study provides valuable insights into nutritional behaviors between dogs and their owners. Findings underscore the need for holistic approaches to health, diet, and emotional bonds. Opportunities exist for targeted interventions to enhance nutritional knowledge, promote healthier practices, and strengthen the human-canine bond. Further research and more data collection are crucial for validation within the broader context of nutritional epidemiology.

Biography

Ionela Hotea Lecturer - Department of Animal Nutrition and Animal Health, Faculty of Veterinary Medicine, University of Life Sciences "King Mihai I" from Timisoara. 2011- Doctor in Veterinary Medicine. Research projects – 2 projects as director, as member - 9 national and international research projects in veterinary parasitology, animal nutrition and human medicine. Also, member in 19 projects, implemented in our university for institutional development and for student-centered education. Publications - 141 scientific papers as first or co-author and 7 books as principal author.

Virtual Keynote Presentation

DOES SOCIAL SUPPORT PROTECT HEALTHCARE PROFESSIONALS FROM FATIGUE AND RESTRICTIVE QUALITY OF LIFE? A CROSS SECTIONAL STUDY IN GREECE

Paraskevi Theofilou

Hellenic Open University, School of Social Sciences, Greece

Abstract

The multitude of stressful factors in the work environment, combined with work burnout and the absence of social support, significantly degrades the quality of life of health professionals. And while studies focus individually on each variable, the purpose of the present research is to classify and simultaneously correlate them, in the case of healthcare professionals in the post-pandemic era. The quantitative method with a structured questionnaire was selected to conduct the research in 506 health workers, from 14 hospitals of the 6th Health Care Region of Greece. A fairly high level of fatigue, a low level of social support and a moderate to high level of general health were found. Physical, mental, and overall fatigue were found to be significantly negatively correlated with family, friends, significant others, and overall social support. Their correlation was found to be significantly positive in terms of general health, as well as its individual subscales. Further investigation of the cumulative effects of fatigue and the low level of quality of life of health professionals on the efficiency and level of healthcare services provided, will contribute to the formation of new approaches to dealing with and preventing the phenomenon.

Biography

Paraskevi Theofilou is a Post Doc Researcher (2016-2018, University of Peloponnese, Department of Nursing, Sparta, Greece)
Ph.D. in Health Psychology (Panteion University of Social and Political Sciences, Department of Psychology, Athens, Greece) Ph.D. in Personnel Management (University of Peloponnese, Department of Nursing, Tripoli, Greece) M.Sc. Health Services Management (Frederick University, School of Health Sciences and School of Law and Business Administration, Cyprus) M.Sc. Social exclusion, minorities and gender (Panteion University of Social and Political Sciences, Department of Sociology, Athens, Greece) Social Administration - Management of Health Services (National School of Public Administration, Athens, Greece) B.Sc. in Psychology (Panteion University of Social and Political Sciences, Department of Psychology, Athens, Greece) B.Sc. in Social Work (Technological Educational Institute of Athens, Athens, Greece).

Virtual Presentations

SEARCHING FOR BIOMARKERS IN THE BLOOD OF PATIENTS AT RISK OF DEVELOPING PARKINSON'S DISEASE AT THE PRODROMAL STAGE

Marianna V Selikhova, Elena A Katunina, Victor Blokhin, Marina R Nodel, Ekaterina N Pavlova, Alexander L Kalinkin, Valerian G Kucheryanu, Leyla Alekperova, Mikhail Yu Martynov and Michael V Ugrumov

Pirogov Russian National Research Medical University, Russia

Abstract

Parkinson's disease (PD) is diagnosed many years after its onset, under a significant degradation of the nigrostriatal dopaminergic system, responsible for the regulation of motor function. This explains the low effectiveness of the treatment of patients. Therefore, one of the highest priorities in neurology is the development of early (preclinical) diagnosis of PD.

The aim of this study was to search for changes in the blood of patients at risk of developing PD, which are considered potential diagnostic biomarkers.

Methods: Out of 1835 patients, 26 patients were included in the risk group and 20 patients in the control group. The primary criteria for inclusion in a risk group were the impairment of sleep behavior disorder and sense of smell, and the secondary criteria were neurological and mental disorders. In patients at risk and in controls, the composition of plasma and the expression of genes of interest in lymphocytes were assessed by 27 indicators.

Results: The main changes that we found in plasma include a decrease in the concentration of l-3,4-dihydroxyphenylalanine (L-DOPA), urates, in expression of some types of microRNA, and an increase in the total oxidative status. In turn, in the lymphocytes of patients at risk, an increase in the expression of the DA D3 receptor gene and the lymphocyte activation gene 3 (LAG3), as well as a decrease in the expression of the Protein deglycase DJ-1 gene (PARK7), were observed.

Conclusion: The blood changes we found in patients at risk are considered candidates for diagnostic biomarkers at the prodromal stage of PD.

Biography

Marianna V Selikhova, MD, PhD, MRCP is a neurologist, working in the UK for over 15 years with a specialist expertise in Movement disorders. While working at The Bristol Brain Centre, a tertiary referral service for South West on England, I have been selecting the patients for advance therapy with DBS, Duodopa, apomorphine pump, and looking after them. I also see a number of referrals with the diagnostic dilemma of early PD or Prodromal PD with non-motor presentation or isolated tremor, thanks to the growing awareness about PREDICT PD research. In 2019 I joined the research on Prodromal PD, run by Professor Michael Ugrumov, who created the panels of biomarkers for prodromal and an established PD on experimental models and proposed to verify this on humans. He is an academician of the Russian Academy of Sciences, was professor of the University in Sorbonne and an award winner of American association in experimental biology for works on neuronal regulation.

I am qualified in neurology in Moscow, completed doctoral PhD on the early stages of Parkinson' disease, focused on subtyping of PD according to the age and motor presentation, on predictors of cognitive deficits and long-lasting response to LD. it was also shown the possibility of PD diagnosis at prodromal stage of depression if the biomarkers applied. I have done fellowship in Movement disorders at UCL under the supervision of Prof Andrew Lees and published the clinic- pathological studies on PD subtypes (Brain, 2009), benign tremulous Parkinsonism, biomarkers of PD dementia.

COMPARISON OF QUANTIFERON GOLD PLUS AND QUANTIFERON GOLD IN TUBE DIAGNOSTIC PERFORMANCE IN DETECTING TUBERCULOSIS INFECTION: EVIDENCE FROM A META-ANALYSIS

Nouira Mariem, Souayeh Nesrine, Maatouk Mohamed, Nouira Hajer and Arfa Sondess

University of Tunis El Manar, Tunisia

Abstract

Background: The field of diagnostic validity approaches of tuberculosis (TB) infection remains evolving with no definitive consensus and continuous debates.

Objectives: Our principal objective was to review the current evidence on the pooled diagnostic accuracy metrics of Interferon-Gamma Release Assays (IGRAs) tests for TB infection detection. Our secondary objective was to compare the diagnostic performance of the Tuberculin Skin Test (TST) versus the QuantiFERON Gold Plus (QFT Gold Plus)

Methods: This was a meta-analysis following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis of Diagnostic Test Accuracy Studies (PRISMA-DTA) guidelines. The index tests of our meta-analysis were IGRAs tests (QFT Gold Plus; QuantiFERON Gold In Tube (QFT GIT)) and the TST. For the reference standard, the sensitivity was assessed based on active TB infection status which was clinically and/or biologically confirmed, and the specificity was assessed among asymptomatic participants who were not at risk or having a very low risk for TB infection.

Results: Overall, 42 studies were included in this MA, assessing one or more outcomes. QFT Gold Plus had a good, pooled sensitivity and specificity rates of 87% CI95%[82%-91%] and 93% CI95%[78%-98%] respectively. Its PPV was 88 % which suggests that the test is valuable in confirming the infection. The AUC was 0.98 indicating excellent diagnostic accuracy of the QFT Gold Plus. Very similar results were found for the QFT GIT. No significant difference was noticed when comparing sensitivity(p=0.15) and specificity(p=0.4) between the QFT Gold Plus and the QFT GIT. The comparison of QFT Gold Plus to the TST, indicate an acceptable concordance rate (76%).

Conclusion: Our results indicate that various IGRAs tests had a good diagnostic accuracy and performance and exhibit highly comparable results. Each test(IGRAs tests vs.TST) had its strengths and its limitations. None of the available tests is considered as the gold standard.

Biography

Nouira Mariem has completed her PhD in 2015 from Faculty of Medicine of Monastir, Tunisia. She is a public health specialist since 2018, at the Charles Nicolle teaching Hospital-Faculty of Medicine of Tunis-Tunisia.

TARGETING THE SPIKE GLYCOPROTEIN RECEPTOR BINDING DOMAIN OF SARS-COV-2 DELTA (B.1.617.2) VARIANT BY CHICORIC ACID FROM ECHINACEA PURPUREA USING MOLECULAR DOCKING

Selma HOUCHI

University of Ferhat ABBAS setif-1, Algeria

Abstract

Background: COVID-19, is a disease resulting from the SARS-CoV-2 global pandemic. This last, enters into the host cells through an interaction between its surface spike protein (S-protein) and the angiotensin-converting enzyme 2 receptors. The search for S-protein inhibitors is an urgent need which may reduce the virulence of the virus.

Objective: To investigate how chicoric acid interacts with Spike Protein, docking calculations combined with ADMET analysis were conducted

Methods: Target proteins of SARS-CoV2 infection was obtained from protein data bank (RCSB) website in PDB formats (PDB ID: 7ORB). Then, it was protonated where hydrogen atoms were added with their 3D geometry, corrected for any found errors in the connection or type of different atoms, and then energy minimized at the end of the preparation steps. Structures of chicoric acid was surveyed and downloaded from the PubChem database in SDF. Then, Energy minimizing of these ligands was done. The last step is Docking and ADMET analysis.

Results: Molecular docking results demonstrated that chicoric acid exhibited good potential inhibition against COVID-19 spike protease active site. its binding energy is -7.91 kcal/mol. Furthermore, it showed effective binding energy with multiple interactions with amino acid residues active site, it forms three H-acceptor bonds with GLN 474, GLU 471 and Asp 467 and one H-donor with LYS 458.

Chicoric acid obeyed to Lipinski's rules with two violations. In addition, this compound was found to be CYP2C9 non inhibitor all cytochrome P450 isoforms. exhibited negative results on Ames mutagenesis. furthermore, no toxicity was shown with the hERG I inhibitor, and no hepatotoxicity and skin sensitization, which allows it to be good safety drugs.

Conclusion: The results demonstrating that chicoroc acid possess enough potential to be drug-like molecule as potential therapeutic agent of SARS-CoV-2. However, *in vitro* and *in vivo* tests are essential to validate it.

Biography

Selma HOUCHI, Associate Professor at the University of Ferhat ABBAS SETIF-1 Algeria, head of the Biotechnology and molecular pathology specialty, teacher at the postgraduate level, member of the laboratory of applied biochemistry and the editorial board of journal of research in pharmacy. Her research interest including public health and safety, infectious disease, bacterial resistance to antibiotics, Multi Drug Resistant strains, Extended Spectrum Betalactamases, Biological activities, Medicinal plants, valorization of biomolecules, phytochemicals analysis, inhibition of enzymes such as beta-lactamases, Acetylcholinesterase (AChE), butyrylcholinesterase (BChE); Drug discovery and development using Docking analysis, SARS-CoV-2.

EXCLUSIVE BREASTFEEDING PRACTICE IN NORTH AFRICAN COUNTRIES: EVIDENCE FROM A META-ANALYSIS

Nouira Mariem, Souayeh Nesrine, Maatouk Mohamed, Nouira Hajer and Arfa Sondess

University of Tunis El Manar, Tunisia

Abstract

Background: Exclusive breastfeeding (EBF) is a public health priority all over the world. The global prevalence of EBF during the first six months of life remains low, particularly in low- and middle-income countries.

Objectives: To examine the existing evidence of the pooled prevalence during the first 6 months of infant's life in the North African (NA) countries.

Methods: The international databases, including PubMed, Google Scholar, Science Direct, Scopus, and Web of Science were systematically searched. The inclusion criteria included original research of observational studies, written in English or French and conducted among mothers in NA countries (Tunisia, Algeria, Morocco, Libya, Egypt, Sudan) on breastfeeding prevalence. The main outcome of interest was the prevalence of EBF during the first six months of infant's life (among infants aged ≤6 months). The secondary outcome was the prevalence of EBF until the first six months of life (among infants aged at least 6 months or more). Meta-analyses were conducted using R (version 4.2.3).

Results: A total of 16 studies with a total of 7,849 participants were included in the analysis. The overall global pooled prevalence of EBF during the first six months in NA countries was 29.0% (CI95% [18.0; 42.0]) with heterogenous results (Tau2 = 1.41, I2 = 99%, $p < 0.01$). Tunisia had the lowest prevalence of EBF (11%) while Sudan (63%) and Morocco (48%) had the highest prevalence rates. The prevalence of EBF until the first six months of life (8 studies were analyzed) was 30.0% (CI95% [14.0; 52.0]).

Conclusion: Our findings indicate that the practice of EBF in NA countries falls below the recommendations of the WHO and requires improvement using targeted interventions and adoption a multi-dimensional approach. Implementation of Baby-Friendly Hospital Initiatives can contribute to the improvement of breastfeeding practices in this region.

Biography

Nouira Mariem has completed her PhD in 2015 from Faculty of Medicine of Monastir, Tunisia. She is a public health specialist since 2018, at the Charles Nicolle teaching Hospital-Faculty of Medicine of Tunis-Tunisia.

ROLE OF MASS MEDIA IN UNDERSTANDING ABOUT CERVICAL CANCER AND ITS SCREENING AMONG MARRIED WOMEN

Ayesha Shahid, Amna Javed, Rukiya Tariq and Muhammad Ikram

Consultant Gynecologist, Pakistan

Abstract

Background: The increasing mortality of cervical cancer besides being preventable and curable is quite an alarming situation globally. It is the third most common cancer of females in developing country like, Pakistan. With the advancement in technology, breast cancer awareness has surpassed the specific number. Hence, cervical cancer being the common malignancy among females need to be addressed with the same zeal.

Objective: This study intends to discover awareness, understanding as well as role of mass media towards cervical cancer and its screening awareness.

Methods: Cross-sectional study was conducted on married women (20-60 years of age) through self-administered questionnaire; visiting OPD of Gynecology and Obstetrics department of Shaikh Zayed hospital dated 1-7-2022 to 1-8-2022, Lahore, Pakistan. Data was analyzed through IBM SPSS Statistics version 24.

Results: Only 17% respondents had an understanding and 83% respondents were not familiar with the word cervical cancer and its screening. The study concluded that age, occupation, education and monthly household income showed positive associations with understanding of cervical cancer and its screening; this is because most of the respondents were of young age, housewives, less educated, and belongs to low socio-economic status. Whereas, 28% respondents found mass media imperative and 72% respondents had not found mass media significant in their awareness approach. Residence and source of information had shown significant associations with role of mass media in cervical cancer and its screening awareness because urban residence and utilization of information sources enhances knowledge as well as give awareness on their health spectrum.

Conclusion: Cervical cancer can be easily prevented with the help of screening methods. Thus, it is need of an hour to work on mass media for its awareness to prevent the third most common cancer among females in developing countries.

Biography

Ayesha Shahid recently successful in obtaining my fellowship in Gynecology and Obstetrics from Pakistan. Furthermore, I have also cleared the MRCOG-2 in January 2024. As a keen researcher, I have contributed to various research projects, both nationally and internationally, resulting in multiple publications. I have actively participated in numerous conferences across the globe. I am also an author of a book chapter related to gynecology. During the COVID-19 pandemic, I served as a frontline healthcare worker and also conducted researches on various aspects of the pandemic. Additionally, I have dedicated my efforts to advocate for women's health, particularly in the field of gynecology. Presently, I am spearheading an awareness campaign focused on cervical cancer, which ranks as the third most common cancer among females in Pakistan. My involvement in cervical cancer research, coupled with participation in conferences and delivering lectures, underscores my commitment to raising awareness about this critical health issue. Furthermore, I am in the process of developing a website dedicated to cervical cancer awareness.

USEFULNESS OF THE TUBERCULIN SKIN TEST FOR THE DETECTION OF ACTIVE TUBERCULOSIS: RESULTS FROM A LARGE TUNISIAN MULTICENTER CASE-CONTROL STUDY

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University of Tunis El Manar, Tunisia

Abstract

Background: During the past decade, the frequency of extrapulmonary forms of tuberculosis (TB) has increased. These forms are often miss-diagnosed. This statement of the TB epidemiological profile modification, conduct us to reflect about the utility of the Tuberculin Skin Test (TST) in active TB detection.

Objective: to evaluate the diagnostic accuracy performance of the TST for active tuberculosis detection.

Methods: This was a case-control, multicenter study conducted in 11 anti-TB centers in Tunisia (June-November2014). The cases were adults aged between 18 and 55 years with newly diagnosed and confirmed tuberculosis. Controls were free from tuberculosis. A data collection sheet was filled out and a TST was performed for each participant.

Diagnostic accuracy measures of TST were estimated using Receiver Operating Curve (ROC) curve and Area Under Curve (AUC) to estimate sensitivity and specificity of a determined cut-off point.

Results: Overall, 1050 patients were enrolled, composed of 336 cases and 714 controls. The mean age was 38.3 ± 11.8 years for cases and 33.6 ± 11 years for controls.

The mean diameter of the TST induration was significantly higher among cases than controls (13.7 mm *vs*.6.2 mm; p=10-6). AUC was 0.789 [95% CI: 0.758-0.819; p=0.01], corresponding to a moderate discriminating performance for this test. The most discriminative cut-off value of the TST, which was associated with the best sensitivity (73.7%) and specificity (76.6%) couple was ≥ 11 mm with a Youden index of 0.503. Positive and Negative predictive values were 3.11% and 99.52%, respectively.

Conclusion: TST could be a useful tool used for active tuberculosis detection, with a moderate global performance and accepted sensitivity and specificity at the cut-off point of 11 mm. However, it cannot be considered as a gold standard test due to its multiple disadvantages.

Biography

Nouira Mariem has completed her PhD in 2015 from Faculty of Medicine of Monastir, Tunisia. She is a public health specialist since 2018, at the Charles Nicolle teaching Hospital-Faculty of Medicine of Tunis-Tunisia.

INTEGRATION OF CORRELATIVE AND EXPLANATORY MODEL METHODS FOR PREDICTING THE GROWTH OF BIOLOGICAL SYSTEMS

Carlos Oscar Rodríguez Leal

University of Guadalajara, Mexico

Abstract

In this work, several correlative and explanatory modelling methods complement and improve each other, and information from systems is used to make predictions of the future behaviour of different systems, which is finally applied to the prediction of growth of biological systems, with particular interest in the evolution of epidemics. Both in the short, medium and long term. The basic correlative models to be used are linearization and linear regression and statistical methods, Taylor series for discrete datasets, neural networks, inverse problem method, etc. Typical models such as binary fission, population density-dependent multiplication rates, Malthus model, Leslie matrix model, logistic growth model, and stochastic logistic growth model are used for explanatory models. As for the extra information used, there is the variable growth of epidemics depending on the seasons of the year, population conglomerations, etc. All these methods are used together, using techniques that complement and correct each other, to arrive at results that are compared with real records, where the precision of such joint techniques is shown. In addition, some of the individual methods employed are known methods, while others are known but modified and improved methods, or even original novel methods, such as Taylor polynomials for discrete datasets.

Background: In the use of methods for forecasting the evolution of epidemiological systems, there is a wide variety of alternatives. In this work, an integration of existing methods, as well as existing improved methods and new methods, is carried out, complemented with important information on the future evolution of such systems, in order to arrive at more accurate prediction results in the short, medium and long term.

Objective: Integrate a wide variety of methods for predicting the evolution of epidemiological systems, obtaining more accurate predictions in the short, medium and long term.

Methods: Various models of population growth are used, both correlative and explanatory, along with useful information from the environment of the populations studied, all of which is integrated through novel methods in order to make more accurate predictions in the short, medium and long term about population growth, and in particular about the growth of epidemics.

Results: The joint analysis of the methods used yields satisfactory results, as more accurate predictions are made about the evolution of the growth of epidemics in the short, medium and long term.

Conclusion: This paper shows that the joint analyses of correlative, explanatory and pertinent information models produce more accurate predictions in the short, medium and long term, by applying different special integrative techniques of the different models according to the respective time frame.

Biography

Carlos Oscar Rodríguez Leal has experience in inverse problems with joint investment in geophysics, giving some lectures on the subject. He also has experience in the neural network method, studying in a self-taught way. He has published some articles on mathematics and physics, and has participated in several conferences on mathematics, physics and philosophy.

PREVALENCE AND TREND OF BREASTFEEDING INDICATORS IN TUNISIA: EVIDENCE FROM REPEATED NATIONAL SURVEYS (2000-2018)

Nouira Mariem, Maatouk Mohamed, Nouira H, Souayeh Nesrine and Arfa Sondess

University of Tunis El Manar, Tunisia

Abstract

Background: Breastfeeding is a recommended practice by the World Health Organization due to the numerous benefits it brings to both the child's and the mother's health.

Objective: to synthesize national data related to the practice of breastfeeding in Tunisia.

Methods: This was a meta-analysis of national multiple indicator cluster surveys (MICS) conducted in Tunisia during the years 2000, 2006, 2012, and 2018. The main estimated indicators were the prevalence of early initiation of breastfeeding within the first hour following birth and the prevalence of exclusive and predominant breastfeeding (breastfeeding combined with drinking water) during the first six months of life. To evaluate the trend of breastfeeding indicators, the Mann-Kendall trend test was used. The analysis was performed using R software (version 4.2.3).

Results: In total, four MICS surveys involving 5594 mothers were included in the analysis. The overall prevalence of children who were never breastfed was 4% (95% CI [3%-7%]). The prevalence of children who were breastfed early within the first hour following birth was 56% (95% CI [20%-87%]), with a decrease from 87% in 2006 to 32% in 2018 (p=0.3). Among children under 6 months, the prevalence of exclusive breastfeeding during the first six months was 15% (95% CI [5%-35%]), with a decrease from 46% in 2000 to 13% in 2018 (p=0.08). The prevalence of predominant breastfeeding was 41% (95% CI [31%-51%]). The prevalence of continued breastfeeding up to the age of 2 years was 19% (95% CI [16%-22%]).

Conclusion: The indicators of BF practice in Tunisia are unsatisfactory and below the WHO recommendations. The alarming decline of this practice in Tunisia requires the adoption of a multidimensional approach (health, social, media) to promote this practice.

Biography

Nouira Mariem has completed her PhD in 2015 from Faculty of Medicine of Monastir, Tunisia. She is a public health specialist since 2018, at the Charles Nicolle teaching Hospital-Faculty of Medicine of Tunis-Tunisia.

MEASLES IN MEXICO 2020: AN EPIDEMIOLOGICAL PROFILE AND FUTURE PREVENTION STRATEGIES AMIDST CHALLENGES

Alejandro Cárdenas-Cantero[1,2] and Ana Karen Angoa-González[1,2]

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[2]Universidad de Guadalajara (UdeG), Mexico

Abstract

Background: Measles, a highly contagious disease preventable by vaccination, reemerged in Mexico during 2020. An outbreak of measles was established in the country, which posed substantial public health implications and challenges for the implementation of prevention strategies.

Objectives: This study aims to describe the measles outbreak in Mexico during 2020, analyze the distribution of cases and risk factors, and propose prevention strategies for future outbreaks.

Methods: A cross-sectional and retrospective study of confirmed measles cases in 2020 was conducted using open data from the Ministry of Health. Categorical variables, including frequencies, rates, percentages, and risk factors, were analyzed.

Results: Of the 2,295 suspected measles cases that were reported, only 196 were confirmed. The distribution of cases included 83 females and 113 males, with an odds ratio of 1.21 for being male ($p = 0.22$). A lack of vaccination record was identified in 134 cases, significantly increasing the risk of contracting the disease ($OR = 1.86$, $p < 0.001$). All cases presented with exanthema, and none had fever. No deaths were reported. 83% of the cases were originated in Mexico City.

Conclusions: This study highlights the importance of strengthening vaccination coverage and epidemiological surveillance to effectively prevent and control future measles outbreaks in Mexico. Vaccination is the most effective public health prevention strategy. Nevertheless, global coverage has decreased in the last decade, prompting measles outbreaks in several countries. It is recommended to strengthen conventional epidemiological surveillance strategies, followed by general hygienic measures, monitoring cases and contacts, in addition to verify vaccination status before traveling.

Biography

Alejandro Cárdenas Cantero has been serving as a medical practitioner in the public health services in the state of Mexico for the past 10 years. He is conscious of the needs of the beneficiaries of health services for health improvement.

He has held the position of Primary Health Centre Director, where he has highlighted his service attitude towards the community and promoted healthy environments.

He earned his Epidemiologist degree from the University of Guadalajara, Mexico, in this year. Trained in hospital epidemiology and health management, focusing on the needs of the population in terms of decision-making based on information for health emergencies.

His professional interests focus on medical research and how emergent and remerging neglected infectious diseases impact on global public health problems can influence the future decisions in epidemic intelligence.

CHARACTERIZATION, ANTIBACTERIAL AND CYTOTOXIC ACTIVITIES OF SILVER NANOPARTICLES USING THE WHOLE BIOFILM LAYER AS A MACROMOLECULE IN BIOSYNTHESIS

Aghapy Yermans Yakoup

Zewail City for Science and Technology, Egypt

Abstract

Recently, multi-drug resistant (MDR) bacteria are responsible for a large number of infectious diseases that can be life-threatening. Globally, new approaches are targeted to solve this essential issue. This study aims to discover novel antibiotic alternatives by using the whole components of the biofilm layer as a macromolecule to synthesize silver nanoparticles (AgNPs) as a promising agent against MDR. In particular, the biosynthesized biofilm-AgNPs were characterized using UV-Vis spectroscopy, electron microscopes, Energy Dispersive X-ray (EDX), zeta sizer, and potential while their effect on bacterial strains, and normal cell lines was identified. Accordingly, biofilm-AgNPs have a lavender-colored solution, spherical shape, with a size range of 20–60 nm. Notably, they have inhibitory effects when used on various bacterial strains with concentrations ranging between 12.5 and 25 µg/mL. In addition, they have an effective synergistic effect when combined with phage ZCSE9 to inhibit and kill Salmonella enterica with a concentration of 3.1 µg/mL. In conclusion, this work presents a novel biosynthesis preparation of AgNPs using biofilm for antibacterial purposes to reduce the possible toxicity by reducing the MICs using phageZCSE9.

Biography

Aghapy Yermans Yakoup is a graduate, batch 2023, with a biomedical sciences major (BMS) (medical sciences concentration) from Zewail City for Science, Technology, and Innovation. In addition, I have worked as a junior researcher assistant (jRA) in the Center for Microbiology and Phage Therapy (CMP) in Zewail City for Science, Technology, and Innovation from Fall 2021 until Summer 2023. I am interested in finding new solutions to eliminate multi-drug-resistant bacteria and inventing new compounds that can be antibiotic alternatives. Also, I am interested in the medical microbiology field. In the future, I plan to enroll in a Ph.D. program that aims to find new applicable solutions for infectious diseases in different body systems like the nervous and cardiovascular systems.

OPTIMIZING DUAL-ANTIPLATELET THERAPY IN THE PERIOPERATIVE PERIOD FOR SPINE SURGERY AFTER RECENT PERCUTANEOUS CORONARY INTERVENTION: A COMPREHENSIVE REVIEW, SYNTHESIS, AND CATALYST FOR PROTOCOL FORMULATION

Brandon Lucke-Wold

University of Florida, USA

Abstract

The increased incidence of spine surgery within the last decade has highlighted the importance of robust perioperative management to improve patient outcomes overall. Coronary artery disease (CAD) is a common medical comorbidity present in the population of individuals who receive surgery for spinal pathology that is often treated with dual-antiplatelet therapy (DAPT) following percutaneous coronary intervention (PCI). Discontinuation of DAPT prior to surgical intervention is typically indicated, however, contradictory evidence exists in the literature regarding the timing of DAPT use and discontinuation in the perioperative period. Herein we review the most recent cardiac and spine literature on the intricacies of PCI and its associated risks in the postoperative period. We further propose protocols for DAPT use following both elective and urgent spine surgery to optimize perioperative care.

Biography

Brandon Lucke-Wold was born and raised in Colorado Springs, CO. He graduated magna cum laude with a BS in Neuroscience and distinction in honors from Baylor University. He completed his MD/PhD, Master's in Clinical and Translational Research, and the Global Health Track at West Virginia University School of Medicine. His research focus was on traumatic brain injury, neurosurgical simulation, and stroke. At West Virginia University, he also served as a health coach for the Diabetes Prevention and Management program in Morgantown and Charleston, WV, which significantly improved health outcomes for participants. In addition to his research and public health projects, he is a co-founder of the biotechnology company Swift Science, the pharmaceutical company ProPhos Neuroscience, and was a science advocate on Capitol Hill through the Washington Fellow's program.

HEPATITIS B IN NORTHERN VIETNAM

Evgeniia Lichnaia[1], Bui Thi Thanh Nga[2], Olga Petrova[1], Daria Starkova[1], Tran Thi Nhai[2], Vo Viet Cuong[2], Alexander Dmitriev[3,4] and Olga Kalinina[1]

[1]Saint-Petersburg Pasteur Institute, Russia
[2]Joint Russian-Vietnamese Tropical Science and Technology Center, Hanoi, Vietnam
[3]Federal State Budgetary Scientific Institution, Russia
[4]The Saint Petersburg Institute of Technology, Russia

Abstract

Background: Hepatitis B virus (HBV) is one of the leading causes of chronic liver disease and liver cancer in Vietnam. However, epidemiological studies of hepatitis B in rural areas of the country are still limited.

Objective: to assess the seroprevalence of viral hepatitis B markers among ethnic minorities of rural districts in Ha Giang province, Vietnam.

Methods: A cross-sectional study was conducted in Vị Xuyên and Bắc Quang districts of Ha Giang province in November 2022. The study involved 300 residents (men - 109, women - 191) aged from 18 to 70 years (average age 44.4±1.3 years). The majority of participants belonged to the two large ethnic groups Tay (47.0%) and Dao (45.0%). The presence of serological markers of HBV was determined by using commercial ELISA-kits (RPC «Diagnostic Systems», Russia) according to the manufacturer's instructions.

Results: Totally, the prevalence of HBsAg was 11,3% (34/300; 95%CI 8.2-15.4), anti-HBc - 67% (201/300; 95%CI 61,5-72,1), anti-HBs - 39,3% (118/300; 95%CI 34.0-45.0). No statistically significant difference in the HBV seroprevalence was observed between regions, as well as between the two major ethnic groups, Tay and Dao. No serological HBV markers were found in 21.0% (63/300; 95%CI, 16.8-26.0) of the participants.

Conclusion: The results of this study indicate a high seroprevalence of hepatitis B virus in the ethnic groups, which preserve the national lifestyle in Vị Xuyên and Bắc Quang rural districts, Ha Giang province, Vietnam.

Accepted Abstracts

CROSS-CULTURAL ADAPTATION TO SPANISH AND VALIDATION OF THE HLS-COVID-Q22 INSTRUMENT FOR MEASURING HEALTH LITERACY ON COVID-19

Manuel Caipa Ramos, Silvia Quispe Prieto, Alberto Paucar-Cáceres and Regina Nina Chipana

Manchester Metropolitan University, UK

Abstract

Background: Health literacy (HL) is understood as the knowledge and skills that people must possess to access, understand, evaluate and apply health information to make good decisions and promote self-care. The social importance of HL has been vastly understood and its measurement has been the subject of various studies. In particular, during the recent pandemic, several instruments for measuring HL against Covid-19 have been proposed in different countries. The diversity of cultures makes it necessary to validate the instruments to apply them in various nations and to compare results.

Objective: In this article, we report the cross-cultural adaptation and validation of the psychometric properties of the hl measurement scale or instrument, HLS-COVID-Q22 from English to Spanish.

Methods: The seven steps described in 'Translation, adaptation and validation of instruments', Sousa and Rojjanasrirat (2010). In the final step of psychometric analysis, the four-factor structure (6,6,5,5 items) of the original instrument was subjected to confirmatory factor analysis (CFA) to determine the fit of the translated instrument. The pilot test was administered to 490 people in the city of Tacna in southern Peru.

Results: The pilot test reported levels of HL as "problematic" (55.5%); "sufficient" (27.3%); "inadequate" (17.1%). The "problematic" level is replicated proportionally between men and women (52.3% and 58.6%) and age groups under 40 and over 40 years (54.6% and 56.4%). Regarding the validity of the instrument, the confirmatory factor analysis initially did not show good fit indices, so a re-specification process was required by correlation of residuals that allowed us to arrive at good indicators. Regarding the reliability of the instrument, high values of internal consistency were obtained, with an ordinal Alpha of 0.87 and Omega of 0.93.

Conclusion: A high percentage of people (>70%) show problematic to inadequate levels of HL. These levels are similar between men and women and the age group under 40 and over 40 years of age. The adaptation process of the instrument originally in English included a qualitative sub-process with linguistic and cultural considerations added to a quantitative validation procedure with psychometric support, confirming the suitability of the scale translated into Spanish. The cross-culturally adapted instrument was used as part of the ALSAVI project whose objective is to measure HL in the Viñani area in the Tacna region in southern Peru, after coordination with representative stakeholders.

A REVIEW ON THE HEALTH IMPACT OF SELF-MEDICATION FOR MALARIA ON PORT HARCOURT RESIDENTS

Chinweike Chinah and Rebecca Irons

University of Sunderland, UK

Abstract

Background: Self-medication is an increasing global public health issue that affects both low and middle-income countries and developed nations. The residents of Port Harcourt, Nigeria, face a serious malaria problem and have limited access to healthcare. Consequently, many of them resort to self-medication to treat the disease.

Objective: To assess the level of awareness among Port Harcourt residents about the negative consequences of self-medication for malaria on their health.

Methods: A descriptive survey method was employed to select 105 participants randomly from two local government districts in Port Harcourt. The collected data were analysed using percentage-based descriptive statistics.

Results: The study found that the majority of the participants engaged in self-medication, but they were mostly uninformed about the adverse effects of self-medication for malaria on their health. The participants in the study believed that they could handle their malaria symptoms, likely due to prior experiences and a proper diagnostic laboratory test confirming their diagnosis. Low income and a lack of health insurance were identified as the main reasons for self-medication, while other factors included limited healthcare facilities, expensive drugs, the inability to afford medical expenses, proximity to hospitals, and negative perceptions of healthcare professionals.

Conclusion: The study indicates that self-medication for malaria will persist as a problem in the research region unless measures are taken by authorities and the government to address the issue.

AN INTEGRATIVE FRAMEWORK FOR OCULAR EPIDEMIOLOGY: ADVANCING EYE AND VISION CARE

Daniela Oehring
University of Plymouth, UK

Abstract

This keynote presentation explores the significant domain of ocular epidemiology, with an emphasis on the evolving landscape of eye and vision care. Given the contemporary shift in healthcare paradigms and the escalating incidence of vision-related disorders, a comprehensive understanding of ocular epidemiology and its role in delivering effective, sustainable, and universally accessible eye care becomes crucial. The discourse introduces an integrative approach to epidemiological research in vision health, amalgamating conventional epidemiological methodologies with contemporary health technologies, data science, and genomics. The focal point will be the emerging concept of "Precision Ophthalmology" - the employment of genomic information and big data analytics to predict, prevent, and personalise the treatment of ocular ailments.

The presentation delves into contemporary issues, encompassing the ramifications of the global ageing populace on eye care, the implications of the COVID-19 pandemic on ocular health, and the epidemiology of 'digital eye strain' in the context of our increasingly screen-driven lifestyle. The discourse will emphasise the potential role of Artificial Intelligence and telemedicine in enhancing diagnostic and therapeutic strategies for an array of eye conditions. Furthermore, the significance of public health strategies and health promotion in averting visual impairment and blindness will be addressed. The escalating burden of vision loss due to modifiable risk factors such as diabetes and lifestyle behaviours calls for robust primary and secondary prevention strategies.

The aim is to stimulate a paradigmatic shift in our engagement with ocular epidemiology, advocating for collaborative efforts between clinicians, epidemiologists, geneticists, and data scientists. This integrative approach holds the potential to innovate and implement practical solutions to mitigate the global burden of visual impairment and blindness, thereby securing the fundamental human right to vision.

APPLIED THEATRE ARTS AS A TOOL TO INCREASE DEPRESSION LITERACY IN ADOLESCENTS: LESSONS LEARNED FROM A MIXED-METHOD PILOT STUDY

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Abstract

Adolescent depression has increased sharply over the past decade, exacerbated by the effects of the COVID-19 pandemic (Thapar, et al. 2022, Branje & Morris, 2021; Golberstein et al., 2020). Depression literacy can be used as a tool to mitigate the consequences of depression (Beaudry, et al 2019). Low depression literacy causes hesitancy in seeking help for depressive symptoms due to the stigma associated with mental illness (Zhong, et al, 2021). This delay exacerbates the effects of depression and further impede the quality of life of the depressed (Curran, et. Al, 2023). Depression literacy is a protective factor that must be utilized to develop interventions for adolescents.

Involvement in extracurricular activities can lead to lower rates of depression and other negative mental health states (LaForge-Mackenzie, et al., 2022; Bernasco et al., 2021; Magson et al., 2020, Steiner, et., al, 2019). Adolescents who participated in theatre arts as an extra-curricular activity reported increased levels of self-esteem, self -confidence, belonging, and lower rates of risky behaviours (Quek et al., 2021; Fancourt, 2019).

Moreover, involvement in theatre arts can reduce health-related stigma (Bernasco et al., 2021).

The Unified Theory of Behaviour highlights the importance of mental health literacy and therefore postulates that knowledge, skills, and abilities are important precursors to behavioural change and must be integrated into the design of interventions (Hart et al., 2014).

Previous studies have used educational campaigns to increase depression literacy but did not employ novel or creative strategies to do so (Johns Hopkins Medicine, 2018; Beaudry et al., 2019). Applied theatre arts and arts integration have been used for a myriad of academic and public health topics such as mathematics (Jeronimo, 2019), science (Madden, et al., 2022), history (Anderson, 2017), and nutrition and healthy eating (Tympa, et al., 2019), sexual and reproductive health (Kaiser Permanente Educational Theatre, 2018) and among vulnerable populations (Theatre Lab, 2019). Scant attentions have been paid to the prospects of applying theatre arts to increase depression literacy as a function of decreasing depression in adolescents. The current talk discusses the lessons learned from using applied theatre arts in this fashion.

WHAT FACTORS SHOULD BE CONSIDERED WHEN DEVELOPING PROTOCOLS TO WORK WITH DOMESTIC ABUSE PERPETRATORS RE-ENGAGING WITH THEIR CHILDREN AND FAMILIES: A FEASIBILITY STUDY

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Abstract

Background: Domestic abuse is a pressing public health issue that disproportionately affects women, often with children witnessing the abuse as bystanders. While efforts have primarily focused on supporting victims, the long-term impact on children who have limited or no contact with the abusive parent has been underexplored. Adverse Childhood Experiences (ACEs), including a lack of contact with a parent, can have lasting negative effects into adulthood. This feasibility study aims to support the development of policies and protocols for social workers and other professionals working with domestic abuse perpetrators seeking to re-engage with their children and families.

Research Question: The central research question of this qualitative study is: What factors should be considered when developing protocols to work with domestic abuse perpetrators re-engaging with their children and families?

Methodology

Participants: The study will involve three distinct participant categories:

- Health and social care professional stakeholders: Including social workers, health visitors, school nurses, or professionals in contact with perpetrators through the criminal justice system.
- Domestic abuse perpetrators: Individuals who have admitted to, been accused of, or convicted of domestic abuse and seek to re-establish a relationship with their children.
- Adult survivors/carers: Partners of the perpetrator who have custody of children from the relationship or individuals caring for or having a relationship with the perpetrator's children (e.g., grandparents, extended family members, foster carers).

Data Collection: Each participant category will participate in separate 90-minute focus groups. The focus groups will delve into the factors influencing perpetrators' re-engagement with their children, the associated risks, and the impact on the children, domestic abuse survivors or carers, and the perpetrators themselves.

Data Analysis: Thematic analysis will be employed to identify recurring themes and patterns in the data collected from the focus groups.

THE IMPACT OF STRATEGIES FOR INCREASING VACCINATION COVERAGE IN CHILDREN: A COMMUNITY CLINICAL TRIAL

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Abstract

Background: The Brazilian National Immunization Program (PNI) has been consolidating itself as one of the most relevant interventions in public health. Paradoxically, great challenges arise for the PNI. The phenomenon of falling vaccine coverage is observed not only in Brazil, but in several countries. In the year 2021, faced with the unfavourable scenario of a drop in vaccination coverage, the State Department of Health, and the Federal University of Minas Gerais joined forces to implement a research-intervention.

Objective: The aim of this study was to evaluate the impact of this intervention on the vaccination coverage of children under 2 and on work process indicators.

Methods: This is a community clinical trial carried out in 212 municipalities in the state. Workshops were held and Municipal Action Plans were created. Vaccination coverage data were obtained from the National Immunization Program Information System and evaluated using the Mann-Whitney U and the McNemar Test. Work process indicators were evaluated using the Friedman and Wilcoxon tests.

Results: The results demonstrate an important improvement for most of the indicators in the three analysed times. Among the indicators that showed the best performance, it is possible to mention those related to the active search by the Community Health Agent. Regarding vaccine coverage, for all immunobiological analysed, there was an increase in the percentage of municipalities that reached targets.

Conclusion: The intervention research had a positive impact on vaccine coverage of children under 2 years of age and on indicators of immunization work processes in municipalities in the state of Minas Gerais, Brazil.

MEASURING THE REAL-WORLD IMPACT OF THE COVID-19 PANDEMIC ON SURVIVAL RATES FOR INDIVIDUALS DIAGNOSED WITH CANCER IN MANITOBA, CANADA

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University of Manitoba, Canada

Abstract

Background: The disruptions to routine healthcare services raises the possibility of missed or delayed diagnoses for individuals with suspected cancer leading to a potential cohort of missing cancer cases. Modelling studies have estimated that these individuals could experience more advanced disease at diagnosis and inferior outcomes such as decreased survival. However, few studies have investigated the association between the COVID-19 pandemic and survival among individuals diagnosed with cancer. Objective: We examined the association between the COVID-19 pandemic and cancer survival in Manitoba, Canada.

Methods: A retrospective population-based cohort study of individuals diagnosed between January 2015 to September 2021 from Manitoba, Canada were analysed. Interrupted time series models with Royston-Parmar models were used to analyse survival data by three-month quarters. Eleven cancer sites/groupings were analysed. Unadjusted and adjusted analyses were reported. One-year Kaplan-Meier estimates were reported as well as one-year delta restricted mean survival time (RMST) between predicted and counterfactual estimates and 95% confidence limits.

Results: Most analyses indicated 95% confidence limits within +/- 5% or 10% of counterfactual estimates. Survival was significantly lower for lung cancer patients aged 50 to 74 (delta RMST: -31.6 days (95% CI: -58.3, -7.2)) during April to June 2021, which was a pandemic wave including the Alpha and Delta variants.

Conclusion: Most cancer cohorts demonstrated survival rates similar to expected values. Individuals with lung cancer aged 50 to 74 demonstrated significantly lower survival during a single three-month quarter, which could be due to increased vulnerability to COVID-19 infection.

QUALITY INDICATORS IN THE CLINICAL MICROBIOLOGY LABORATORY: AN AMR ONE HEALTH APPROACH

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Abstract

Quality Indicators (QIs) play a vital role in determining, observing, and evaluating performance for essential laboratory processes. These measures not only establish a baseline but also serve as a source of data for decision-making in the laboratory. In many public and private laboratories, particularly in resource-limited nations, QIs are either minimally implemented or absent. These indicators are essential for achieving ISO15189 accreditation and are integral to the Quality Management System. Additionally, quality measures are required for the execution of antimicrobial resistance (AMR) surveillance and One Health initiatives.

Practical measures including quality parameters and operational efficiency are needed in laboratories. The National Reference Laboratory (NRL) and Ministry of Health (MOH) must lead in standardizing these metrics which encompass quality, process performance, and resource management to provide comparative data. Successful implementation requires committed leadership, skilled staff, and a phased approach starting with core metrics and gradually including additional AMR-related indicators.

The World Health Organization's (WHO) Global Antimicrobial Resistance and Use Surveillance System (GLASS) requires national AMR data submission annually. A key issue identified in the GLASS 2022 Report is the number of NRL/lab networks that conduct AMR surveillance that are not using AST standards (19.8 %) and local labs performing AST without an EQA program (51.4 %). Further, there is wide variation in testing coverage, so data representativeness is a major limitation in interpreting AMR rates nationally. Suggested key AMR-related metrics will be presented including tracking progress in implementation and current AMR rates that can be incorporated into monthly sentinel site reporting to provide regional data.

Harmonized and standardized QIs are essential for delivering information on both quality and operational performance within the laboratory. These indicators are vital in supporting the monitoring and evaluation of selected priority pathogen AMR data, aligning with national standards and international efforts.

CHRONIC DISEASE DEVELOPMENT AND MULTIMORBIDITY AMONG IMMIGRANTS AND REFUGEES IN ONTARIO

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Abstract

Background: Chronic diseases such as cancer, diabetes, cardiovascular and respiratory diseases are a global concern. In recent decades, Canada has also experienced a major increase in immigration. Yet, a detailed profile of chronic disease and multimorbidity risk patterns across different immigrant populations has been lacking in Canada. The purpose of this dissertation is to identify knowledge gaps in the scientific literature on the development of chronic conditions and multimorbidity across immigrant populations in Ontario, using population-based immigrant and health data housed at ICES.

Methods: This study used a 1:1 matched retrospective observational cohort design from 1995 to 2016 and included an open cohort of individuals entering the study, at different points in time, using routinely collected population-based administrative data at ICES. Our outcome variables consisted of the incidence of one of nine chronic conditions (asthma, Chronic Obstructive Pulmonary Disease, rheumatoid arthritis, acute myocardial infarction, congestive heart failure, diabetes, Crohn's and colitis disease, cancer, and hypertension) and multimorbidity from previously validated ICES-derived disease cohorts. Multimorbidity was examined as: a) two or more (2+ multimorbidity) and b) three or more (3+ multimorbidity) cooccurring chronic conditions. Chronic disease frequencies of dyads and triads were examined for all immigrants and long-term residents of Ontario with multimorbidity. We used an immigrants' year of landing to create five distinct landing cohorts of immigrants between 1992-1995, 1996-1999, 2000-2003, 2004-2007, and 2008-2010. Period-cohort effects were studied by calculating incidence rates for each immigrant category and long-term resident of Ontario in specific time intervals by landing cohort. Stratified and multivariate Cox Proportional Hazard models were used to examine the risk of developing a chronic condition and multimorbidity over time between immigrants and long-term residents, by immigrant visa category and further by world regions of origin and landing cohort.

Conclusion: These findings provide evidence to inform public health policy and planning by highlighting the complexity and heterogeneity of health outcomes across immigrant populations. Knowledge generated from this work will inform policies and evidence-based decision-making aimed to address the threat of chronic diseases and reduce health disparities.

DOES SOCIOECONOMIC POSITION AFFECT KNOWLEDGE OF THE RISK FACTORS AND WARNING SIGNS OF STROKE IN THE WHO EUROPEAN REGION? A SYSTEMATIC LITERATURE REVIEW

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Abstract

Background: Strokes are one of the leading causes of death worldwide. People with a lower socioeconomic position (SEP) (i.e. with regards to education, income and occupation) are at a higher risk of having a stroke and have worse clinical outcomes compared to the general population. Good knowledge levels about stroke risk factors and warning signs are key to prolonging life and reducing health issues caused by stroke. This systematic review examined differences in knowledge of stroke risk factors and warning signs with regards to SEP in the WHO European region.

Methods: MEDLINE, Embase, Web of Science, PsycINFO and CINAHL were systematically searched using appropriate Medical Subject Headings (MeSH) terms and free text, combining search terms with Boolean operators. Two independent reviewers selected studies in two stages (title and abstract, and full-text), and screened reference lists of included studies. Only studies in English and based in the WHO European region were included.

Results: Screening identified 2118 records. In the final review, 20 articles were included, with 67,309 study participants between them. Out of 17 studies that looked at stroke risk factors, 11 found increasing knowledge to be associated with higher SEP, four found no difference by SEP, one showed a mixed pattern and one outlier study found increasing knowledge of risk factors to be associated with a lower SEP. Out of 19 studies that looked at stroke warning signs or symptoms, 15 found there to be better knowledge of warning signs with a higher SEP, three found there to be no difference, and the same outlier study found increasing knowledge of warning signs with a lower SEP. Studies that seemed to have a higher quality rating found increasing knowledge of stroke with a higher SEP. A meta-analysis was not possible due to heterogeneity of studies.

Conclusions: In the WHO European region, better knowledge of stroke risk factors and warning signs is associated with a higher SEP. Public health campaigns and educational interventions aiming to increase stroke knowledge should be targeted at people with a lower SEP.

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Note

Upcoming Confernces

9th International Conference on **Material Science and Engineering** April 11-12, 2024 | Rome, Italy	*9th European Congress on* **Advanced Nanotechnology and Nanomaterials** June 24-25, 2024 | Amsterdam, Netherlands
4th International Conference on **Applied Science and Engineering** June 24-25, 2024 | Vienna, Austria	*7th International Conference on* **Environmental Sustainability and Climate Change** August 19-20, 2024 | Las Vegas, USA
7th International Conference on **Recycling and Waste Management** August 19-20, 2024 | Las Vegas, USA	*International Conference on* **Clinical and Medical Case Reports** September 09-10, 2024 | Barcelona, Spain
2nd International Conference on **Cleaner Production and Circular Economy** September 23-24, 2024 | Prague, Czech Republic	*2nd International Conference on* **Energy Engineering and Resource Efficiency** September 23-24, 2024 | Prague, Czech Republic
6th International Conference on **Renewable Energy, Resources and Sustainable Technologies** September 26-27, 2024 | Amsterdam, Netherlands	*6th European Congress on* **Infectious Diseases** October 03-04, 2024 | Amsterdam, Netherlands
6th European Congress on **Applied Microbiology and Beneficial Microbes** October 03-04, 2024 | Amsterdam, Netherlands	*9th European Congress on* **3D Printing & Additive Manufacturing** October 07-08, 2024 | London, UK
5th International Conference on **Advanced Functional Materials** October 14-15, 2024 | London, UK	*5th International Conference on* **Biomaterials & Biodevices** October 14-15, 2024 | London, UK
10th International Conference on **Materials Science & Engineering** October 17-18, 2024 | Tokyo, Japan	*4th World Congress on* **Otology, Rhinology & Laryngology** October 17-18, 2024 | Tokyo, Japan

Upcoming Confernces

5th International Conference on
Biofuels and Bioenergy
October 21-22, 2024 | Tokyo, Japan

8th International Conference on
Neurology and Brain Disorders
October 21-22, 2024 | Tokyo, Japan

4th International Conference on
Gynecology & Obstetrics
October 21-22, 2024| Tokyo, Japan

3rd European Congress on
Hematology and Blood Disorders
October 28-29, 2024 | Rome, Italy

4th European Congress on
Cancer and Oncology Research
October 28-29, 2024 | Rome, Italy

5th International Conference on
Infection Prevention and Control
November 11-12, 2024 | London, UK

4th International Conference on
Microbiology and Immunology
November 11-12, 2024 | London, UK

6th International Conference on
Biopolymers and Bioplastics
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