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The *Medical Journal of Malaysia (MJM)* welcomes articles of interest on all aspects of medicine in the form of original papers, review articles, short communications, continuing medical education, case reports, commentaries and letter to Editor. Articles are accepted for publication on condition that they are contributed solely to *The Medical Journal of Malaysia*.

NOTE: MJM is published bimonthly ie. January, March, May, July, September and November.

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Please ensure that your submission to MJM conforms to the International Committee of Medical Journal Editors Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals.

Neither the Editorial Board nor the Publishers accept responsibility for the views and statements of authors expressed in their contributions.

The Editorial Board further reserves the right to reject papers read before a society. To avoid delays in publication, authors are advised to adhere closely to the instructions given below.

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Manuscripts should be submitted in English (British English). Manuscripts should be submitted online through *MJM Editorial Manager*, <http://www.editorialmanager.com/mjm>.

Instructions for registration and submission are found on the website. Authors will be able to monitor the progress of their manuscript at all times via the *MJM Editorial Manager*. For authors and reviewers encountering problems with the system, an online Users' Guide and FAQs can be accessed via the "Help" option on the taskbar of the login screen.

MJM charges a one-time, non-refundable Article Processing Charge (APC) upon submission. Waiver of the APC applies only to members of the editorial board, and authors whose articles are invited by the editor. In addition, recipients of the MJM Reviewer Recognition Award from the previous year may enjoy a waiver of the APC for the next calendar year (e.g. recipients of MJM Reviewer Recognition Award 2022 will enjoy waiver of APC for articles submitted between January and December 2023).

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All submissions must be accompanied by a completed **Copyright Assignment Form, Copyright Transfer Form and Conflict of Interest Form** duly signed by all authors. Forms can be downloaded from MJM website at <https://www.e-mjm.org/>

Manuscript text should be submitted as **Microsoft Word** documents. Tables and flowcharts should be submitted as **Microsoft Word** documents. Images should be submitted as separate **JPEG files** (minimum resolution of 300 dpi).

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All submissions must include at least two (2) names of individuals who are especially qualified to review the work. All manuscripts submitted will be reviewed by the Editor in-charge before they are sent for peer review. Manuscripts that are submitted to MJM undergo a double-blinded peer review and are managed online. Proposed reviewers must not be involved in the work presented, nor affiliated with the same institution(s) as any of the authors or have any potential conflicts of interests in reviewing the manuscript. The selection of reviewers is the prerogative of the Editors of MJM.

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MJM follows the recommendation of the International Committee of Medical Journal Editors (ICMJE) for eligibility to be considered as an author for submitted papers. The ICMJE recommends that authorship be based on the following four (4) criteria:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
2. Drafting the work or revising it critically for important intellectual content; AND
3. Final approval of the version to be published; AND
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

TYPES OF PAPERS

Original Articles:

Original Articles are reports on findings from original unpublished research. Preference

for publications will be given to high quality original research that make significant contribution to medicine. Original articles shall consist of a structured Abstract and the Main Text. The word count for the structured abstract should not exceed 500 words. The main text of the articles should not exceed 4000 words, tables/illustrations/figures/images up to five (5) and references up to 40. Manuscript describing original research should conform to the IMRAD format, more details are given below.

Original articles of cross-sectional and cohort design should follow the corresponding STROBE check-lists; clinical trials should follow the CONSORT check-list.

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Review Articles are solicited articles or systematic reviews. *MJM* solicits review articles from Malaysian experts to provide a clear, up-to-date account of a topic of interest to medical practice in Malaysia or on topics related to their area of expertise. Unsolicited reviews will also be considered, however, authors are encouraged to submit systematic reviews rather than narrative reviews. Review articles shall consist of a structured Abstract and the Main Text. The word count for the structured abstract should not exceed 500 words. Systematic Review are papers that presents exhaustive, critical assessments of the published literature on relevant topics in medicine. Systematic reviews should be prepared in strict compliance with MOOSE or PRISMA guidelines, or other relevant guidelines for systematic reviews.

Short Communications:

Shorts communication are short research articles of important preliminary observations, findings that extends previously published research, data that does not warrant publication as a full paper, small-scale clinical studies, and clinical audits. Short communications should not exceed 1,500 words and shall consist of a Summary and the Main Text. The summary should be limited to 100 words and provided immediately after the title page. The number of tables/illustrations/figures/images should be limited to three (3) and the number of references to ten (10).

Continuing Medical Education (CME) Articles:

A CME article is a critical analysis of a topic of current medical interest. The article should include the clinical question or issue and its importance for general medical practice, specialty practice, or public health. It shall consist of a Summary and the Main Text. The summary should be limited to 500 words and provided immediately after the title page. Upon acceptance of selected articles, the authors will be requested to provide five multiple-choice questions, each with five true/false responses, based on the article. For guideline, please refer to: Sivalingam N, Rampal L. Writing Articles on Continuing Medical Education for Medical Journals. *Med J Malaysia*. 2021 Mar;76(2):119-124.

Case Reports:

Papers on case reports (one to five cases) must follow these rules: Case reports should not exceed 2,000 words; with a maximum of two (2) tables; three (3) photographs; and up to ten (10) references. It shall consist of a Summary and the Main Text. The summary should be limited to 250 words and provided immediately after the title page. Having a unique lesson in the diagnosis, pathology or management of the case is more valuable than mere finding of a rare entity. Being able to report the outcome and length of survival of a rare problem is more valuable than merely describing what treatment was rendered at the time of diagnosis. There should be no more than seven (7) authors.

Please note that all Case Reports will be published in the new MJM Case Reports Journal (www.mjmcasereports.org).

Commentaries:

Commentaries will usually be invited articles that comment on articles published in the same issue of the *MJM*. However, unsolicited commentaries on issues relevant to medicine in Malaysia are welcomed. They should not exceed 2,000 words. They may be unstructured but should be concise. When presenting a point of view, it should be supported with the relevant references where necessary.

Letters to Editor:

Letters to Editors are responses to items published in *MJM* or to communicate a very important message that is time sensitive and cannot wait for the full process of peer review. Letters that include statements of statistics, facts, research, or theories should include only up to three (3) references. Letters that are personal attacks on an author will not be considered for publication. Such correspondence must not exceed 1,500 words.

Editorials:

These are articles written by the editor or editorial team concerning the *MJM* or about issues relevant to the journal.

STRUCTURE OF PAPERS

Title Page:

The title page should state the brief title of the paper, full name(s) of the author(s) (with the surname or last name bolded), degrees (limited to one degree or diploma), affiliation(s), and corresponding author's address. All the authors' affiliations shall be provided after the authors' names. Indicate the affiliations with a superscript number at the end of the author's degrees and at the start of the name of the affiliation. If the author is affiliated to more than one (1) institution, a comma should be used to separate the number for the said affiliation.

Do provide preferred abbreviated author names for indexing purpose, e.g. L Rampal (for Lekhraj Rampal), BS Liew (for Liew Boon Seng), B Abdullah (for Baharudin Abdullah), Hoe VC (for Victor Hoe Chee Wai).

Please indicate the corresponding author and provide the affiliation, full postal address and email.

Articles describing Original Research should consist of the following sections (IMRAD format): Abstract, Introduction, Materials and Methods, Results, Discussion, Acknowledgment and References. Each section should begin on a fresh page. Scientific names, foreign words and Greek symbols should be in italic.

Abstract and Key Words:

A structured abstract is required for Original and Review Articles. It should be limited to 500 words and provided immediately after the title page. Below the abstract provide and identify three (3) to 10 key words or short phrases that will assist indexers in cross-indexing your article. Use terms from the medical subject headings (MeSH) list from Index Medicus for the key words where possible. Key words are not required for Short Communications, CME articles, Case Reports, Commentaries and Letter to Editors.

Introduction:

Clearly state the purpose of the article. Summarise the rationale for the study or observation. Give only strictly pertinent references, and do not review the subject extensively.

Materials and Methods:

Describe your selection of the observational or experimental subjects (patients or experimental animals, including controls) clearly, identify the methods, apparatus (manufacturer's name and address in parenthesis), and procedures in sufficient detail to allow other workers to reproduce the results. Give references to established methods, including statistical methods; provide references and brief descriptions of methods that have been published but are not well-known; describe new or substantially modified methods, give reasons for using them and evaluate their limitations.

Identify precisely all drugs and chemicals used, including generic name(s), dosage(s) and route(s) of administration. Do not use patients' names, initials or hospital numbers. Include numbers of observation and the statistical significance of the findings when appropriate.

When appropriate, particularly in the case of clinical trials, state clearly that the experimental design has received the approval of the relevant ethical committee.

Results:

Present your results in logical sequence in the text, tables and illustrations. Do not repeat in the text all the data in the tables or illustrations, or both: emphasise or summarise only important observations in the text.

Discussion:

Emphasise the new and important aspects of the study and conclusions that follow from them. Do not repeat in detail data given in the Results section. Include in the Discussion the implications of the findings and their limitations and relate the observations to other relevant studies.

Conclusion:

Link the conclusions with the goals of the study but avoid unqualified statements and conclusions not completely supported by your data. Avoid claiming priority and alluding to work that has not been completed. State new hypotheses when warranted, but clearly label them as such. Recommendations, when appropriate, may be included.

Acknowledgements:

Acknowledgements of general support, grants, technical assistance, etc., should be indicated. Authors are responsible for obtaining the consent of those being acknowledged.

Referencing guide:

The Medical Journal of Malaysia, follows the Vancouver numbered referencing style. Citations to someone else's work in the text, should be indicated by the use of a number. In citing more than one article in the same sentence, you will need to include the citation number for each article. A hyphen should be used to link numbers which are inclusive, and a comma used where numbers are not consecutive. The following is an example where works 1,3,4,5, have been cited in the same place in the text.

Several effective drugs are available at fairly low cost for treating patients with hypertension and reducing the risk of its sequelae.^{1,3,5}

The list of all of the references that are cited in the article should be presented in a list labelled as 'References'. This reference list appears at the end of the paper. Authors are responsible for the accuracy of cited references and these should be verified by the author(s) against the original documents before the manuscript is submitted. It is important that the author should never place in the list of references a document that he or she has not seen. The Journals names should be abbreviated according to the style used in the Index Medicus. All authors when six or less should be listed; when seven or more list only the first six and add et al.

If you are citing the author's name in your text, you must insert the citation number as well. Jewell BL (8) underlined that as focus in the SARS-CoV-2 pandemic shifts to the emergence of new variants of concern (VOC), characterising the differences between new variants and non-VOC lineages will become increasingly important for surveillance and maintaining the effectiveness of both public health and vaccination programme. If you are citing more than one author's name in your text and you want to cite author names in your text, use 'et al.' after the first author. Example: Rampal et al. (9) highlighted that the disregard of the manuscript guidelines and instruction to authors of the journal you submit, is one of the common reasons for 'Rejection' of the article.

Example references Journals:

Standard Journal Article

Rampal L and Liew BS. Coronavirus disease (COVID-19) pandemic. *Med J Malaysia* 2020; 75(2): 95-7.

Rampal L, Liew BS, Choolani M, Ganasegeran K, Pramanick A, Vallibhakara SA, et al.

Battling COVID-19 pandemic waves in six South-East Asian countries: A real-time consensus review. *Med J Malaysia* 2020; 75(6): 613-25.

NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. *Lancet* 2021; 11; 398(10304): 957-80.

Books and Other Monographs:

Personal Author(s)

Goodman NW, Edwards MB. 2014. *Medical Writing: A Prescription for Clarity*. 4 th Edition. Cambridge University Press.

Chapter in Book

McFarland D, Holland JC. Distress, adjustments, and anxiety disorders. In: Watson M, KISSANE D, Editors. *Management of clinical depression and anxiety*. Oxford University Press; 2017: 1-22.

Corporate Author

World Health Organization, Geneva. 2019. WHO Study Group on Tobacco Product Regulation. Report on the scientific basis of tobacco product regulation: seventh report of a WHO study group. WHO Technical Report Series, No. 1015.

NCD Risk Factor Collaboration (NCD-RisC). Rising rural body-mass index is the main driver of the global obesity epidemic in adults. *Nature* 2019; 569: 260-64.

World Health Organization. Novel Coronavirus (2019-nCoV) Situation Report 85, April 14, 2020. [cited April 2020] Accessed from: <https://www.who.int/docs/defaultsource/coronaviruse/situationreports/20200414-sitrep-85-covid-19>.

Online articles

Webpage: Webpage are referenced with their URL and access date, and as much other information as is available. Cited date is important as webpage can be updated and URLs change. The "cited" should contain the month and year accessed.

Ministry of Health Malaysia. Press Release: Status of preparedness and response by the ministry of health in and event of outbreak of Ebola in Malaysia 2014 [cited Dec 2014]. Available from: http://www.moh.gov.my/english.php/database_stores/store_view_page/21/437.

Other Articles:

Newspaper Article

Panirchellum V. 'No outdoor activities if weather too hot'. *the Sun*. 2016; March 18: 9(col. 1-3).

Magazine Article

Rampal L. World No Tobacco Day 2021 -Tobacco Control in Malaysia. *Berita MMA*. 2021; May: 21-22.

Tables:

All tables and figures should have a concise title and should not occupy more than one printed page. The title should concisely and clearly explain the content of the table or figure. They should be numbered consecutively with Roman numerals (e.g Table I) and figures with Arabic numerals (e.g. Figure 1), and placed after the sections of the manuscript which they reflect, particularly the results which they describe on separate pages. Cite tables in the text in consecutive order. Indicate table footnotes with lower-case letters in superscript font. Place the information for the footnote beneath the body of the table. If a table will be submitted as a separate document, the filename should contain the surname of the first author and match its label in the manuscript (e.g., SMITH Table 1). Vertical lines should not be used when constructing the tables. All tables and figures should also be sent in electronic format on submission of the manuscript as supplementary files through the journal management platform. Clinical Photographs should conceal the subject's identity. Tables and flow-charts should be submitted as Microsoft Word documents. Images should be submitted as separate JPEG files (minimum resolution of 300 dpi).

Photographs of Patients:

Proof of permission and/or consent from the patient or legal guardian must be submitted with the manuscript. A statement on this must be included as a footnote to the relevant photograph.

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Abbreviations:

Use only standard abbreviations. The full-term for which an abbreviation stands should precede its first use in the abstract, article text, tables, and figures, unless it is a standard unit of measurement. Abbreviations shall not be used in the Title. Abbreviations should be kept to a minimum.

Formatting of text:

Numbers one to ten in the text are written out in words unless they are used as a unit of measurement, except in tables and figures. Use single hard-returns to separate paragraphs. Do not use tabs or indents to start a paragraph. Do not use the automated formatting of your software, such as hyphenation, endnotes, headers, or footers (especially for references). Submit the Manuscript in plain text only, removed all 'field codes' before submission. Do not include line numbers. Include only page number.

BEST PAPER AWARD

All original papers which are accepted for publication by the MJM, will be considered for the 'Best Paper Award' for the year of publication. No award will be made for any particular year if none of the submitted papers are judged to be of suitable quality.

National Tobacco Control Conference (NTCC) 2025

Noncommunicable Diseases Malaysia (NCDM) Conference 2025

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Dr Kavinash Loganathan

Dr Sharina Hamzah

Dr Toh Gaik Theng

Dr Wong Yin How

National Tobacco Control Conference (NTCC) 2025

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Noncommunicable Diseases Malaysia (NCDM) Conference 2025

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National Tobacco Control Conference 2025

30th May – 1st June 2025

University of Cyberjaya, Cyberjaya, Selangor, Malaysia

A review on prevention strategies for oral cancer

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Track: Health

Theme: Tobacco-free Generation

ABSTRACT

Introduction: This plenary session provides a comprehensive overview of recent research on the chemical composition and health implications of e-cigarettes in Malaysia, focusing on e-liquids and aerosols. **Discussion:** E-liquids primarily consist of nicotine, propylene glycol (PG), vegetable glycerine (VG), and various flavouring agents. Heating these liquids generates harmful substances such as formaldehyde, acetaldehyde, and acrolein. Studies reveal significant variability in nicotine concentrations (3 mg/mL to 50 mg/mL), with many "nicotine-free" products actually containing nicotine. Health risk assessments indicate substantial non-cancer risks—including respiratory and neurological symptoms—and cancer risk indices exceeding safety thresholds. **Conclusion:** These findings underscore the urgent need for regulatory reform. Research priorities include longitudinal toxicity studies of flavouring agents, device-specific emission profiling, and biomarker development for exposure monitoring.

Keywords: E-cigarettes, Chemical Profiling, Health Risk Assessment, Malaysia, Regulatory Policy.

Unveiling the vapour: Chemical insights and research directions for E-cigarettes in Malaysia

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Track: Health

Theme: Lung Health

ABSTRACT

Introduction: This plenary session provides a comprehensive overview of recent research on the chemical composition and health implications of e-cigarettes in Malaysia, focusing on e-liquids and aerosols. **Discussion:** E-liquids primarily consist of nicotine, propylene glycol (PG), vegetable glycerine (VG), and various flavouring agents. Heating these liquids generates harmful substances such as formaldehyde, acetaldehyde, and acrolein. Studies reveal significant variability in nicotine concentrations (3 mg/mL to 50 mg/mL), with many "nicotine-free" products actually containing nicotine. Health risk assessments indicate substantial non-cancer risks—including respiratory and neurological symptoms—and cancer risk indices exceeding safety thresholds. **Conclusion:** These findings underscore the urgent need for regulatory reform. Research priorities include longitudinal toxicity studies of flavouring agents, device-specific emission profiling, and biomarker development for exposure monitoring.

Keywords: E-cigarettes, Chemical Profiling, Health Risk Assessment, Malaysia, Regulatory Policy.

The mental health status of E-cigarette users in Hulu Langat District, Selangor

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Track: Health

Theme: Tobacco-free Generation

ABSTRACT

Introduction: Background: This study explores the mental health status of e-cigarette users and associated factors. **Materials and Methods:** A cross-sectional study was conducted among 303 e-cigarette users in Hulu Langat, Selangor, using the DASS-21 questionnaire. Multivariate logistic regression was applied to analyze associated factors. **Results:** Prevalence rates for depression, anxiety, and stress were 11.9%, 21.5%, and 10.6%, respectively. Factors associated with mental health outcomes included experimentation, withdrawal symptoms, exposure to promotions, and beliefs about e-cigarette efficacy in smoking cessation. **Conclusion:** E-cigarette users experience varying levels of psychological distress. Addressing withdrawal symptoms and promoting ethical marketing practices are crucial for sustainable community mental health.

Keywords: Depression, Anxiety, Stress, E-Cigarettes, Mental Health

Quit intention induced by Pictorial Health Warnings (PHWS) on manufactured cigarettes packages: A mixed methods study among Johor Bahru adult smokers

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Track: Health

Theme: Smoking Cessation

ABSTRACT

Pictorial health warnings (PHWs) are labelled on cigarette packages to display actual gruesome images of smoking hazards. The objectives of this study were to determine the correlation between sociodemographic and smoking characteristics, negative affective reaction, and quit intention, as well as to seek for probable enhancement on the future of the PHWs in Malaysia. This is a mixed-method study commenced with the quantitative component and followed by the qualitative component. A multistage sampling was utilised to recruit respondents for the quantitative component. For the qualitative component, participants who had low negative affective reaction and low quit intention were recruited amongst those who participated in the quantitative component via convenient sampling for a focus group discussion. The overall negative affective reaction was 4.44 points which was considered low as compared to the median (4.67 points). The overall quit intention was 14.62 points which was also considered low as compared to the median (15 points). Marital status was the only sociodemographic variable that had a statistically significant negative correlation with quit intention. The overall negative affective reaction was very poorly positively correlated with overall quit intention. Participants were experiencing worn-out effect, difficulty in associating and understanding, language barrier, and selectivity and avoidance towards the current PHWs. The PHWs in Malaysia have not been successful in deterring smoking and inducing quit intention or quit attempt. Suggestions included to refresh the PHWs periodically, provide quitting knowledge, increase visibility, create relatable message, and create tobacco products with different levels of toxicity.

Keywords: Pictorial Health Warning, Cigarettes, Packages, Smoking

The overlooked majority: Insights into sociodemographic, health, and tobacco use profiles of hospitalized smokers in Malaysia

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Track: Malaysian Government

Theme: Smoking Cessation

ABSTRACT

Introduction: Hospitalized smokers are often overlooked in cessation efforts, despite hospitalization presenting a potential teachable moment. **Materials and Methods:** A cross-sectional study was conducted with smokers admitted to medical and cardiology wards in Hospital Tengku Ampuan Afzan (October 2022–October 2023) using universal sampling. Data were collected via the DASS-21, Fagerström Test for Nicotine Dependence (FTND), and Transtheoretical Model (TTM). Results: Among 488 participants, the median age was 50 years. Illicit cigarette use was prevalent (55.5%). Although 71.7% had attempted to quit, only 8.3% had tried pharmacotherapy. Most participants (78.5%) expressed readiness to quit within the next month. Conclusion: Hospitalized smokers exhibit high motivation to quit, but access to cessation support is limited. Structured, hospital-based services are urgently needed.

Keywords: Sociodemographic, Tobacco Use, Hospitalized Smokers, Malaysia, Smoking Cessation.

Framing the future: Adolescents' views on Malaysia's tobacco-free generation policy

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Track: Youth and Students

Theme: Tobacco-free Generation

ABSTRACT

The tobacco-free generation (TFG), viewed as a bold policy to accelerate momentum towards tobacco endgame, has sparked debates across various sectors. In Malaysia, its omission from the final legislation following a declared intent to adopt it in January 2022 has generated similarly conflicting responses. Despite the strong advocacy by public health experts in view of the growing vaping epidemic, its viability is weakened by concerns over economic impacts and constitutional discrimination. This study focused on adolescents – a key target group – and explored their awareness and perceptions of the policy. Fifteen secondary school students, ages 15–17, were interviewed face-to-face. The interviews were audio-recorded, transcribed, and analysed using thematic analysis and NVivo. Participants demonstrated varying levels of awareness, ranging from apathy to strong understanding of the concept, with social media and school-based programs cited as primary information sources. Two main themes emerged regarding perceptions: (i) positive impressions and (ii) ambivalent sentiments. Support for the policy originated from personal experience with smoking individuals or environments and awareness of health and financial benefits. In contrast, participants expressed concerns about the policy's feasibility due to the existing high smoking prevalence and weak enforcement of the smoke-free zones and underage smoking regulations. Participants also highlighted limitations in the implementation timeline and enforcement capacity. In conclusion, the successful implementation of TFG will require enhanced awareness, engagement with key influencers and effective enforcement of current policies. Furthermore, extensive consultation with other stakeholder groups is vital for designing effective tobacco control strategies that are inclusive and sustainable.

Keywords: Tobacco-free Generation, Tobacco Control, Smoking, Adolescents

Ever use of electronic cigarettes and its associated factors among adolescents in Kota Bharu, Kelantan

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Track: Youth and Students

Theme: Tobacco-free Generation

ABSTRACT

Introduction: The 2022 National Health and Morbidity Survey (NHMS) reported a decline in conventional cigarette smoking among Malaysian adolescents, but e-cigarette use has emerged as the most prevalent tobacco product at 14.9%. This trend is concerning due to associated health risks, nicotine dependence, and social influences that may contribute to tobacco use normalisation. Aim(s): To determine the factors (age, sex, exposure to tobacco use, knowledge, attitude and monthly household income) associated with ever use of e-cigarettes among adolescents in Kota Bharu, Kelantan. **Materials and Methods:** A cross-sectional study was conducted among 411 secondary school students in Kota Bharu, Kelantan using a three-stage stratified sampling method. Data were collected using a validated self-administered questionnaire in Bahasa Malaysia. Descriptive statistics and multiple logistic regression analyses were performed using SPSS version 29. **Results:** Most participants (99.8%) were Malay, with a mean age of 14.6 years (SD = 1.12). The sex distribution was 48.9% male and 51.1% female. The prevalence of ever e-cigarette use was 13.1%, with a mean initiation age of 12.8 years (SD = 1.75). Older age (AOR = 1.77; 95% CI: 1.28, 2.47; $p < 0.001$), male sex (AOR = 5.86; 95% CI: 2.47, 13.88; $p < 0.001$), and attitude score (AOR = 0.84; 95% CI: 0.73–0.97; $p = 0.02$) were significantly associated with ever use of e-cigarettes. **Conclusion:** These findings offer baseline evidence for developing targeted prevention and intervention programs for adolescents as well as to increase community awareness by involving schools and local organisations in addressing this issue.

Keywords: Electronic Cigarettes, Electronic Nicotine Delivery Systems, Adolescents, Prevalence, Associated Factors

Parental strategies and challenges in addressing adolescent E-cigarette Use: A qualitative study in Kuala Selangor, Malaysia

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Track: Youth and Students

Theme: Tobacco-free Generation

ABSTRACT

Introduction: E-cigarette use is rising among Malaysian adolescents, raising concerns about long-term health effects. Parental intervention plays a crucial role in prevention, yet little is known about the strategies parents employ or the challenges they encounter. **Aim:** This study aims to explore parental interventions and approaches to cease adolescent e-cigarette use and identify challenges they face in implementation. **Materials and Methods:** A qualitative study was conducted utilizing semi-structured interviews were conducted with 14 parents of adolescents who vape, residing in Kuala Selangor, Malaysia, between April and June 2023. Data was collected via online meetings on the Google Meet platform. Information on the parents' characteristics was gathered during the interview sessions, while their identity was kept confidential through the use of pseudonyms. Data were analyzed thematically using NVivo software to identify emerging patterns and themes. **Results:** Three primary parental intervention strategies were identified: 1) verbal personalized counselling, 2) direct intervention (e.g., displacement strategy, diversion and curfew imposition), and 3) third-party involvement, such as seeking support from close friends or extended family members and relatives. However, parents encountered several challenges, including the adolescent's growing sense of independence, the easy accessibility of e-cigarettes, and environmental influences such as peer pressure and social norms. **Conclusion:** The findings underscore the vital role of parental involvement in prevention efforts and highlight the need for comprehensive support through education, policy development, and community collaboration. Strengthening these domains may enhance parent's ability to effectively reduce adolescent e-cigarette use. Furthermore, recognizing the barriers could guide stakeholders including parents, public health advocates and policy makers in designing a targeted framework to safeguard the health of our future generations.

Keywords: E-Cigarette, Smoking Cessation, Parental Interventions, Adolescent Health

An evaluation of a capacity-building and empowerment program for university students, teachers, and secondary school students using the technique of Visualization In Participatory Programmes (VIPP)

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Track: Advocates and Community Leaders

Theme: Tobacco-free Generation

ABSTRACT

The increasing use of e-cigarettes (ECs) among secondary school students has become a significant concern for school administrators. This issue is largely driven by the wide variety of flavours and product designs available, which complicates efforts to implement effective prevention and advocacy programs in schools. Moreover, the lack of accessible educational resources further hinders the ability to inform students about the health risks associated with EC use. In response to these challenges, the Malaysian National Poison Centre, in collaboration with the Pulau Pinang Department of Education and undergraduate students, launched a comprehensive program titled "Capacity-Building and Empowerment Program for University Students, Teachers and Secondary School Students using the VIPP Technique", which was implemented between June 2023 and May 2024. This initiative aimed to enhance awareness and foster a proactive attitude towards ECs prevention through a participatory educational method. To assess the program's effectiveness, a series of pre-and post-intervention surveys were administered, focusing on participants' knowledge, perception, attitudes and beliefs regarding the danger of ECs use. Descriptive analysis using SPSS version 22 revealed marked improvement across all evaluated dimensions. Notably, the program enhanced the understanding of EC-related health risk among participants. They also expressed a stronger sense of responsibility in addressing ECs use, particularly within school environments. The findings underscore the importance of equipping educators and students with the tools to combat EC use through awareness and education. Given the positive outcomes, the program will be expanded to other secondary schools across Malaysia. This initiative supports the broader public health goal of the Malaysian Ministry of Health, which seeks to protect the younger generation from the growing threat of e-cigarette use. Overall, the program demonstrates a promising model for collaboration, education-based intervention in tobacco control efforts among adolescents.

Keywords: E-cigarettes, Adolescents Prevention, Health Education, Capacity-Building Program, Public Health Intervention

Evaluating staining effects of cigarette smoke using Cigarette Smoke Simulation Chamber (CSSC) V1.0: An in vitro study

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Track: Youth and Students

Theme: Tobacco-free Generation

ABSTRACT

Introduction: Despite the increasing awareness of tobacco's detrimental effects, the impact of cigarette stains on dental health remains underexplored. Previous studies have inadequately modelled protocols for artificially staining tooth surfaces with cigarette smoke. This study aims to develop a chamber that can simulate cigarette smoking, allowing for a thorough investigation of its effects on enamel discolouration. By examining the in vitro discolouration of enamel samples, we seek to contribute to tobacco control among youth in terms of oral health and aesthetics. **Materials and Methods:** Enamel samples from permanent upper incisor teeth (N=5) were prepared using acrylic resin moulds. The specimens were subjected to aerosol exposure in a self-fabricated Cigarette Smoke Simulation Chamber (CSSC) V1.0 for 40 cycles, each lasting 15 minutes, using a total of 400 cigarettes to simulate one year of smoking. After each set of 10 cycles, samples were stored in distilled water at 37°C. Colour values were measured using a spectrophotometer at baseline and after exposure to cigarette smoke. Individual enamel sample colour readings (L*, a*, and b*) were recorded, and mean colour changes (ΔL^* , Δa^* , Δb^* , and ΔE) were calculated. **Results:** Significant mean colour changes (ΔL^* , Δa^* , Δb^* , and ΔE) were observed in each specimen after exposure to cigarette smoke. The mean ΔE values recorded were 23.43±0.02, 5.64±0.01, 9.44±0.32, 16.01±0.08, and 10.73±0.33, respectively. **Conclusion:** The Cigarette Smoke Simulation Chamber (CSSC) V1.0 serves as an effective in vitro tool for evaluating the harmful effects of cigarette smoke on enamel surfaces. The significant discolouration after 1 year of smoking observed indicates the need for tobacco control measures, highlighting the effect of nicotine stains. This method has potential in research focused on dental health as well as for reducing tobacco-related harm among youth.

Keywords: Smoking Machine, Cigarette, Nicotine Stains, Enamel

Chemical profiling of E-liquids and emissions from E-cigarettes marketed in Malaysia

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Track: Health

Theme: Lung Health

ABSTRACT

Introduction: E-cigarettes (E-cigs) are gaining popularity among youth and young adults in Malaysia. While the chemical composition of e-liquid is usually disclosed, there is limited information on how these compounds change when aerosolised and the potential toxic substances inhaled during use. **Objective:** This study aimed to analyse and compare the chemical constituents of e-liquids and their emissions from e-cigs in Malaysia. Twelve disposable and refillable e-liquid samples were selected based on their nicotine content and availability. **Materials and Methods:** Chemical profiling was conducted using a Shimadzu GCMS-QP2010 Ultra System coupled with a Teledyne Tekmar HT3™ headspace autosampler. E-liquid (250–300 mg) and corresponding emission samples produced by a smoking machine collected on Cambridge filter pads (CFPs) were incubated at 160°C for 30 min prior to analysis. Separation was performed on a Shimadzu Rxi-5Sil MS capillary column. **Results:** Eighty-five percent of the emission samples had fewer chemical compounds than their liquid counterparts, indicating possible compound loss or transformation during aerosolisation. Nicotine and 3-Piperidinol, 1-ethyl- were consistently found in both forms. Major volatile compounds included benzyl acetate, benzaldehyde, cinnamaldehyde, terpineol, and pyrazine derivatives. The mango and lychee flavoured samples showed the highest diversity, with 37 compounds in liquid and 33 in emissions. Some flavouring agents, like limonene, citronellol, and carene, were present in the liquid but absent in the emissions, suggesting thermal degradation or evaporation during vaping. **Conclusion:** This study highlights the compositional differences between e-liquids and aerosol emissions, stressing the need for regulations that consider both e-liquid ingredients and inhaled chemical transformations. Ongoing monitoring and public awareness are vital to reduce health risks linked to flavoured e-cigs.

Keywords: E-cigarettes, Flavoured e-liquids, Aerosol Emissions, Chemical Profiling, GC-MS Analysis

Quit for a better smile: A case report on successful smoking cessation through motivational interviewing in dental practice

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Track: Advocates and Community Leaders

Theme: Smoking Cessation

ABSTRACT

Introduction: Smoking remains a major risk factor for oral diseases and treatment failure, particularly in dental implant therapy. Dental settings offer a unique opportunity for targeted behavioural interventions, with dental professionals serving as frontline agents of tobacco control. **Aim:** To present a successful case of smoking cessation using motivational interviewing in a dental setting, highlighting its impact on treatment outcomes and quality of life. **Materials and Methods:** A 39-year-old male with a 26-year smoking history and low nicotine dependency (Fagerström score = 1) was referred to a smoking cessation program by a prosthodontist to improve implant prognosis. The patient was managed through four structured counselling sessions grounded in motivational interviewing principles: partnership, empathy, evocation, and respect for autonomy. Oral hygiene education, dietary counselling, and financial cost awareness were included to support behavioural change. Progress was monitored using carbon monoxide- (CO) breath analysis, Fagerström scores, and self-reported behaviour. **Results:** The patient successfully quit smoking, confirmed by a final Fagerström score of 0 and 0 ppm CO level. Motivated by the fear of implant failure and financial burden, the patient remained abstinent throughout dental implant surgery and reported improved general health, taste perception, self-confidence, and aesthetics. Full oral rehabilitation was completed without complication. **Conclusion:** This case illustrates the effectiveness of brief, patient-centred smoking cessation interventions in dental practice. Integrating behavioural counselling into routine dental care supports both oral health outcomes and broader public health objectives. Dental professionals should be empowered and trained to contribute meaningfully to tobacco cessation efforts, especially in multidisciplinary treatment contexts.

Keywords: Smoking Cessation, Motivational Interviewing, Dental Public Health, Tobacco Control, Oral Health Promotion

Mapping E-cigarette promotion on social media platforms in support of FCTC article 13: A scoping review

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Track: Health

Theme: Framework Convention on Tobacco Control (FCTC)

ABSTRACT

E-cigarette use among youth is escalating globally, fuelled by the pervasive social media marketing that often circumvents the WHO Framework Convention on Tobacco Control (FCTC) Article 13 that mandates a comprehensive ban on tobacco advertising, promotion, and sponsorship (TAPS). This review aimed to systematically map recent evidence on e-cigarette promotion strategies and themes on social media. Following PRISMA-ScR guideline, peer-reviewed articles published in English from 2020 to 2025 were searched through PubMed, Web of Science, and ScienceDirect. Inclusion criteria required e-cigarette and social media promotion related terms in title or abstract. Eligible studies (n=37) underwent thematic synthesis focused on marketing strategies and themes. Instagram was the most studied platform (56.7%, 21/37), followed by TikTok (32.4%, 12/37) and YouTube (21.6%, 8/37). Nearly half (47.6%, 10/21) of geolocated studies examined U.S data, with only 1 study involved Malaysia (4.8%). The predominant methodology was manual coding (78.4%, 29/37), only 16.2% (6/37) studies used machine learning and 5.4% (2/37) employed both methods. Most studies (90.5%, 19/21) identified both direct (discounts or giveaways) and indirect promotion strategies, including youth marketing with young models, flavours or cartoon features (74%, 14/19), influencer marketing (53%, 10/19), viral campaigns (42%, 8/19) such as TikTok challenges, and discreet promotion (21%, 4/19) which uses non-representative hashtags to evade regulations. The most common themes were youth-appealing theme (75%, 12/16) revolving humour, fashion or lifestyle content and informational themes on device customization and perceived health claims of e-cigarette use (56%, 9/16). These findings revealed e-cigarette social media marketing to normalize e-cigarette use while downplaying the risks. The lack of Malaysian data highlights critical surveillance gaps, leaving the country vulnerable to unregulated cross-border promotion.

Keywords: E-Cigarette, Social Media, Marketing Strategy, Theme, TAPS

Alarming profiles of vape poisoning cases in Malaysia (2015–2024): The urgent need to expedite enforcement of the new tobacco act

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Track: Health

Theme: Tobacco-free Generation

ABSTRACT

Introduction: The National Health and Morbidity Survey 2022 showed an increase of 52% in the prevalence of vape users aged 13 to 17 compared to 2017. This, in turn, will increase the risk of health effects to users, including acute poisoning due to nicotine overdose and the misuse of drugs or other prohibited substances. The Malaysian National Poison Centre (NPC) have been receiving calls with alarming profiles of poisoning cases involving e-liquid from 2015 to 2024. Considering these worrying trends, the collected data were analyzed to highlight the epidemiological shifts, risk factors, and regulatory implications. **Materials and Methods:** A retrospective analysis was performed using data from e-liquid poisoning exposure calls received by the Malaysian National Poison Centre between January 2015 and December 2024 using SPSS 26 software. **Results:** and **Discussions:** Analysis of 152 cases reveals a five-fold increase in poisoning incidents from 2019 to 2024, with two distinct surge periods: during the COVID-19 Movement Control Order (2020–2021) and post-pandemic. Initially, in 2015–2021, cases predominantly involved children under five (63%) due to accidental ingestion. In 2023, nicotine was delisted from the Poisons Act, and a new trend emerged: 41% of reported cases involved teenagers aged 15–19 who intentionally vaped and subsequently experienced acute effects following exposure. Symptoms ranged from acute nicotine toxicity (vomiting, seizures, drowsiness) to severe neuropsychiatric effects like psychosis and hallucinations, with suspected adulteration by substances abuse. Geographically, central region states such as Selangor and Kuala Lumpur reported higher incidence rates with a total of 53 cases (34.9%), correlating with higher prevalence of users. **Conclusion:** The NPC's data underscores urgent needs to expedite the Control of Smoking Products for Public Health Act 2024 enforcement and public awareness campaigns targeting adolescents. Strong, united actions are needed to protect youth and help Malaysia reach its goal of a tobacco-free generation.

Keywords: Vape Poisoning Malaysia, E-Cigarette Liquid Poisoning, Vape Exposure, National Poison Centre, Enforcement

Engaging adolescents in tobacco prevention: Outcomes of a student-led programme in a semi-urban school in Malaysia

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Track: Youth and Students

Theme: Tobacco-free Generation

ABSTRACT

Smoking and vaping are highly prevalent among Malaysian adolescents, especially males and those from lower socioeconomic groups. This study aims to implement brief educational intervention on smoking and vaping, delivered by undergraduate university students, among high school students in Nilai, Negeri Sembilan, Malaysia. **Methods:** In this interventional study, undergraduate students received coaching on tobacco control issues. Following training, they planned and conducted a half-day programme for high school students at a local school. The programme included various engaging activities such as interactive talks, group sharing sessions, a crossword fun race, and anti-tobacco poster-making. To assess the impact of the intervention, pre- and post-programme questionnaires were administered to measure changes in students' knowledge and attitudes toward smoking and vaping. **Results:** 26 undergraduate counselling students were trained to conduct the programme. 90 male high school students from Form 3 and 4 participated in the programme. Only 17.8% knew that vape contains nicotine. At the end of the programme, there were improvement in knowledge (Mean difference, SD: 4.44, 2.31, $p < 0.001$) and attitude (Median, IQR: 38.0, 12.0 vs 26.0, 5.0, $p < 0.001$) on smoking and vaping. A total of 98.9% of students found the programme easy to understand, and 96.7% intended to apply what they learned. 95.6% reported willingness to advise peers against smoking and vaping. **Conclusion:** Male high school students in this semi-urban area had limited knowledge on tobacco and nicotine addiction. Undergraduate-led educational intervention demonstrates strong potentials in enhancing students' knowledge and attitudes. Continued efforts are needed to further reduce tobacco use among adolescents.

Keywords: Tobacco Use, Nicotine, Vaping, Adolescents, Malaysia

The politics of implementing tobacco control policy in Malaysia: An Advocacy Coalition Framework (ACF) approach

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Track: Malaysian Government

Theme: Framework Convention on Tobacco Control (FCTC)

ABSTRACT

Despite decades of tobacco control efforts, Malaysia continues to face high smoking prevalence and sustained interference from the tobacco industry. This paper applies the Advocacy Coalition Framework (ACF) to examine the political dynamics underpinning tobacco control policymaking in Malaysia. It identifies and analyzes the competing coalitions — the pro-tobacco control coalition comprising the Ministry of Health, non-governmental organizations (NGOs), and public health advocates; and the anti-tobacco control coalition including multinational tobacco companies, allied government ministries, and industry-aligned actors. Using historical and contemporary case studies, this research explores how belief systems, resource mobilization, and political strategies have shaped the trajectory of tobacco policy. The findings reveal persistent resistance from the tobacco industry through economic framing, political lobbying, regulatory capture, and strategic use of media and misinformation. While Malaysia's accession to the WHO Framework Convention on Tobacco Control (FCTC) in 2005 marked a pivotal shift towards stronger regulatory measures — including pictorial warnings, tax hikes, and smoke-free laws — the anti-tobacco coalition continues to exert influence, often delaying or diluting policy implementation. Recent efforts, such as the MPOWER strategies and targeted enforcement, have yielded measurable public health benefits, notably a decline in smoking rates from 29.5% in 2000 to 22.5% in 2020. However, tobacco industry interference remains entrenched, especially through its involvement in policymaking institutions and framing of illicit trade narratives. This study underscores the importance of sustained coalition-building, institutional insulation from industry influence, and policy learning in achieving long-term tobacco control goals. It provides valuable insights into how political power dynamics and actor interactions determine the success or failure of public health interventions in Malaysia and similar contexts.

Keywords: Advocacy Coalition Framework (ACF), Tobacco Industry Interference, Tobacco Control Policy, Coalition Politics, MPOWER Strategies

Quit smoking & vaping – from awareness to actualization

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Track: Advocates and Community Leaders

Theme: Tobacco-free Generation

ABSTRACT

The increasing prevalence of smoking and vaping in Malaysia, particularly among adolescents, demands urgent public health interventions. Malaysia's adult smoking rate of 21.3% mirrors the global average, yet its adult e-cigarette usage (5.8% in 2023) and adolescent vaping (14.9% in 2022) significantly surpass international benchmarks. This presentation outlines the mQuit program, a digital cessation initiative facilitated through the JomQuit web portal. Individuals expressing interest are contacted to determine their readiness to quit, followed by a structured series of six consultations over 6–12 weeks. The first session includes education on smoking harms, nicotine dependence assessment, and quit planning, while subsequent sessions monitor withdrawal symptoms and adherence to behavioral change strategies. Out of 4,137 enquiries received, only 507 (12.3%) completed an initial consultation, with a majority (77.7%) being unreachable. Key insights reveal challenges in contact validity, digital engagement drop-offs, and scalability. Recommendations include implementing chatbot-assisted triage, improving user experience on the portal, and expanding the cadre of trained quit coaches to increase successful conversions. The findings underscore the need to strengthen digital infrastructure and outreach strategies to bridge the gap between awareness and cessation.

Keywords: Vaping, e-Cigarettes, mQuit, Smoking Cessation, Malaysia

JomLapor – Enhancing compliance with the smoking control bill through digital innovation

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Track: Advocates and Community Leaders
Theme: Act 853 and Regulations

ABSTRACT

Introduction: Tobacco use is a major contributor to preventable deaths in Malaysia, with second-hand smoke posing significant health risks. Although smoke-free laws exist, enforcement remains inconsistent. To address this challenge, JomLapor was developed as a community and citizen empowering digital reporting tool to support enforcement of the Control of Smoking Products for Public Health Act by enabling the public to report smoking violations in real time. **Methods:** JomLapor is a web-based platform allowing users to report violations of designated smoke-free zones such as restaurants, schools, government facilities, hospitals, and public transport terminals. Reports are geotagged, timestamped, and include photo evidence. Submissions are reviewed and directed to local enforcement agencies. The platform also captures anonymized data to identify hotspots and trends. **Results:** Following its launch, JomLapor has received hundreds of reports from diverse locations nationwide, with urban areas showing the highest submission rates. Data analysis revealed frequent violations in eateries and transit areas, particularly during peak hours. Several local authorities responded by conducting targeted enforcement based on report data. User surveys indicated high satisfaction with the platform's ease of use and affirmed strong public interest in participating in health governance. **Discussion:** JomLapor exemplifies how digital tools can bridge the gap between public health policy and enforcement. By engaging the community and citizens in monitoring and reporting, the platform promotes shared responsibility, timely enforcement, and greater adherence to smoke-free laws. Its analytics capabilities provide valuable insights for resource allocation and policy refinement. Moving forward, JomLapor aims to enhance its integration with enforcement agencies and expand outreach to underserved populations, reinforcing its role as a scalable model for community-driven public health interventions.

Keywords: Tobacco Control, Public Health, Digital Reporting, Citizen Engagement, Smoking Enforcement

Shaping healthier behaviors: The role of JomSihat in addressing smoking and vaping

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Track: Advocates and Community Leaders

Theme: Tobacco-free Generation

ABSTRACT

The increasing prevalence of smoking and vaping in Malaysia, particularly among youth, highlights the urgent need for targeted behavioral interventions. Recent studies show 84.5% of 307,109 school students simultaneously use traditional cigarettes and e-cigarettes. Weak regulations and marketing tactics aimed at youth fuel widespread nicotine addiction. Smoking-related illnesses already cost Malaysia 16.49% of its National Health Expenditure, according to the Southeast Asia Tobacco Control Alliance (SEATCA), adding to the nation's economic burden. JomSihat, a collaborative initiative by civil society organizations and the Ministry of Health Malaysia, addresses these issues through multi-faceted behavioral interventions. It leverages culturally relevant materials including booklets and videos, interactive workshops, and peer and family support systems to drive behavior change. The program targets youth, including school and university students, alongside key influencers like teachers and parents, emphasizing education and awareness. By promoting healthier lifestyle choices, Jom Sihat aims to reduce smoking and vaping prevalence while empowering youth to resist social and environmental pressures. Its adaptability, potential to influence attitudes, and alignment with Malaysia's public health goals position it as a promising model for long-term public health improvement and a replicable framework for other regions.

Keywords: Behavioral Interventions, Tobacco Control, Vaping Awareness, Youth Education, Public Health, JomSihat, Smoking Prevention.

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Cataract blindness – The magnitude, intervention and evaluation

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Track: Diseases of Aging

Theme: Prevention, Screening and Early Detection

ABSTRACT

Introduction: Cataract Blindness is defined as visual acuity $<3/60$ in the better eye due to cataract. It is a global burden requiring intervention. In 2023, Rapid Assessment of Avoidable Blindness (RAAB) surveys were conducted in the Eastern and Sarawak regions of Malaysia to assess eye care service performance following the introduction of mobile cataract programs. **Materials and Methods:** Using multistage cluster sampling, residents aged 50 and above were examined for visual acuity and causes of impairment. Of 10,184 enumerated subjects, 9,709 were examined, with high response rates in both regions. **Results:** Findings revealed significant improvements since the 2014 National Eye Survey (NES II). Blindness prevalence decreased from 1.4% to 0.8% in Eastern and from 1.6% to 0.6% in Sarawak. Severe visual impairment also declined. Untreated cataract remained the leading cause of blindness, though cataract prevalence dropped at most surgical thresholds. Good post-surgical visual outcomes (VA $\geq 6/12$) increased, and effective Cataract Surgical Coverage (eCSC) rose by 13.8–19.2% in Eastern and 18.6–23.8% in Sarawak. Notably, gender disparities in cataract surgical coverage observed in 2014 were no longer evident in 2023. **Conclusion:** These improvements suggest the success of mobile cataract services and quality surgical initiatives. However, further coordinated efforts are needed to meet the WHO's target of a 30% increase in eCSC and to continue reducing avoidable blindness nationwide.

Keywords: Cataract, RAAB, CSC

Vaccination strategies in respiratory diseases

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Track: Respiratory

Theme: Prevention, Screening and Early Detection

ABSTRACT

Vaccination remains a cornerstone in preventing morbidity and mortality among older adults and individuals with chronic respiratory diseases such as asthma and chronic obstructive pulmonary disease (COPD). With the release of the 2025 Malaysian National Vaccine-Preventable Disease (VPD) recommendations, vaccination strategies for this vulnerable population have been further refined. Key updates include universal annual influenza vaccination for all adults aged ≥ 60 years, with preference for high-dose or adjuvanted formulations where available. Pneumococcal protection can now be achieved using a single dose of PCV20, or alternatively, PCV15 followed by PPSV23 after one year. Respiratory syncytial virus (RSV) vaccination is recommended for all ≥ 60 years and extended to those aged 50–59 years with comorbidities such as chronic lung disease, diabetes, cardiovascular disease, or immunocompromise. Tdap remains essential, with one adult dose followed by 10-yearly boosters, while recombinant zoster vaccine (RZV) is now recommended for all adults ≥ 50 years, administered in two doses. This presentation highlights the rationale and clinical implications of these updated recommendations, using case-based examples to illustrate practical decision-making. Implementation of these strategies is expected to reduce respiratory-related hospitalisations, improve patient outcomes, and enhance quality of life among older adults and those living with chronic respiratory conditions.

Keywords: Vaccine-Preventable Disease, Influenza, Pneumococcal, COPD, RSV

Making rare skin diseases visible: Lessons from epidermolysis bullosa for patient-centered care in Malaysia

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Track: Diseases of Skin / Other NCDs

Theme: Treatment and Management of NCDs

ABSTRACT

Rare skin diseases are often overlooked in health planning, despite the heavy and lifelong burden they place on patients and families. These are chronic conditions that impact far more than health alone but affecting eating, mobility, education, social participation, and mental wellbeing. Families frequently spend hours each day managing care while facing financial and emotional strain. In Malaysia, people living with rare skin diseases face common challenges: limited access to genetic testing (often only available overseas), high costs of specialised treatments and wound dressings, fragmented care pathways, and low awareness among health professionals. These systemic gaps delay diagnosis, restrict access to appropriate care, and leave families feeling unsupported. Epidermolysis Bullosa (EB), for example, illustrates these realities. EB is sometimes described as a “rare blistering skin disease,” where fragile skin and painful wounds dominate daily life. But the struggles of EB patients and caregivers are shared by many families across the spectrum of rare skin conditions. Addressing these needs requires convergence and alignment. Initiatives such as newborn screening, national registries, and clinical protocols must be developed as part of a comprehensive rare skin disease framework. EB offers one example, but the solutions must be integrated, patient-centered, and inclusive for all rare skin disease communities. This presentation will share lessons from EB in Malaysia within the wider rare skin disease context, highlighting patient and caregiver realities and underscoring why rare skin diseases must be recognised in national health strategies to ensure sustainable care, equity, and dignity for families who have long been invisible.

Keywords: Epidermolysis Bullosa, Rare Skin Diseases, Patient Centered Care, Advocacy and Policy, Treatment and Management

Genetic counselling and genomic testing for neurological conditions

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Track: Neurological and Mental Health

Theme: Treatment and Management of NCDs

ABSTRACT

Genetic diseases and congenital malformations are one of the main causes of NCDs and main cause of mortality and morbidity. Recent advances in technology and easier access to information have resulted in greater understanding of genomic science and its application in neurological conditions. Issues related to the clinical utility, cost-effectiveness and ethical concerns of these diagnostic tools had been raised. All processes within a cell are regulated by an interacting network of multiple genes. Each healthy individual carries several faulty genes in the cells. A disorder due to a variation in a gene or copy number change in the chromosome is often suspected in a patient with learning difficulties and dysmorphism. Others are due to mitochondrial variations, polygenic or multifactorial inheritance where the environment plays a role. A genetic study scrutinizes the functioning and composition of the single gene while a genomic study addresses all or a large number of genes and their inter-relationships (the "network") in order to identify their combined influence on the growth and development of the organism. Variants are passed on to the offspring and become 'familial'. A variant is considered as 'pathological' when the change leads to disrupted information causing diseases. Some of the ethical concerns regarding genetic or genomic testing are tests involving asymptomatic children, genetic testing without genetic counselling, the lack of equitable access to genetic services and support and high costs of the tests. Other issues such as lack of knowledge by healthcare providers to interpret the pathogenicity of the variants, incidental findings, variants of uncertain significance, cascade screening and the lack of appreciation of the methodology of mutation detection techniques are also major concerns. Hence, understanding the challenges and opportunities presented by genomic testing must be understood as genetic diseases and genetic susceptibility have become the main cause of NCDs.

Keywords: Genetic Diseases are NCDs, Genomic Testing, Genetic Counselling, Ethics

Impactfully bridging the gap: Medical student engagement in diabetic retinopathy screening

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Track: Diseases of Skin / Other NCDs

Theme: Prevention, Screening and Early Detection

ABSTRACT

Diabetic retinopathy (DR) remains a leading cause of preventable blindness in Malaysia, amid rising diabetes prevalence and limited screening coverage. This presentation explores the challenges faced in managing DR, including late detection and inadequate awareness, which contribute to significant visual impairment. It also emphasizes the critical role of early detection through retinal screening programs. In response, a collaborative initiative between medical students and the Ministry of Health was launched to enhance retinal screening efforts across underserved communities. Medical students received targeted training on fundus examination and DR identification, becoming integral members of screening teams. This involvement yielded multiple benefits: increasing community awareness, expanding screening coverage, and facilitating timely referrals for treatment. Furthermore, the program significantly enriched students' educational experience by providing practical, hands-on exposure to ophthalmic care, fostering a deeper understanding of diabetic complications and public health strategies. The integration of medical students into community screening activities not only bridges resource gaps but also cultivates future healthcare advocates committed to community service. This presentation highlights the importance of multi-sector collaboration in addressing diabetic eye disease, showcasing how medical student involvement can positively impact both community health outcomes and medical education. The model offers a sustainable approach for scaling up DR screening initiatives nationwide, emphasizing that empowering future physicians through active community engagement is vital in combating preventable blindness in Malaysia.

Keywords: Diabetic Retinopathy, Screening, Medical Students

Empowering communities, strengthening systems: Translating the WHO NCD agenda into impact

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Track: Diseases of Skin / Other NCDs

Theme: Advocacy, Policy and Collaboration

ABSTRACT

Noncommunicable diseases (NCDs) are responsible for 74% of global mortality and remain the leading cause of premature death and disability in Malaysia. The rising burden is driven by demographic shifts, rapid urbanization, globalization of unhealthy commodities, and widening social and economic disparities. These factors are compounded by behavioral risk factors such as tobacco use, harmful alcohol consumption, unhealthy diets, and physical inactivity, contributing to escalating healthcare costs, reduced workforce productivity, and long-term social dependency. The World Health Organization's Global Action Plan for the Prevention and Control of NCDs (2013–2030), along with its Implementation Roadmap (2023–2030), provides a strategic framework to reduce premature mortality and strengthen health systems. Translating this agenda into measurable impact requires a dual approach: empowering communities as active agents of change and reinforcing resilient health systems, capable of delivering integrated, equitable, and sustainable NCD services. This keynote explores evidence-based strategies from Malaysia and global contexts, highlighting the role of community-led initiatives, such as digital health platforms, school-based programs, workplace wellness models, and civil society engagement, in promoting effective and sustainable behavior change. Concurrently, system-level interventions including integration of NCD services into primary care, fiscal and regulatory policies, and adoption of WHO "Best Buys" are essential to create enabling environments for health equity. The presentation underscores the importance of multisectoral collaboration, leadership, and data-driven accountability in accelerating progress toward national and global NCD targets. Empowered communities and strengthened systems together offer a transformative pathway to sustainable impact.

Keywords: Noncommunicable Diseases, Community Empowerment, Health System Strengthening, NCD Prevention

Promoting mental health through intersectoral collaboration and community engagement

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Track: Neurology and Mental Health

Theme: Advocacy, Policy and Collaboration

ABSTRACT

The promotion of mental health requires coordinated, intersectoral strategies that extend beyond the boundaries of health care systems. This work highlights initiatives developed through collaboration with nongovernmental organisations, health care facilities, research centres, and government agencies. Core activities include mental health screening, psychological consultation, psychological wellbeing seminars and structured referral services. Particular attention is directed toward providing psychosocial support for vulnerable populations, including survivors of torture, indigenous communities, and school-aged children, with interventions designed to be contextually relevant and culturally appropriate. A multimodal approach has been implemented, integrating psychoeducation, brief consultations, and interactive workshops and seminars to enhance awareness, resilience, and help-seeking behaviour. Furthermore, mental health advocacy in sport has been advanced through contributions to the classification of athletes with intellectual impairments and the training of new classifiers, thereby promoting both fairness in competition and athlete wellbeing. Within clinical settings, collaboration with multidisciplinary teams has strengthened the integration of psychosocial perspectives into pain management and psycho-oncology case management, where advisory roles support comprehensive care delivery. Parallel engagement with research centres has facilitated the generation of evidence to inform programme development and refine intervention strategies. Through these intersectoral initiatives, the overarching aim has been to advance mental health advocacy, broaden access to psychosocial support, and foster sustainable community engagement. This presentation will share experiences, challenges, and lessons learned in building networks that place mental health at the centre of holistic wellbeing.

Keywords: Mental Health Promotion, Psychological Wellbeing, Intersectional Collaboration, Vulnerable Population, Multidisciplinary

Heart health: Building a future of hope through advocacy

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Track: Cardiovascular and Metabolic

Theme: Advocacy, Policy and Collaboration

ABSTRACT

Cardiovascular disease (CVD) is the leading cause of death in Malaysia and across Asia, with Malaysians experiencing onset much earlier than Western and many other populations. This early risk, driven by diet, stress, smoking, and sedentary lifestyles, demands urgent action. While prevention is possible, individual choices are not enough—advocacy, with a holistic approach, is key to turning awareness into meaningful change. This presentation, Heart Health: Building a Future of Hope Through Advocacy, explores how advocacy strengthens the fight against heart disease. It requires communities, policymakers, healthcare systems, and families to function as co-stakeholders to achieve impactful outcomes. Key strategies include promoting balanced diets such as Suku Suku Separuh, encouraging daily activity, and reducing smoking and vaping. For patients, advocacy means affordable follow-ups, clear medical pathways, and wider access to cardiac rehabilitation, while also recognizing the vital role of families and caregivers especially in terms of emotional support. Caregivers are often overlooked and face stress, burnout, thus increasing health risks themselves. Advocacy must therefore extend to caregiver training, support networks, and respite care. Incentives such as workplace wellness initiatives, insurance discounts, and subsidies for healthier foods can further encourage healthier lifestyles. Education, starting in schools, remains essential to nurture lifelong sustainable habits. Finally, the presentation situates advocacy within the Asian context—where strong family ties, cultural foods, and religious institutions can be leveraged for impact. By respecting traditions while promoting healthier practices, advocacy can drive sustainable change. Together, these efforts offer hope for reducing the CVD burden and building a healthier Malaysia and Asia.

Keywords: Heart health advocacy

Immunotherapy in lung cancer: Who benefits, who doesn't, and why?

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Track: Respiratory

Theme: Treatment and Management of NCDs

ABSTRACT

The immune system plays an important role in surveillance and eradication of cancer cells. The adoption of immunotherapy has transformed the treatment landscape of lung cancer. Patients with advanced non-small cell lung cancer (NSCLC) treated with immunotherapy may benefit from durable tumour response and long-term survival. The approved immunotherapy in lung cancer includes immune checkpoint inhibitors (ICIs) targeting programmed-death (ligand) protein (PD-(L)1) and cytotoxic T-lymphocyte-associated protein 4 (CTLA-4), which are now an integral part NSCLC treatment irrespective of histological cell types and across all tumour stages. However, the majority of patients with advanced NSCLC are resistant to immunotherapy with ICIs or develop therapeutic resistance while on treatment. Resistance mechanisms to immune checkpoint blockade are often complex and include a combination of defects within the cancer-immunity cycle such as failure in antigen presentation and T-cell priming, presence of co-inhibitory immune checkpoints, inability of immune cells to infiltrate the tumour, and presence of an immunosuppressive tumour microenvironment. PD-L1, although not perfect, is a predictive biomarker for first-line immune checkpoint inhibitor therapy in metastatic NSCLC without actionable driver alterations. In patients with tumour expressing high levels of PD-L1 of >50%, guidelines recommend ICI monotherapy as a treatment option. However, ICI monotherapy is less efficacious in patients with tumours expressing lower levels of PD-L1. In these patients, it is recommended that treatment should use a combination of ICI with chemotherapy with/without an antiangiogenic agent or with another ICI.

Keywords: Immune Checkpoint Inhibitor, Immunotherapy, Lung Cancer, PD-L1, Survival

From diagnosis to daily life: A patient's journey in managing heart disease

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Track: Cardiovascular and Metabolic

Theme: Treatment and Management of NCDs

ABSTRACT

Cardiovascular disease remains a leading cause of morbidity and mortality globally, necessitating comprehensive approaches from acute diagnosis to long-term management. This presentation recounts a personal journey through heart disease, beginning with a heart attack in November 2022, followed by coronary artery bypass surgery in February 2023. It highlights the critical phases of post-operative recovery, including physical rehabilitation, medication adherence, lifestyle modifications, and psychological resilience, which collectively contributed to a successful recovery and improved quality of life. Drawing from lived experience, the talk provides practical insights into managing daily life with cardiovascular disease, emphasizing patient empowerment and self-care strategies. Furthermore, it introduces Pertubuhan Teras Jantung, a support organization co-founded with my wife, dedicated to assisting cardiovascular patients and caregivers. The NGO advocates for early detection, patient education, and systemic healthcare policy reforms aimed at reducing the burden of cardiovascular disease nationally. This narrative underscores the vital role of patient-led initiatives in complementing clinical care, fostering community support, and driving health policy changes to enhance cardiovascular health outcomes.

Keywords: Cardiovascular, Heart Health, Experience, NGO

The role of AI and machine learning in the detection of neurological disorders

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Track: Neurology and Mental Health

Theme: Treatment and Management of NCDs

ABSTRACT

Noncommunicable neurological disorders impose a growing national burden through delayed detection and variable care pathways. This plenary survey examines how artificial intelligence (AI) and machine learning (ML) can facilitate early detection and inform clinical decision-making in various conditions, including stroke, epilepsy, and movement disorders, among others. After an introduction to the core computational methods (vector-matrix models, gradients, and convolutional feature extraction), example evidence for AI-enabled triage is provided (e.g., hemorrhage and large-vessel-occlusion flags on CT/MRI), as well as seizure detection/prediction, gait and tremor analytics from wearables, etc. A summary of what AI can and should not do is also discussed. Practical deployment is framed as a clinical AI pipeline. Implementation guidance is also provided. Safety, governance, and equity are equally covered. The plenary is then concluded with future directions - multimodal and privacy-preserving learning, uncertainty-aware and causally informed models, and national collaborations - to translate trustworthy AI into measurable reductions in neurological NCD burden.

Keywords: Artificial intelligence (AI), Machine Learning (ML), Neurological Disorder Detection, Analytics, Clinical Decision Support

Harnessing neurotechnology for mental and neurological well-being: Malaysia's journey from brain health to brain capital & economy

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Track: Neurology and Mental Health

Theme: Treatment and Managements of NCDs

ABSTRACT

Malaysia is actively using neurotechnology to improve brain health and build its national brain capital. In the last ten years, advanced tools like brain scanners (EEG, fMRI), robotics, and virtual reality have become common in medical and research settings. They are crucial for aiding stroke recovery, monitoring epilepsy, and supporting mental health rehabilitation. These technologies allow for more accurate diagnoses, better treatments, and wider access to care. The idea of brain capital emphasizes that a population's cognitive abilities and brain health are valuable national assets. They drive productivity, and creativity. By investing in education, innovation, and mental well-being, Malaysia is turning brain health into a strategic resource for social and economic progress. This approach reflects a broader shift toward a "brain economy," where cognitive strength and mental wellness are key to sustainable development.

Keywords: Brain health, Brain capital, Neurotechnology, Well-being, Malaysia

The importance of early detection in heart failure: Screening at-risk cohorts

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Track: Cardiovascular and Metabolic

Theme: Prevention, Screening and Early Detection

ABSTRACT

Management of heart failure has seen tremendous advancements, owing to efficacious therapies being developed over the past 2 decades. Alongside the 'fantastic four' pillars of treatment in heart failure with reduced ejection fraction, we now have an armamentarium to combat a, previously, elusive entity, i.e., heart failure with preserved ejection fraction. We have also witnessed a rise in various services developed to improve heart failure care. This includes clinics aimed at early implementation and rapid up-titration of guideline-directed medical therapies, supported by evidence from trials such as STRONG-HF suggesting that such approach being both efficacious and safe. However, a current unmet need in the field of heart failure revolves around early detecting and screening for the disease. Heart failure is commonly linked to various risk factors, an important one being that of diabetes mellitus. The unquestionable link between diabetes and heart failure development has even led to the European Society of Cardiology recently releasing a clinical consensus statement proposing a refined definition of diabetic myocardial disorder that goes beyond traditional school of thoughts solely surrounding coronary disease development. There is now growing evidence in the use of novel tools such as echocardiography and natriuretic peptides in early screening efforts, which allows for prompt risk stratification and cardio-kidney-metabolic treatment. There is also growing evidence for personalised, targeted therapies which can potentially be utilized to directly prevent the development of heart failure, which are now currently being tested in phase 3 and 4 studies, all in the name of stemming the disease!

Keywords: Heart Failure, Diabetes, Preventive Cardiology, Cardio-Kidney-Metabolic Syndrome, Cardiology

Beyond CPAP: Evolving approaches to the management of sleep apnea

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Track: Respiratory

Theme: Treatment and Management of NCDs

ABSTRACT

Continuous positive airway pressure (CPAP) remains the standard therapy for obstructive sleep apnea (OSA), yet adherence challenges and the heterogeneity of OSA pathophysiology demand a broader, patient-centered toolkit. This presentation reviews contemporary non-CPAP strategies and a practical framework for selecting the right therapy for the right patient. We will outline a “treatable-traits” approach that integrates clinical phenotyping (symptoms, craniofacial pattern, comorbidities), endotyping (loop gain, arousal threshold, upper-airway muscle responsiveness), and endoscopic findings (including DISE) to guide therapy. Evidence and real-world outcomes will be summarized for: oral appliance therapy with titration and objective verification; positional therapy with modern vibrotactile devices; lifestyle, weight reduction, and metabolic optimization; myofunctional/oropharyngeal exercises; nasal optimization to reduce upper-airway resistance; targeted palatal procedures; tongue-base reduction (including minimally invasive and transoral robotic approaches); maxillomandibular advancement for selected phenotypes; and hypoglossal nerve stimulation with updated selection criteria and programming principles. Strategies for monitoring efficacy (HSAT/PSG), mitigating complications, and sequencing or combining therapies will be emphasized, along with shared decision-making, expectation setting, and longitudinal follow-up.

Keywords: Continuous Positive Airway Pressure, Sleep Apnea, Obstructive, Polysomnography, Surgery

The need for a behavioural sciences focus in mental health and mental disorders

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Track: Neurology and Mental Health

Theme: Prevention, Screening and Early Detection

ABSTRACT

The complexity of mental health and mental disorders necessitates a comprehensive understanding that extends beyond traditional biomedical models. There is a critical need to integrate a behavioral sciences perspective into mental health research and practice. Behavioral sciences, encompassing psychology, behavioral economics, cognitive science, social sciences, offer invaluable insights into the determinants of mental health, including environmental, social, and individual factors. By focusing on behaviors, motivations, and decision-making processes, we can identify modifiable risk factors and develop targeted interventions that promote resilience and recovery. Furthermore, incorporating behavioral sciences fosters a holistic approach, facilitating personalized treatment plans and enhancing adherence. Some of the factors that will be highlighted are recent advances illustrating how behavioral insights can improve prevention strategies, early detection, and management of mental disorders. Emphasizing interdisciplinary collaboration, this approach aims to bridge the gap between biological and psychosocial frameworks, ultimately leading to more effective, sustainable mental health solutions. Recognizing behavioral sciences as a vital component in understanding and addressing mental health challenges is essential to advancing research, policy, and clinical care in this field.

Keywords: Behavioural Sciences, Mental Health, Mental Disorders, Research, Application

Managing asthma across the lifespan: Integrating care for sustained control

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Track: Respiratory

Theme: Treatment and Management of NCDs

ABSTRACT

Introduction: The prevalence of vape users aged 13 to 17 increased by 52% between 2017 and 2022. This study analyzes e-liquid poisoning calls received by the National Poison Centre (NPC). **Materials and Methods:** A retrospective analysis was performed on exposure calls between January 2015 and December 2024. **Results:** Analysis of 152 cases reveals a five-fold increase in poisoning from 2019 to 2024. Early cases (2015–2021) primarily involved accidental ingestion by children under five (63%). However, in 2023, a new trend emerged: 41% of cases involved teenagers (15–19 years) who intentionally vaped and experienced acute nicotine toxicity, including seizures and neuropsychiatric effects. **Conclusion:** NPC data underscore the urgent need to expedite enforcement of the Control of Smoking Products for Public Health Act 2024.

Keywords: Vape Poisoning Malaysia, E-Cigarette Liquid Poisoning, Vape Exposure, National Poison Centre, Enforcement.

Vaping: The myths we believe, the science we ignore

Wee Lei Hum

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Track: Respiratory

Theme: Prevention, Screening and Early Detection

ABSTRACT

Vaping has become a major public health concern in Malaysia, adding to the persistent burden of tobacco use. While adult smoking has declined only modestly, e-cigarette use increased from 9.8% in 2017 (≈ 1 in 10 adults) to 14.8% in 2022 (≈ 1 in 7 adults). Among adolescents aged 13–17, prevalence was even higher: 23.5% of boys (≈ 1 in 4) and 6.2% of girls (≈ 1 in 16) reported use. This rise is fueled by aggressive marketing, flavoured products, and myths that vaping is harmless, safer than smoking, or an easy way to quit. Evidence shows serious risks, including nicotine addiction, dual use, and serving as a gateway to smoking and drug use among youth. This plenary will examine the gaps between public perception and scientific evidence. Many continue to believe that vaping reduces harm at the population level, does not affect non-smokers and is safe for youth, yet research consistently demonstrates otherwise. While some trials suggest that a complete switch to nicotine e-cigarettes may improve quit rates compared with standard therapies, uncertainties about sustaining abstinence, long-term safety and the public health trade-off of rising youth uptake in Malaysia limit their value as a population-level harm reduction tool. Vaping is not merely an individual lifestyle choice but a population-scale experiment with Malaysian youth as test subjects. To protect the next generation and advance Malaysia's tobacco and nicotine endgame, the Control of Tobacco Product and Smoking Act 2024 must be rapidly scaled up, widely implemented and strongly enforced.

Keywords: Vaping, Electronic Cigarettes, Malaysia, Nicotine Addiction, Youth

Open-label clinical assessment of a traditional chinese medicine supplementation for cardiovascular health improvement

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Track: Cardiovascular and Metabolic

Theme: Treatment and Management of NCDs

ABSTRACT

Cardiovascular disease is the foremost contributor to global mortality and represents a major component of the non-communicable disease (NCD) burden. Although conventional therapies reduce morbidity and mortality, a significant residual risk persists. Traditional Chinese Medicine (TCM), particularly multi-herb formulations, has long been used for circulatory health and may provide adjunctive benefits through lipid modulation, vascular support, and anti-inflammatory mechanisms. This study evaluated the cardiovascular effects of a standardised aqueous extract comprising eight TCM herbs: *Alternanthera sessilis*, *Astragalus membranaceus*, *Zingiber officinale*, *Glycyrrhiza uralensis*, *Panax notoginseng*, *Salvia bowleyana*, *Codonopsis pilosula*, and *Ligusticum chuanxiong*. Fifty adults received daily supplementation for 12 weeks. Clinical and biochemical assessments were performed at baseline and at monthly intervals, including blood pressure, heart rate, lipid profile, and salivary cardiac biomarkers. Patient-reported outcomes were measured using the visual analogue scale (VAS) for perceived cardiovascular health and the HeartQoL questionnaire for disease-related quality of life. Supplementation led to significant reductions in triglycerides (-38.1%, $p < 0.001$) and low-density lipoprotein cholesterol (-14.1%, $p < 0.05$). Salivary biomarkers also showed marked decreases in high-sensitivity C-reactive protein (-8.6%, $p < 0.01$) and matrix metalloproteinase-9 (-25.6%, $p < 0.001$), with a concurrent non-significant downward trend in creatine kinase-MB isoenzyme (-9.2%). Patient-reported outcomes improved significantly, with VAS scores increasing by 16.5% and HeartQoL total and subscale scores by 13.8% (both $p < 0.001$). This standardised multi-herb extract demonstrated favourable effects on lipid parameters, inflammatory and myocardial stress biomarkers, and patient-reported cardiovascular outcomes. These findings suggest potential clinical value as an adjunctive therapy in cardiovascular risk management.

Keywords: Cardiovascular Disease (CVD), Non-communicable Disease (NCD), Traditional Chinese Medicine (TCM), Lipid Profile, Inflammation

Interleukin-13 rs20541 variant and obesity: From adipocyte mechanisms to population-level associations in Malaysia

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Track: Diseases of Skin / Other NCDs

Theme: Prevention, Screening and Early Detection

ABSTRACT

Obesity is a chronic inflammatory condition influenced by genetic and environmental factors. Interleukin-13 (IL-13), a cytokine involved in immune and metabolic regulation has a functional polymorphism, rs20541 (R130Q), with uncertain effects on adiposity. This study explored the functional role of rs20541 on adipocyte biology and its association with obesity-related parameters in Malaysian adults. In vitro, 3T3-L1 mouse adipocytes (ATCC® CL-173™) were treated with IL-13 rs20541 wild-type (R130) or variant (Q130) recombinant proteins. Adipogenesis, lipolysis, glucose uptake and whole transcriptomic sequencing (WTS -Mus Musculus GRCm39) were assessed. In parallel, a cross-sectional study (May 2023 - October 2024) at Sunway College and Sunway University included anthropometry cardiometabolic assessment and KASP genotyping. Genotype distributions were analyzed under allelic (A vs G), dominant (GG+GA vs AA) and recessive (AA+AG vs GG) models. Overall, Q130-treated adipocytes exhibited higher glucose uptake [basal: 8.68 vs. 6.10 vs. 5.85 μ M and insulin stimulation: 39.68 vs. 25.69 vs. 24.65 μ M; $p < 0.05$] but reduced lipolysis [basal: 1.97 vs. 2.05 vs. 2.13 nmol and isoproterenol-stimulated: 2.57 vs. 4.28 vs. 5.58 nmol; $p < 0.05$]. WTS revealed upregulation of Ucp1, Ucp3 and Scd1 (thermogenesis, fatty acid metabolism, PPAR/AMPK pathways) and downregulation of Fasn, Il6 and Tnf (lipogenesis, inflammatory signalling). KEGG analysis (adj-p < 0.05) identified 15 altered pathways spanning lipid metabolism, glucose/insulin signalling and inflammation. In the cohort (n=397; mean age: 21.5 \pm 3.5 years), A allele frequency was 28.2% (AA 11.6%, AG 33.2%, GG 55.2%). AA carriers (dominant model) had higher waist-to-hip ratio (WHR) (0.82 vs. 0.79; adj-p = 0.028) while A carriers (recessive model) had lower WHR (0.78 vs. 0.81; adj-p = 0.050) but higher fasting glucose (5.10 vs. 4.90 mmol/L; adj-p = 0.012). In conclusion, IL-13 rs20541 Q130 influences adipocyte metabolism and associates with obesity-related traits, supporting its potential as a marker for obesity risk and precision

Keywords: Obesity, IL-13, rs20541, Adipocyte Biology, Genotype-Phenotype

Tackling obesity among malaysian adults: Exploring the usage of ketogenic diets as an effective weight loss strategy

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Track: Cardiovascular and Metabolic

Theme: Treatment and Management of NCDs

ABSTRACT

Introduction: Malaysia has some of the highest rates in obesity amongst our neighboring Southeast-Asian countries. According to the National Health & Morbidity Survey (NHMS) 2023, there is a rising trend in obesity amongst Malaysian adults. Adult obesity rates in Malaysia have steadily risen over time, from 15.1% in 2011 to 21.8% in 2023. Increasing numbers of obese patients which are more at risk of medical conditions such as diabetes and cardiovascular disease will undoubtedly increase the strain on healthcare resources and services. One of the key recommendations in NHMS 2023 for the prevention of obesity is to encourage healthy diets. This review explores the ketogenic diet as a potentially effective strategy for weight loss in obese Malaysian adults. **Materials and Methods:** This review carried out a narrative synthesis of articles which were published since 2020 to the present day. The literature search was conducted using PubMed with appropriate terms for the search strategy (obesity, weight loss, diet, ketogenic, low carbohydrate high fat) with inclusion limited to studies offering free full-text access. **Results:** Out of 119 results available from the search, 7 papers were chosen for further study. Most results showed that ketogenic diets were successful in reducing body weight in obese patients significantly. In fact, one review concluded that ketogenic diets were superior in creating greater weight loss compared to other low carbohydrate diets. **Conclusion:** Obesity remains as a pressing public health issue amongst adults in Malaysia. Evidence suggests that ketogenic diets may serve as an effective intervention for weight reduction. Effective strategies for weight loss such as ketogenic diet, should be considered for use in the prevention of obesity in adults and recommended guidelines on its appropriate usage should be implemented to aid clinical practice.

Keywords: Obesity, Weight Loss, Diet, Ketogenic, Low Carbohydrate High Fat

Accelerating healing in diabetic foot ulcers: A rapid review on the role of platelet concentrates

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ABSTRACT

Introduction: Diabetic foot ulcers (DFUs) represent one of the most debilitating complications of diabetes globally, with a high risk of amputation and significant economic burden. A recent study has implied that the estimated treatment cost in Malaysia for DFUs can be as high as MYR 6000-8600 per patient annually, and around 18% of patients with DFUs undergo lower-limb amputation. Despite standard care being provided, healing outcomes are poor due to impaired vascularisation, chronic inflammation and neuropathy. Platelet concentrates (PCs) are an inexpensive autologous modality that utilises cytokines, growth factors and extracellular vesicles to accelerate healing. **Materials and Methods:** A narrative synthesis approach of peer-reviewed articles published from 2015 up to 2025 was adopted, and a rapid review was conducted in PubMed using the following terms: (“platelet-rich plasma” OR “platelet rich plasma” OR “PRP” OR “platelet concentrate” OR “autologous platelet concentrate”) AND (“diabetic foot” OR “diabetic foot ulcer” OR “diabetic wound”). Relevant studies were screened and selected based on inclusion criteria. **Results:** 15 studies were included. Systematic reviews and meta-analyses reported PRP significantly improved the complete healing time of ulcers and has been shown to reduce healing time by 3 weeks. Mechanistic studies reported that PRP-derived exosomes can stimulate fibroblast functions and promote angiogenesis. PRP-exosomes have also been shown to suppress activity of neutrophil extracellular traps (NETs) and promote wound healing. RCTs have demonstrated that PRP dressings or injections are associated with reduced pain, decreased infection rates and faster granulation tissue formation. **Conclusion:** Evidence supports that PRP and PRP-derived exosomes may lessen the financial burden of DFUs and accelerate their healing while reducing risks of complications. Due to the variability in the methods of preparation of PRP, comparability across studies is limited, and this highlights a need for a standardised preparation for future treatment plans for DFUs.

Keyword: Platelet Concentrates, Platelet-rich Plasma, Platelet-rich Fibrin, Diabetic Foot Ulcers, Diabetic Wounds

Frequency of Anti-Acetylcholine Receptor (AChR) antibody among suspected adult myasthenia gravis patients in Malaysia: A healthcare burden?

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Track: Diseases of Skin / Other NCDs

Theme: Prevention, Screening and Early Detection

ABSTRACT

Introduction: Myasthenia gravis (MG) is a chronic neuromuscular autoimmune disease, characterised by muscle weakness. It presents a significant healthcare burden particularly due to its impact on patients' quality of life and challenges in diagnosis and management. One of the diagnostic parameters for MG is the presence of anti-acetylcholine receptor (AChR) autoantibodies. **Objective:** The objective of this study is to evaluate the frequency of anti-AChR antibody in adult Malaysian MG-suspected patients. **Materials and Methods:** This is a retrospective study analysing the frequency of anti-AChR IgG antibody measured by enzyme-linked immunosorbent assay (ELISA) selected from our diagnostic database. Results equal to and above 0.5 nmol/L are considered positive. **Results:** About 71% (192/276) of seropositive patients are adults and 66% are in the working adult age (18-64 years). Additionally, 67.2% (129/192) of seropositive patients are in the prime working age (25-54 years). About 21% (27/129) from this group was diagnosed with ocular MG, with diplopia and ptosis the most commonly reported symptoms. Eight patients experienced MG crisis. Overall, a female predominance was also observed (60.9%) and there was a significant mean difference between males and females who were seropositive ($p < 0.05$). **Conclusion:** In this adult patient cohort, a high percentage of seropositivity was reported and patients presented with a wide range of debilitating symptoms, from numbness to difficulty of swallowing. Notably, women are also highly affected. Older women (30 years and above) were experiencing more chronic symptoms. Based on these observations, it is presumptive that quality of life is greatly affected. Adults are crucial for Malaysia's economic activity and contribute to the labour force and thus, disease like MG can pose a burden to the healthcare system. Nonetheless, other key measures such as co-morbidity index, type of treatment and duration of hospitalization of patients should be considered in future studies.

Keywords: Myasthenia Gravis, Neuromuscular, Autoimmune, Anti-Acetylcholine Receptor Antibody, ELISA

Triglyceride-Glucose (TyG) Index as a Non-Invasive Screening Tool for Early Diagnosis of Metabolic Dysfunction-Associated Steatohepatitis (MASH) among Adults

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Track: Diseases of Skin / Other NCDs

Theme: Prevention, Screening and Early Detection

ABSTRACT

Introduction: Metabolic dysfunction-associated steatohepatitis (MASH) is a progressive liver disease increasingly diagnosed among adults, largely due to the rising prevalence of obesity and metabolic syndrome in Malaysia. While liver biopsy remains the diagnostic gold standard for MASH, it is invasive and impractical for routine screening. Triglyceride-glucose (TyG) index, an insulin-resistance indicator has shown promising results as a reliable, non-invasive and cost-effective screening tool for early detection of MASH among adults especially in resource-limited settings. **Objective:** Evaluate the association between TyG index with MASH and assess the predictive and diagnostic accuracy for MASH risk stratification. **Materials and Methods:** A narrative synthesis review was adopted to extract relevant 11 peer-reviewed studies published between 2019 and 2025, and a rapid literature search was conducted in PubMed using the terms: ("triglyceride glucose index" OR "TyG index") AND ("nonalcoholic fatty liver disease" OR "NAFLD" OR "NASH" OR "MASH" OR "MASLD" OR "metabolic dysfunction associated steatohepatitis") AND ("adult" OR adults OR "middle aged" OR "older adults"). **Results:** Multiple literatures highlight a strong association between the TyG index and MASH, suggesting its value as a non-invasive screening tool. TyG-related parameters such as TyG BMI and TyG-ALT show superior predictive performance than the TyG index alone. A non linear, positive relationship between elevated TyG-derived indices and MASH risk has been observed, indicating that higher baseline values significantly increase disease susceptibility together with persistent insulin resistance while guiding early intervention strategies. **Conclusion:** Higher baseline TyG index is strongly associated with an increased risk of MASH, supporting its potential as an affordable, non-invasive biomarker which is essential for early identification, risk stratification and diagnosis. Although further research is needed to establish standardization and validate its use across Malaysia, current evidence from global studies recommends its integration into local routine screening protocols as early as in primary care settings.

Keywords: Triglyceride-glucose Index, Early Diagnosis, Metabolic Dysfunction-associated Steatohepatitis, MASH, Nonalcoholic Fatty Liver Disease

Integrating Comprehensive Geriatric Assessment (CGA) into primary care in Malaysia: A strategic approach to early dementia detection

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Track: Diseases of Aging

Theme: Prevention, Screening and Early Detection

ABSTRACT

Introduction: Malaysia will be an ageing nation by 2030, with >15% of the population aged >60 years old. This paradigm shift is anticipated to upsurge the number of people living with dementia (PLWD). The Malaysian National Dementia Action Plan (2023–2030) targets early detection by endorsing yearly screening for those at high risk of dementia. However, early diagnosis is hindered by specialists' shortage in Malaysia, with less than 80 geriatricians currently practicing (2023), below the recommended ratio. Other barriers include poor awareness, stigma, inadequate training and low screening rates in clinical settings. **Objective:** This review aims to identify prevailing gaps in early dementia detection in Malaysia and explore strategies from other health systems' policies that could be adapted locally. **Materials and Methods:** A narrative synthesis was conducted using literature published between 2015 and 2025 to explore barriers and enable dementia screening in primary care. A rapid review of eleven peer reviewed articles indexed in PubMed was performed using search terms related to ("dementia" AND "cognitive screening" AND "primary care"). **Results:** The Mini-Mental State Examination (MMSE) and Montreal Cognitive Assessment (MoCA) are widely used but limited in populations with low education and language barriers. The 5-Cog Paradigm is a tool assessing picture-based memory, motor cognitive risk, and paper-matching that offers a quick and effortless alternative, which has been successfully implemented in developed countries, improving accessibility and geriatric screening. **Conclusion:** A complete and organized pathway for early dementia detection is achieved when cognitive screening is incorporated through Comprehensive Geriatric Assessment (CGA). Some approaches to implementing this include training healthcare providers in CGA, embedding cognitive assessments into existing NCD clinics, utilizing digital health tools for comprehensive documentation and extending outreach through primary care. By overcoming training constraints, these actions serve national objectives and allow for prompt intervention among the elderly.

Keywords: Dementia, Cognitive Screening, Primary Care, Comprehensive Geriatric Assessment, Malaysia

Strengthening advocacy and collaboration to prevent early smoking and vaping initiation among adolescents in Manjung, Malaysia

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Track: Diseases of Skin / Other NCDs

Theme: Advocacy, Policy and Collaboration

ABSTRACT

Early initiation of smoking and vaping among Malaysian adolescents is a critical public health issue. Addressing this requires multi-sectoral strategies involving advocacy, policy enforcement, and community action. In line with Act 852, the District Health Office of Manjung (PKD Manjung) and the National Anti-Drug Agency (NADA) implemented a targeted health education program to prevent tobacco use among at-risk adolescents. This study aimed to evaluate its effectiveness. A pilot intervention entitled “No Vape, Strong Weyh!” was developed as a structured education module grounded in Social Cognitive Theory, the Health Belief Model, the Theory of Planned Behavior, and Social-Emotional Learning. Thirty students (11- 12 years old) identified through school referral as at risk of smoking and vaping participated. The program, delivered via interactive sessions, emphasized risk awareness, refusal skills, and coping strategies. Pre- and post-intervention assessments measured perceptions of smoking using the Bahasa Malaysia Perception Towards Smoking Questionnaire (BMPTSQ; 8-item Likert scale), and behavioral intentions (adapted WHO Youth Tobacco Survey). Data analysed using McNemar’s test and the Wilcoxon Signed-Rank Test. Most participants (n=20; 67%) had never tried smoking or vaping, though several reported initiation as early as age seven. Exposure remained high, with 50% witnessing smoking at home, 60% in public or media, and 30% having been offered tobacco products. Post-intervention, perceptions towards negative impact of smoking improved significantly (median score increase from 31 to 33, p-value < 0.001), and all participants indicated refusal of future cigarette or e-cigarette offers. Discomfort around smokers rose from 60% to 70%. The intervention strengthened advocacy messages and created a supportive environment for policy translation. This project highlights the effectiveness collaboration in adolescent tobacco prevention. Integrating advocacy, policy, and education offers a replicable model, with future expansion requiring stronger policy enforcement and community engagement to sustain smoke-free environments and curb early nicotine initiation.

Keywords: Adolescents, Smoking and Vaping, Policy Act 852, Advocacy and Health Education, Nicotine and Tobacco

Incidence, mortality, and predictors of status epilepticus in Malaysian Emergency Departments

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Track: Neurology and Mental Health

Theme: Treatment and Management of NCDs

ABSTRACT

Introduction: Status epilepticus (SE) is a neurological emergency requiring prompt management to reduce mortality and improve patient outcomes. This study aimed to determine the incidence, mortality risk, and predictors of SE among epilepsy patients presented to the emergency department (ED). **Materials and Methods:** This prospective, multicentre study was conducted from November 2024 to June 2025 across 23 hospitals in Malaysia. We included adult epilepsy patients on maintenance antiepileptic drugs (AEDs) who presented with seizures, while excluding first-onset and non-epileptic seizures. Convenience sampling was used. The primary endpoints were the incidence of SE and in-hospital all-cause mortality. Logistic regression was performed to identify predictors of SE. **Results:** A total of 262 patients were recruited, predominantly male (n=157, 59.9%) with an unknown epilepsy aetiology (n=129, 49.2%). SE occurred in 24.4% (n=64) of patients. The rates of intubation and mortality were 13.7% (n=36) and 3.1% (n=8), respectively. SE was positively associated with both intubation (p<0.001) and mortality (p<0.001). The study identified non-adherence to AEDs (aOR 2.055, 95% CI 1.119-3.772, p=0.020) and infection (aOR 2.339, 95% CI 1.223-4.474, p=0.010) as significant predictors of SE. In contrast, stress was negatively associated with SE (aOR 0.096, 95% CI 0.013-0.725, p=0.023). **Conclusion:** This study confirms a high incidence of SE among epilepsy patients presenting in the ED, which is significantly associated with increased mortality. Our findings underscore the critical importance of patient education on medication adherence and the timely management of intercurrent infections to improve outcomes for this high-risk population. The unexpected negative association with stress warrants further investigation.

Keywords: Status Epilepticus, Emergency Department, Medication Adherence, Antiepileptics, Seizure

The hidden toll: Early mortality in STEMI thrombolysis at a Non-PCI-capable Emergency Department

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Track: Cardiovascular and Metabolic

Theme: Treatment and Management of NCDs

ABSTRACT

Introduction: Pharmacological thrombolysis remains the primary reperfusion strategy in ST-elevation myocardial infarction (STEMI) in many Asian countries, including Malaysia. However, data on early mortality in the Emergency Department (ED) following STEMI thrombolysis in non-PCI-capable hospitals is unavailable. This study aimed to examine the incidence and identify the predictors of early mortality in the ED following STEMI thrombolysis. **Materials and Methods:** This retrospective single-centre study included STEMI patients who received pharmacological thrombolysis at a tertiary hospital from 2016 to 2020 through total population sampling. Early mortality in the ED was defined as death occurring in the ED post-thrombolysis. Logistic regression was used to identify independent predictors of early ED mortality. **Results:** Data from 941 patients were analysed, with a mean age was 53.0±12.2 years, and the majority were male (n=846, 89.9%). The overall in-hospital mortality rate was 10.3% (n=97), nearly half (n=47, 48.5%) occurred in the ED. Independent predictors of early mortality included: age ≥75 years (aOR 4.474, p=0.001), female sex (aOR 3.059, p=0.003), pre-existing hypertension (aOR 2.105, p=0.030), ischemic heart disease (aOR 0.316, p=0.043), Killip class ≥2 (aOR 2.252, p=0.033), systolic blood pressure <100 mmHg at presentation (aOR 3.365, p=0.003), and presentation during the COVID-19 pandemic (aOR 2.404, p=0.014). Post-thrombolysis, independent predictors of early mortality include failed thrombolysis (aOR 3.147, p=0.004) and ventricular fibrillation/tachycardia (aOR 10.312, p<0.001). **Conclusion:** Early ED mortality post-STEMI thrombolysis was substantial. Prompt transfer to cardiac care units and recognition of key risk factors may improve outcomes in high-risk STEMI patients.

Keywords: STEMI, Emergency Department, Thrombolysis, Early Mortality, Malaysia

The diabetic link: A major predictor of renal function decline in atrial fibrillation patients on direct oral anticoagulants

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Track: Cardiovascular and Metabolic

Theme: Prevention, Screening and Early Detection

ABSTRACT

Introduction: Atrial fibrillation (AF) and non-communicable diseases (NCDs) like diabetes mellitus (DM) are common comorbidities that complicating patient care. While direct oral anticoagulants (DOACs) have improved stroke prevention, concerns about their long-term effects on renal function deterioration has been documented. This study aimed to identify the incidence and key predictors, including DM, of significant renal function decline among AF patients on DOACs in an Asian population. **Materials and Methods:** This multicentre retrospective study utilised data from AF patients initiated on DOACs between 2013 and 2022 across five tertiary hospitals in Malaysia. Convenience sampling was employed. The primary outcomes were the prevalence of DM and a clinically significant decline (>30%) in estimated glomerular filtration rate (eGFR) after DOAC initiation. Logistic regression was performed to identify independent predictors of eGFR decline. **Results:** The study included 464 patients (mean age, 72.3±9.5 years; 60.8% male). The prevalence of DM was 42.5% (n=197). Clinically significant eGFR decline occurred in 55 patients (11.9%). Our analysis revealed that DM was the strongest independent predictor of renal decline [aOR 4.066, 95% CI 2.142–7.718, p<0.001]. Other significant predictors included the use of rivaroxaban (aOR 0.384, 95% CI 0.177–0.835, p=0.016), being in a non-Malay, Chinese, or Indian racial group (aOR 2.764, 95% CI 1.239–6.164, p=0.013), use of angiotensin-converting enzyme inhibitors (aOR 0.466, 95% CI 0.253–0.858, p=0.014), and duration of DOAC therapy (aOR 1.258, 95% CI 1.057–1.497, p=0.010). **Conclusion:** We found a high prevalence of DM among AF patients, and confirmed that clinically significant renal function decline is a prevalent issue in Malaysian AF patients on DOACs. The strong association with DM underscores the critical need for proactive renal monitoring and NCD management. Targeting patients with DM for early intervention and tailored therapeutic strategies may be crucial to mitigate renal deterioration and improve long-term outcomes for this high-risk population.

Keywords: Atrial Fibrillation, Diabetes, Renal Function Decline, DOAC, NCD

Integrating advocacy and lived experience into psychosocial care for rare skin diseases

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Track: Diseases of Skin / Other NCDs

Theme: Advocacy, Policy and Collaboration

ABSTRACT

Psychosocial care is vital for people living with rare skin diseases, yet in Malaysia it is often overlooked. These conditions affect more than health — they shape daily life, bringing stigma, isolation, financial stress, and emotional strain for patients and caregivers. As a caregiver to a child with Epidermolysis Bullosa (EB) a fragile skin disease and I share a lived experience perspective on why psychological and emotional support must be part of holistic care. Families affected by rare skin diseases often face limited access to trained professionals, fragmented services, and little understanding from the community. To help bridge these gaps, I have supported families through peer groups, caregiver training, and short-term accommodation support. The approach is very personal and family-centred. Psychosocial care often happens in small, trusted ways: hospital or home visits, online counselling, or informal family gatherings. In this role, I act as a mediator, helping families communicate with healthcare providers and other stakeholders, while also taking time to understand their social, cultural, and family circumstances. Families say they feel safer and more supported in these trusted, community-based spaces than in formal systems alone. By sharing these experiences, I hope to show how family-centred and culturally grounded approaches can reduce isolation and help families live with dignity and hope.

Keywords: Rare Skin Diseases, Epidermolysis Bullosa, Psychosocial Care, Family Support, Lived Experienced

Effect of innovative tools for diabetes self-management education on glycaemic control in diabetes melitus patient at Klinik Kesihatan Beruas, Perak

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Track: Diseases of Skin / Other NCDs

Theme: Treatment and Management of NCDs

ABSTRACT

Introduction: Diabetes mellitus is a major contributor to non-communicable disease (NCD) morbidity in Malaysia. Although structured diabetes self-management education (DSME) has been shown to improve outcomes, routine practice often lacks practical and standardized tools to support effective self-care. This study aimed to develop and evaluate a four-component DSME model incorporating innovative, user-friendly tools to enhance patient education, empower healthcare providers, and improve glycaemic control in primary care. **Materials and Methods:** Four innovative tools were introduced as part of structured DSME at Klinik Kesihatan Beruas, Perak. For providers, the Diabetes Assessment Form supported systematic evaluation of adherence, self-monitoring blood glucose (SMBG), and injection technique, while the Education Checklist ensured consistent counselling on lifestyle, medication, foot care, and complication prevention. For patients, the Hypoglycaemia Kit provided fast-acting carbohydrates with clear instructions for immediate response, and the Education Booklet offered practical guidance on insulin use, diet, hypoglycaemia care, and daily SMBG recording. Implemented over six months, these tools were evaluated using pre- and post-intervention HbA1c, analysed by the Wilcoxon signed-rank test, which showed significant improvement (p -value < 0.05). **Results:** A significant median reduction of 0.65 % in HbA1c was recorded among 26 patients after implementation of the tools ($Z = -2.19$; 95% CI: -1.20 to -0.05 ; p -value = 0.029). The intervention demonstrated a moderate effect size ($r = 0.43$), indicating meaningful improvement in glycaemic control. The tools increased patient confidence and provider effectiveness. The hypoglycaemia kit supported safe self-management, reducing emergency visits. The assessment form and checklist improved counselling, SMBG, and medication adherence, while the education booklet strengthened knowledge, caregiver support, and reduced anxiety. **Conclusion:** This four-component DSME model offers a practical and scalable approach in primary care, equipping healthcare workers and patients with effective tools to strengthen self-management, enhance safety, and help reduce the burden of diabetes.

Keywords: Diabetes Education, DSME, Innovation, NCD Prevention, Health Education

Developing and validating a breast cancer screening health literacy questionnaire for Malaysian adults

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Track: Diseases of Skin / Other NCDs

Theme: Prevention, Screening and Early Detection

ABSTRACT

Introduction: Health literacy supports decision-making and cancer prevention. In Malaysia, limited health information among disadvantaged groups causes delayed diagnoses and poorer outcomes. No validated tool exists to assess breast cancer screening health literacy. Aim: This study aimed to develop and validate a culturally appropriate questionnaire to assess breast cancer screening health literacy among Malaysian adults. **Materials and Methods:** A three-phase, multi-method design was employed. Phase One involved item generation through systematic review, online surveys, expert validation, and translation. Phase Two included cognitive debriefing and test-retest reliability. Phase Three involved data collection among 779 adults (mean age 36.6 years; 66% female) attending clinics in Selangor and Johor, recruited through convenience sampling. Analyses included EFA, internal consistency, and CFA using CB-SEM. **Results:** The initial 66-item tool was reduced to 41 items across seven domains. One item was removed due to low test-retest reliability, and four following EFA, yielding a 61-item version with strong internal consistency (Cronbach's alpha ≥ 0.93 ; CITC ≥ 0.71). CFA entailed 31 refinement steps, removing 20 items and correlating 11 residuals. The final model demonstrated strong factor loadings (0.75–0.92), convergent validity (AVE > 0.50), composite reliability (CR > 0.70), discriminant validity (HTMT < 0.90), and acceptable model fit ($\chi^2/df = 2.175$, GFI = 0.849, AGFI = 0.827, CFI = 0.953, TLI = 0.948, RMSEA = 0.052). **Conclusion:** The validated 41-item Bahasa Malaysia questionnaire is psychometrically robust and applicable across clinical and community settings to identify literacy gaps, guide tailored health promotion strategies, enhance early detection, and reduce disparities in breast cancer outcomes among Malaysian women.

Keywords: Breast Cancer, Screening, Health Literacy, Questionnaire, Malaysia

The prevalence of medication compliance and associated psychosocial factors among the major multi-ethnics patients with ischemic heart disease patients in Malaysia

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Track: Cardiovascular and Metabolic
Theme: Prevention, Screening and Early Detection

ABSTRACT

Introduction: Ischemic heart disease (IHD) has remained the leading cause of death in Malaysia since 1980. Despite increasing recognition of ethnic diversity in healthcare research, the psychosocial determinants of medication compliance are still not well understood. This study examined the prevalence of medication compliance and its psychosocial predictors among the three major ethnic groups in Malaysia, with the aim of informing culturally responsive strategies for disease management and secondary prevention. **Materials and Methods:** A cross-sectional study was conducted at a major cardiac tertiary center using purposive sampling. Data were collected from 1,200 patients with IHD through validated questionnaires measuring medication compliance and psychosocial factors. Descriptive statistics, chi-square tests, and logistic regression analyses were performed to examine ethnic variations and independent predictors of compliance. **Results:** Significant differences in compliance were observed across ethnic groups ($p=0.005$). Chinese patients demonstrated the highest compliance rate (71.3%), followed by Indians (63.5%) and Malays (60.8%). Logistic regression analyses identified medication barriers (AOR=0.87, 95% CI=0.81–0.94), patient motivation (AOR=0.80, 95% CI=0.68–0.93), and lifestyle factors (AOR=0.88, 95% CI=0.80–0.96) as significant independent predictors of compliance across groups. Ethnic-specific variations further indicated the influence of cultural and social contexts on adherence patterns. **Conclusion:** The study highlights the importance of psychosocial determinants in managing IHD and underscores notable ethnic differences in medication compliance. Findings suggest that effective secondary prevention requires interventions tailored to cultural beliefs, motivational needs, and lifestyle challenges. Integrating these psychosocial elements into patient education, counseling, and health promotion may strengthen medication adherence and contribute to reducing IHD-related morbidity and mortality in Malaysia. [FRGS/1/2023/SS09/UPSI/03/2]

Keywords: Ischemic Heart Disease, Medication Compliance, Psychosocial Factors, Ethnic Difference, Secondary Prevention

Functional foods in the prevention of non-communicable diseases

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Track: Diseases of Skin / Other NCDs

Theme: Treatment and Management of NCDs

ABSTRACT

Non-communicable diseases (NCDs) such as cardiovascular disorders, diabetes, obesity, and cancers account for the majority of global mortality. Conventional medical interventions address symptoms but often fall short in prevention. Functional foods, which provide health benefits beyond basic nutrition, offer a complementary approach to reducing NCD risk factors. Functional foods counteract the key drivers of NCDs, primarily chronic inflammation, oxidative stress, and metabolic dysfunction. Their bioactive components produce health benefits through several key mechanisms. This research examines the role of a patented high-potency fermented extract, combined with synergistic nutrients, in fighting NCDs. Prebiotics and probiotics found in fermented foods can promote a healthy gut microbiome. This influences immune function, reduces inflammation, and can improve metabolic health. Emphasis is placed on the fermentation and extraction technologies patented across more than 10 countries, including Japan, the USA, Australia, and Europe, which ensure high bioavailability and safety of bioactive compounds. Studies indicate that significant immunomodulatory and antioxidative properties. When formulated with immune vitamins, the functional food demonstrates enhanced efficacy in reducing oxidative stress, improving immune responses, and maintaining metabolic balance. Evidence suggests that benefits include reduced inflammation, improved lipid profiles, regulated blood sugar levels, and increased resilience against chronic diseases. These outcomes highlight the synergistic effects of functional food with supporting nutrients in preventing the onset of NCDs. Functional foods enriched with scientifically validated bioactive compounds combined with vitamins to enhance health immunity represent a promising, sustainable, and safe dietary intervention in combating NCDs. By addressing root mechanisms, including oxidative damage, immune dysfunction, and metabolic imbalance, these formulations provide preventive and complementary strategies for global public health. Integrating such functional foods into daily nutrition could serve as an accessible tool to reduce the growing burden of NCDs. Academic research is necessary to fully understand the mechanisms and optimise the utilisation of functional foods.

Keywords: Functional Food, Non-Communicable Diseases, Food Fermentation, Immunomodulation, Preventive Nutrition

Bridging silos: A multi sectoral approach for effective community based cancer awareness programs

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Track: Diseases of Skin / Other NCDs

Theme: Advocacy, Policy and Collaboration

ABSTRACT

In the face of rising cancer incidence, enhancing public awareness is a critical public health objective. This abstract presents a collaborative project by KanWork Cancer Society, focused on promoting a healthy lifestyle and facilitating cancer early detection. Recognizing the vital role of cross-sectoral partnerships in public health, this initiative was carried out in collaboration with local communities, hospitals, and government agencies. The primary aim of this program was to determine the relationship between program strategies and the overall effectiveness of a cancer awareness program. A secondary objective was to identify the key predictors that contribute significantly to the program's effectiveness, highlighting the value of a multi-agency collaborative approach. A customized instrument to measure a program effectiveness constructs guided by The Interactive Model of Program Planning was developed. The questionnaire was administered to 120 participants from the most recent community cancer awareness program in October 2024, and a 60% response rate was achieved. Participants learned about the program primarily through community networks (66%). The findings revealed positive and moderate to strong relationships between several program strategies and overall cancer awareness program effectiveness. Significant correlations were found with short lectures ($r=0.655$, $p<0.001$), sharing sessions with cancer survivors ($r=0.456$, $p<0.001$), awareness exhibitions ($r=0.352$, $p<0.001$), program facilities ($r=0.246$, $p<0.001$), and health screening ($r=.592$, $p<0.001$). Short lecture is a significant predictor and the greatest contributor to the program's effectiveness ($\beta=0.773$, $p<0.001$). In summary, five key factors were found to be instrumental in contributing to the cancer awareness program's success. This program demonstrates that collaboration across multiple sectors is a key factor in developing effective cancer awareness programs. The findings underscore the importance of integrating evidence-based program strategies within a collaborative framework to enhance public health advocacy. This model provides valuable insights for policy development aimed at expanding cancer prevention efforts through multi-sectoral partnerships.

Keywords: Cancer Awareness Program, Collaboration, Program Effectiveness, NGO