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INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA

NEWSLETTER

January 2024

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HEALTH POLICY AGENCY
MINISTRY OF HEALTH REPUBLIC OF INDONESIA
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MASTHEAD

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FEATURES

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InVITE & PROACTIVE Study Updates

By: Eka Windari R., I Wayan Adi Pranata, Lois E. Bang, Melinda Setiyaningrum, Nur Latifa Hanum, Retna Mustika Indah, Restu Amalia, Riza Danu Dewantara

InVITE

As of January 8, 2024, out of the 700 participants who enrolled in the study, 688 (98.29%) have completed their participation, while 12 (1.71%) are still ongoing. The study is conducted across three different sites. Site 03 (Dr. Ansari Saleh Hospital) completed visit 5 on January 4, 2024, and Site 02 (TC Hillers Hospital) completed visit 5 on November 16, 2023. Only Site 01 is still undergoing visit 5. The details of the visits for each site are outlined in Table 1.

The study has faced challenges in retaining participants. Of the 688 subjects who have ended their participation, 626 (89.43%) completed the study, while 45 (6.43%) withdrew. Reasons for withdrawal include participant decisions, personal reasons, or loss of interest. Additionally, some participants did not receive the complete vaccine regimen within 12 months of enrollment, leading to three (0.43%) subjects being excluded from the study. Two (0.29%) subjects were discontinued as continuation was not in their best interest, and one (0.14%) subject was non-compliant with study procedures. Unfortunately, one (0.14%) subject passed away during the study, and ten (1.43%) subjects had other reasons for ending their participation.

Moreover, the study has been monitoring symptomatic visits among participants. Table 2 provides details of these visits as of January 8, 2024. It is important to note that the occurrence of COVID-19 symptoms among some participants does not necessarily indicate that they have contracted the disease.

Site	Symptomatic Visit		
	# of visit	Positive	Negative
01	105	62	43
02	14	6	8
03	2	1	1
Total	121	69	52

Table 2. Symptomatic Visit Details per Jan 08, 2024

Site	Screening / Visit 1	Enrollment Failure	Enrolled	Ongoing	Add. Visit 1	Visit 2	Add. Visit 2	Add. Visit 3	Visit 3	Agree Ext.	Not Agree Ext.	Ext. Visit 4	Ext. Visit 5
01	345	2	343	12	88	326	314	306	315	285	30	277	261
02	228	1	227	0	97	214	191	188	195	151	44	151	148
03	130	0	130	0		130			129	95	35	95	92
Total	703	3	700	12	185	670	505	494	639	531	109	523	501

Table 1. Details of Visits per site per Jan 08, 2024

INA104

The INA104 (PROACTIVE) study was completed and closed in October 2023. Data Management implemented a database lock on December 29, 2023. The final research report, excluding data analysis, was submitted to FK UI Ethics Committee on December 27, 2023.

Currently, three main manuscripts are in preparation by the study's core team, the NIAID team, and the Secretariat, involving the Principal Investigator (PI) and Co-Investigator (CoI) from each site. The first manuscript, focusing on participant characteristics and factors associated with one-year mortality ('*Baseline Characteristics and One-Year Mortality*'), has been distributed to the entire team and is targeted for publication in the Journal of the International AIDS Society. The second manuscript presents an initial analysis of all cases of death within three years ('*Early Analysis of Three-Year Mortality in People Living with HIV*'), and the third manuscript examines clinical, immunological, and virological responses in HIV-infected individuals receiving ARVs ('*Clinical, Immunological, and Virological Responses of HIV-infected People with Anti-Retroviral Therapy in Nationwide Indonesian Cohort*'). The process of assembling and designating specific writing teams for the second and third manuscripts is underway, taking into account the previously submitted concept plans and the interests of each site.

In addition to the main manuscripts, three additional manuscripts are being developed. These cover topics on late presenters, phylogenetic resistance analysis, and pediatric subject analysis. Data from the '*Baseline Characteristics and One-Year Mortality*' manuscript, along with the late presenter manuscript, were presented at the *Annual Meeting of the American Society of Tropical Medicine and Hygiene* (ASTMH) held at the Hyatt Regency Chicago, IL, USA, from October 18-22, 2023. The concept plans for the other manuscripts will be further discussed with the NIAID team.

Furthermore, a scoping review is currently underway regarding HIV disease in Indonesia. The goal is to gain a comprehensive understanding of the various aspects of HIV research conducted in Indonesia and identify areas where further HIV research is needed. This review is being conducted thoroughly, examining articles and research results on HIV in Indonesia from the early stages of the epidemic to the present. The scoping review involves the Secretariat team and Research Assistants (RAs) from the core site. The RAs are divided into several groups, each guided by a team member from the Secretariat. Each group is assigned an equal number of articles from searches on PubMed and Garuda. The groups will then conduct an initial screening and categorize the articles according to the objectives of the scoping review.

As a follow-up, categorized articles will be selected for discussion in the bi-weekly journal club forum, attended by RAs, PIs/Co-PIs from the site, and the Secretariat.

INA-RESPOND Newsletter

WOLBACHIA-INFECTED MOSQUITO FOR DENGUE VIRUS INFECTION CONTROL: FACTS AND CONTROVERSIES

By: Rifa'ah Rosyidah, Adhella Menur

Dengue virus infection in Indonesia

Dengue is a mosquito-borne (Aedes aegypti and Aedes albopictus), acute febrile illness caused by dengue virus (DENV serotype 1-4) infection, a spherical, single-stranded RNA virus belonging to the genus Flavivirus in the family Flaviviridae. DENV infection has become a significant public health concern, and the global incidence has increased over the past two decades. From 2000 to 2019, the World Health Organization (WHO) documented a ten-fold surge in reported cases worldwide, increasing from 500,000 to 5.2 million. Indonesia is among the world's 30 most highly DENV endemic countries, with all four serotypes circulating and experiencing outbreaks yearly. Since the first dengue report in Indonesia in 1968, disease epidemiology has undergone dynamic changes affecting all provinces. East Java, West Java, and Central Java are provinces with the highest dengue cases incidence (1). In 2022, the incidence rate (IR) was 52.1 per 100,000 population with the case fatality rate (CFR) was 0.86%.

The dengue economic burden is a major problem in Indonesia. In 2015, the estimated dengue treatment cost was 5.3 trillion rupiah, equivalent to 3% of the state budget and almost close to the cost of eliminating malaria in the Asia Pacific, around 6.3 trillion rupiah. In 2017, the estimated cost burden was twice as large. The National Health Insurance reported that the costs for dengue treatment at primary health care range from 883 million rupiah to 3.7 billion rupiah per month in 2020 (2). Since there have been significant steps forward in preventing dengue, like the Wolbachia method we will discuss here, there is hope that a mosquito bite will result in nothing more serious and burdening than an itching feeling that relieved with a scratch.

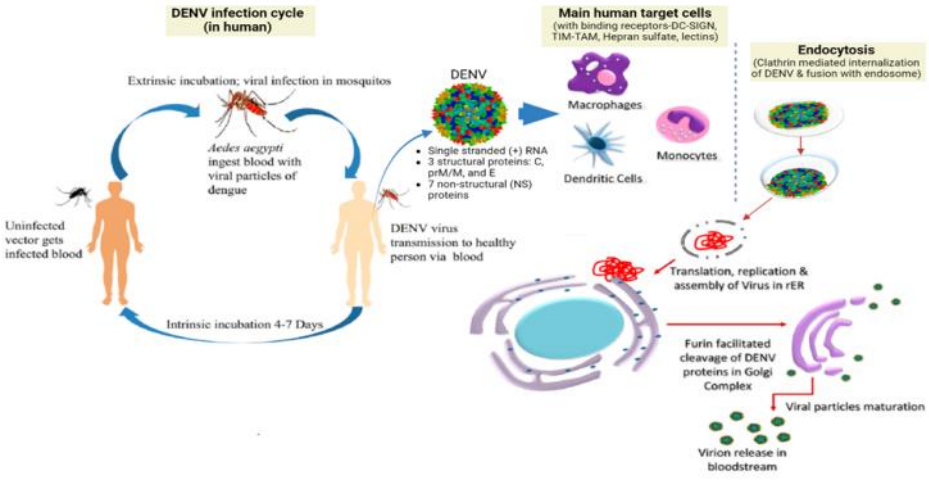

Figure 1. DENV infection cycle in the human body (3). Modified with Biorender.com.

Clinical manifestations of DENV infection in humans

A general overview of the DENV infection in humans is presented in Figure 1.

DENV infection has a broad spectrum of clinical presentations, often with unpredictable clinical evolution and out-

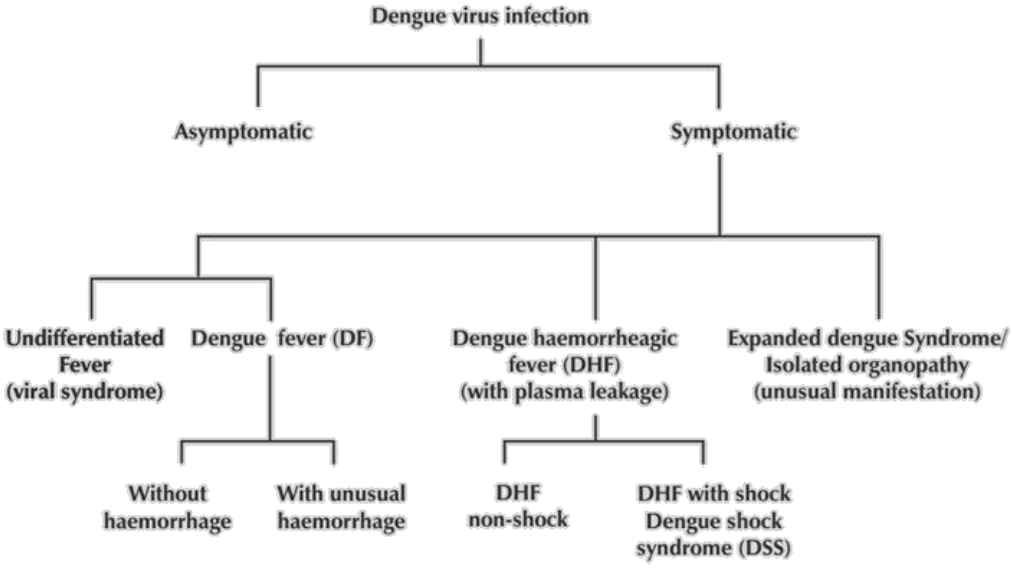

Figure 2. Classification of DENV infection (the WHO Regional office for South-East Asia, 2011).

come. While most patients recover following a self-limiting, non-severe clinical course, some progress to severe to fatal disease, characterized mainly by plasma leakage with or without hemorrhage (4). The clinical classification of symptomatic DENV infection has undergone revisions (1997, 2009, and 2011). The 2011 version was proposed by the WHO South-East Asia Regional Office, which included the concept of expanded dengue syndrome (patients with severe organ involvement but without evidence of plasma leakage). Despite the classification, the principal management for dengue is supportive, managing fever, bleeding, plasma leakage, and shock.

The Wolbachia method: How does it work?

Since effective antivirals and vaccines are still being developed, prevention has become the cornerstone of DENV infection control. Current strategies are limited to vector controls: efforts to suppress immature and adult mosquito numbers through insecticides that are not environmentally friendly and community campaigns to reduce breeding sites. Even with considerable resources invested in these activities, sustained suppression of mosquito densities has been elusive, mosquitoes become resistant to insecticide, and seasonal outbreaks continue. There is a run in searching for effective vector control innovation, and the most promising is the Wolbachia method.

The method utilizes a gram-negative bacteria named Wolbachia pipientis. It was first discovered in the reproductive tissues of mosquitoes Culex pipens by Hertig and Wolbach in 1924. Wolbachia is present in more than 60% of insects, including dragonflies, fruitflies, butterflies, and moths. Some mosquitoes are also carrying the bacteria, but Ae. aegypti don't usually carry it. Wolbachia lives inside host cells, maintains an endosymbiotic relationship with hosts, and is passed from one generation to the next through an insect's eggs. It manipulates the host characteristics and reproduction in many ways, all favoring Wolbachia-infected females in nature (5,6). Wolbachia-induced reproductive manipulations include parthenogenesis, the feminization of genetic males, male killing, and the most remarkable: cytoplasmic incompatibility (CI). CI is a phenomenon where mating between Wolbachia-infected males and uninfected females causes severe developmental defects in the early stages of embryogenesis, resulting in unhatched

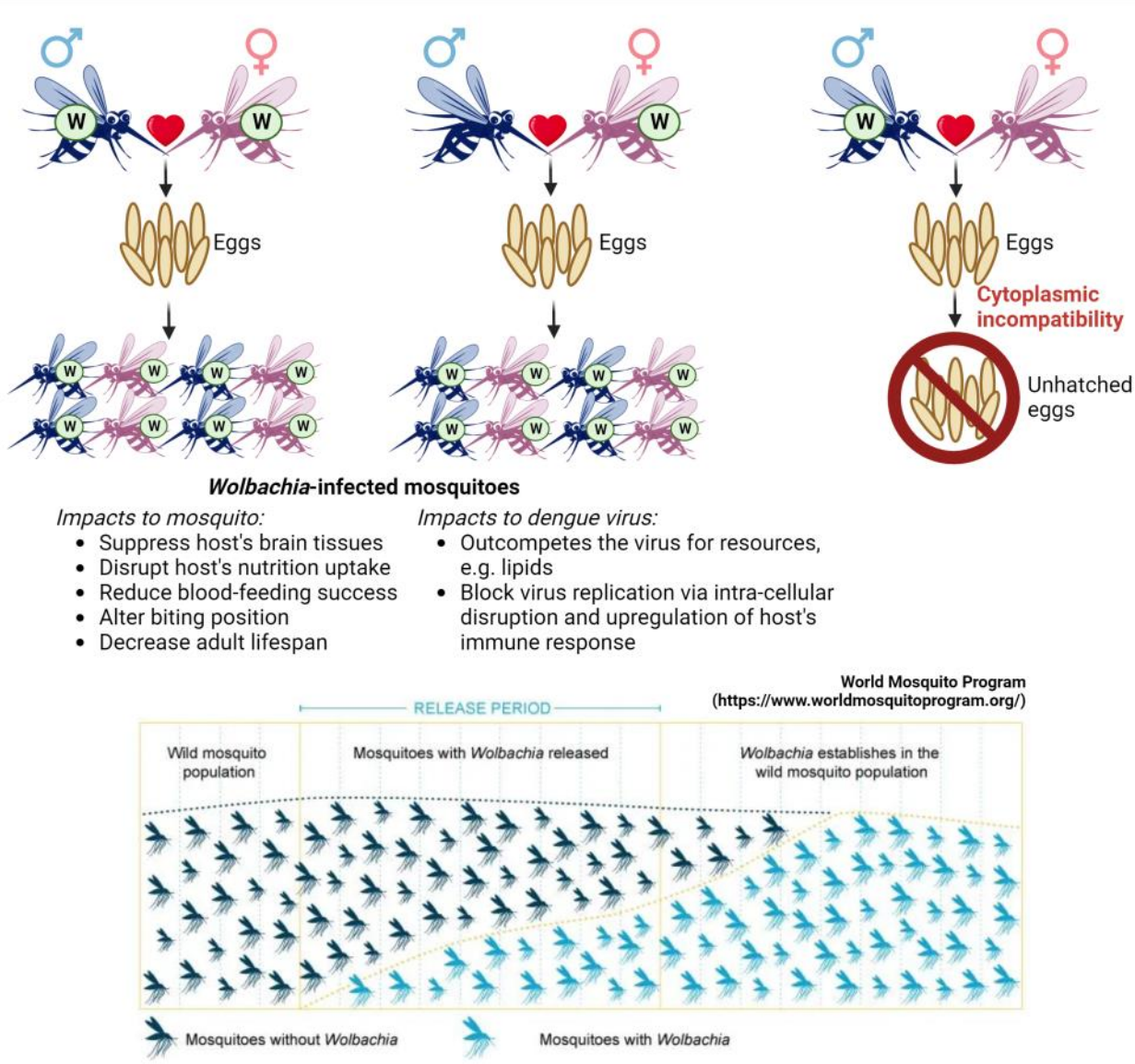

Figure 3. Mechanisms of the Wolbachia method (7). The release of Wolbachia-infected mosquitoes is expected to replace wild-type mosquitoes and reduce DENV infection. Modified with Biorender.com.

eggs. After more than a decade, researchers found a way to transfer strains of Wolbachia from another insect into Ae. aegypti through embryo microinjection. The Wolbachia strains named wMel (from Drosophila melanogaster) and wAlbB (from Ae. albopictus) can achieve stable transfection of Ae. aegypti. Surprisingly, not only does it reduce DENV transmission by shortening adult mosquitoes' lifespan and CI phenomenon, but also the bacteria's presence can block the DENV replication.

Releasing Wolbachia-infected Mosquitoes: Facts

Studies conducted by the World Mosquito Program (WMP), a non-profit organization owned by Monash University, Australia, showed that when introduced into Ae. aegypti, Wolbachia can help to reduce the ability to transmit DENV to humans. It is proving highly effective in 14 countries across three continents, protecting almost 11 million people so far (December 2022) (5). Brazil, ranked

first in dengue cases globally, began releasing Wolbachia-infected mosquitoes in September 2014 in Rio de Janeiro. Large-scale deployments in the country followed three years later, and a 2021 study in Niterói, Brazil, demonstrated a 69% reduction in DENV infection (6). A study in Northern Queensland also showed a 96% reduction in the incidence of DENV infection after adopting the Wolbachia method (8). A study in Singapore has thus far demonstrated reductions of Ae. aegypti populations and dengue incidence by 98% and 88%, respectively (9).

In 2017, the WMP collaborated with the Tahija Foundation and Gadjah Mada University, conducted a cluster randomized trial within a 26km2 area of Yogyakarta, Indonesia, named "The Applying Wolbachia to Eliminate Dengue" (AWED). Over a two-year trial period, the intervention clusters had a lower incidence of symptomatic dengue compared to the control clusters (67/2905 (2.3%) vs. 318/3401 (9.4%)). The efficacy of Wolbachia in protecting against DENV infection was 77.1% (95% CI 65.3-84.9) and was similar across all four DENV serotypes. Furthermore, the efficacy in preventing hospitalization due to dengue was 86.2% (95% CI 66.2-94.3) (10). Following the promising result, the Indonesia MoH included the method in the national strategy to manage dengue and has issued a decree (No 1341/2022) to conduct a pilot project for dengue control using Wolbachia-infected mosquitoes in five cities with high IR (above the global average of 10 per 100,000 population): West Jakarta, Bandung, Semarang, Bontang, and Kupang.

Controversies Surrounding The Wolbachia Method Implementation in Indonesia

Even though the Wolbachia method trial in Yogyakarta was proven successful, it is still challenging to implement broadly due to some community's rejection. When the WMP and Save the Children organization were about to implement the program in Denpasar and Buleleng, Bali, in November 2023, there was resistance from the local government and community. More than 1000 people signed a petition against the release of the Wolbachia-infected mosquito because they feared that the method would ignite a new pandemic (11). Other rumors are also circulating in the community, some issues and facts are below:

Issues	Fact checks
Does the Wolbachia method involve genetically modified organisms? Will it produce dangerous mosquito mutants?	**NO:** The Wolbachia method is not genetic modification. The genetic material of the bacteria and the mosquito have not been altered. We even call the Wolbachia-infected mosquito the "kind mosquito" that reduces DENV infection. There is an unrelated research about engineered *Ae. aegypti* also to combat DENV (Buchman A. et al, https://doi.org/10.1371/journal.ppat.1008545).
Will the bacteria (Wolbachia) transmit to humans and harm the environment?	**NO:** Wolbachia does not infect humans, and there is no horizontal transmission to other species. Wolbachia also does not contaminate the environment.
Is Wolbachia-infected mosquitoes can cause brain inflammation?	**NO:** The issue arises that Wolbachia-infected mosquitoes will transmit the *Japanese encephalitis* virus (JEV) that causes brain inflammation. The vector for JEV is different from DENV, which is *Culex* species mosquitoes.
Is the bite of Wolbachia-infected mosquitoes promoting gay genetics in male humans?	**NO:** There is a hoax spreading by irresponsible people that if Wolbachia can induce the feminization of genetic male mosquitoes, it also will feminize male humans and promote gay activities.This is definitely disinformation.
Is there any shady motive in Bill Gates's involvement in the WMP?	**NO:** The Bill & Melinda Gates Foundation, a non-profit organization, has helped fund the WMP's activities, along with other partners for almost 20 years to support DENV infection control innovation.
Will DENV fight back Wolbachia?	**(?)** The rapid mutation rate of RNA viruses like DENV suggests it may adapt to Wolbachia's selective pressure and become resistant. However, with the complexity of the relationship between the virus, bacteria, and mosquito, researchers have not observed resistance until now. Monitoring for the emergence of viral resistance to Wolbachia should remain a critical component of this method (Edenborough KM. et al, doi: 10.1128/JVI.02203-20).

The Importance of Community Engagement

Imagine a guest coming to our house to release a bucket of mosquito eggs. It is a normal reaction for people to fear, confuse, and reject. Therefore, it is important to strategize and involve experts in community engagement and mass communication. Also, convincing government officials from the provincial level down to the village level is not easy. The success of the Wolbachia method trial in Yogyakarta and Australia relied on an approach to build community engagement by applying the Public Acceptance Model (PAM) (12). The PAM consisted of four key components:

1. Raising awareness by providing information to residents and key stakeholders about the program. These activities included face to face meetings, a public billboard and newspaper advertising, media events, a school outreach program, stalls at community markets, community associations, traditional and electronic mail outs of information letters and deployment coverage updates, information kiosks in public spaces, and social media incentive program.
2. Quantitative surveys that measured community awareness and acceptance conducted by an external market research company.
3. An issues management system that allowed community members to easily contact the program with questions or concerns and have them addressed by program staff typically within 24 hours of receipt. This also allowed residents to opt out of direct participation if they had concerns.
4. A community reference group that consisted of respected community members from key stakeholder groups and included representation from the government, local community, local business, community development and environmental groups, tourism, and education sector. The reference group was tasked to evaluate activities and make a recommendation to the program management that community engagement had been sufficient for releases of mosquitoes to commence. The secondary functions were to test and comment on the suitability of engagement materials and approaches, to provide the program with feedback on community sentiment towards the program and identify potential issues that might require a proactive response (13).

Program implementers must provide the targeted community with the best possible explanation and assistance. Strong community engagement and multidisciplinary participation can ensure the effectiveness of the program. Prof. dr. Adi Utarini, M.Sc, MPH, Ph.D, the study lead of the successful Wolbachia method trial in Yogyakarta, in one interview with the media (Kick Andy, MetroTV, September 4th, 2023), shared that the team needed two years to approach and gain trust from the community to implement the method. She noted that researchers should learn to communicate with people to bring research benefits from the laboratory and desk to society. Parallel with the community engagement, Indonesia government is also preparing Wolbachia-infected mosquito production facilities. Setting up the facilities isn't cheap or easy; it needs strict biosafety measures and produces many Wolbachia eggs and mosquitoes. Currently, Indonesia has two laboratories with facilities, i.e., the Universitas Gadjah Mada laboratory in Yogyakarta and the MoH public health laboratory in Salatiga, Central Java, which can produce about 7-8 million Wolbachia eggs every week. Indonesia MoH collaborates with the WMP and state-owned

pharmaceutical holding PT Bio Farma (Persero) to increase the facility numbers. Hopefully, over time, people's doubts will decrease with the increase in knowledge, and the Wolbachia method may be expanded and shape the way to limiting DENV infection worldwide.

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INA-RESPOND Newsletter

PHYSICAL ACTIVITY AS A VITAL SIGN

By: Edrick Purnomo Putra

In 2020, data from the World Health Organization (WHO) indicated that physical inactivity ranked fourth among the leading global risk factors for mortality.[1] A lack of physical activity (PA) is associated with up to 3% of total direct healthcare expenditures in developing countries.[2] Additionally, the absence of PA contributes to numerous chronic diseases, accounting for more than 50 billion dollars in global economic burden.[3] There is strong evidence demonstrating that PA significantly reduces the risk of cardiovascular diseases (CVD), type 2 diabetes, hypertension, stroke, hyperlipidemia, and depression. It also contributes to improvements in body mass index, quality of life, cardiorespiratory fitness, muscular fitness, bone health, and cognitive function.[4]

The WHO released new guidelines in 2020 recommending that all adults should engage in physical activity regularly. This should include at least 150-300 minutes per week of moderate-intensity aerobic exercise, or at least 75-150 minutes per week of vigorous-intensity aerobic exercise, or an equivalent combination of both, to reap health benefits.[5] Additionally, muscle-strengthening activities involving major muscle groups at moderate or greater intensity are recommended on two or more days per week.[5] The benefits of PA occur in a dose-response manner, with a 4% reduction in the risk of mortality for every additional 15 minutes of PA per day, within the range of 15-100 minutes of moderate to vigorous PA daily.[4] However, in reality, almost half of U.S. adults[2] and one-third of Indonesians[6] fail to meet these recommendations.

Efforts to find a solution for insufficient physical activity (PA) have been ongoing for a long time. In 2007, the Exercise is Medicine (EIM) initiative was launched in the U.S. through a collaboration between the American Medical Association (AMA)

and the American College of Sports Medicine (ACSM). EIM aims to encourage clinicians to evaluate a patient's PA level during every clinical encounter, refer to the PA guidelines, and provide counseling or referrals based on the patient's current PA level. With these objectives, measuring PA level has been proposed as one of the vital signs and an important component of standard medical service. Assessing PA as a vital sign during clinic visits has the potential to reduce or manage chronic diseases affected by a lack of physical activity and sedentary behavior.[7]

When discussing the measurement of PA as a vital sign, various tools have been explored in studies to record moderate-to-vigorous PA. These include the Exercise Vital Sign (EVS), Physical Activity Vital Sign (PAVS), Speedy Nutrition and Physical Activity Assessment (SNAP), General Practice Physical Activity Questionnaire (GPPAQ), and Stanford Brief Activity Survey (SBAS).[8] EVS and PAVS are the most commonly applied in the US and have shown validity for use in primary care as measures to identify patients not meeting PA guidelines.4 Both tools essentially include two questions: one about the number of days per week the patient performs moderate-to-vigorous PA, and another about the average duration of these activities each day. Both EVS and PAVS can be administered and calculated in less than 30 seconds.8 PAVS also optionally includes a question about the frequency of muscle-strengthening activities.[9]

Several studies with promising results have been conducted regarding the implementation of PA vital signs in clinical settings. A 2022 study on the implementation of PAVS in primary care revealed that patients reporting as inactive also had a higher burden of chronic diseases, indicating that PAVS is a useful screening tool in primary care. It helps physicians understand the PA level of patients and identify those who may benefit from physical activity counseling and prescription.10 A 2021 study implemented PAVS in an electronic health record in an academic preventive cardiology clinic, concluding that PAVS is a feasible, quick, and scalable electronic tool to assess PA and aid providers in discussing and counseling on this CVD risk factor.2 A study in youth and adolescent populations found that PA declines significantly with age and is associated with increased obesity prevalence. PAVS is a simple tool for measuring PA and guiding interventions, which has yet to be examined in the pediatric population.[3]

PA vital sign tools also have limited studies regarding their accuracy compared to the gold standard objective measure of PA, accelerometry.[4] Both EVS and PAVS are modestly associated with accelerometry, and the norm for self-reported PA measures often shows moderate associations.[8] Although cardiorespiratory fitness is a strong predictor of mortality, its measurement is not feasible in most clinical settings due to logistical, cost, and time constraints. Hence, EVS can be used as an alternative tool to measure and promote PA.[11]

Implementing PA vital signs in clinical practice is not without challenges. For providers, barriers include time constraints, staff unfamiliarity with the tool, lack of motivation, inadequate knowledge, skills, competencies, and facilities related to PA, and providers' personal PA practices.[7,10] Patients face barriers such as a lack of understanding of the questions asked by the tool and the type of visit (first visit, annual visit, or acute case visit).[7,10] In the healthcare system itself, barriers identified include a lack of incentives for providers, non-standard coding for PA and its interventions, and the absence of PA measurement in medical records.[7]

To improve implementation, several strategies can be applied. Consistent measurement of the PA vital sign should be a regular routine at every visit,

just like measuring blood pressure and heart rate.[7,10] It should also be recorded and integrated into the medical record system. Collective commitment by all providers in the clinical setting is necessary, along with proper training. A standard code for PA interventions should be established, and incentives should be given to providers for their time spent counseling and prescribing exercise. From a social perspective, governments and stakeholders should collaborate to create an environment that encourages PA with supportive infrastructure and community access. Technological integration may also motivate patients to participate in PA.[7] Personalization is crucial in counseling and individual exercise prescription, taking into account patients' affective responses, motivation, and behavioral science.[12] Collaboration and referrals with qualified exercise professionals should be properly established to ensure patient safety and success.[13]

PA is a well-known management strategy in many diseases, especially for managing chronic conditions, but it is often overlooked in daily clinical practice. Routine inclusion of a physical activity vital sign in medical records is encouraged. More longitudinal research is needed to understand how regular use of PA vital sign tools affects health risk outcomes. However, for now, regular measurement of PA is a promising way to make EIM applicable in clinical practice. By simply asking two questions that take less than 30 seconds, clinicians can identify a lack of PA, raise awareness, provide counseling or referrals, and potentially change a patient's health trajectory. Treating PA as a vital sign will motivate patients and clinicians to recognize the importance of regular PA engagement. Personalization should be customized to the patient's needs and conditions when it comes to counseling and individual exercise prescription.

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INA-RESPOND Newsletter

EMBARKING ON NEW BEGINNINGS: A DIVE INTO ENGLISH IDIOMS OF RENEWAL

By: Dedy Hidayat

Early this month, in the comfort of my couch, I was watching "The Big Bang Theory" on Netflix for the fifth time; yes, you read it right. The series is so charming and witty that I cannot help myself make it as my go-to movie when I need to relax and recharge.

Science, humor, and social dynamics make this 2007–2019 American sitcom delightful. The show follows a group of scientists and academics who see the world through the eyes of eccentric Sheldon Cooper and grounded Leonard Hofstadter. It's no surprise that "*The Big Bang Theory*" is one of the most watched sitcoms. It appeals to a wide audience by blending complex scientific concepts with everyday life and humor. With their quirky habits and relatable struggles, the characters become almost like friends, letting us into their geek culture, romantic adventures, and personal growth.

As we move into January 2024, Season 7, Episode 24 stands out because it's the only time Sheldon says, "*I'm tempted to turn over a new leaf.*" Sheldon is known for being very set in his ways and not wanting to change. At this time of the year, this saying, which means *to change how you act or to start over*, really hits home. People often think about themselves, make resolutions, and look for fresh starts at the start of a new year.

In that spirit, let's look at some of the idioms we have in English language that speaks about new beginnings:

Start from Scratch

"Starting from scratch" means to embark on a task or project without any pre-existing advantage, resources, or groundwork. This idiom likely finds its roots in the world of sports, where 'scratch' referred to a starting line etched directly onto the ground, signifying a race's beginning without any head start. For instance, when a research team undertakes an exploratory study in a novel area of health science, they are metaphorically starting

from scratch. They must develop their hypotheses and methodologies entirely from the beginning, as no prior foundation exists in this unexplored domain.

Wipe the Slate Clean

The phrase "wipe the slate clean" means to forget about past mistakes or failures and start over. It sounds like this phrase comes from a time when slates were commonly used in schools. These slates made it easy to erase mistakes, which stood for the chance to start over. An illustrative example of this idiom can be seen in scientific research. Researchers may decide to "wipe the slate clean" when a clinical trial fails to prove their hypothesis. This means that they have to rethink and change their approach, putting past failures behind them and getting ready for future trials with a fresh outlook and plan.

New Lease on Life

"A new lease on life" is an idiom that signifies a rejuvenated outlook or improved situation. The phrase likely originates from legal terminology, where a 'lease' refers to a contractual agreement. In this context, a 'new lease' implies a fresh start or renewed opportunity. This idiom can be particularly relevant in academic or research settings. For example, when a new funding grant is awarded to a research project that was previously facing financial difficulties, it can metaphorically give the project a 'new lease on life.' This infusion of resources revitalizes the project, enabling the researchers to continue their work with renewed vigor and hope

So, what words or idioms do you find interesting and want to share with us? We welcome you to share your favorite words and idioms, and explain their meaning. I await your insights and contributions. Now, still related to new year and starting anew, here are three tips for creating a sustainable new year's resolution!

Creating sustainable new year's resolutions:

1. **Starting a new habit is often more effective than quitting a bad one**. This is because we transform deprivation into positivity, making change more appealing. The key here is to ensure that the new activity we want to turn into a habit is something we enjoy or are interested in. This intrinsic motivation helps us maintain the habit. For example, if you want to reduce weight but hate exercising, don't make a New Year's resolution to exercise more. Instead, find other physical activities that you enjoy to occupy your time so that you don't use that time to binge eat. This way, the change will be more sustainable.
2. **Setting specific, realistic goals provides a clear path to success.** Your goals should be both specific and measurable. Instead of vaguely aiming to 'exercise more,' set a precise goal like 'jogging for 30 minutes, three times a week.' This specificity simplifies progress tracking and reinforces commitment. Ensure that your goals are achievable and not just wishful thinking. Setting unrealistic goals can lead to demotivation. Therefore, aim to align your goals with your current abilities and circumstances, while still challenging yourself and keeping it enjoyable.
3. **Share your goals and partner up with people who can support and hold you accountable**. This accountability partner can be someone with similar goals or someone you trust to keep you on track. They can encourage, advise, and work through issues. Collaboration makes the journey to your goals less isolating and increases the likelihood of success because you have someone to celebrate your milestones and keep you focused during tough times.

Each step forward, no matter how small, is progress towards your goal. Good luck! -DH-

INA-RESPOND Newsletter

EMBRACING DIVERSITY IN RESEARCH: UNPACKING THE GENDER EQUALITY, DISABILITY, AND SOCIAL INCLUSION (GEDSI) FRAMEWORK

By: Aly Diana

Recently, when exploring calls for proposals and funding opportunities, I noticed the introduction of a 'new' requirement: the inclusion of GEDSI. For instance, guidelines state: "*It should also reference how the project will be responsive to gender equality, disability rights, social inclusion.*" My limited understanding of GEDSI and the expectations of donors prompted me to seek further insight. As a newcomer to this concept, I welcome input from those more knowledgeable and experienced. In this brief overview, I aim to clarify the definition of GEDSI, differentiate between sex and gender, explain how these concepts influence various life aspects, including health, and summarize the key elements to incorporate in a GEDSI-related proposal.

Defining GEDSI.

GEDSI represents an all-encompassing approach to promoting fair societal conditions:

1. **Gender Equality**: This is the state where all genders enjoy equal rights, opportunities, and access to resources. It aims to expand individual freedoms, balance power dynamics, transform gender roles, and improve the overall quality of life, enabling everyone to reach their full potential.

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2. **Disability Inclusion**: This aspect focuses on understanding how individual capabilities interact with societal participation. It emphasizes ensuring equal opportunities for all, regardless of physical or mental abilities, thus allowing everyone to participate in all life aspects to the best of their abilities and desires.
3. **Social Inclusion**: This addresses the challenges of inequality and exclusion, particularly among vulnerable groups. It involves improving participation terms in society, expand access to opportunities and resources, and promoting respect for human rights. The goal is to empower individuals and cultivate peaceful, inclusive societies and institutions.

Understanding the Difference between Sex and Gender. A critical aspect of GEDSI is understanding the distinction between 'sex' and 'gender.' Sex denotes the biological differences between males and females, such as chromosomes, hormone profiles, internal and external sex organs. In contrast, gender is a social and cultural construct. It relates to societal norms, roles, behaviors, activities, and attributes that a given society considers appropriate for men, women, and non-binary or gender-diverse people. This distinction is crucial in research, as it acknowledges that both biological and social factors contribute to the diversity of human experiences and health outcomes.

Examples of Impact of Gender on Health. Gender, as a multi-dimensional construct, shapes individual identity, social expectations, and behaviors tied to biological sex. It impacts day-to-day life, career, family dynamics, and notably, health. Social norms and structural systems are influenced by gender, making it essential to understand health outcomes. Health interventions like hormone therapies and post-mastectomy reconstructions are examples where gender identity intersects with health practices. Gender roles can restrict access to health services for women and girls and influence medical interactions. Gender bias has been linked to diagnostic delays in women for conditions like cancer and heart disease, as medical training often centers on symptoms experienced by men, leading to misdiagnosis and lower survival rates for women. Globally, gender inequality adversely affects women's health, influencing social determinants of health, healthcare access, and delivery. Structural sexism not only affects women's health but also the composition and dynamics of the healthcare workforce. Despite women dominating the healthcare sector, female clinicians face discrimination, lower pay, and fewer career advancement opportunities. There is a lower valuation of female-specific medical procedures and research, with women's health research often being less publishable and impactful than men's. The focus on women's health has traditionally been limited to reproductive issues, with inadequate attention and research on conditions like menstruation and menopause.

Key Considerations for Embedding GEDSI in Proposals. When embedding GEDSI into proposals, the key considerations are:

- Conducting GEDSI Analysis: Begin with identifying GEDSI issues and plan for a thorough GEDSI analysis to inform the design process. This involves understanding the specific barriers and norms related to gender, disability, sexual orientation, gender identity, indigenous peoples, and ethnic minorities. The analysis should occur early in the design phase.
- Addressing Barriers and Norms: Use the GEDSI analysis to pinpoint opportunities and actions to tackle barriers and norms. Implement both targeted and integrated strategies to

address these issues, which can be refined after the GEDSI analysis.

- Resource Allocation: Allocate sufficient funding and human resources to support GEDSI-related activities, including technical assistance, further analysis, and training.
- Risk Identification and Safeguarding: Recognize risks that could hinder GEDSI progress and First Nations engagement, as well as potential adverse effects on vulnerable populations. Develop mitigation strategies and adhere to a 'do no harm' approach.
- GEDSI in Monitoring and Evaluation: Integrate GEDSI-focused output and outcome indicators into monitoring and evaluation frameworks. This should include the collection, analysis, and reporting of disaggregated data to track and report GEDSI progress effectively.

Conclusion GEDSI's integration into research and grant proposals is a way in trying to ensure inclusivity and equality/equity in research, reflecting the rich tapestry of human diversity. This paradigm shift, deeply rooted in the history of global equality movements, ensures that research outcomes are beneficial and accessible to all sections of society.

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