

INA-RESPOND

INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE



NEWSLETTER

December 2023

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Words for The Holidays



HEALTH POLICY AGENCY
MINISTRY OF HEALTH REPUBLIC OF INDONESIA

2023

INA-RESPOND newsletter

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FEATURES

INA-RESPOND Newsletter

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 December 11, 2023, out of the 700 participants who enrolled in the study, 665 (95%) have completed their participation, while 35 (5%) are still ongoing. The study is being conducted at three different sites. Site 02 (TC Hillers Hospital) completed visit 5 on November 16, 2023. Sites 01 and 03 are still on visit 5. The details of the visits for each site are listed in Table 1.

It is important to note that the study has encountered challenges in retaining participants. Out of the 665 subjects who have ended their participation, 603 (86.14%) completed the study, and 45 (6.43%) withdrew. Reasons for withdrawal included the participant's decision, personal reasons, or loss of interest. Additionally, some participants did not receive the complete vaccine regimen within 12 months of enrollment, resulting in the exclusion of three (0.43%) subjects from the study. Two (0.29%) subjects were not al-

lowed to continue because continuation was deemed 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 ended their participation for other reasons.

Furthermore, the study has been tracking symptomatic visits among participants. Table 2 provides the details of these visits as of December 11, 2023. It is important to note that while some participants have experienced COVID-19 symptoms, this does not necessarily indicate that they have contracted the disease.

STUDY UPDATES

Site	Symptomatic Visit		
	# of visit	Positive	Negative
01	104	61	43
02	14	6	8
03	2	1	1
Total	120	68	52

Table 2. Symptomatic Visit Details per Dec 11, 2023

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	29	88	326	314	306	315	285	30	277	249
02	228	1	227	0	97	214	191	188	195	151	44	151	148
03	130	0	130	6		130			129	95	35	95	89
Total	703	3	700	35	185	670	505	494	639	531	109	523	486

Table 1. Details of Visits per site per Dec 11, 2023

INA104

The INA104 (PROACTIVE) study was completed and closed in October 2023.

The study's completion marked the beginning of an intricate process of data management, involving meticulous data cleaning currently being undertaken by the Data Management team. Once this is complete, the statistical team will analyze the data to create a final research report for the Ethics Committee and for manuscript publication.

Three main manuscripts are in preparation by the core study team, the NIAID team, and the secretariat, involving the Principal Investigator (PI) and Co-Principal Investigators (CoPI) from each site.

The first manuscript, covering baseline characteristics and predictors of all cases of death within one year ("Baseline Characteristics and One-Year Mortality"), has been shared with the entire team and is targeted for publication in the Journal of the International AIDS Society.

The second manuscript involves a preliminary analysis of all cases of death over three years ("Early Analysis of Three-Year Mortality in People Living with HIV").

The third manuscript focuses on virology, immunology, disease, and clinical development ("Clinical, Immunological and Virological Responses of HIV-infected People with Anti-Retroviral Therapy in Nationwide Indonesian Cohort").

Currently, preparations are underway, including determining the specific writing teams for the second and third manuscripts.

The composition of these teams is based on the previously submitted concept plan and the interests of each site.

In addition to these primary manuscripts, there are plans for three supplementary manuscripts that address crucial aspects of HIV research. These include investigations into late presenters, phylogenetic resistance analysis, and pediatric subjects. Data from the "Baseline Characteristics and One-Year Mortality" manuscript and the late presenter study were presented at the Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH) in Chicago, IL, USA, on October 18-22, 2023. Further concept planning for other manuscripts will be discussed with the NIAID team.

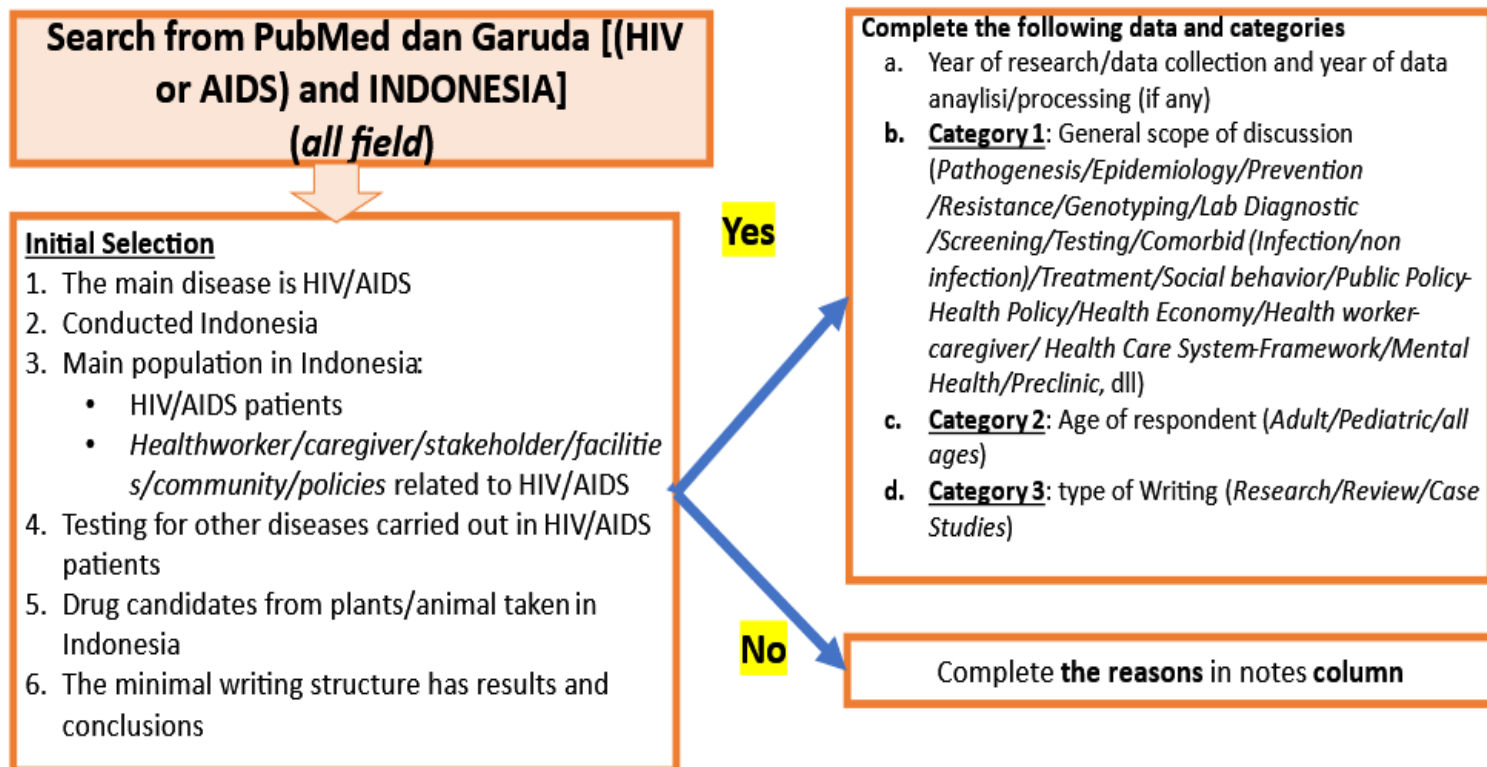
Apart from that, scoping review activities are currently being carried out with the aim of gaining a comprehensive understanding of HIV research that has been carried out in various fields and identifying gaps in HIV research in Indonesia. This review was carried out comprehensively on articles and research results regarding HIV in Indonesia, starting from the early stages of the epidemic to the present. The Secretariat is diligently preparing the protocol for this review, ensuring a robust and methodical approach. In parallel, literature searches regarding HIV research in Indonesia have also begun to be carried out from 2 journal databases, namely PubMed and Garuda (Digital Reference Gallery: <https://garuda.kemdikbud.go.id/>). Diagram 1 on page 5 shows the journal selection flow.

Based on the search process with the keywords 'HIV' OR 'AIDS' and 'Indonesia' in PubMed and Garuda, 1,364 journal titles were obtained from PubMed and 1,758 journal titles from Garuda. The journal is then reviewed again by the Research Assistant from the Core Site together with the team from the Secretariat if it meets the selection criteria and continues with categorization according to protocol.

The RA core sites are divided into groups, with each group consisting of 2 RA core sites assisted by 1 person from the secretariat. The number of journals to be reviewed is also divided among the groups, ensuring

that each group reviews different journals. Within each group, the 2 core site RAs review the same titles. To ensure objectivity, the review process is carried out independently, after which the results are collected by the Secretariat Team. A consensus deliberation is then held with the Secretariat Team. Discussions are conducted periodically. The selection and review processes have been completed for journals from PubMed. Meanwhile, the review of journals from Garuda is still ongoing.

Journal Selection Workflow



*Additional category for GARUDA: Sinta score 1-2-3

INA-RESPOND Newsletter

ATTACK ON THE VIRUS

By: Adhella Menur

SCIENCE CORNER

On November 5, 2023, the final episode of an epic anime called "Attack on Titan" (AoT) was aired, leaving the fans with vague feelings. At first, the dark fantasy written by Hajime Isayama was expected to be a cliché storyline centered on a boy heroine who wants to defeat gigantic man-eating humanoids referred to as Titans. However, the story progressed with intensive twists, deep-dive characterization, and roller-coaster emotions. Throughout the 89 episodes, fans were questioning: who the real monster is, what is humanity, and why wars will not end after all attempts. Isayama was not hesitant to bring out "The Rumbling," when millions of Colossal Titans swept through 80% of human population. Even though the global alliance successfully stopped The Rumbling and ended the Titan power, the peace was not eternal. In the post-credit scene, the cycle of violence inevitably resumes, and another war erupts even without the Titan existence.

In our real world, after more than three years of battle with the SARS-CoV-2 that killed more than 6.9 million people, humanity, represented by the WHO, declared victory and ended the global emergency status for COVID-19 on May 5, 2023. The WHO Director-General warned that the virus is still killing and changing. The risk remains of new variants emerging that cause new surges in cases and deaths. The attack on the virus was as epic as the attack on Titan. Lessons learned should be attained as much as possible to prepare for future threats.

The origin of Titan vs. the virus

In the AoT anime, the writer decided to make an ancient species of aquatic worm from the Cambrian period (500 million years ago), *Hallucigenia*, nicknamed "spinal worm," responsible for forming Titan power. The first human who transformed into Titan was initially infected with the *Hallucigenia*. While fans are satisfied with the complete explanation of the Titan's origin, humanity is still uncertain about the origin of the SARS-CoV-2 infection. Two major theories have been long debated: a natural spillover through zoonosis followed by sustained human-to-human spread or introduction of a virus into humans from a laboratory source.

Coronaviruses are widely present in the animal world; in humans, seven pathogenic coronaviruses have been identified in the last 20 years. Most human coronaviruses (HCoVs) are zoonotic in origin, and their evolution is linked to a high level of urbanization and animal breeding, which facilitates the exchange of species and simplifies the crossing of species barriers and genomic reorganization. After many years of surveying wild animals, researchers concluded that bats serve as the main reservoir for the virus and need intermediate hosts, where the virus acquires some or all the mutations necessary for efficient human transmission. Two previous dangerous HCoVs, SARS-CoV and MERS-CoV, had confirmed this spillover event. For SARS-CoV origin, a series of investigations

found that the virus existed in masked civet cats and raccoon dogs that bats infected. Antibodies to the virus in a badger were later found at a Chinese live animal market in Shenzhen and were suspected to be the source of the human infection. For MERS-CoV origin, researchers found that dromedary camels were an essential reservoir for MERS-CoV originating from bats and predicted interspecies transmission occurred more than 30 years ago. Additionally, dromedary camels in Saudi Arabia have been found to have multiple MERS-CoV genetic lineages, involving crossing various barriers and causing outbreaks in humans.

The remaining mystery in the SARS-CoV-2 origin - spillover theory - is what animal serves as the intermediate host. The Huanan Market in Wuhan, China, was identified as a likely source of the spillover event, where wild live SARS-CoV-2-

susceptible animals, such as palm civets, mink, raccoon dogs, hog badgers, red foxes, and pangolins, were sold. Spatial analyses within the market reported that SARS-CoV-2-positive environmental samples, including cages, carts, and freezers, were associated with activities concentrated in the southwest corner of the market where vendors sell wild animals. Moreover, in the early SARS-CoV-2 infections, the virus was classified into two lineages, A and B; lineage B emerged before lineage A and had a direct epidemiological link to the market. Early lineage A isolates were not directly linked to the market but were isolated in patients who resided within 2.31 km of the market. Lineage A was later isolated from an environmental sample in the market. Multiple spillover events might have occurred between late October and mid-November 2019 rather than a single spillover event at one point.

However, an analysis of animals at the market during the outbreak did not identify a single species as the intermediate host. Therefore, everything is still circumferential pieces of evidence. The

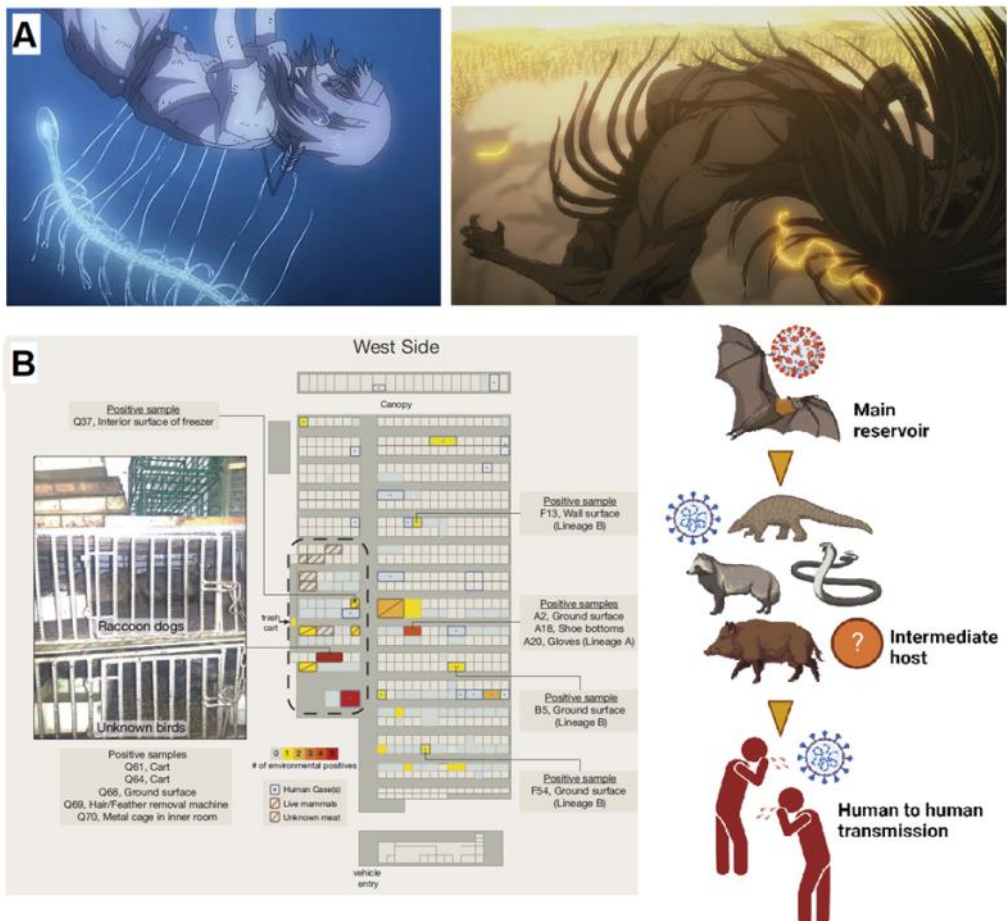


Figure 1. (A) The origin of Titan, an infection of powerful Hallucigenia. (B) Zoonotic origin theory of SARS-CoV-2 with circumferential evidences found in the Huanan market (Worobey M, et al., doi: 10.1126/science.abp8715). Created with Biorender.com

second theory, laboratory-related theory, was more attractive to many people. The Wuhan Institute of Virology (WIV)—a laboratory where scientists study coronaviruses—is in the same city. Scientists in WIV were intensively studying SARS-related viruses after the 2002–2003 SARS-CoV global spread. They were working on CoV diagnostics, isolation of CoV and vaccine development in high biosafety standards (BSL3 or 4) and possessed many collections of SARS-CoV samples from bats. People assumed the outbreak resulted from a lab leak of manipulating coronaviruses and a previously infected lab staff member bringing the virus to the market. Additionally, in May 2021, the US President asked intelligence agencies to probe the virus's origins, but they could not reach a consensus. Some agencies even shifted from a neutral stance on the virus' origin to one favoring, with "low confidence," a lab leak. However, the WHO investigation team produced a 150-page report from the fact-finding mission that said the outbreak was unlikely to be a lab accident. Scientists in WIV also have a routine health surveillance program, and a study showed that no SARS-CoV-2

positive in lab staff despite extensive epidemiological tracing of early cases.

Alwine JC et al., in "A Critical Analysis of the Evidence for the SARS-CoV-2 Origin Hypotheses", beautifully explained how the lab-related theory was unlikely. The virulence of SARS-CoV-2 depends not only on the furin cleavage site but also on the cleavage site loop length; this knowledge was not attained before 2020; deliberate engineering of the SARS-CoV-2 cleavage site without this critical information is improbable. Also, there is a signature of laboratory handling in SARS-CoV-2: the loss of the furin cleavage site in the spike protein during cell culture - however, early isolates of SARS-CoV-2 showed the furin cleavage site to be intact, arguing against the introduction into humans after laboratory cell culture. To simplify, it is too complicated for scientists to make a compatible virus such as SARS-CoV-2. The authors remind us that scientific conclusions are based on likelihood given the scientific data, and findings can change as new data are obtained. For now, the available evidence favors the zoonotic theory. Nonetheless, the virus's origin may remain a mys-

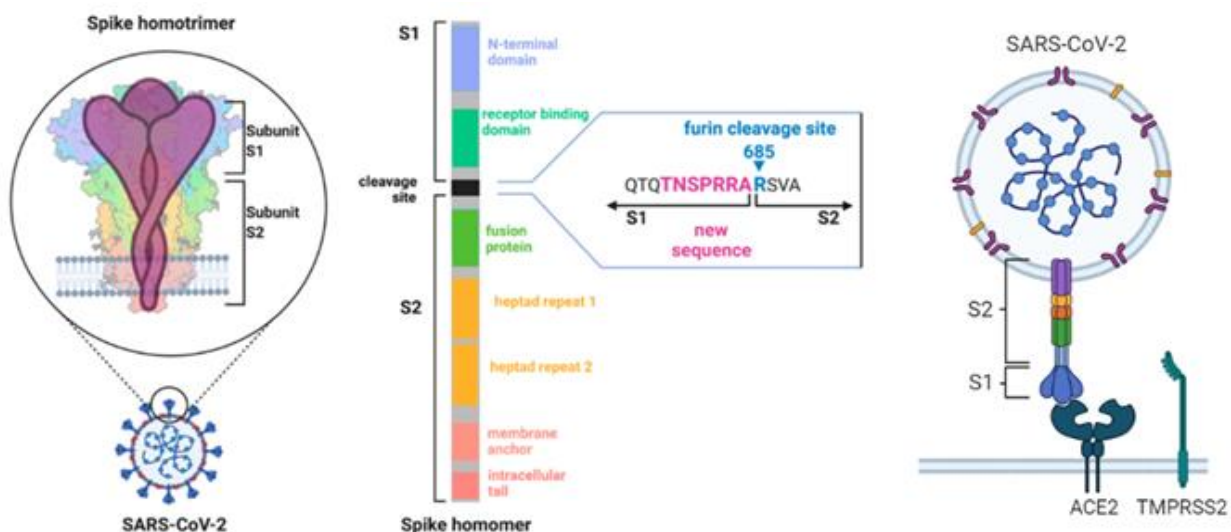


Figure 2. SARS-CoV-2 has revealed a complex relationship between the presence of a furin cleavage site and viral attachment, which the lab technology before 2020 still lacked knowledge of (figure from Brown EF, et al, <https://doi.org/10.3390/cells1111801>). Created with Biorender.com.

tery for humanity, but open a wide range of research to prevent the event from happening again.

The variants and recombinants

In the AoT anime, Titans have many variants, from the mindless Pure Titans to the more sophisticated Titan shifters. Pure Titans are the weakest and most generic Titans whose behavior is easy to predict, making them easy to kill. Abnormal Titans are Pure Titans with unusual behavior and intelligence, allowing them to perform unpredictable moves. The Nine Titans, also known as Titan Shifters (Attack, Colossal, Armored, Female, Beast, Jaw, Cart, War Hammer, and Founding), are the strongest; each can shift back and forth between human and Titan form to access their Titan's abilities. SARS-CoV-2 also has many variants due to its consistent mutation throughout the pandemic. A variant is a viral genome (genetic code) that may contain one or more mutations. Mutations are prone in all RNA viruses in each cycle of replication. Even though SARS-CoV-2 has a proofreading enzyme that allows high-fidelity replication to maintain the integrity of a long viral RNA genome and limit the error rate imposed by viral RNA polymerases, mutations still occur due to how efficient the virus is. At first, the evolution rate was observed to be approximately two mutations per month. However, abundant mutations emerged, particularly in the Spike protein, implying that the evolution rate is higher than predicted.

The WHO is tracking all SARS-COV-2 variants, and some are identified as variants of concern (VOC) due to their significant impact on public health (increased transmissibility and virulence, more severe disease, or immune escape), such as Alpha, Beta, Gamma, Delta, and Omicron. Some are labeled as variants of interest (VOI) and under monitoring (VUM). Alpha (B.1.1.7) was the first of the

highly publicized VOC. Alpha first appeared in Great Britain in November 2020 with key spike mutations: N501Y, H69/V70, P681H, and Y144. Beta (B.1.351) was identified in South Africa at the end of 2020 with key spike mutations: N501Y, E484K, K417N, L18F, D80A, D215G, and A701V. Gamma (P.1) was first found in Brazil in January 2021 with key spike mutations: K417T, E484K, and N501Y. Then, those VOCs faded away with the rise of the more aggressive Delta variant. Delta (B.1.617.2) was first identified in India in late 2020 with key spike mutations: R158G, L452R, T478K, D614G, P681R, and D950N. Delta variant was the worst nightmare over the course of the pandemic because it is highly transmissible, replicating more efficiently, attacking lungs frequently, and causing severe disease, especially in unvaccinated persons. The Delta variant was swept away by Omicron (B.1.1.529), first identified in Botswana and South Africa in late November 2021. Initially, Omicron was so worrisome due to its tremendous mutations and really distinct from previous variants. Over 60 mutations were identified, consisting of substitutions, insertions, and deletions, of which over half were accumulated in the spike (key: D69–70 deletion, T95I, G142D/ D143–145 deletion, K417N, T478K, N501Y, N655Y, N679K, and P681H). Luckily, up to now, Omicron has not been acting like Delta. Even though it has higher transmissibility and immune escape, the case fatalities were reduced compared to Delta, which may be attributed to the lack of the TMPRSS2 pathway that did not let it habitat lungs.

Multiple subvariants of Omicron have been identified, and new ones continue to emerge. The original version of Omicron is no longer circulating. More than 300 Pango lineages are currently associated with the Omicron variant; some have an unofficial media nickname. The 'standard' subvari-

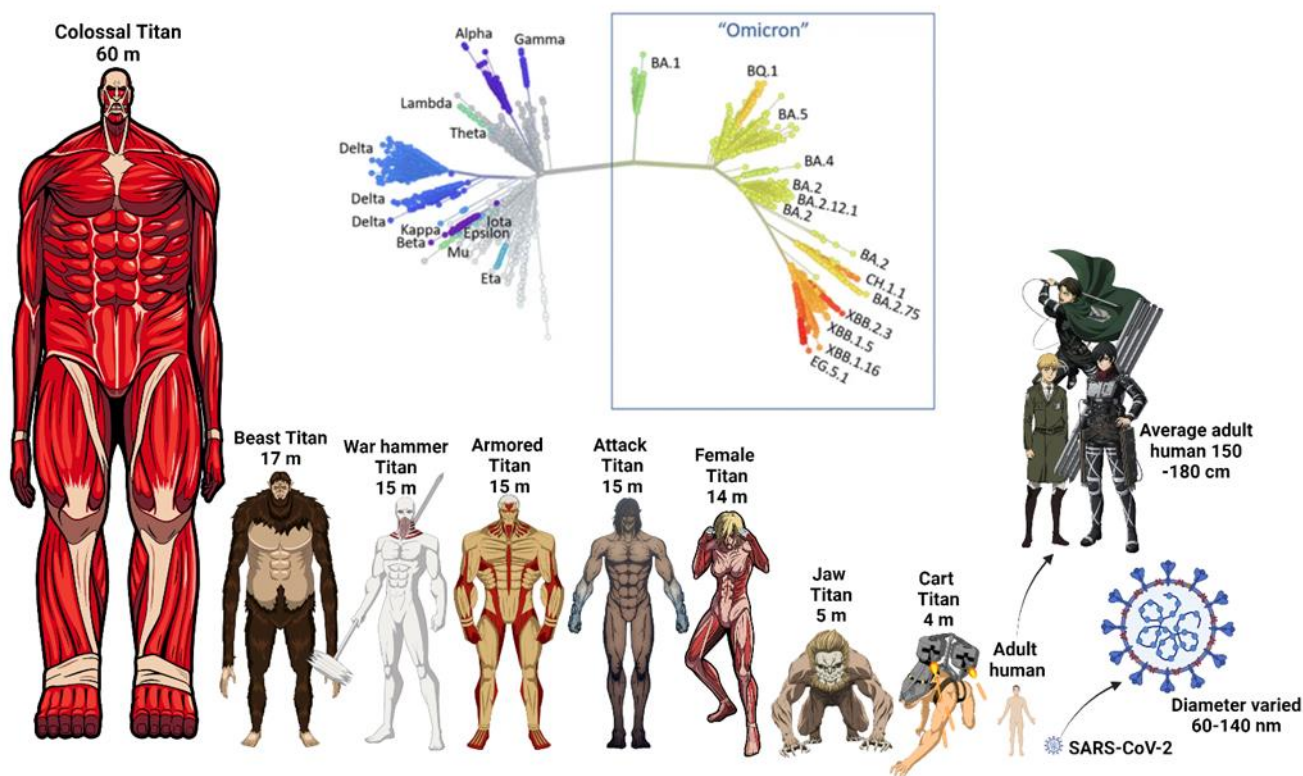


Figure 3. Size comparison of some Titan shifter variants to human to the virus. Upper: phylogeny of SARS-CoV-2 variants from the beginning of the pandemic to August 2023 (Nextstrain.org). Created with Biorender.com.

ant is now referred to as BA.1 (or B.1.1.529.1), and the two other subvariants are known as BA.2 (or B.1.1.529.2) and BA.3 (or B.1.1.529.3). In mid-2022, BA.4 (or B.1.1.529.4) and BA.5 (or B.1.1.529.5) were detected in several countries. Moreover, some Omicron subvariants were recombinants, resulting from genomes of two variants or subvariants combined during viral replication, for example, XBB, a recombinant of the BA.2.10.1 and BA.2.75 sublineage. After the Delta variant wave, we observed several case surges that were still manageable or mini waves caused by the Omicron subvariants. At the end of 2023, the descendant of BA.2.86 caused the latest mini wave: JN.1 (BA.2.86.1.1). JN.1 was first detected in the United States in September 2023. It continues to be reported in multiple countries, and its prevalence has rapidly increased globally. Due to its rapidly increasing spread, the WHO has classified JN.1 as a VOI since December 19, 2023. It contains more than 30 mutations in

the spike, making it highly capable of evading the pre-existing anti-SARS-CoV-2 immunity. The JN.1 has a hallmark mutation L455S in the spike and three other mutations in the non-spike. Currently, there is no evidence that JN.1 presents an increased threat to public health compared to different circulating variants. However, it is still can cause fatal cases, particularly in elderly and immunocompromised patients. There is one certainty that it will not be the last virus attack. Something new will emerge if there is a virus mini wave somewhere in the world.

The Survey Corps Titan research – The Scientists

In the AoT anime, a branch of Military division called the Survey Corps had a crucial role in the story. The Survey Corps was most actively involved in direct Titan combat, Titan research, human expansion, and world exploration. They hoped that

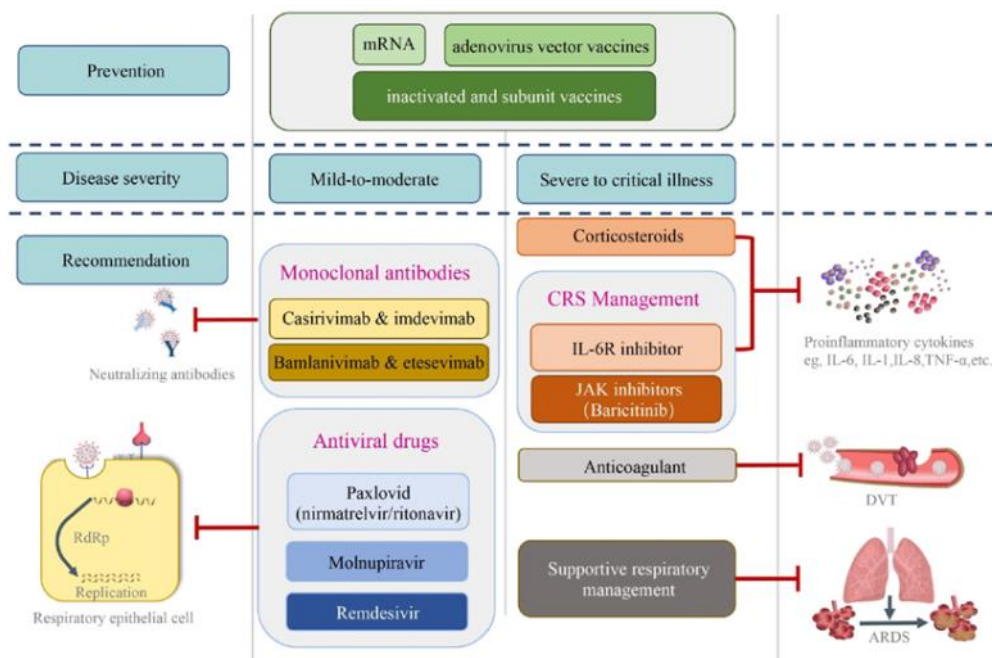


Figure 4. Clinical management of COVID-19 according to scientific evidence throughout the pandemic (figure from Zhu Y, et al, doi: 10.3389/fimmu.2023.1116131).

someday, their efforts would change the world, and they would be able to recover what had been taken away from humanity. The character that resembled an energetic and quirky scientist was named Hange Zoe. Hange initially had a very hateful heart towards Titans, which killed many of Hange's comrades, but when Hange kicked the head of a 3-meter Titan, Hange was shocked at how abnormally light it was. This drove Hange to take an extreme and outside-the-box approach to Titan research. Hange even kept some Titans alive for the sake of experimentation to better understand the nature of these beasts and their weaknesses. Upon learning that there was a power to transform into a Titan, research was conducted to uncover the extent of Titan shifter abilities. This would grant the Survey Corps vital information when dealing with enemies with this power. Hange also led the engineering team to invent new weapons, such as the Titan guillotine and the thunder spear, that effectively killed Titans.

It is such a familiar story regarding the attack on the virus. Borrowing the concluding remarks of

Alwine JC et al.: "Science was our best ally during the pandemic, working to understand virus replication, spread, and disease to produce life-saving vaccines, antivirals, rapid tests, and treatments." The more we curious and understand our enemies, the more effective our approach to defeat them and prevent future threats. Such groundbreaking scientific discoveries have never been so swiftly and efficiently applied in human history.

One of the precious scientific breakthroughs is the mRNA vaccine, which produces robust immune responses against SARS-CoV-2 spike RBDs, preventing the viral spread and limiting the disease severity. The 2023 Nobel Prize in Physiology or Medicine has been awarded to a pair of scientists, Professors Katalin Kariko and Drew Weissman, who developed the technology that led to the mRNA COVID-19 vaccines. Karikó and Weissman showed in the early 2000s that it was possible to dampen the body's inflammatory responses to lab-made mRNAs by making specific chemical changes to the component bases of the molecules—findings that allowed future groups to deliver ge-

netic instruction into human cells to make viral proteins and lead the body to produce immunity. Quickly developing a vaccination against nearly any disease is the central tenet of the technology - as long as you know the correct genetic instructions. This allows for considerably faster and more flexible vaccine development compared to traditional methods.

Attack on the virus: season finale or to be continued to a new season?

Can we confidently say goodbye to the COVID-19 pandemic? After the WHO ended the global health emergency status, countries shifted to handling the virus as an endemic pathogen. As they want to catch up with the economy, many countries let down their guard, dismantle the systems it has built, and send the message that COVID-19 is now nothing to worry about. Observing this trend, even the PLOS Neglected Tropical Disease (NTD) Journal now invites the community of NTD scientists to submit COVID-19 papers. Markov PV et al. stated that the best-case scenario for the future evolution of SARS-CoV-2 whereby there will be continued antigenic drift within the Omicron lineage, such that over short and medium timescales, immunity elicited by a combination of vaccination and prior infection protects against severe disease on rein-

fection and provides broad immune responses that will cover considerable continued evolution of the virus. The worst-case scenario is that antigenic evolution would be disrupted by the emergence of a new variant with an entirely different constellation of mutations and phenotypic properties, which will allow the virus to evade immunity established by prior infection or vaccines. Several hypotheses explain the emergence of VOC: sustained stealth circulation of SARS-CoV-2 in humans in areas with poor genomic surveillance, zoonotic circulation of SARS-CoV-2 in animal reservoirs (risk of spillover and spillback events), and chronic SARS-CoV-2 infections in immunocompromised individuals. As the immunity from previous infections and vaccines wane over time, unclear government policies, discontinuing research due to limited support, public ignorance, and vaccine inequality may lead to the worst scenario (hopefully not!).

As WHO's technical lead, Maria Van Kerkhove, said, "We can't forget the graves that were dug" - we should not forget how many frontliners died, saving lives during the pandemic. Like the Survey Corps in the AoT anime screamed, "*Shinzou wo sasageyo!*" - "Dedicate your heart!"; to win the battle, we should deliver our best as individuals for



our community. Start to take care of our health, apply standard health precautions to prevent transmission, take vaccine or booster if available, follow reliable reports, spread awareness, and keep fighting. Anyway, happy new year 2024! May the year bring health, many joys, and more achievements!

Source of inspiration

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<https://www.science.org/content/article/mrna-discovery-paved-way-covid-19-vaccines-wins-nobel-prize-physiology-medicine>

<https://screenrant.com/attack-titan-final-chapters-review-milestone-anime/>

<https://collider.com/attack-on-titan-series-finale-ending-explained/>

The complete series of Attack on Titan anime can be streamed on Netflix until January 9, 2024.

INA-RESPOND Newsletter

STAY ACTIVE AS A FAMILY DURING SCHOOL HOLIDAYS

By: Maria Lestari



SPORTS & LIFESTYLE

Physical activity is associated with a reduced risk of various diseases, including heart disease, stroke, type 2 diabetes, several forms of cancer, and depression. It is recommended that children engage in an average of 60 minutes of moderate-to-vigorous physical activity daily and participate in activities that strengthen their muscles and bones at least three times per week. However, evidence suggests that most children do not meet these recommendations.^{1, 2}

In a study by the University of South Australia, researchers discovered that primary school children tend to be less active, spend more time on screens, and have a poorer diet during holidays compared to the school term. This implies that children are likely to spend more hours in front of

screens, consume an unhealthy diet, and be less active during their holidays. The study, which assessed responses from 358 primary school students (grades 4 and 5), found that during holidays, children were 12 minutes less active each day, 27 minutes more sedentary, and spent over an hour extra on screen time.^{3, 4}

The good news is that family activities can significantly benefit everyone. Adults should aim for at least 2½ hours of physical activity weekly, while children need 60 minutes daily.⁵ Engaging in family activities not only meets these physical needs but also strengthens familial bonds and creates lasting memories. Here are some comprehensive tips to increase activity during the holiday season:

Schedule time for physical activity. Identify time slots during the week when most family members are available and devote several of these periods to active pursuits. The structured days hypothesis suggests that obesity-related behaviors, including physical activity, sedentary behavior, and diet, are more beneficially regulated on days with structured plans than on spontaneous, less structured days.⁶

Transform holiday chores into a game. Walking around the house or apartment while doing routine chores can be an excellent form of physical exercise and a way to burn calories. To increase physical activity during the holidays, families can turn these chores into friendly games or competitions, which also boosts children's self-confidence. After finishing, reward everyone for their efforts by allowing the children to choose a fun activity, such as bike riding, playing an outdoor game, or visiting the local playground.⁷

Get creative and reduce screen time. Instead of watching TV or playing video games, encourage children to engage in creative activities. Drawing, cooking, making holiday decorations or cards, or creating simple homemade gifts for friends or neighbors can be captivating for children of all ages. Excessive screen usage negatively impacts social and emotional development, increasing the risk of obesity, sleep disorders, and mental health issues, including depression and anxiety. It may hinder the ability to interpret emotions, promote aggressive behavior, and generally damage psychological health.⁸

Involve kids in the kitchen. Teaching children to cook is a simple and effective way to encourage healthy eating habits that can last into adulthood. A study published in the *Journal of Nutrition Education and Behavior* revealed that young adults (aged 18 to 23) with cooking skills tended to have better nutritional outcomes a decade later, including eating more vegetables and consuming less fast food.⁹

Encourage learning a new sport. Numerous sports clubs offer coaching clinics during school holidays at reasonable prices. While some cater to children already active in the sport, most aim to attract new participants and promote a 'just get involved' philosophy. Participation in sports helps young people develop lifelong healthy habits. Research indicates that young athletes often continue being active into adulthood. A long-term study showed that individuals who engaged in sports from ages nine to 18 were five to six times more likely to remain active in adulthood.¹⁰

Conclusion

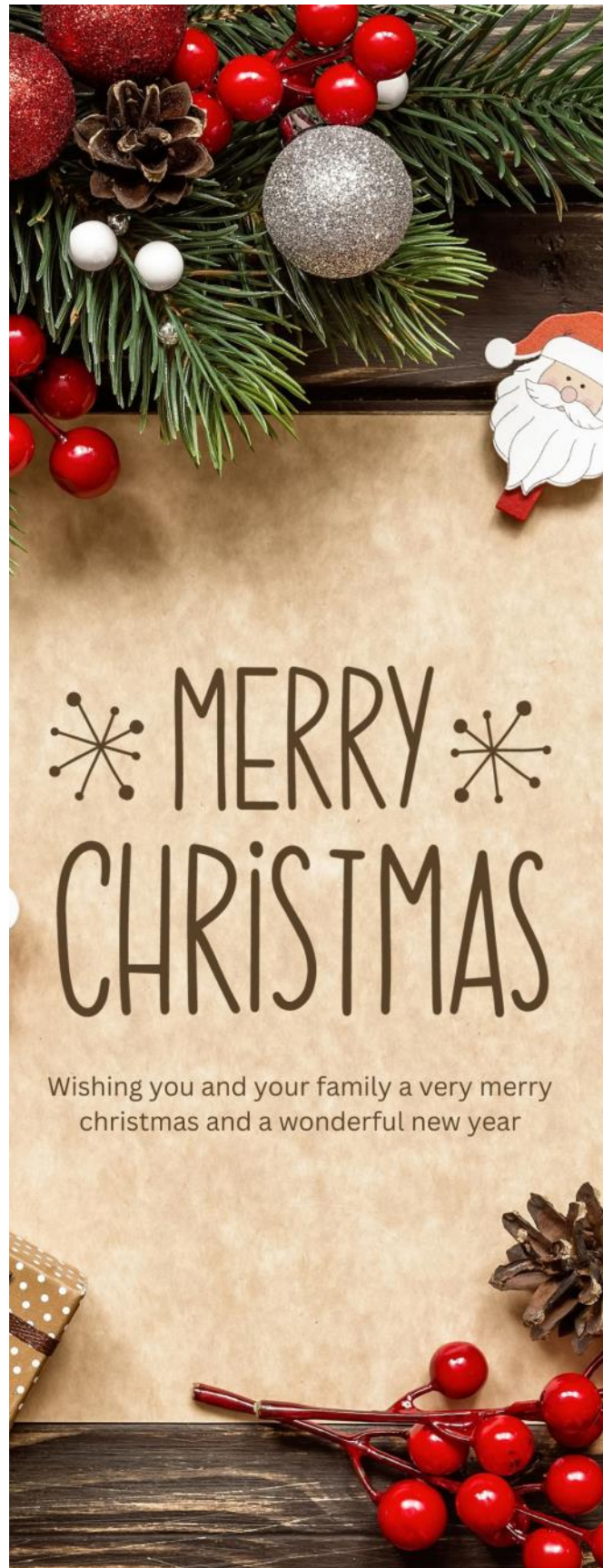
Keeping kids active during the school holidays is more than just a form of entertainment; it's a beneficial investment in their physical development. Exploring new sports, engaging in outdoor activities, and building new friendships pave the way for a healthy, active lifestyle and a positive start to the upcoming school year.

So, whether it's a walk in the park, jumping on a trampoline, or swimming in a pool, keeping children active during the summer break is vital for their physical, mental, and social well-being, both now and in the future.

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Congratulations!

Congratulations to Prof. dr. Bacht Alisjahbana, Sp.PD-KPTI, Ph.D., Prof. Dr. dr. Erlina Burhan, M.Sc, Sp.P(K), and Dr. Wahyu Nawang Wulan, S.Si., M.AppSc. on your respective academic accomplishments.

Professor Bacht and Professor Erlina, your elevation to professorship is a testament to your academic excellence and leadership.

Dr. Nawang, your achievement in obtaining your Ph.D. reflects your deep intellect and dedication to your field of study.

Each of you has demonstrated exceptional commitment and resilience in your academic pursuits. May this new phase of your careers bring further opportunities for innovation, discovery, and mentorship.



Bacht Alisjahbana



Erlina Burhan



Wahyu Nawang

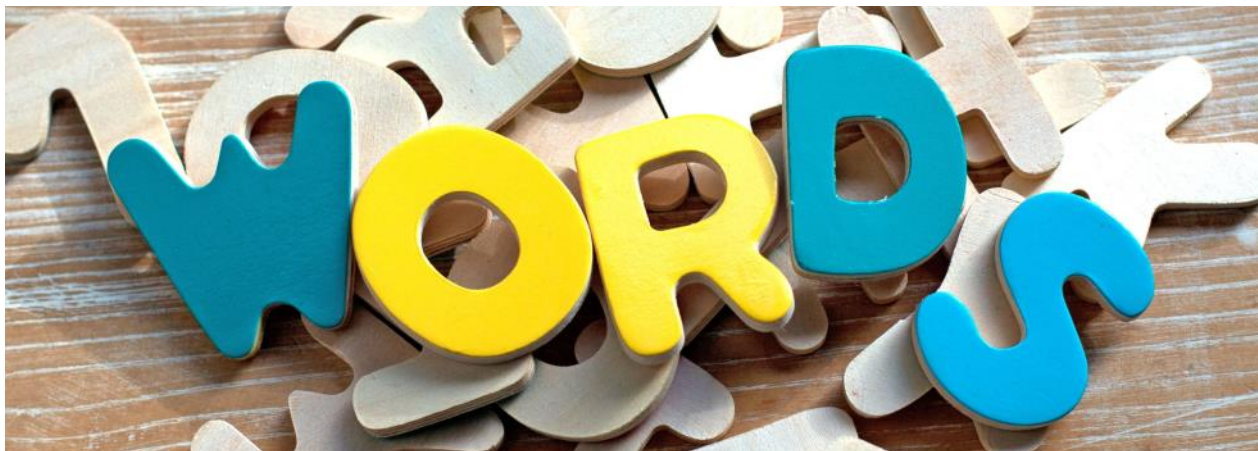


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THE HOLIDAY SPIRIT THROUGH YULETIDE, SERENDIPITY, AND QUINTESSENTIAL

By: Dedy Hidayat



LANGUAGE CORNER

Welcome back to the Language Corner, where we will continue our exploration of the fascinating world of language. This month, we'll look at the meanings, origins, and cultural relevance of three words: Yuletide, Serendipity, and Quintessential. Each of these words adds its own distinct thread to the rich tapestry of our language, conjuring images and emotions that are particularly strong during the holiday season. So, without further ado, let's unravel the stories behind these enchanting words.

Yuletide

Have you ever come across the phrase "Make the Yuletide gay"? It's a line you might recognize from the classic holiday song, "[Have Yourself A Merry Little Christmas](#)." How does the word "Yuletide" mean and how is it related to Christmas?

Yuletide derives from the Old English 'geōl' (Yule) and 'tīd' (time or season), yuletide *originally referred to a pagan festival celebrating the winter solstice. Over time, as Christianity spread, these traditions*

were seamlessly woven into Christmas celebrations, transforming yuletide into a synonym for the Christmas season. It symbolizes a time of festivity, warmth, and family gatherings. Yuletide is synonymous with cozy evenings, festive lights, and a spirit of generosity and togetherness, bridging ancient customs with contemporary celebrations.

Yuletide traditions are as varied and rich as the cultures that celebrate them. From the burning of the Yule log, a custom originating in Scandinavia symbolizing the welcoming of the new year and the warding off of evil spirits, to the singing of carols and the preparation of special meals, each practice adds a unique flavor to the season. In many parts of the world, yuletide is also a time for generosity and giving, encapsulated in the exchange of gifts and acts of charity. The season's emphasis on joy, renewal, and reflection is universally resonant, making it a deeply cherished time of the year for many. Whether it's through the twinkling of Christmas lights, the joy of holiday markets, or the quiet reflec-

tion on the passing year, yuletide remains a symbol of hope, a beacon in the darkest time of the year, promising the return of light, life, and renewal.

Serendipity

I first came across this word in a 2001 romantic comedy about Jonathan and Sara, who met by chance while shopping in New York City and fell in love. Jon wanted to explore things further but Sara wasn't sure their love was meant to be. They decided to test fate by splitting up and seeing if destiny brought them back together. (No more spoilers. I'll let you watch the movie yourself if you're interested to know how their story unfolds.)

In life, we often encounter Serendipity, *the happy chance that brings unexpected but delightful surprises*. This word was inspired by a Persian fairy tale and perfectly describes finding treasure in unforeseen places.

The charm of serendipity lies in its universal appeal and unpredictability. It is a reminder that life's greatest joys and achievements can come from the most unexpected places. This word encourages us to remain open to the unplanned and the unforeseen, recognizing that sometimes the best paths in life are those that we have not consciously chosen.

In the context of creativity and innovation, serendipity plays a pivotal role. Many scientific breakthroughs and artistic creations were the result of serendipitous moments. From the discovery of penicillin by Alexander Fleming to the invention of the microwave oven by Percy Spencer, history is replete with examples where serendipity led to monumental advances. These instances highlight the importance of being receptive to the unexpected and embracing the unknown. They remind us that sometimes, the most extraordinary outcomes arise not from meticulous planning, but from being open to the gifts of chance and the whispers of serendipity.

Quintessential

It was in a meeting when I first heard this word used by one of the participants. In everyday casual conversations, most people might opt for more common words or phrases to express a similar idea. However, the use of "quintessential" can add a touch of eloquence to a description, and I'm guessing that the person might use it for that reason.

"Quintessential" conveys *the concept of something being the most perfect or typical example of its kind*, deriving from the Latin 'quinta essentia', meaning "fifth essence." In modern use, it describes the purest embodiment of a quality or class, representing an ideal standard.

In the realm of research and academia, the term "quintessential" gains a special significance. It is often used to describe a work, theory, or experiment that is considered the most definitive and authoritative in its field. Moreover, the concept of quintessence in research extends beyond individual studies or theories. It can also refer to the essential qualities that define a successful researcher or a groundbreaking piece of research. Attributes like innovative thinking, meticulous methodology, and the ability to synthesize complex information are often considered quintessential traits of exemplary research work. In this context, describing something as quintessential is not just about recognizing its superiority but also about appreciating the attributes that contribute to its status as a benchmark of excellence. It's a term that encourages the pursuit of perfection, deep understanding, and the establishment of high standards in scholarly endeavors.

So, do you have any words that you find interesting and would like to share with us? If so, we warmly invite you to send us your favorite word and enlighten us about its significance. I eagerly anticipate your contributions and insights. Wishing you all the joy of the season: cheers and happy holidays! :)

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LEARNING LIKE AN ADULT: DO IT RIGHT PLEASE AND THERE IS NO "OR"

By: Aly Diana

COMIC CORNER



minder of the importance of applying adult learning principles in our interactions with adults, including students, community members, and patients. We often default to traditional teaching methods, neglecting the necessity for adult-centered learning approaches in our communication.

Key theories include Knowles' andragogy, which emphasizes learner autonomy, experience-based learning, and problem-solving; Mezirow's transformational learning, focusing on critical reflection and perspective transformation; and Brookfield's self-directed learning, highlighting the learner's control over their educational journey. Applying these theories in medical education involves creating learning environments that foster autonomy and critical thinking. This means moving beyond traditional didactic methods to interactive,

Recently, I had the opportunity to revisit the principles of andragogy. While these principles are theoretically sound, applying them in practice is challenging. This brief summary serves as a re-

problem-based approaches that leverage learners' extensive clinical and research experiences. For example, integrating real-world scenarios in teach-

ing reflects the dynamic and complex decision-making processes in medical practice, aligning with Knowles' assertion that adults learn best when the content is relevant to their professional lives.

Transformational learning is particularly relevant in an era of rapidly evolving medical knowledge. Encouraging professionals to critically analyze and reflect on their beliefs and experiences promotes adaptability and resilience, essential for navigating the challenges of medical research and patient care. Furthermore, fostering a culture of self-directed learning empowers medical professionals to take charge of their learning, aligning with Brookfield's assertion that adults are capable of, and benefit from, directing their own learning. This approach not only enhances engagement but also ensures continuous professional development, crucial in a field where lifelong learning is vital.

Integrating adult learning involves unique challenges. One major challenge is transitioning from the traditional role of an information provider to a facilitator of learning. This shift requires educators to adopt methods that foster critical thinking and self-directed learning, which may be unfamiliar or uncomfortable for those accustomed to traditional didactic teaching.

Another challenge lies in aligning educational strategies with the varied experiences and expertise levels of adult learners. Medical learners bring diverse clinical experiences and specialties, necessitating tailored teaching approaches. Similarly, adult learners from the community contribute their unique experiences, while patients introduce their personal attributes and habits, adding further dimensions to the learning process. Each group's distinct background requires educators to adapt and innovate in their teaching methods to effectively communicate new information and concepts.

Furthermore, as educators, we often face time constraints and workload pressures, making it difficult to devote time to developing and implementing innovative educational strategies. Balancing clinical, research, and teaching responsibilities

while also keeping up with advancements in both medical science and educational theory is a significant task.

Overall, while adult learning theories provide a robust framework for enhancing medical education, their practical implementation by medical professionals as educators requires overcoming challenges related to role adaptation, learner diversity, and time management. Addressing these challenges is essential for the effective application of adult learning principles in medical education. Although we have shifted from traditional to adult learning theory, one thing remains constant: practice makes perfect.

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