Global Health Cast

Thanks for joining!

Dr. Melvin Sanicas

Prof. Dr. Joe Schmitt

Every Tuesday

12.00 noon - CET

GLOBAL HEALTH PRESS

What we talk about today:

- COVID19 update
- Good Medical Language (GML)
- Public Health Emergencies of International Concern (PHEIC)
- Language errors in media

Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 17 July 2022**

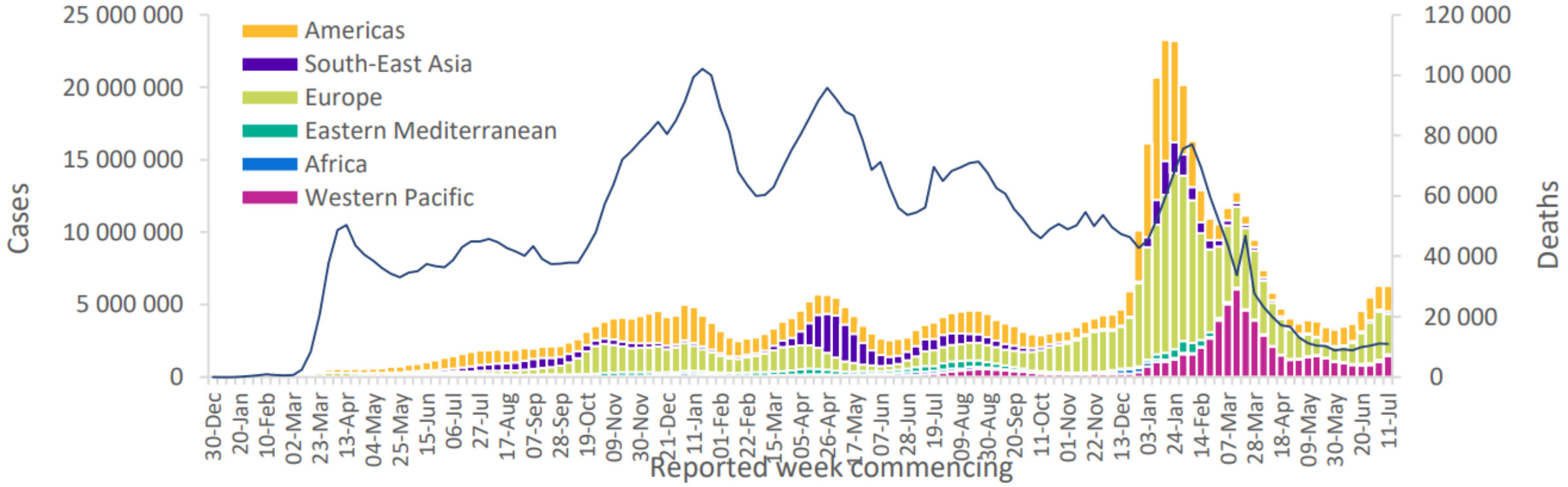
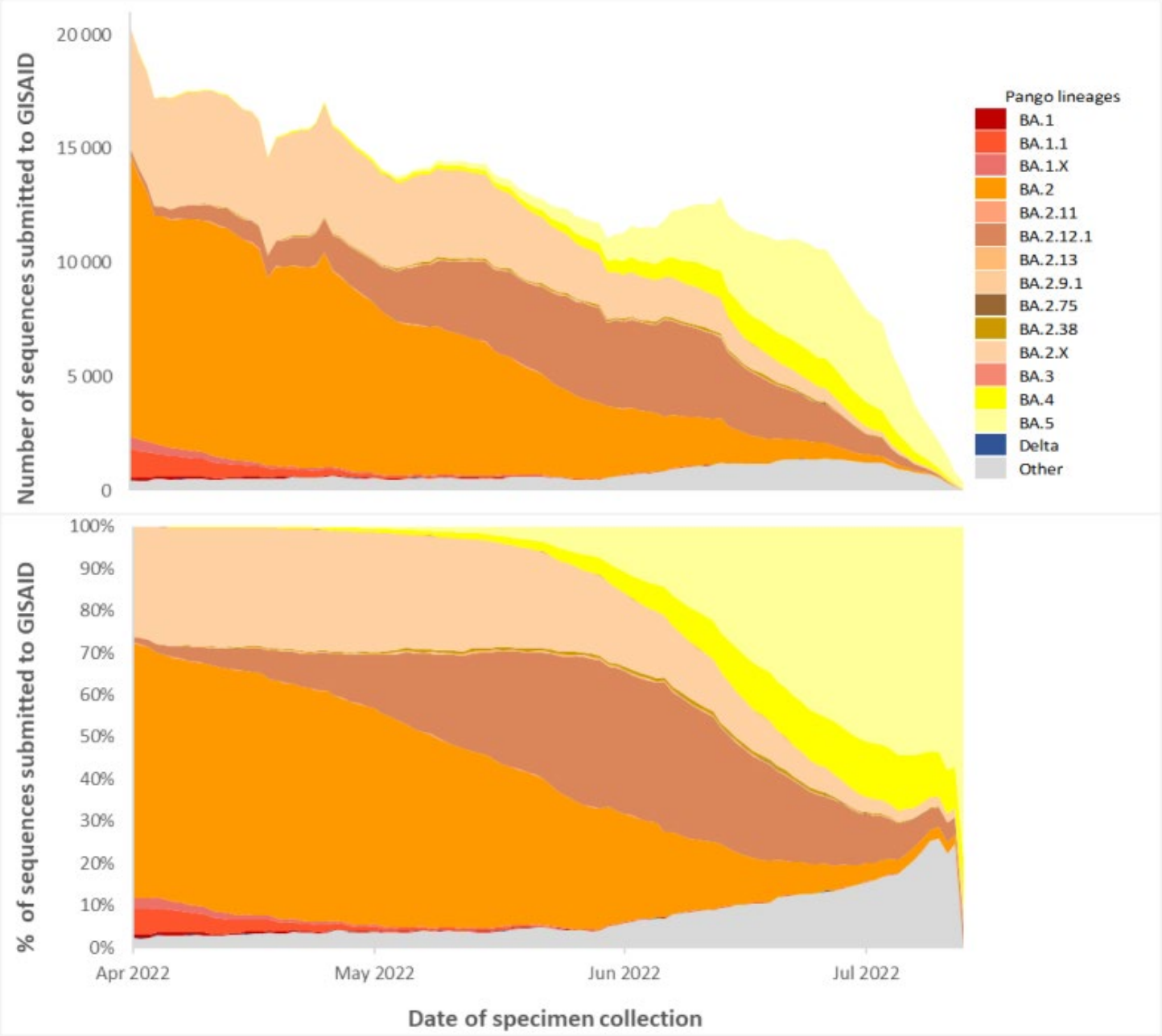


Figure 4. Panel A and B: The number and percentage of SARS-CoV-2 sequences, as of 18 July 2022



Number (top) and Percentage (bottom) of SARS-CoV2 sequences over time

POTENTIAL PROTECTIVE ADAPTIVE IMMUNE MECHANISMS INDUCED BY VACCINATION

Serum antibody[1,2]

- Neutralizing
- Non-neutralizing (ADCC, etc.)
- Functionality (opsonophagocytosis)
- Avidity

Mucosal antibody[3]

- IgA locally produced
- IgG diffused from serum

CD4+ T cells[4]

- B cell help
- T cell help (Th17)
- Cytokines
- Lysis
- Tregs

CD8+ T cells[5]

- Lysis
- Avidity

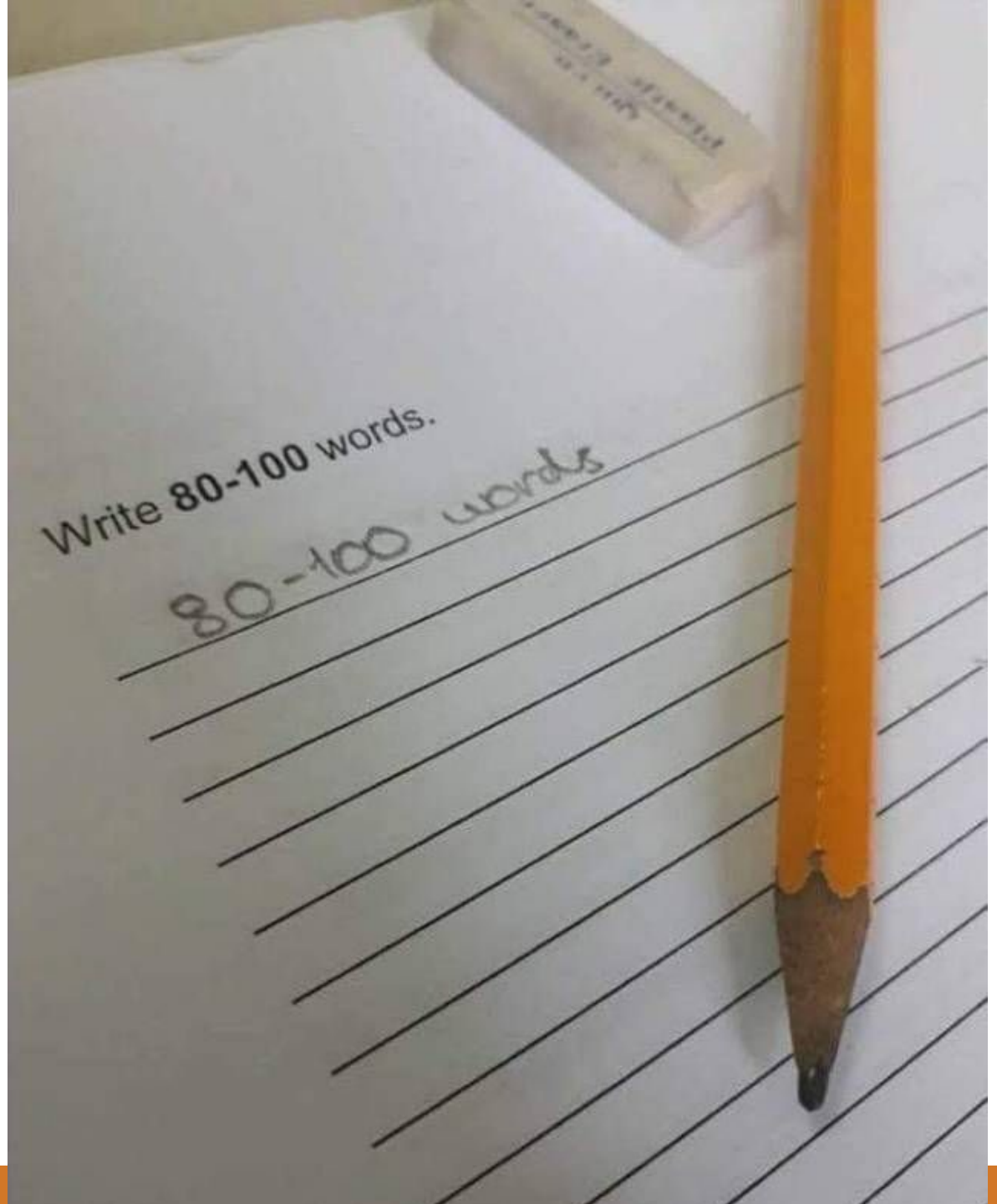
ADCC, antibody-dependent cellular cytotoxicity; CD, cluster of differentiation; IgA, immunoglobulin A; IgG, immunoglobulin G., Tregs, regulatory T cells

1. Pulendran B. Nat Immunol. 2011;12: 509–17. 2. Ricke DO. Front Immunol.12:640093; 3. Horton RE, et al. Front Immunol. 2013;4:200; 4. Swain LS, et al. Nat Rev Immunol. 2012;12:136-48. 5. Gilfillan CB, et al. Eur J Immunol. 2021;51:1348-60.

GCP, GMP, GLP, …

Good medical language (GML):

a prerequisite for good science and understanding



This study was done to evaluate the efficacy of influenza vaccine in reducing the incidence in patients with of **all-cause** pneumonia.

Some Causes of Pneumonia

- *Streptococcus pneumoniae*
- *Mycoplasma*
- *Chlamydia*
- *Mycobacterium*
- *Legionella*
- *Actinomyces*
- *Aspergillus*
- *Cryptococcus*
- Cytomegalovirus
- Measlesvirus
- Varicella

This study was done to evaluate the efficacy of influenza vaccine in reducing the incidence of **pneumonia of <u>any</u>-cause.**

Adolescents are a relevant reservoir of the meningococcus and in this age group meningococcal disease causes the highest **mortality**.

Adolescents are a relevant reservoir of the meningococcus and in this age group meningococcal **diseases** cause the highest ~~**mortality**~~ **case fatalities.**

Ticks are the carriers of many severe diseases.

Tick Borne Diseases and Their Causative Organisms in Europe

Tick Borne Diseases	Cause
Lyme disease	***Borrelia burgdorferi***
Tick Borne Encephalitis	**Tick Borne Encephalitis Virus**
Babesiosis	*Babesia spp*.
Crimean-Congo Haemorrhagic fever (CCHF)	Crimean-Congo Haemorrhagic Fever Virus
Human granulocytic anaplasmosis (HGA)	*Anaplasma phagocytophilum*
Rickettsiosis	*Rickettsia* spp.
Tick-borne relapsing fever (TBRF)	Spirochetes
West Nile Fever	West Nile Virus
Omsk Haemorrhagic Fever (OHF)	Omsk Haemorrhagic Fever Virus
Febrile neurological syndrome	Eyach virus
Powassan virus disease	Powassan virus
Tick paralysis	No pathogen but neurotoxins in tick saliva
Wound Infection	*Staphylococcus, Streptococcus*, others
Tularemia	*Francisella tularensis*

Heyman P, Cochez C, et al., A clear and present danger: tick-borne diseases in Europe. *Expert Rev Anti Infect Ther*. 2010;8:33–50.e; European Centre for Disease Prevention and Control/ Tick-borne diseases

Ticks are the carriers of many ~~severe diseases~~ **microoganisms** which may cause severe diseases

She developed Lyme disease after a **tick bite.**

Ticks Cannot Bite as They Have No Teeth

Ticks give unfriendly kisses on our skin?

Sauer JR. Tick salivary gland physiology. *Annu Rev Entomol* 1995;40:245-67.

I am not a native speaker …

- Are my examples correct?
- Any other comments?
- Do you have any other examples?

Please write me: ghc@gobalhealthpress.org

Public Health Emergency of International Concern (PHEIC): WHO definition

„A PHEIC is an extraordinary event which is determined to constitute a public health risk to other states through the international spread of disease and to potentially require a coordinated international response."

This definition implies a situation that is:

- serious, sudden, unusual or unexpected;
- carries implications for public health beyond an affected country's border and;
- may require immediate international action.

WHO had declared a PHEIC six times in the past, all for viral outbreaks:

1. January 2020 for COVID-19, declared when the virus was first detected outside of China. This eventually became a persistent global pandemic
2. July 2019 for Ebola, for the second time, relating to the outbreak in eastern DRC
3. February 2016 for Zika, which began in Brazil and affected mostly Latin America
4. August 2014 for Ebola, for an outbreak in West Africa that also spread to Europe and the US
5. May 2014 for polio, following a rise in the spread of "wild polio" and vaccine-derived virus in Afghanistan, Pakistan and Nigeria. Besides the one for COVID-19, this is the only PHEIC still in place.
6. 2009 for the H1N1 or "swine flu," which started in Mexico and spread across the world

More on Good Medical Language (GML)
What is wrong in media

- „Vaccine“ or „Vaccine Candidate“?
- „Small children“ versus newborns, infants, toddler, kindergarten-child …
- „Immunity“ or „Protection“?
- What is „Seroprotection“?
- „Efficacy“ or „Effectiveness“
- „Herd Immunity“ or „Herd Protection“?
- „Vaccine Licensure“ versus „Vaccination Recommendation“?
- Sensitivity & Specificity or „(Positive/Negative) Predictive Value“?
- „Disease“ versus „Syndrome“ … and other terms
- Microorganism versus Disease

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How many COVID-19 vaccine doses should I take?

If you´re clever, you take them all.