

COMMENTARY: Navigating COVID language traps

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I have been thinking and arguing about COVID-19 terminology since the pandemic started. I am especially interested in how public health professionals—both officials and outside experts—talk about COVID.



There are terms that public health professionals often use imprecisely. There are terms they often use incorrectly. And there are terms they often use in a way that's technically accurate but almost sure to be misunderstood by much of the public. Then, when they're predictably misunderstood, they claim they were clear and the public is "confused."

Politicians and journalists fall into these COVID language traps too. But for obvious reasons public health professionals should be held to a higher standard. And if they can do a better job of communicating clearly about COVID, maybe there's hope that others will improve as well.

Here are some of my musings about COVID language traps. This isn't truly an article. It's a list. Read the entries that interest you.

I have posted an [unabridged version](#) of this non-article article that's twice as long—with more terms and more details on each term—on my website.

Misinformation

The term "misinformation" used to mean and should mean verifiably false factual claims—claims that virtually all well-informed people consider disproved.

Sometimes it still means that. But to deeply committed people in many fields, "misinformation" now often means the "other side's" unproven hypotheses and speculations, but not "our side's" unproven hypotheses and speculations. I'd rather we didn't dub as "misinformation" overconfident, unproven claims that might or might not turn out true—though I concede that knowingly pretending an unproven claim is established truth is a kind of misinformation. But what's especially upsetting is when we apply a double standard to these claims depending on which side is making them.

Your unproven hypotheses and speculations are no more or less "misinformation" than mine.

Worse still, in political contexts "misinformation" has all too often come to mean merely statements—even verifiably *true* factual claims—that seem likely to lead people to conclusions or policies the speaker considers undesirable.

And COVID debates are unavoidably political. Any COVID-related statement that makes people less likely to get vaccinated or less likely to wear masks, for example, will be deemed "misinformation" by many public health professionals—and therefore sometimes by social media censors. That's true not just of verifiably false factual claims, but also of debatable factual claims where the evidence is mixed; and of opinions or recommendations that aren't factual claims at all; and even of verifiably true factual claims.

Consider a tweet that COVID is usually mild, so we should just rely on natural immunity and go about our business without boosters or other precautions. I think this is unwise advice. But its only factual claim, "usually mild," is verifiably true. Calling this tweet "misinformation" misuses the term.

Here's one of my favorite examples of a factually accurate COVID-related claim widely considered misinformation by public health professionals: COVID vaccines were granted Emergency Use Authorizations despite zero proof that they reduced the COVID death rate.

Even false factual claims are generally NOT deemed "misinformation" by public health professionals if they seem likely to lead people to conclusions that public health considers desirable.

This is flat-out true. Demonstrating a reduction in mortality would have required much bigger and longer-lasting trials; enough people in the placebo groups would have had to die to yield a statistically significant benefit of vaccination. That would have delayed the vaccine rollouts unconscionably. So the FDA sensibly settled for proof that the vaccines reduced the incidence of symptomatic

illness.

Conversely, even false factual claims are generally *not* deemed "misinformation" by public health professionals if they seem likely to lead people to conclusions that public health considers desirable.

I could offer a long litany of what I consider officially sanctioned COVID misinformation that public health professionals have declined to call misinformation at various times, including claims about:

- The efficacy of cloth masks
- Whether transmission is nearly always via droplets or often via aerosols
- The risk of outdoor transmission

- The likelihood of breakthrough infections in fully vaccinated and boosted people
- And on and on

Some of these false factual claims seemed likely to turn out true when they were advanced, and are "misinformation" only in hindsight. But even in hindsight public health professionals rarely use that term about their own mistakes. And some of these claims were advanced—almost always for prosocial reasons—by public health professionals who knew they were unproven or even had grounds to suspect they were false.

Mask

The term "mask" is simply too broad. It is applied to face coverings that provide meaningful inbound and outbound protection against COVID, such as N95s. And it is applied to face coverings that provide little to no protection against COVID—loose-fitting cloth masks, including sometimes even the flimsiest of bandanas and neck gaiters.

Ideally we would have different terms for masks of different protective value. We have one such term—"respirator" for the most effective face covering—but it's probably a lost cause to get people to use it much.

These distinctions are not subtle. You're probably safer wearing a well-fitting N95 respirator in a roomful of unmasked people than wearing a typical cloth mask in a roomful of people also wearing typical cloth masks.

Because most mask mandates deploy a broad lowest-common-denominator definition of "mask," as if all masks were created equal, they end up mandating a precaution that is

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sometimes more burdensome than beneficial. Evidence on the effectiveness of generalized mask mandates is mixed. It wouldn't surprise me if mask mandates were effective in direct proportion to which masks people voluntarily pick when mandated to wear whatever kind they want.

Mask terminology is just as problematic when advising people to mask up voluntarily. What sort of mask I'm wearing probably affects my health more than whether others around me are wearing any mask at all. Convincing people of this would be a lot easier if all masks didn't have the same name.

Airborne

COVID is transmitted mainly in two ways: via biggish droplets that are expelled into the air by an infected person and reach the face of another person before they can drop to the ground; and via smaller particles, called aerosols, that are also expelled into the air by an infected

person but hang in the air longer and travel through the air farther because they're lighter.

The distinction between droplets and aerosols isn't dichotomous. Nonetheless, it's a distinction that matters. Some precautions like social distancing protect us mostly from droplets, while others like ventilation are effective against aerosols—though it's important to note that aerosols can also transmit SAR-CoV-2 viruses at close range.

After 2-1/2 years of COVID, we still don't know how much transmission is via droplets and how much is via aerosols (with a small remaining percentage via surfaces).

In normal parlance, "airborne" means moving through the air. So in normal parlance, both droplets and aerosols are airborne. For people who talk normally, the COVID transmission question has been airborne (droplets or aerosols) versus surfaces: "Can I breathe it in?" versus "Dare I touch that doorknob?"; wearing masks versus washing packages.

In normal parlance, both droplets and aerosols are airborne.

In public health parlance, on the other hand, the term "airborne" is usually applied only to aerosols, although public health professionals' use of the two terms varies widely. So early in the pandemic, when the World Health Organization (WHO) insisted for many months that COVID was "NOT

airborne," it meant not (not ever?) transmitted via aerosols. Even before the consensus shifted and public health professionals decided the WHO was wrong (though they rarely accused the WHO of "misinformation"), many people found the claim confusing. "Not airborne" seemed to suggest that COVID must be transmitted mostly via surfaces, not when infected people expel virus particles into the air by coughing, sneezing, talking, or breathing.

Immunity

Most people see "immunity" as a dichotomous concept: You're either immune or you're not. But public health professionals use the term non-dichotomously.

But not always. Especially after the first COVID vaccines were introduced, they often overgeneralized about people who "had immunity" to COVID and others who "were not immune." Then they turned around and criticized non-scientists who similarly overgeneralized—who insisted that they were already "immune" from a prior COVID infection so they didn't need to get vaccinated, or who complained that they were misled that getting vaccinated would make them "immune" and then they got infected anyhow.

COVID vaccination gives the vaccinee immunity. How much immunity (and against what—eg, infection versus severe illness) depends on the vaccine, the recipient, and the virus variant. And then that immunity, partial from the get-go, starts to wane.

I'll get to "natural immunity" next; it, too, is partial and wanes.

"How much immunity" vaccination confers is a crucial COVID question. But if you see "immunity" as a dichotomous concept, "how much immunity" is a confusing question. Worse: To many people, "waning immunity" feels like it isn't immunity at all—which means COVID vaccination feels like a fraud.

Public health professionals exacerbated this problem in the early days of the pandemic by sounding like COVID vaccines were a silver bullet, leading people to expect that once vaccinated they'd be "immune" in the dichotomous sense—or impervious to COVID. But it's not entirely public health's fault; just the word itself set people up to get that impression.

A lot of risk-related terms have this "dichotomous or not" language problem. Two others I could have written about are "protection" and "prevention." If a COVID precaution—a booster, say—sensibly reduces your chances of serious illness, but not down to zero, does it "protect" you and "prevent" you from ending up in the hospital? No, if you think these terms are dichotomous. Yes, if you think they're not. Since people use these terms sometimes one way and sometimes the other, if you use them without specifying, you are setting yourself up to be misunderstood.

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Natural immunity

From time to time a term that public health professionals have been using for decades gets picked up by the general public—or worse yet, by a movement whose views are anathema to public health professionals (antivaxxers, for example). Sometimes they use the word incorrectly. But even when they're using it correctly, public health professionals are likely to say they're not—simply because they're using it to make a point that public health professionals disapprove of.

That's the fate of "natural immunity." In the public health literature, this term is routinely used and has long been used to mean exactly what antivaxxers use it to mean: immunity resulting from prior infection or perhaps from good overall health, but in any case *not* from vaccination.

But when huge numbers of COVID survivors started claiming that they had "natural immunity," many public health professionals suddenly objected that the term is misleading, even "misinformation"—despite its being public health's own term, used the same way public health professionals use it.

The tipoff is how many articles and op-eds started putting "natural immunity" in quotes to imply that it's somehow not quite real immunity. No one in public health ever puts "vaccine-induced immunity" in disparaging quotes.

Of course "natural immunity" has the same dichotomous-or-not problem as "immunity." Natural immunity doesn't mean you can't catch COVID, just as vaccine-induced immunity doesn't mean you can't catch COVID. But natural COVID immunity is real immunity, partial like all COVID immunity. Although public health professionals rightly want previously infected people to get vaccinated anyway, their objections to the term "natural immunity" are baseless.

Natural immunity doesn't mean you can't catch COVID, just as vaccine-induced immunity doesn't mean you can't catch COVID. But natural COVID immunity is real immunity.

I'm not suggesting that it makes sense to get infected on purpose, only that it makes sense to think you're safer after contracting COVID than you were before—and the conventional public health term for that increased safety is "natural immunity."

Just this month, the US Centers for Disease Control and Prevention (CDC) issued revised COVID

recommendations that finally took natural immunity into account, albeit without using the term. A CDC expert explained that "both prior infection and vaccination confer some protection against severe illness, and so it really makes the most sense to not differentiate with our guidance or our recommendations based on vaccination status at this time."

Case

Early in the pandemic, public health professionals tried to sustain a distinction between the virus named SARS-CoV-2 (not the virus's original name, but that's another story) and the disease named COVID (or more formally, COVID-19). If you're infected with SARS-CoV-2, they said, you might or might not come down with COVID. They failed. Even public health professionals now frequently call both the virus and the disease COVID, both when writing for the general public and when writing for each other.

Best example of this conflation: the term "COVID test." Similarly, experts now routinely point out that "COVID is often asymptomatic"—a sentence that is oxymoronic for those who still insist that COVID is a disease, not merely an infection. Diseases are symptomatic by definition.

So what's a COVID "case"?

When public health professionals are being careful, the word "case" is followed by "of"—or at least there's some nearby specification of what sort of case they're talking about—a case of infection, of a positive test result (with a specified test), of symptomatic illness, of medically attended and lab-diagnosed disease, of hospitalization, of death, etc.

When public health professionals aren't being careful, the word "case" is often ambiguous. And like most of us, public health professionals are often careless about language—with each other because they assume their fellow professionals will understand; and with the general public because they're not working hard enough to be understood.

When the term "case" is used with no specification of what it's a case of, the number of COVID cases is probably one of three numbers:

When public health professionals aren't being careful, the word "case" is often ambiguous.

- The biggest of the three is the number of people who are infected with SARS-CoV-2, whether they're aware of it or not—a number nobody knows, but experts can try to estimate it.
- The middle and most commonly used number is the number of people who have tested positive for SARS-CoV-2 in some public venue where test results can be counted. This number goes up or down not just depending on how much of the virus is around, but also depending on how many publicly reported tests are being done.
- The smallest and technically most accurate number of "COVID cases" is the number of people who are known to have tested positive for SARS-CoV-2 and have also been diagnosed as having COVID because they have symptoms that satisfy the case definition for COVID-19 disease.

What we mean by "case" becomes crucial when we start talking about case-fatality rates. The COVID case-fatality rate is a fraction. It's the number of people who have died of COVID (or *with* COVID—yet another terminological trap) in the numerator and one of these three vastly different "case" counts in the denominator. No wonder we see endless arguments over how deadly COVID is!

Booster

Many people think of a "booster shot" as any dose after the first one against a specific disease. But to experts, "booster" usually means a follow-up dose when protection that used to be sufficient isn't sufficient any longer.

If it takes more than one dose to get people sufficiently protected in the first place, then the second (or third, or nth) dose isn't technically a booster; it's part of what's called the "primary series." The Pfizer-BioNTech and Moderna COVID vaccines— the ones most commonly

used in the United States—both are given as a two-dose primary series.

For most Americans so far, any COVID vaccine dose after the first two Pfizer or Moderna doses is aimed at bumping up prior protection that was originally considered adequate. So it's a booster, regardless of why the bump is "needed" (another word that deserves exegesis): because the virus has changed, or because immunity has waned, or merely because even more immunity seems worth the minimal downsides of yet another shot.

COVID's "booster" terminological tussle is grounded in the controversy over COVID vaccination. It was clear from the outset that convincing millions of reluctant people to roll up their sleeves for a COVID shot was going to be a challenge. Most public health professionals figured the challenge would get even tougher if people realized that boosters might be needed down the road. So anyone who received two Pfizer or Moderna doses (or one Johnson & Johnson dose) was deemed "fully vaccinated" against COVID.

Unfortunately, vaccine efficacy waned more precipitously than the experts expected or hoped, especially against the various Omicron subvariants. So boosters became very important. For a while, pre-Omicron, mainstream public health resisted, fearful that a booster campaign would undermine the holdouts' willingness to get vaccinated at all. But with Omicron, the case for boosting became too strong to oppose.

That's when a lot of public health professionals decided it was a mistake to call COVID boosters "boosters." They feared that booster language would make a third shot sound optional rather than essential. Better to claim that the third shot was the completion of a three-shot primary series. That way, people with only two shots would feel some pressure to finish the job. Essentially, they wanted to give up on encouraging people to get their first shots by implying that two were enough, and focus instead on encouraging people to get their boosters by implying that three was the key.

Changing terminology in midstream this way might have been worth trying if there were grounds for confidence that three doses would be enough. But vulnerable people are already being advised to get a second booster. Are public health professionals now going to suggest, "Well, actually, it's a *four*-dose primary series"? And what if they end up recommending periodic boosters for years to come? How many times can they say a newly recommended shot isn't a booster but part of an endlessly lengthening primary series?

So the CDC devised a compromise. It still says anybody with two Pfizer or Moderna doses is "fully vaccinated." And it still calls all additional shots "boosters." But it introduced a new term, "up to date," for people who have gotten all the boosters currently recommended for their cohort. If you want to be up to date, the recommended boosters aren't optional.

Complicating things further, pathogens mutate, and sometimes a new mutation requires a new vaccine. That's why the flu vaccine changes nearly every year, as manufacturers try to match the flu strains thought likeliest to be circulating in the coming season. Public health

professionals rarely call the annual flu shot a "booster" because this year's flu vaccine is usually not the same vaccine as last year's.

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A reformulated COVID vaccine is expected to roll out this fall, a "bivalent" vaccine combining the original COVID vaccine dose with a new Omicron dose in the same shot. Public health professionals don't normally call a reformulated vaccine a "booster." But in the case of COVID, it looks like that's what they're planning to do. A COVID "booster" is coming to mean any shot beyond the primary

series that public health professionals want you to get—even if they now wish the primary series had included more than two shots, and even if the vaccine has been reformulated. That's a different meaning for "booster" than the usual one for other diseases.

Whatever "booster" means or comes to mean, we can't talk intelligibly about who ought to get another COVID shot without distinguishing the various reasons for getting one: your antibodies have waned, the virus has changed, you never had enough protection in the first place, you simply want more protection, etc.

Emergency

To qualify as an emergency, an event normally should be important, bad, sudden, and short-term. We sometimes deviate from these specifications. We may talk about a "minor emergency," for example, or even a "slow-motion emergency." But the essence of an emergency is the need to put aside your normal concerns and focus on this big new problem. In general, a situation isn't an emergency if it doesn't matter much, or if it comes on slowly with lots of time to prepare, or if it keeps going and you have little choice but to integrate it into how you live.

COVID was clearly an emergency in early 2020. It's debatable whether it's still an emergency in mid-2022—though even if it's not, a virulent new variant might make it an emergency again.

I'm almost certain that most Americans think COVID is no longer an emergency. Many public health professionals, on the other hand, say it is. Some may actually think COVID is still an emergency; others may want to keep calling it an emergency to justify some of the COVID precautions implemented under emergency conditions. And labeling COVID an official Public

Health Emergency (PHE) allows the Secretary of Health and Human Services (HHS) to take various actions, including using government funds and waiving certain legal restrictions while the PHE is in place.

COVID is still a very significant public health problem. We need to debate which precautions to keep in place, though I doubt that continuing to call COVID an "emergency" advances the debate.

It's no surprise that much of the public is highly motivated to "get over" COVID and return to normal life, while many public health professionals want the public to stay focused on the biggest public health emergency of their careers. This disconnect between public health and the public is probably inevitable, but it is one main reason for COVID polarization and declining public trust in public health officials.

Continuing the emergency designation has another legal element too, especially with regard to Emergency Use Authorizations (EUAs). Congress created the EUAs in order to let the Food and Drug Administration (FDA) okay drugs, vaccines, and other emergency countermeasures without making the manufacturer jump through all the hoops required for formal licensure. Once the HHS Secretary declares an emergency that threatens public health and safety, the FDA can issue EUAs for that emergency, authorizing temporary use of products that aren't licensed at all, or aren't licensed for a novel use.

Individual EUAs can be revoked if the product involved turns out ineffective or dangerous. (That's what happened to the EUA for hydroxychloroquine.) Otherwise, they're all good until the HHS Secretary formally declares the end of the emergency, or until licensure. The legal COVID "emergency" will last until some HHS Secretary decides to declare that it's over.

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There are current EUAs in effect for anthrax, Ebola, MERS, Zika, and H7N9 influenza, among others. As far as the US government is concerned, they're all still emergencies.

COVID-related EUAs keep getting issued and amended. They are routinely covered in the media with virtually no attention to whether there's actually still a COVID "emergency" that justifies approving unlicensed products to be used by millions of people.

EUAs are just the tip of the iceberg. A wide range of federal, state, and local laws and regulations are hooked to the pandemic "emergency." All sorts of requirements have been imposed or suspended; everything from Medicare rules to immigration rules to election rules

have been altered. Some of these pandemic provisions are worth keeping in place after the pandemic "emergency" is declared to be over. But many were promulgated under emergency provisions, without meeting the procedural requirements for normal legislation or rulemaking. When the pandemic "emergency" ends, these provisions may automatically revert to their pre-pandemic status unless or until they're promulgated in a non-emergency way—reason enough for many public health professionals to want the "emergency" status to continue.

Whether or not you think the medical and societal COVID "emergency" is over for now, the legal "emergency" shows no signs of abating.

Pandemic and endemic

There are lots of competing definitions of pandemics. What they all have in common is a disease, usually an infectious disease, that affects people (that's the "-demic" part) and is spread widely over many countries on several continents (that's the "pan-" part).

But even experts don't tend to use the term "pandemic" unless three other conditions are met.

A pandemic affects a lot of people. Rare diseases aren't usually called pandemic no matter how geographically widespread the very few cases are.

A pandemic is nontrivially harmful. We don't talk about pandemics of minor illnesses.

Perhaps most important, something about a pandemic is new in a threatening way. Sometimes it's a pathogen or at least a variant we haven't seen before. Sometimes it's a familiar pathogen that has suddenly changed for the worse: more deadly, maybe, or more transmissible. Something is new and bad.

A circulating disease behaving normally—nothing's new—isn't "pandemic" even if it meets all the other pandemic specs. It is "endemic" in places where it's circulating (which may or may not be worldwide). It's baseline; it's what we've come to expect.

In recent decades, "pandemic" has become a scary word. So declaring an emerging infectious disease a pandemic is a fraught thing for an official agency to do. In 2009, the WHO delayed calling the widely spreading, newly mutated H1N1 "swine" flu strain a pandemic for weeks after virtually all experts were certain it was one. Again in the early months of COVID-19's spread, there was great hesitation to declare or even predict a COVID pandemic. On February 22, 2020, my wife and colleague Jody Lanard and I wrote ["Past Time to Tell the Public: It Will Probably Go Pandemic, and We Should All Prepare Now."](#) We weren't the first to use the word "pandemic" about COVID. But we beat the WHO and the CDC.

Perhaps because the word "pandemic" is now so loaded and scary, the word "endemic" has come to seem to the public like something to hope for. Once COVID is endemic, many people figure (and some commentators claim), life will be normal again: no masks, no social distancing, no tests.

It's true that "endemic COVID" will be in some sense the new normal, so we'll have to get used to it and decide how to live with it. But we don't know how much worse than the old normal it will be. It's possible that a SARS-CoV-2 variant that stabilizes and becomes endemic could be worse (more deadly, more transmissible, more resistant to vaccines and treatments) than the pandemic variants we've endured so far.

To public health professionals, "endemic" has no connotation of "mild" or "manageable" or "easy to live with." Malaria is endemic in much of Africa, where it is far deadlier than COVID. And to public health professionals, "pandemic" doesn't connote horrific or devastating. The H1N1 flu pandemic of 2009 was a genuine pandemic because it was a new nontrivial flu strain spreading worldwide, even though it was less deadly than many endemic flu seasons.

To much of the public, on the other hand, "pandemic" does mean horrific and "endemic" does mean mild.

The actual meanings of the two terms notwithstanding, their connotations are what they are. Claiming that COVID is (or will soon be) "endemic" will be heard as claiming that it's not worth worrying about so much anymore. If you want people to keep worrying or dial their worry level back up, "pandemic" is the more convincing word for your purposes.

All the choices are bad. If you use "pandemic" and "endemic" correctly, you will be widely misunderstood. If you use these two terms the way they're understood by most people, you'll be using them incorrectly. Since both uses are in circulation, when others use these two terms, you will have to figure out (or guess) which meanings they have in mind. And when you use these terms, people who are aware of the definitional problem will have to figure out (or guess) which meanings you have in mind.

The only decent choice is awkward and burdensome: Point out the definitional confusion and specify which meanings you have in mind. "When I say 'pandemic' and 'endemic,' I mean this and not that."

I think that's your best choice for all the terms I have discussed. It's fine to avoid these terms when you can—but more often than not, you can't. In 2005 I wrote a website column titled "[Risk Words You Can't Use.](#)" I was kidding myself. It's almost impossible to talk about risk without using the terms in my 2005 column. And it's almost impossible to talk about COVID without using the terms I've been discussing here.

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public is confused."

So once you decide to use these terms, be explicit about what you mean. Just as important: Be explicit about what you don't mean. Warn your audience that other people often use the terms differently than you are using them. Or expect to be widely misunderstood.

And if you decide to go ahead and use a term in a way you know will be widely misunderstood, don't you dare pretend later that you were clear and "the