

# From 'bench-to-bedside' and more: Medical buzzwords decoded

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A few short weeks ago, the word "coronavirus" probably meant little, if anything, to most people. (Human coronaviruses were first identified in the 1960s and, while they vary in severity, all have the ability to cause respiratory illnesses.) But today, headlines with that medical term are popping up everywhere, as this new virus continues to spread across

China and the world.

So, after reading these articles, you may know a little about coronaviruses, but don't worry if you're confused by other medical terms you read or hear about. You're not the only one.

About 90 million Americans struggle to understand (and make decisions based on) the [health information](#) they receive from their doctors, according to a [national study](#). Health literacy—the ability to process health information and ask for appropriate services to address a health issue—is a crucial part of healthcare. Studies have found that lower health literacy levels are associated with more hospitalizations and not taking medications as prescribed.

But health literacy isn't just the patient's responsibility. Everyone who interacts with patients should strive to make sure what they are saying is absorbed. Communication can sometimes break down when doctors or other health care providers use medical jargon, or technical language that has a specific meaning only in medicine.

"While it is tremendously important for physicians to know this jargon—it's just that: jargon," says Yale Medicine ear, nose, and throat specialist Douglas M. Hildrew, MD. "If, as physicians, we cannot talk to our patients in a way that can be easily understood, remembered, and repeated, we are failing them."

Still, you may come across unfamiliar medical lingo in conversation or hear and read about it in the news. We asked Yale Medicine gastroenterologist Kenneth Hung, MD, to help us decode some medical buzzwords. (While this guide highlights some frequently used words, it's by no means a complete list.)

**What does "activities of daily living" mean?**

For people who are seriously ill or who have [neurodegenerative diseases](#) (such as ALS or Parkinson's disease), living alone can pose a health risk. The independence of a patient can be tested, in part, based on his or her ability to complete six basic tasks without help. These six tasks are called "activities of daily living," and they include the following: eating, bathing, dressing, going to the bathroom, controlling bladder and bowels, and getting out of bed or a chair without assistance.

## **What is an "acute illness"?**

When illnesses or conditions develop quickly and have symptoms that go away completely, like a case of food poisoning, doctors use the word "acute" to describe them. "Acute means something that is recent and usually lasts less than 30 days, but it can depend on the disease," Dr. Hung says. By contrast, chronic illnesses like [high blood pressure](#) or HIV/AIDS require constant management throughout life.

## **What is an "adverse event"?**

If a patient tries a new drug and it causes diarrhea, this bad side effect could be considered an adverse event. "It's a side effect that we do not want, and it can be expected or unexpected," Dr. Hung explains. Most adverse events are minor such as headache or cough, but adverse events can also be serious like death or stroke, he adds. The term is usually used in the context of clinical trials when testing the effectiveness of a new procedure or medicine.

## **What does "bench-to-bedside" mean?**

The term "bench" is a reference to the counter space in research labs. Researchers who work in labs usually conduct basic science research that aims to answer fundamental questions about science or medicine, but it

may not lead to the development of a drug or treatment that addresses a disease. However, some researchers design experiments so that the results, if positive, can directly affect patient care. This type of research is called "bench-to-bedside" and is often used interchangeably with the phrase "translational research."

## **What are "biologics"?**

"This is a hot term right now and refers to a class of medications that is not a pill," Dr. Hung says. "Biologics are drugs that basically work through your immune system to treat illnesses, and almost all of them are given through IV infusions, though some are injections," he says. The Food and Drug Administration (FDA) has approved a handful of biologics to treat rheumatoid arthritis, an inflammatory disorder. For example, the drug abatacept (brand name Orencia) is produced using DNA technology and affects the immune system's T cells.

## **What does "clinical care" mean?**

"This means care—you can take out the word 'clinical,'" Dr. Hung says. Clinical care involves everything done to help patients recover from their condition. It can include medications and procedures, as well as lab and imaging tests.

## **What is a "community setting"?**

When a patient receives care outside of a hospital, it's considered to be delivered in the "community setting." "We might tell a patient to have follow-up lab work done in the community," Dr. Hung says.

## **What is a "comorbidity"?**

"The term 'comorbidity' is a fancy word for other things you have going on with you," Dr. Hung says. A person may be seeing a doctor for high blood pressure, and may also have other serious health concerns, or comorbidities, like diabetes and obesity. When deciding which procedures or medications to use as part of a treatment plan, a doctor should consider all of the patient's health issues.

## **What is a "drug cocktail"?**

This isn't what it sounds like. It refers to a combination of medicines. "Some medications work well together," Dr. Hung says. Cancer and depression might be treated with multiple drugs at the same time (a drug cocktail) because they target different aspects of the diseases, or because combining them improves the overall effectiveness of the drugs.

## **What does "emergent" mean?**

An unresponsive patient having a heart attack or stroke is an example of a situation medical staff would consider emergent. "Emergent [think "emergency"] means something we have to do now," Dr. Hung says. On the opposite side of the spectrum is a "routine" case, like a skin rash.

## **What does "fail" mean?**

The meaning of the term "fail" depends on the patient and the procedure, according to Dr. Hung. Although it can be used in the context of a surgical procedure, he notes that a gastrointestinal example might be a failed colonoscopy, a procedure that involves pushing a camera on a probe through the colon to look for polyps, or unusual bumps or growths. "Maybe the colon was so twisted that I wasn't able to get all the way to the end," he says.

## **What is "genetics"?**

Genetics is the study of how genes are passed down throughout generations, as well as the study of individual genes and how they affect the body. You may, for instance, hear about genetic testing for cancer that identifies specific mutations that can be targeted for treatment or read news articles about genetic therapies for certain diseases, such as cystic fibrosis. Also, a hereditary condition, such as hemophilia, may be described as genetic.

## **What is "genomics"?**

Genomics is the study of the complete DNA sequence, or genome, in humans, with a focus on analyzing patterns from hundreds of thousands of genomes in order to prevent certain diseases from developing or to better treat the ones that do. For example, the genetically inherited condition familial hypercholesterolemia (FH) causes high blood pressure at a young age but may be overlooked until a person receives genetic testing. If treated early, FH can be a manageable disease.

## **What does "high-risk patient" mean?**

Patients with multiple, serious health problems are classified as "high risk." The chances of something going wrong during a procedure like surgery are higher for these patients. "Everything we do in medicine has risks and benefits, and, first, we must do no harm," Dr. Hung says. Some procedures that would work well in many patients could be potentially life-threatening for high-risk patients. A surgeon evaluating a high-risk patient, for example, may forgo traditional open-heart surgery in favor of a procedure that is less invasive.

## **What is "immunotherapy"?**



This type of therapy harnesses the body's immune system to fight a disease. Immunotherapy is most commonly associated with a drug class of cancer treatment, but it could also refer to allergy shots that help the body tolerate allergies better. A type of immunotherapy is now being tested in clinical trials for the treatment of multiple sclerosis. This is a growing field of medicine, one you can expect to hear more about in coming years.

## **What does "indication" mean?**

When someone has particular symptoms or a condition that can be helped by a specific medication, procedure, or test, then it is called an "indication." For example, a urinary tract infection is an indication for using antibiotics. "Rectal bleeding is an indication to have a colonoscopy to detect possible colon cancer," Dr. Hung says. Another way to think about the term is to ask: Does the medicine or procedure address the symptoms?

## **What does "interventional" mean?**

The term "interventional" is usually used within the context of interventional radiology, in which doctors use imaging (X-ray, CT scan or MRI) to guide them in doing a procedure. But other specialties, including cardiology and gastroenterology, also have doctors who sub-specialize in more complex techniques, which require additional training. "If you think about a snowboarder who can do crazy flips, then that's what an interventional specialist is kind of like," Dr. Hung says. All cardiologists can treat conditions like high blood pressure, for example, but only an interventional cardiologist would be able to use a catheter (a flexible tube) to insert a stent that can help open a blocked artery. "The word has, as its root, the word 'intervention,' which usually means a procedure to address something," Dr. Hung explains.

## **What is "length of stay"?**

Sometimes abbreviated as LOS, it refers to the period of time a patient stays in a hospital or any treatment facility. Typically, a shorter length of stay is considered to be an advantage (as with minimally invasive surgery), so patients are able to recover at home.

## **What does "outcome" mean?**

The term "outcome" refers to the end result of a condition or medical procedure. "A good outcome could mean a variety of things," Dr. Hung says. "This could mean a patient survives a disease or regains the ability to walk." A bad outcome can mean getting an infection or death.

## **What does "resistant" mean?**

"This means 'difficult to treat' and a drug that normally works won't work," Dr. Hung says. It can be used to talk about a bacterial infection that is "resistant" to standard antibiotics, meaning that more powerful antibiotics must be used. Resistant can also mean difficult to treat, in a way that is not the result of antibiotic resistance. "In this case, resistant can mean refractory," Dr. Hung says. This might be used to describe a person's high blood pressure that does not go down with a medication that most people respond to; treatment-resistant depression, for example, means that a person's mental state has not improved despite taking medicine for it.

## **What is a "survival rate"?**

"A rate is something over time," Dr. Hung says. "In this case, it is the amount of people who survive a condition over time." Doctors may mention survival rate to help patients gauge what to expect in and from



their treatment process. It represents a statistical probability and is not a prediction. The five-year survival rate for patients with prostate cancer, for example, is much higher than for those with pancreatic cancer.

## **What does "therapeutic benefit" mean?**

"Therapeutic benefit is a fancy term that describes if someone benefited or not," Dr. Hung says. The benefit depends on the goal of the patient and the doctor.

## **What does "tolerate" mean?**

When deciding which treatment to provide a patient, doctors balance potential benefits against the risks. "Tolerate basically means whether or not we think someone will do well with a therapy or procedure," Dr. Hung says. For a cancer patient, a doctor may decide the risks of chemotherapy, which usually cause patients to become very tired and weak, might be too much for someone who is already very weak from another treatment. If a person can handle the potentially bad side effects of a medicine and still benefit from it, then they would be considered able to "tolerate" the medicine or procedure, like surgery.

In the end, knowing some medical jargon might help you better navigate the next doctor's visit or news report.

Provided by Yale University

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