

Changes to hospital policies, public behavior critical for fighting COVID-19

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Hospitals around the nation have enforced stricter visitation policies and adapted new sanitation guidelines, among other measures, in response to the growing number of COVID-19 patients.



While these measures might seem extreme to outsiders, experts say they are necessary for slowing the spread of the novel <u>coronavirus</u>, which is more easily transmitted and more fatal than influenza.

COVID-19 has rapidly spread across the globe since it first infected a man in Wuhan, China in late 2019. Since then, much discussion has focused on the role surfaces play in transmission of the virus, said University of Arizona professor Kelly Reynolds, chair of the Department of Community, Environment and Policy in the Mel and Enid Zuckerman College of Public Health and director of the college's Environment, Exposure Science and Risk Assessment Center.

Before the COVID-19 outbreak, the idea that surfaces played a significant role in transmission was controversial, said Reynolds, who studies the transmission of germs from a variety of routes, such as food, water, air or person-to-person contact. Now, Reynolds is optimistic that the lessons learned from this pandemic will improve hygiene practices in the long run.

Reynolds talked to UANews about the precautions hospitals and households should take to slow the spread of the virus.

Q: What makes COVID-19 so infectious?

A: We're still learning a lot about how COVID-19 is spread, but we think the main route is through person-to-person contact, coughs and sneezes. Another way is via large droplets, which is different than being suspended in the air. That means when you cough or sneeze, little bits of saliva and mucus will quickly settle on surfaces, and new studies are now showing that the virus can survive for long periods on different surfaces. That's why you're being told to wash your hands often and not to touch your face. Hands touch many different surfaces and can transport infection into your body to get you sick.



Q: What is typically done to control infection in hospitals, and what is changing?

A: There are multiple routes of transmission in hospitals. The biggest is hand-to-patient contact. That's why there's so much emphasis on hand hygiene, and why you see hand sanitizers outside every hospital room door. Everyone should be sanitizing their hands when they go in and when they leave. Prior to this, hand hygiene was something hospitals struggled with. Our research shows a 50% compliance rate, on average, among hospital care staff. But now that everyone is hyper-aware, I'm hopeful that people are becoming more cautious.

Another strategic route is surface disinfection. Hospitals employ entire teams of experts that oversee environmental sanitation specially focused on cleaning rooms daily. When patients are discharged, they do a ceiling-to-floor intensive cleaning that takes up to two hours. But as the demand for rooms grows during this pandemic, and room turnover increases, this might be hard to maintain. If it takes two hours and we need to turn over rooms at a rate of 20 minutes, that doesn't leave enough time. We need to guard against this as well.

The other thing hospitals are really focused on is ventilation, or air exchange rates, in rooms. There are regulatory standards in air-change rates per hour for different types of rooms such as surgery, ICU or labor. CDC guidelines state that COVID-19 patients should be housed in an airborne infection isolation room with negative pressure relative to the surrounding area to prevent viruses from leaving the room. A minimum of six, and up to 12, air changes per hour is recommended. The air should also be filtered through HEPA (high-efficiency particulate air) filters before recirculating.

Q: What should the public understand about the



decision to limit hospital visitation?

A: We have evidence from previous outbreaks that social distancing can have a real impact on peak illnesses in a community, but this virus has so many unknowns. This will be a test of how effective social distancing can be. We are taking such drastic measures to flatten the curve (spread out the number of total cases over a longer period to prevent hospitals from becoming overburdened). And while there are many unknowns, I think social distancing is where we're banking on making the biggest impact. Because not everyone responds the same way, you can't be sure if the person you interact with is shedding the virus, so it's imperative that people start distancing now to stop the spread.

A lot of people wonder why we must socially distance ourselves for this virus and not the flu. It's because COVID-19 seems to be more infectious and we don't have a vaccine or herd immunity built up to protect those at risk. The thought is: If we don't act, it could turn out to be like the flu (which kills tens of thousands per year alone) or worse.

Q: Many restaurants have now closed for regular business and are offering takeout only. Is ordering takeout actually an improvement?

A: While ordering takeout can still be risky, it's a significant improvement, because you're minimizing the number of people you come into contact with in an enclosed environment. You don't have many people handling sugar packets and sauce containers and menus, for example. It's safer, but disease can still be spread. We're looking to minimize.

Q: Does any of this knowledge translate to the home?

A: Hospitals are conscious about disinfecting high-touch surfaces, which



is something we don't usually think much about at home, but what you touch daily or frequently that you don't think about disinfecting are hotspots for germ transmission. This is especially true if you're quarantining. There's a high probability that you could transmit it to a family member. Doorknobs, light switches, refrigerator handles, remotes, cell phones—we don't think about these surfaces, but we touch them all day long.

Q: Might anything positive come out of this?

A: From my perspective, as someone who works in infection control, I hope we sustain this level of hygiene. A lot of cold and flu cases can be prevented. These are things we're more familiar with and less afraid of and are therefore less careful, but maybe this will bring into focus the need to maintain these precautions for viruses perceived as less risky in the future.

Provided by University of Arizona

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