

# Medevac helicopter flights could be grounded by new 5G rollout

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Credit: CC0 Public Domain

The critically ill newborn baby was whisked by helicopter Saturday from rural Silverton, Oregon, to a children's hospital in Portland, the kind of life-saving transport Life Flight Network makes thousands of times a

year.

But starting Jan. 19, when new 5G [wireless service](#) kicks off across the country, such routine air-ambulance missions may no longer be permitted.

U.S. regulations in many cases require commercial helicopters—including air ambulances and scores of other operators—to have a functioning device known as a [radar altimeter](#). But new frequencies being shifted to 5G service may render them unreliable. That could make landings in remote areas dangerous and put Life Flight's hospital landing pads in Portland and Seattle off limits, said Ben Clayton, interim chief executive officer of the Aurora, Oregon-based nonprofit.

"We have a lot of trepidation over the potential impacts," said Clayton, who relayed details of the Saturday flight.

Wireless carriers point to research they say shows helicopters and 5G co-existing safely in other countries. But the Federal Aviation Administration on Thursday restricted helicopter operations in regions in which hundreds of hospitals are located unless manufacturers can demonstrate their aircraft can withstand 5G interference. The new limits are among 1,462 imposed on flight operations that rely on radar altimeters the agency posted on Thursday.

Unlike jets, helicopters operate close to the ground—where cell towers are located—almost all of the time. They also land frequently away from airports, making them one of the most difficult aviation issues to resolve with 5G.

## **Interference risk**

The issue is that new 5G signals operate in airwaves adjacent to those used by the altimeters. The wireless industry and the Federal Communications Commission, which approved the use of the frequencies, maintain the frequencies are far enough away from aircraft signals that they won't pose any danger. But tests by aviation groups have found the devices are susceptible to interference.

Fifty U.S. airports won at least a partial reprieve from the most draconian flight restrictions in a compromise between aviation regulators and AT&T Inc. and Verizon Communications Inc. announced on Jan. 3. But airlines, helicopter operators and scores of other aviation operators are girding for significant impacts once the new service switches on.

The six-month restriction on locating 5G cell towers near runways at those 50 airports only protect the last 20 seconds before landing, the FAA said on a website detailing its actions. The agency included potential restrictions for landings at many of the 50 airports, including Chicago O'Hare, New Jersey's Newark Liberty and Detroit Metro, in the documents it posted Thursday.

Additionally, many airports that could be subject to prohibitions on landing in low-visibility conditions weren't included on the list of 50. Portland International and Metro Oakland International in California, for example, have sophisticated instrument landing systems that the FAA will restrict starting Jan. 19, yet 5G towers can be located nearby.

"As a result, those airports will be left vulnerable to sweeping operational impacts during periods of low visibility once 5G is turned on January 19," the Regional Airline Association, a trade group representing the smaller partners of the major carriers, said in a press release.

The Airports Council International-North America trade group called the

list of 50 airports "irrelevant" since it expects limitations despite the agreement with the mobile service providers.

"This attempt at a short-term fix does not address a number of critical uncertainties about the potentially adverse impact of 5G on certain low-visibility approaches," ACI-NA said in a statement.

The actual impact on flights remains unclear as the FAA and the aviation industry sort through a dizzying set of variables, including the precise location of thousands of 5G cell towers, the power at which they will transmit signals and the direction signals are beamed.

There has been at least some cause for optimism in recent days as the [wireless companies](#) have begun sharing more precise data, allowing aircraft manufacturers to fine-tune analysis on the degree to which their devices are at risk.

"Since the agreement with the wireless companies was reached, the agency has made progress to safely reduce the risk of delays and cancelations as wireless companies share more data and manufacturer altimeter testing results arrive," the FAA said in a statement on Wednesday.

## **January deadline**

But even if companies are able to file applications with the FAA attempting to show their equipment is safe, the FAA may not be able to review and approve them before the Jan. 19 deadline.

The combination of helicopters' vulnerability and the lack of measures to protect them has the industry greatly concerned, the Helicopter Association International said Thursday in a statement.

"This situation, where lives have been put at risk, was completely avoidable," James Viola, president and chief executive officer of the association, said. "The families of those who die because a helicopter could not be dispatched to an accident scene that was too close to a 5G tower will not be consoled by faster Internet speeds."

The CTIA, a trade group that represents wireless service providers, said almost 40 countries around the world have allowed similar 5G signals and they operate without causing harmful interference to helicopters.

The agreement announced last week "includes the broadest and most stringent protection for helicopters anywhere in the world," CTIA said in a statement.

The federal requirement for radar altimeters on commercial helicopters is relatively new and was pushed by the National Transportation Safety Board after multiple fatal crashes in which low-flying copters struck the ground.

The Helicopter Association in October petitioned FAA to waive the requirement, arguing that alternative safety measures were available, and air-medical and off-shore oil flights would grind to a halt without an exemption. So far, FAA has not acted on the request.

Of the 300,000 people transported on air-medical helicopters each year, 40,000 to 50,000 are picked up from parking lots, open fields and other unimproved sites following an emergency, the helicopter group said in the petition to FAA.

One such flight occurred Tuesday night in South Kingstown, Rhode Island, after a fatal head-on crash. A Boston MedFlight helicopter had to touch down in a nearby field to pick up a critically injured 59-year-old woman, said Rick Kenin, chief operating officer-transport at the

company.

Boston MedFlight normally requires pilots to use night-vision goggles to minimize the risks on such operations because they help pilots see power lines, trees and other obstructions. But because FAA regulations require a working radar altimeter while flying with night-vision goggles, this is the type of flight that may not be legal after 5G gets switched on in the area, Kenin said.

Even if the FAA grants air-ambulance operators a waiver from the rules, allowing pilots to make such landings without the night-vision aids, Kenin says it's troubling.

"If we are going to a 5G interference area, we're going to be going back to the 1990s where we went in with eyeballs and a search light," he said.

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