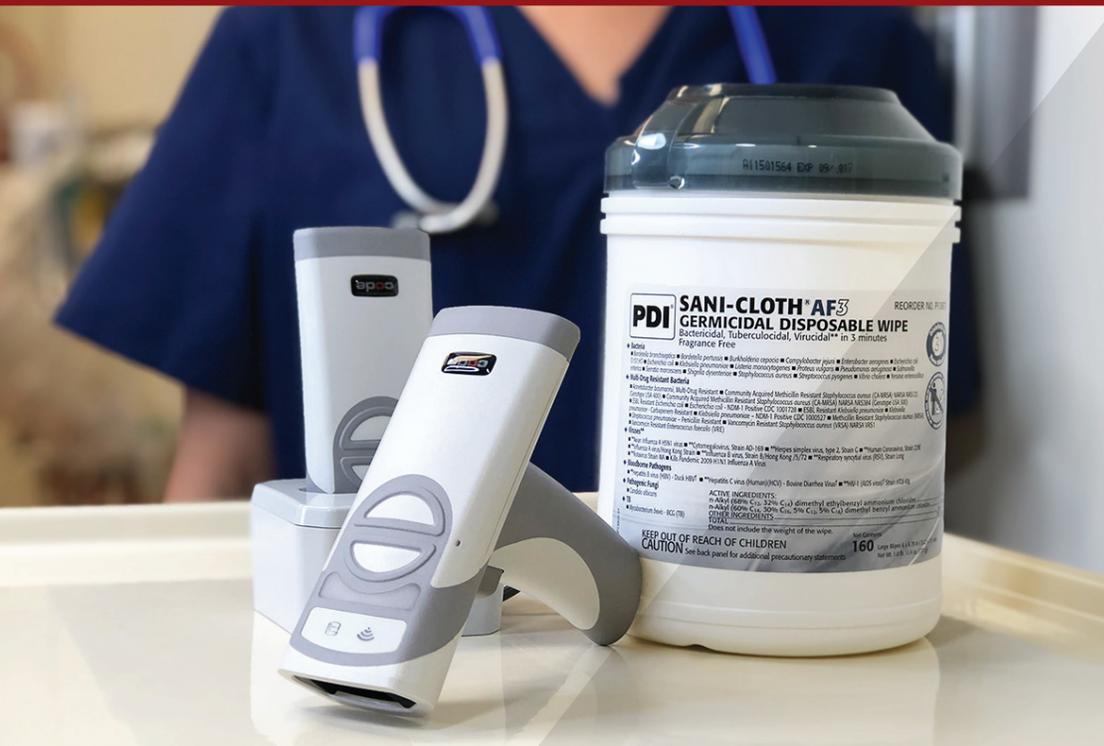


# ANTI-MICROBIAL DOES NOT MEAN DISINFECTANT-READY

Revolutionizing Data Capture in Healthcare

WHITE PAPER



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## Introduction

In the medical field there are two absolute truths: equipment is expensive, and it must stay clean. It only makes sense, then, that if purchased equipment cannot withstand the variety of harsh chemical cleaners used in hospital and clinic settings, it quickly goes from an investment aimed at improving patient care to an expensive doorstop or paperweight.

Barcode readers have proven to be an invaluable resource in hospitals world-wide, but it can be a challenge to find devices that complement each hospital's demanding work environment and also withstand the harsh cleaning necessary for infection control.

To some, anti-microbial plastics would seem the most effective solution; however, **there are many misconceptions surrounding what anti-microbial plastics offer compared to disinfectant-ready plastics.** Understanding these differences and the importance of the distinction can help hospitals and clinics to make better informed choices about the types of mobile equipment they will choose to arm their teams for the infection control battle they face.

## Hospital-Acquired Condition (HAC) Reduction Program

According to a 2014 report on National Public Radio, "In 2012, 1 out of every 8 patients nationally suffered a potentially avoidable complication during a hospital stay."<sup>(1)</sup> Centers for Medicaid and Medicare Services defines HACs as "a group of reasonably preventable conditions that patients did not have upon admission to a hospital, but which developed during the hospital stay." By 2018, that number had declined to only 1 out of 31 patients, so progress has been made, but it hasn't happened as fast as federal health officials would like.<sup>(2)</sup>

Under the Affordable Care Act, infection containment and reducing HACs has become a major focus. Medicare has begun a series of hospital evaluations looking at several HAC prevention areas and assigning each hospital an HAC score. As of October 1, 2014, as part of the HAC Reduction program, Medicare began penalizing hospitals with an insufficient HAC score.<sup>(3)</sup>

According to Ann Farrell, Principal at Farrell Associates Health IT Consulting, LLC, "Financial penalties are driving C-Suite focus (e.g. chief operating officer, chief executive officer) on infection control. While HACs are

multi-factorial, there is a growing awareness of the role devices taken room-to-room play in both spreading infection and prevention. These concerns have contributed to the rising number of in-room point of care device strategies and increasingly influence device vendor selection." **With this increased focus on infection control, it is important to have medical-grade plastics that can withstand the harsh chemicals needed to promote infection containment and decrease HACs.**

## Anti-Microbial vs. Disinfectant-Ready

According to Madison Group, an independent plastics testing company, antibacterial additives wear away with time, meaning the plastic ceases to resist bacteria after prolonged use and repeated cleaning and disinfecting. **Because anti-microbial additives are not inherent in the molecular structure, they weaken the plastic composition.**

In an interview for Plastic News, Manish Nandi, Senior Product Developer for Sabic Innovative Plastics, gave some insight on anti-microbial plastics. He mentioned that they are not a "cure-all" for disinfection and that, "the primary control is still going to be cleaning" with the anti-microbial additives acting as a sort of insurance policy.

The problem with this "insurance policy" is that it may not account for substances used to clean the device. In reference to the harsh chemicals used to disinfect devices, Nandi said, ". . . to kill these really resistant bugs, they are coming up with harsher and harsher chemicals. And that is putting pressure on folks like us who are making the materials and surfaces because these materials are not friendly to the harsher chemicals."<sup>(4)</sup>

**Customers who choose anti-microbial devices will potentially pay extra for a device that, over time, is no longer anti-microbial.** Testing and research have found that the plastic used for its construction has deteriorated from repeated exposure to the harsh chemical cleaning agent's healthcare teams use. This leaves these devices susceptible to harboring the very bacteria they were built to resist. As a result, these devices only end up delivering expensive repair and replacement costs. In this age of cost control measures to help make healthcare more affordable, the idea of purchasing a higher dollar peripheral, knowing you will need to replace it years before you should, is enough to send a strained budget and IT team into AFib—especially when there is another option! The alternative is to find devices that do not suffer from this type of decomposition; devices that can withstand the rigors of daily use and daily cleanings in hospital and clinic environments.

## Medical Grade/Disinfectant Ready

**The difference between anti-microbial and disinfectant ready is similar to comparing something that's water resistant to something that's waterproof.** While one offers you a minimum level of assurance or safety, the other offers you a guarantee. With an increased focus on infection control, the risk of financial punishment for HAC ratings, and continued focus on ways to reduce overall costs, hospitals and medical facilities are looking for better options. What they should be looking for is that guarantee.

**Disinfectant-ready materials will not break down when disinfected.** The purpose of these chemical compositions is to withstand different levels of harsh chemical cleanings. Disinfectant resiliency strength varies from product to product in order to accommodate different microorganism levels of control. **Manufacturers have different disinfectant chemical composition in order to attack microorganisms in different ways and not all disinfectant ready plastics are made equal.**

## How Code Can Help

The CDC recommends "Adequate cleaning and disinfection of equipment and environment" as part of infection control.<sup>(6)</sup> This recommendation requires that the equipment be able to endure the cleaning and disinfecting procedures without deterioration of the materials or degradation of function.

[Code purpose builds its healthcare data capture solutions](#) to withstand the abuse complex healthcare workflows deliver. As a result, Code offers a variety of barcode scanning solutions for hospitals, all featuring [CodeShield® Disinfectant-Ready plastics](#). These products are proven to withstand the repeated exposure to the harsh chemical cleanings and disinfectant products used in healthcare environments.<sup>(5)</sup> The variety of Code barcode scanning options available ensures that hospitals and clinics can find the solution combo they want, with the durability guarantee they need.

## Conclusion

Plastics injected with anti-microbial additives will resist growth of bacteria for an undetermined period of time, but that does not eliminate the need to clean and disinfect the device. **Anti-microbial plastic components are not made to withstand the harsh chemical cleaners found in healthcare environments.** As a result, facilities that choose anti-microbial over medical grade, disinfectant-ready plastics in their devices will run the risk

of continuing to spread infections from room to room and patient to patient, degrading in both materials and performance, and cost healthcare facilities additional money for replacement devices. This not only increases the cost to patients, but hospitals may see an impact to HAC scores which can lead to impacts in Medicare and Medicaid funding.

With risks this significant, the choice seems clear. For any additional information regarding Code plastics or [Code products](#) contact [visit our website](#) today or reach out through our [contact page](#).

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