ANALYST BRIEF
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The new healthcare industry landscape makes rapid and robust connectivity more critical than ever. Forward-thinking healthcare SMBs are investing in 5G to meet the challenge and to ensure growth in the future.

Prioritizing 5G for Healthcare SMBs

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Ambulatory and Outpatient Care Clinics Are Investing in 5G

Connectivity is essential for U.S. healthcare SMBs — companies with up to 999 employees — to meet their business priorities and goals.

For this reason, innovative healthcare SMBs are investing in 5G. According to IDC's March 2024 *U.S. Healthcare Provider IT Survey,* 5G is one of the three technology and IT initiatives that will have the greatest impact on healthcare over the next five years. And according to IDC's February 2023 *Worldwide Small and Medium Business Survey,* remote access to network- and cloud-based applications and support for video-based communication and collaboration are priorities for more than half of U.S. healthcare SMBs. 5G's improved networking capabilities offering higher speeds and bandwidth will enable healthcare SMBs to not only achieve these priorities but also reimagine healthcare delivery in a digital-first world.

AT A GLANCE

KEY STATS

- 55% of U.S. healthcare SMBs prioritize improving mobile workers' experience and productivity by providing remote access to network- and cloud-based applications.
- 31.4% of healthcare organizations are investing in public 5G as they modernize their underlying IT infrastructure technology (source: IDC's *U.S. Healthcare Provider IT Survey,* March 2024).

KEY TAKEAWAY

According to IDC's March 2024 *U.S. Healthcare Provider IT Survey,* 5G is a top 3 technology and healthcare IT initiative that will impact healthcare over the next five years. Planning and investing in 5G will provide many benefits to the healthcare industry, but 5G comes with challenges that must be carefully navigated with the right partners.

What Is 5G?

5G is the latest generation of cellular network technology being rolled out in the United States and many other parts of the world. It comprises both an over-the-air radio signal and core network enhancements, which together deliver significantly faster speeds, ultra-reliable low latency, and greater connection density. 5G's performance attributes improve the traditional smartphone user experience and can enable new services when integrated with other technologies such as augmented reality (AR), virtual reality (VR), robotics, and artificial intelligence (AI). However, it is important to note that 5G comes in several flavors, depending on the spectrum, which impact its performance and influence how and where it can be best leveraged in a healthcare setting.

Why 5G Matters to SMBs in Healthcare

The benefits of 5G are largely defined by generational performance improvements in speed/bandwidth, latency, and connection density. All of them are critical for healthcare connectivity.

The benefits of 5G for ambulatory and outpatient healthcare SMBs include:

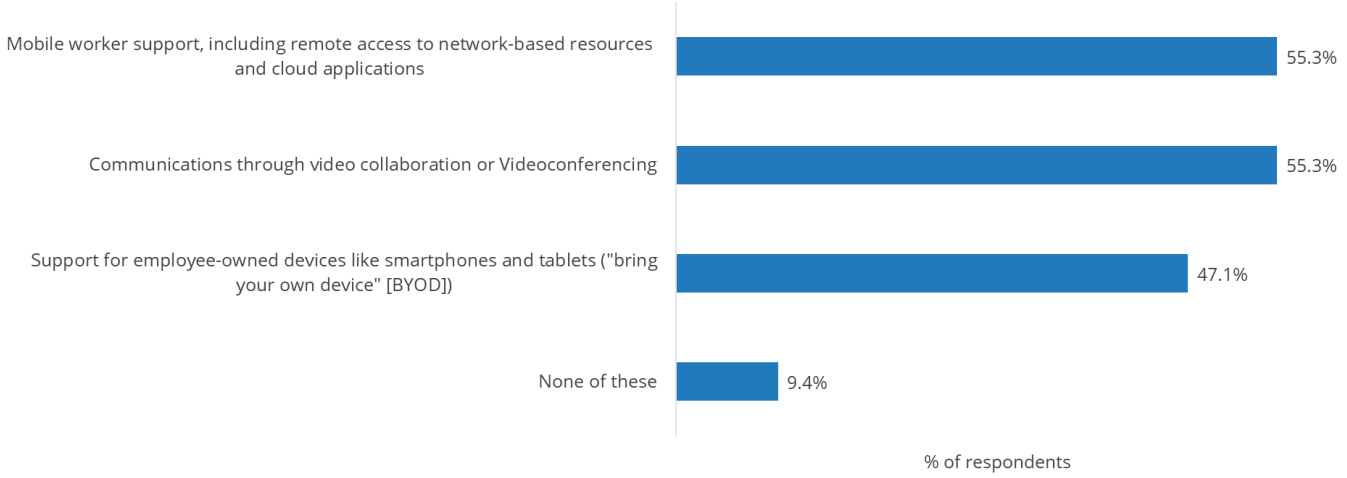
- **Better network performance that delivers higher-quality video essential for telemedicine and telehealth conferencing**. SMBs have moved past the adoption phase of virtual visits and telehealth and are now looking to enhance these technologies. For example, 31% of United States–based healthcare SMBs in IDC's February 2023 *Worldwide Small and Medium Business Survey* listed virtual and video appointments as technology priorities in the next 12 months compared with approximately 20% of SMBs a year earlier.
- **Improved bandwidth to accommodate larger data files**. Healthcare data volume is increasing exponentially with the widespread adoption of electronic health records, diagnostic imaging, and advanced analytics. 5G offers the necessary bandwidth to share these files.
- **A denser connectivity environment that better supports wearables and other remote monitoring tools.** The shift to providing more convenient access to care and the rise of consumerization are leading to increased adoption of remote patient monitoring devices and wearables to collect patient-generated health information, including biometrics and vitals.
- **Greater reliability, which is critical for wireless use cases.** Reliability is especially crucial in healthcare settings where seconds matter. The inherently mobile nature of healthcare work — moving from patient to patient and room to room, traveling in ambulances — requires wireless connectivity. 5G's benefits are amplified in organizations where workers are highly mobile, and communication is critical and time sensitive.

Prioritizing 5G Use Cases

The adoption of 5G in healthcare is part of a new wave of innovation and digital transformation that is increasing the ability to manage more data in real time to drive intelligent decision-making. There may be no industry more likely to benefit directly from all three of 5G's performance enhancements — speed, latency, and density — than healthcare. Capturing, transporting, and analyzing a large amount of data — think of a digital twin of the patient — requires an extraordinary amount of bandwidth and fast data rates. 5G has both, which is particularly useful when the patient requires treatment outside of a medical facility. There is a diverse set of 5G use cases for healthcare. Some are limited to a healthcare facility, while others may address patients and service providers in the field. Clinical use cases include telehealth and telemedicine, remote and bedside patient monitoring, tele-emergency medical services (EMS), AR/VR, and surgical robotics. 5G also optimizes connectivity for operational functions such as video conferencing and collaboration and supporting mobile and hybrid workers (see Figure 1).

FIGURE 1: ***Healthcare SMBs Are Investing in Video Collaboration and Tools to Support Remote Workers***

Q ***Which of the following employee experience and productivity areas will be technology investment priorities for your company in the next 12 months?***



n = 85

Source: IDC's Worldwide Small and Medium Business Survey, February 2023

With so many potential uses for 5G in healthcare, it is easy to focus on a single use case that is readily attainable or fills a gap in an institution's portfolio of care. But thinking of 5G use cases as one-and-done investments artificially caps 5G's potential to transform healthcare. 5G can serve as a platform to deploy and integrate use cases and to paint a comprehensive picture of a patient's health and treatment options, as well as deliver operational efficiencies for the organization as a whole.

Important Considerations for SMBs Deploying 5G

It's not enough to simply identify which scenarios are best for 5G connectivity and wireless networks. Healthcare organizations must also develop a clear vision of how they intend to leverage 5G to achieve their corporate goals and what a successful 5G deployment looks like.

Important considerations include:

- **How to measure the effectiveness of the 5G rollout.** Healthcare executives are rightly concerned about the current twin threats of inflation and recession. Projects that deliver a speedy ROI should take precedence over initiatives that do not recoup initial investments quickly. This is not always easy to do because many healthcare organizations don't apply appropriate benchmark key performance indicators. A thoughtful, pragmatic approach to understanding 5G's potential role that benchmarks new 5G metrics against earlier metrics will help demonstrate 5G's impact on operational efficiencies and its ability to expand coverage and diversity of care.
- **Who pays for 5G in healthcare?** Cost can be a barrier to entry to 5G for some SMBs, which are particularly price conscious, especially in today's macroeconomic landscape. According to IDC's February 2023 *Worldwide Small and Medium Business Survey,* 40% of U.S. healthcare SMBs say they were impacted by inflation in the past 12 months, and 34% expect to be impacted by it in the next 12 months.
- **Many 5G use cases rely on advanced technologies beyond 5G that need to evolve.** AI, AR/VR, data analytics, and robotics are a few evolving use cases. In addition, U.S. healthcare SMBs typically have very small IT staff, if they employ any IT workers at all. Fifty-three percentage of U.S. healthcare SMBs do not have a single full-time IT employee in-house, and of those that do, 53% have only two to four full-time IT workers. These SMBs may be leery of using advanced technologies that rely on 5G as they worry about staff training, implementation, and integration. Furthermore, executives from the business side, not the technology side of the company, are heavily involved in IT purchase decisions at 56% of healthcare SMBs. These decision-makers may be more hesitant to implement new technologies. For example, only 8% of U.S. healthcare SMBs listed AI as a priority for the next 12 months. However, it's important to note that with the recent swift rise of AI adoption, more technology suppliers are building AI capabilities into their tools and services, which allows SMBs to take advantage of the innovative tech without needing to implement, manage, and secure AI themselves.
- **More stringent privacy and security regulations in healthcare**. Security is a top priority for SMBs during the current shift to dispersed workforces and more digitized services such as video and virtual appointments and app-based services. Thirty-two percentage of U.S. healthcare SMBs listed enabling remote/mobile workers to securely connect to business systems as a top challenge to achieving their business priorities, according to IDC's February 2023 *Worldwide Small and Medium Business Survey*. Reliable, speedy connectivity is essential, but it must also be secure.

Healthcare SMBs Face Critical Challenges

Key trends that affect all healthcare organizations but are particularly challenging for smaller ambulatory or outpatient care clinics include:

- **Increasing volume and velocity of cyberattacks**. Ransomware that takes mission-critical IT systems offline, adversely impacting patient care as well as clinical and general operations, is the fastest-growing type of cyberattack. Patients must be able to trust that their protected health information is safe. A healthcare SMB's bottom line is adversely impacted when patient volumes are reduced because appointments were rescheduled or canceled or care was diverted to another — sometimes competing — hospital.

- **Clinical staffing shortages**. These shortages often result in more automation of clinical decision-making and technology to increase existing staff's productivity and efficiency. Many SMBs are keenly interested in automating processes to combat today's labor shortages and increased prices for skilled labor. Twenty-eight percentage of U.S. healthcare SMBs listed process automation and 27% listed connectivity automation as a forward-looking technology priority in the next 12 months, according to IDC's February 2023 *Worldwide Small and Medium Business Survey,* and 35–36%, depending on size, of North American SMBs report that inflation has led to rising costs of internal skills — the number 1 impact of inflation — according to IDC's 2Q22 *Cloud Pulse 2Q22 Survey*.
- **IT staff shortages**. SMBs should prioritize reskilling, upskilling, and retraining IT employees to attract and retain IT talent. Technical staff shortages are causing more healthcare organizations to rely on their technology suppliers not only for technology solutions as a service but also for professional and managed services.
- **Consumer demand for convenient access to healthcare**. Nearly one in five — 19.1% — of consumers would like to have virtual visits even after the COVID-19 pandemic is "over," according to IDC's January 2022 *U.S. Consumer Healthcare Survey*. Healthcare SMBs should revisit the telehealth options they added at the start of the pandemic to ensure these options can support a more robust telehealth practice that is fully integrated into clinician and consumer workflows and to be sure they provide a better user experience.

Taking the First Steps Toward 5G

5G is a journey, not a destination. Healthcare organizations can start on this path by deploying basic 5G use cases that enable "care anywhere" initiatives such as telemedicine, virtual visits, and remote patient monitoring. More advanced 5G use cases, like autonomous and surgical robots and immersive AR/VR medical training, require advanced data analytics. AI, AR/VR, and robotics technologies are still maturing and won't be fully viable for years. Healthcare executives need to take a pragmatic approach to understanding 5G's potential role in digital transformation when it comes to prioritizing use cases for their institutions.

Pick your 5G partners wisely; 5G is more than just a radio signal in the air.

Partnering with strong technology suppliers is just as important to achieving a successful 5G rollout. Healthcare organizations should pick their partners wisely; 5G is more than just a radio signal in the air. Institutions will need to rely on several vendors in the healthcare ecosystem, including medical device manufacturers, when adopting 5G. Healthcare organizations must ensure their partners implement robust security measures.

About the Analysts

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