



SHARED SMART DEVICES 2020

THE LATEST GENERATION
OF DEVICES FOR NURSES

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Shared smart devices are devices used by multiple care team members—mainly nurses but also some hospitalists and therapists—within the walls of the hospital. These devices are increasingly popular in healthcare as a means of improving communication and potentially consolidating the nurse toolbelt. In this high-level update to KLAS’ [2018 clinical mobility report](#), KLAS spoke to organizations using the latest devices from Apple, Vocera, or Zebra (about 10 customers per device). Have new models addressed older versions’ challenges with connectivity, call quality, durability, and battery life? Which devices best meet customer needs? Do Apple and Zebra continue with high mindshare, and what (if any) adoption have Ascom, Samsung, or Spectralink generated? Where does Vocera fit in the market landscape?

Apple a Solid Performer; Healthcare-Specific Zebra Strong with Some Limitations; Vocera Good for Communication, Limited Elsewhere

Organizations using **Apple** iPhones (model 7 or newer) say the consumer-grade devices have no significant weaknesses but are not ideal for healthcare. The biggest strengths are call quality and network connectivity, which has improved since a partnership with Cisco. The phones themselves are seen as more durable than older versions, though most clients still purchase mophie or OtterBox cases. Despite the cases’ added expense, overall cost is near average because customers often buy the phones at lower price points through local carriers. Some clients rate Apple lower because of the inability to swap out batteries and concerns about updates causing issues.

Zebra’s TC51-HC device stands out for its rugged design and the ability to hot-swap batteries, which enables the phone to be used continually. Zebra receives higher support and inpatient workflow ratings than other measured vendors; most respondents have replaced legacy phones as a result and are also using Zebra devices for barcode scanning and (to a more limited extent) photo capture. Weaknesses include the weight of the phones (some mention they can weigh down scrubs) and high cost. Also, the grill that protects the microphone can get gummed up and muffle the caller’s voice; multiple organizations have had Zebra replace the grills. Customers are hopeful the new TC52-HC design will fix this problem.

The **Vocera** Smartbadge is used primarily for its push-to-talk functionality and secure texting. The device has good connectivity and very strong underlying software and security. The cost of the Smartbadge is seen as high considering it has less built-in functionality (e.g., no scanner or camera)—thus, perceptions of value are lower.

Shared Smart Device Ratings

- Well above average
- Above average
- Average
- Below average

All ratings based on limited data (see page 5 for details)

	Connectivity		Features and functionality			Device attributes					Cost per device
	Network connectivity	Call quality (VoIP)	Support of inpatient workflows	Barcode scanning	Camera	Durability	Battery life	Minimizes bulkiness	OS/updates	Native security/privacy	
Apple iPhone 7 or newer (n=12)	●	●	●	●	●	●	●	●	●	●	\$500–\$1,000
Vocera Smartbadge (n=9)	●	●	●	N/A	N/A	●	●	●	●	●	~\$500
Zebra Technologies TC51-HC† (n=10)	●	●	●	●	Insufficient data	●	●	●	●	●	~\$1,000–\$1,400

† Zebra recently released an updated model, the TC52-HC, that some customers are just beginning to deploy. The vendor also offers the TC21-HC as a secondary device for disciplines like environmental services. Note: KLAS was not able to validate enough Spectralink, Samsung, or Ascom customers to include them in this performance chart. These vendors are included in later charts about purchase considerations.

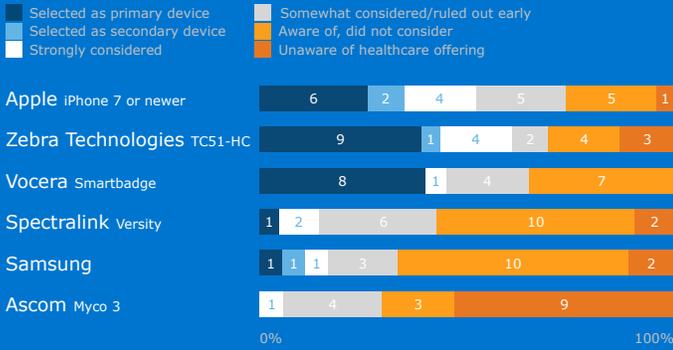
Apple Most Broadly Considered Thanks to Epic Integration; Zebra Strongest Android Option; Some Spectralink Consideration; Samsung Infrequently Considered

The **Apple** iPhone receives strong consideration, especially from Epic EMR customers, who highlight integration with Mobile Heartbeat’s secure communication platform and Epic applications like Haiku and Rover. Of the devices with an Android operating system, **Zebra** is the most broadly considered. Respondents cite strong apps and the built-in barcode scanner and camera. Organizations report the TC51-HC is sufficiently ruggedized for healthcare while still enabling customers to hot-swap batteries. In contrast, lack of battery durability and the inability to hot-swap keep standalone **Samsung** devices from being seriously considered except as secondary devices for non-clinical staff. The **Vocera** Smartbadge is being used primarily by existing communication badge customers; these organizations have deployed the Smartbadge on a limited basis while evaluating whether to upgrade enterprise-wide to its additional features (e.g., ability to text, receive screen-based notifications). However, due to the lack of other shared device functionality, like a camera and barcode scanner, some feel the Smartbadge fits more of a niche workflow and have chosen more functionality-rich solutions as a result. **Spectralink’s** and **Ascom’s** first devices were largely viewed as inadequate—the Spectralink phone was much too heavy, and Ascom’s screen size was much too small for commercial apps. Newer versions of the vendors’ devices seem to have rectified these challenges, but this has not yet resulted in a significant uptick in consideration or market share.

Purchase Considerations

Vendor consideration in purchase decisions since January 2018

(n=25 purchase decisions)

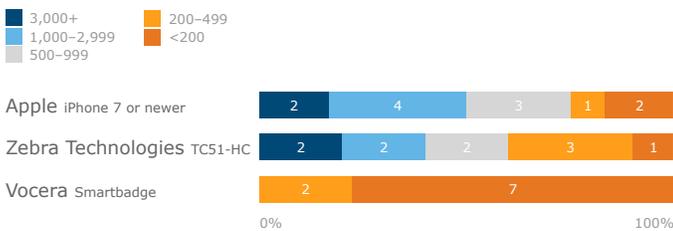


Zebra Used for Most Applications; Apple Used Broadly; Vocera Deployments Still Early

The majority of **Zebra** respondents have implemented Zebra phones to replace legacy phones; they also leverage the phones' barcoding functionality (for medication administration, specimen collection, etc.) and, to a lesser extent, the cameras. Both Apple and Zebra customers report wider ranges of fleet sizes—from small deployments to very large rollouts with thousands of devices. **Apple** had the largest rollout validated in this study (10,000+ devices). However, most Apple respondents are still in the process of replacing their legacy phones. Deployments of **Vocera** Smartbadges tend to be smaller in scope—no interviewed customers have deployed more than 400 devices. Replacing legacy phones with Smartbadges is feasible (a couple of organizations have done it), but most have not, mainly because they deployed their devices only in the last year and only in pilots in limited departments (e.g., ICU for voice calls and nurse call integration). Only proprietary applications can be used on Smartbadges; the devices are not designed for broader functionality.

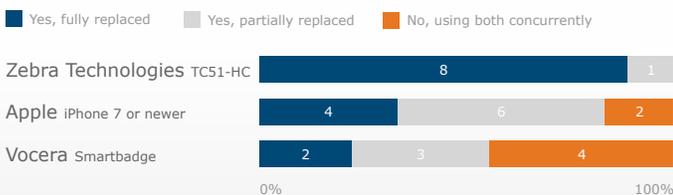
Size of Shared Device Fleet

How many devices of this type have you deployed?



Legacy Phone Replacement

Did you replace your legacy phones with shared smart devices?



Vendor Bottom Lines

Rated Vendors

Apple: Consumer-grade devices. Can replace nurse toolbelt. Most frequently used with Epic or MEDITECH EMR. Most respondents are in process of replacing legacy phones. Chosen for Epic integration, sleek UI, App Store (primarily used for EMR access and secure communications), and native device security. When not selected, reasons include perception as a consumer device, lack of ruggedness, cost, and frequent updates/app changes seen as difficult to manage.

Vocera: Healthcare-grade devices. Limited deployments; most respondents still piloting devices in limited departments. Robust push-to-talk capabilities. Not designed to replace nurse toolbelt; does not offer integrated camera or scanner. Most customers use Smartbadge for voice calls, secure texting, and nurse-call integration.

Zebra Technologies: Most respondents using TC51-HC (healthcare grade). Device considered a strong clinical tool that can replace the nurse toolbelt, including legacy phones, scanners, and cameras. Rugged device with ability to hot-swap batteries. Widely used at Cerner and Epic organizations; favored by Cerner organizations. Compatible with all clinical communication platforms. Downsides include overall device cost and bulkiness.

Note: Vendors fitting the scope of this report were invited to share a list of their healthcare client organizations. However, not all vendors responded, and some do not have enough customers for KLAS to measure their performance. As a result, performance could not be measured for Ascom, Samsung, or Spectralink. A short description of these vendors' shared smart device offerings is included below. As KLAS research in this market continues, updates on customer satisfaction will be shared on the KLAS website as available for these and other devices.

Non-Rated Vendors

Ascom: First-generation device had very small screen, leading to minimal industry adoption. Newer device has larger screen, but mindshare and market share have not caught up. Little consideration in recent decisions. Those that did consider say users preferred the experience with other devices or felt the device had limited features or was too proprietary in nature.

Samsung: Several years ago, more commonly utilized as primary clinical shared devices. Most organizations making decisions today don't seriously consider Samsung devices (consumer grade), preferring to utilize more rugged hospital-grade Android devices that allow battery hot-swapping. Historically, some customers have used other vendors for their primary device and used Samsung for secondary devices for clinical support staff who need less broad functionality, like transport teams, environmental services, or food/dietician teams.

Spectralink: Hospital-grade devices. Average consideration due to vendor history in phone systems. Initial version of shared smart device was bulky, had limited uptake. Past issues contribute to middle-of-the-road consideration today; reasons for not selecting Spectralink include limited install base and inability to get applications/EMR to work on devices.

REPORT INFORMATION

About This Report

The research questionnaire for this study asked respondents to describe their own primary vendor's performance and to identify what other shared smart device vendors they considered and why.

The data in this report was collected over the last six months; the number of unique responding organizations for each vendor is given in the chart below.

	# of Unique Organizations Interviewed	Estimated Customer Base (Shared Smart Devices)
Apple iPhone 7 or newer	12	~100
Vocera Smartbadge	9	20-40
Zebra Technologies TC51-HC	10	~100
Other Validated Vendors		
Ascom Myco 3	0	<20
Samsung	2	<20
Spectralink Versity	1	<20

Note: Some organizations may have rated more than one product.

What Does “Limited Data” Mean?

Traditional KLAS research often focuses on quantitative (numeric) ratings for products. This research is focused more on assessing whether shared smart devices meet healthcare needs. For this study, KLAS aimed to interview about 10 organizations per vendor for each of the main shared smart device vendors in healthcare (Apple, Vocera, and Zebra). Most interviewed organizations use hundreds to thousands of devices and can therefore offer a clear view of how well the devices meet the needs of healthcare users.

KLAS' traditional data threshold for displaying ratings as fully rated is 15 unique responding organizations. Since no vendor's sample meets this threshold, all ratings throughout this report are marked with an asterisk (*) or otherwise designated as “limited data.” If the sample size was less than 6, no rating is shown. Additionally, a vendor's sample size may vary from question to question as individual respondents sometimes could not answer all questions, either because they were unfamiliar with a certain device aspect, their organization does not use a specific functionality, or their organization is too early in its deployment to comfortably comment.

Reader Responsibility

KLAS data and reports are a compilation of research gathered from websites, healthcare industry reports, interviews with healthcare organization executives and managers, and interviews with vendor and consultant organizations. Data gathered from these sources includes strong opinions (which should not be interpreted as actual facts) reflecting the emotion of exceptional success and, at times, failure. The information is intended solely as a catalyst for a more meaningful and effective investigation on your organization's part and is not intended, nor should it be used, to replace your organization's due diligence.

KLAS data and reports represent the combined opinions of actual people from healthcare organizations regarding how their vendors, products, and/or services perform against their organization's objectives and expectations. KLAS findings are a unique compilation of candid opinions and are real measurements representing the feedback of interviewed individuals. The findings presented are not meant to be conclusive data for an entire client base. Significant variables—including a respondent's role within their organization as well as the organization's type (rural, teaching, specialty, etc.), size, objectives, depth/breadth of software use, software version, and system infrastructure/network—impact participants' opinions and preclude an exact apples-to-apples vendor/product comparison or a finely tuned statistical analysis.

We encourage our clients, friends, and partners using KLAS research data to take into account these variables as they include KLAS data with their own due diligence. For frequently asked questions about KLAS methodology, please refer to the KLAS FAQs.

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Note

The findings presented are not meant to be conclusive data for an entire client base. Performance scores may change significantly when additional healthcare organizations are interviewed, especially when the existing sample size is smaller, as in an emerging market with a small number of live clients.



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Our Mission

Improving the world's healthcare through collaboration, insights, and transparency.

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