Healthcare consumers want a digitally enabled care experience, and they are initiating it with greater use of digital tools and electronic health records.
The patient experience is going digital in Singapore, and consumers are leading the way by using digital tools, such as wearables and apps, and accessing electronic health records (EHRs) to manage their health.

Singapore has had a National Electronic Health Record (NEHR) in place for a number of years, which provides authorized healthcare professionals, at the point of care, access to summary patient records from the individual public healthcare institution’s electronic medical records (EMR).

There is a mixed environment in Singapore as each of the public healthcare institutions have good access to EMR systems and the NEHR, whilst the non-public sector has inconsistent access to EMR systems, which are not integrated into the national systems. Recently, access to some of the summary patient healthcare information has been enabled through a nationally launched citizen facing portal.
Singaporean healthcare consumers see EHRs as a tool

The divide between consumers and doctors in Singapore who believe that patients should have full access to their own electronic health records (EHRs) has widened from two years ago—with patients now four times as likely as doctors to believe that patients should have full access to their records.

Specifically, while the number of consumers who believe they should have full access to their records has increased over the past two years—from 73% in 2014 to 82% today—the number of doctors who shared that belief dropped significantly, from 30% to 17%, during the same period.

Access to electronic health records

The Accenture survey found that two-thirds (66%) of consumers who believe they should have EHR access want to see exactly what the doctor sees—not a summary. This comes as the number of patients who know exactly what they can access in their EHRs increased 45% over two years, from 44% in 2014 to 64% today. However, significantly more consumers are likely to access their EHR to stay informed than to help with making medical decisions (27% vs. 11%). Consumers with EHRs most commonly find physician notes about the visit (34%) and lab results (28%) the most helpful data for managing their health.

Consumers have strong views on who should access their EHR data. While more than half (57%) view an EHR as a tool for their primary doctor, only 12% of consumers believe that the government should have access to their records, while only 5% of consumers believe that employers should.

Source: Accenture 2016

FIGURE 1. Who should have access to your EHR?

My primary doctor: 57%
Me: 50%
My other doctors/specialists: 35%
Anyone I give permission to: 45%
Hospitals I visit: 48%
Urgent care centers I visit: 23%
Doctors/specialists performing procedure in other country: 22%
My pharmacy: 13%
Family members: 30%
Caregiver: 15%
Retail clinics I visit: 19%
An overseas health expert performing clinical analysis: 13%
My employer: 5%
The government: 12%

Source: Accenture 2016
EHRs for improved care delivery

A majority of healthcare consumers in Singapore (90%) believe they receive better care when doctors can access and use their EHR.

Benefits of data sharing outweigh risks

Despite concerns about privacy and some reluctance to share health data, most consumers say the benefits of being able to access medical information electronically outweigh the risks. In 2016, 66% of Singaporean healthcare consumers said that the benefits of accessing medical information electronically outweigh the risks, compared to 53% in 2014.

Source: Accenture 2016
Use of wearables and apps have increased in two years

Among those using technology to manage their health, the number of Singapore consumers who use wearables and mobile apps for managing their health has increased slightly since 2014. Specifically, the number of consumers who use health apps increased from 40% in 2014 to 44% today, and the number who use health wearables increased from 17% to 23% during the same time. In addition, the majority of consumers (78%) and doctors (81%) said that using wearables helps a patient engage in their health.
Consumers and doctors in Singapore agree that wearable health devices help patient engagement.

**CONSUMER PERSPECTIVE**
- Engagement with own health: 78% Helps, 6% Has no effect, 16% Hurts
- Accuracy of medical record: 72% Helps, 23% Has no effect, 6% Hurts
- Patient/physician communication: 68% Helps, 26% Has no effect, 6% Hurts
- Patient satisfaction: 62% Helps, 32% Has no effect, 6% Hurts
- Understanding of health condition: 82% Helps, 12% Has no effect, 5% Hurts
- Overall quality of care: 71% Helps, 23% Has no effect, 6% Hurts
- Reduction in cost of healthcare: 56% Helps, 33% Has no effect, 12% Hurts
- Monitoring the health of a loved one: 81% Helps, 14% Has no effect, 5% Hurts

**DOCTOR PERSPECTIVE**
- Engagement with own health: 81% Helps, 11% Has no effect, 8% Hurts
- Accuracy of medical record: 63% Helps, 11% Has no effect, 8% Hurts
- Patient/physician communication: 67% Helps, 35% Has no effect, 8% Hurts
- Patient satisfaction: 72% Helps, 22% Has no effect, 5% Hurts
- Understanding of health condition: 71% Helps, 23% Has no effect, 6% Hurts
- Overall quality of care: 73% Helps, 33% Has no effect, 5% Hurts
- Reduction in cost of healthcare: 43% Helps, 39% Has no effect, 8% Hurts
- Understanding of health condition: 82% Helps, 7% Has no effect, 18% Hurts

A majority of patients in Singapore (87%) are willing to share wearable or app data with their doctor; 82% are willing to share with a nurse or other healthcare professional.

**FIGURE 5.**
Patient willingness to share wearable or mobile app data

- **WITH DOCTORS**
  - 87% Willing
  - 13% Not willing

- **WITH NURSES**
  - 82% Willing
  - 18% Not willing

Source: Accenture 2016
Singaporean healthcare consumers believe in the power of healthcare technology, but they also value in-person interactions.

Many consumers (63%) say technology is important to managing their health. Among consumers who say technology is important, more than one third (38%) say it helps them better understand their condition(s) and medication(s).

Interestingly, despite perceived positive effects on patient engagement, few consumers in Singapore report that their doctors (22%) have recommended they use wearable technology to track their vital signs or fitness and lifestyle. As Singapore embarks on initiatives such as Smart Nation, there is more interest in understanding how wearables and fitness devices can be included to assist both the consumer or the patient and the healthcare professional in wellness and health monitoring.

Source: Accenture 2016
Although patients in Singapore see the benefits of technology for managing their health, virtual or remote health engagement is still the exception. Traditional, in-person visits remain the standard for most consumers, with 72% preferring traditional over remote visits. Quality care is still associated with in-person visits, which is likely a barrier to increasing virtual visits further.

**FIGURE 8.**
Perceived advantages of virtual or in-person visits.

<table>
<thead>
<tr>
<th>Advantage</th>
<th>In-Person</th>
<th>Virtual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing quality care to patients</td>
<td>13%</td>
<td>64%</td>
</tr>
<tr>
<td>Diagnosing problems faster</td>
<td>23%</td>
<td>55%</td>
</tr>
<tr>
<td>Engaging patients in their health/healthcare decisions</td>
<td>19%</td>
<td>53%</td>
</tr>
<tr>
<td>Providing timely care to patients</td>
<td>28%</td>
<td>41%</td>
</tr>
<tr>
<td>Reducing potential (or number of) adverse events</td>
<td>22%</td>
<td>29%</td>
</tr>
<tr>
<td>Accommodating patients’ schedules</td>
<td>16%</td>
<td>56%</td>
</tr>
<tr>
<td>Accommodating physicians’ schedules</td>
<td>19%</td>
<td>40%</td>
</tr>
<tr>
<td>Reducing medical costs to patients</td>
<td>16%</td>
<td>58%</td>
</tr>
</tbody>
</table>

Although distance and geography are not an issue to gaining access to healthcare in Singapore, for those patients with limited mobility or access to transport, the possibilities for virtual or remote health enables convenience and removes anxiety. In addition, use of remote monitoring for close monitoring of patients post discharge provides reassurance that care is still being provided and enables the healthcare professionals to monitor patients more closely.

However, there are signs that some consumers are becoming more accepting of virtual visits and remote monitoring, at least under certain conditions. Nearly half of consumers in Singapore (49%) would prefer a virtual, over an in-person visit, if it meant they could see the doctor sooner. Like everywhere else, Singaporeans do not like being on a waiting list to see the doctor.

**FIGURE 9.**
Time savings impact in-person vs. virtual visit preferences.

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Source: Accenture 2016
PREPARE FOR THE FUTURE BY CLOSING THE GAP

Consumers in Singapore are increasingly embracing digital tools, such as EHRs, wearables and apps, to manage their health. Singaporeans see value in EHRs, yet there is an opportunity for physicians to increase the level of transparency and improve communications with patients.

While Singaporean consumers embrace technology, there is a gap in the mechanisms of funding digital healthcare, as it is currently not proven to significantly impact the health outcomes and the potential additional out of pocket costs to fund the technology are a barrier to adoption. There is also a gap in clinician behavior with the majority of clinicians requiring compelling evidence to use technologies that they perceive as unproven or unfamiliar – cultural change takes time and motivation.

Providers that invest in digital tools and develop strategies to adapt to consumers' expectations will close the gap between what patients demand, and what providers deliver.
Accenture commissioned a seven-country survey of 7,840 consumers ages 18+ to assess their attitudes toward health, the healthcare system, electronic health records, healthcare technology and their healthcare providers’ electronic capabilities. The online survey included consumers across seven countries: Australia (1013), Brazil (1006), England (1009), Norway (800), Saudi Arabia (852), Singapore (935) and the United States (2225). The survey was conducted by Nielsen on behalf of Accenture between November 2015 and January 2016. The analysis provided comparisons by country, sector, age and use. Where relevant, the survey uses select findings from the 2016 Accenture Doctors Survey to compare the doctor and consumer responses.

* Numbers in the figures may not add to 100% due to rounding.