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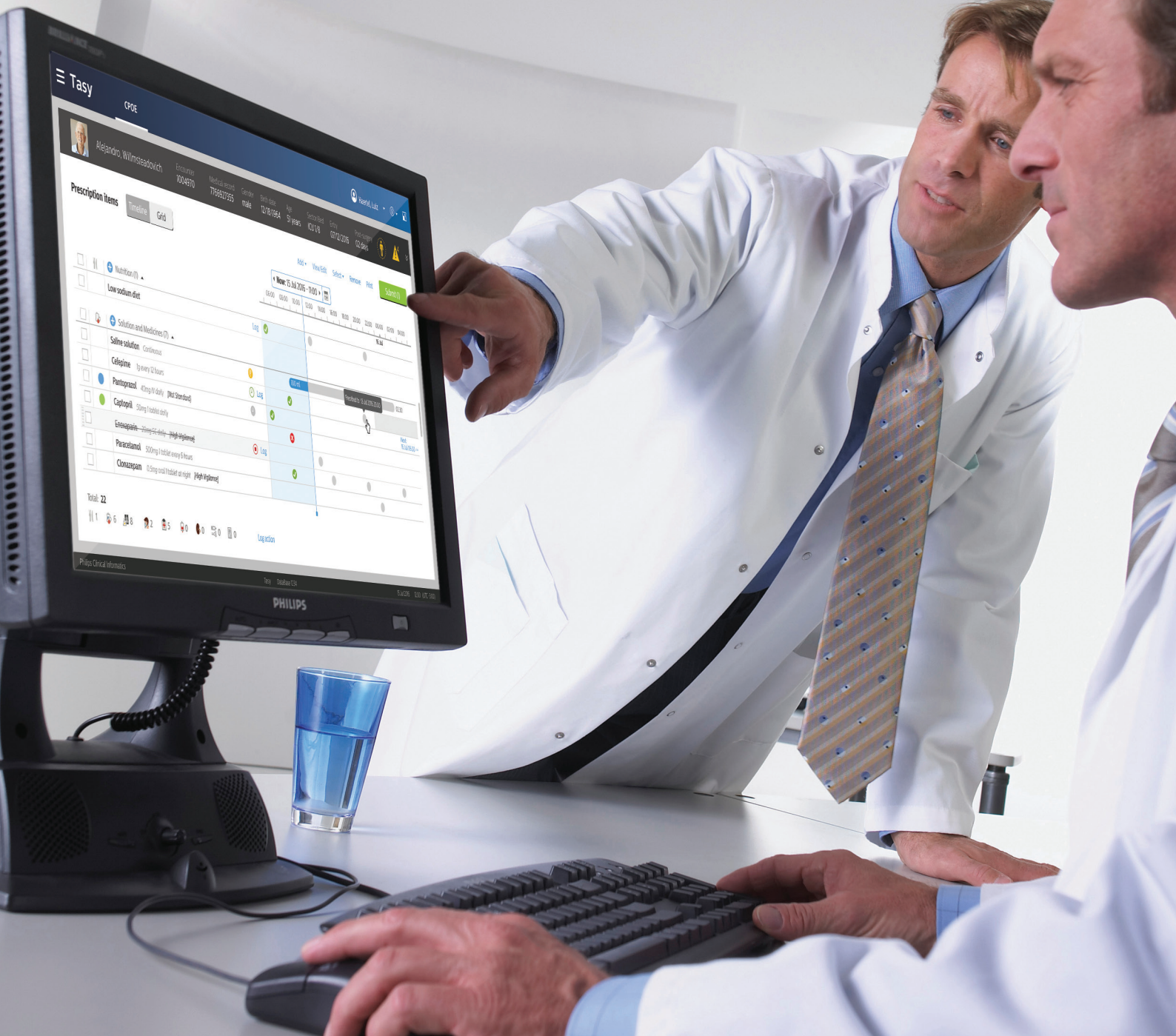
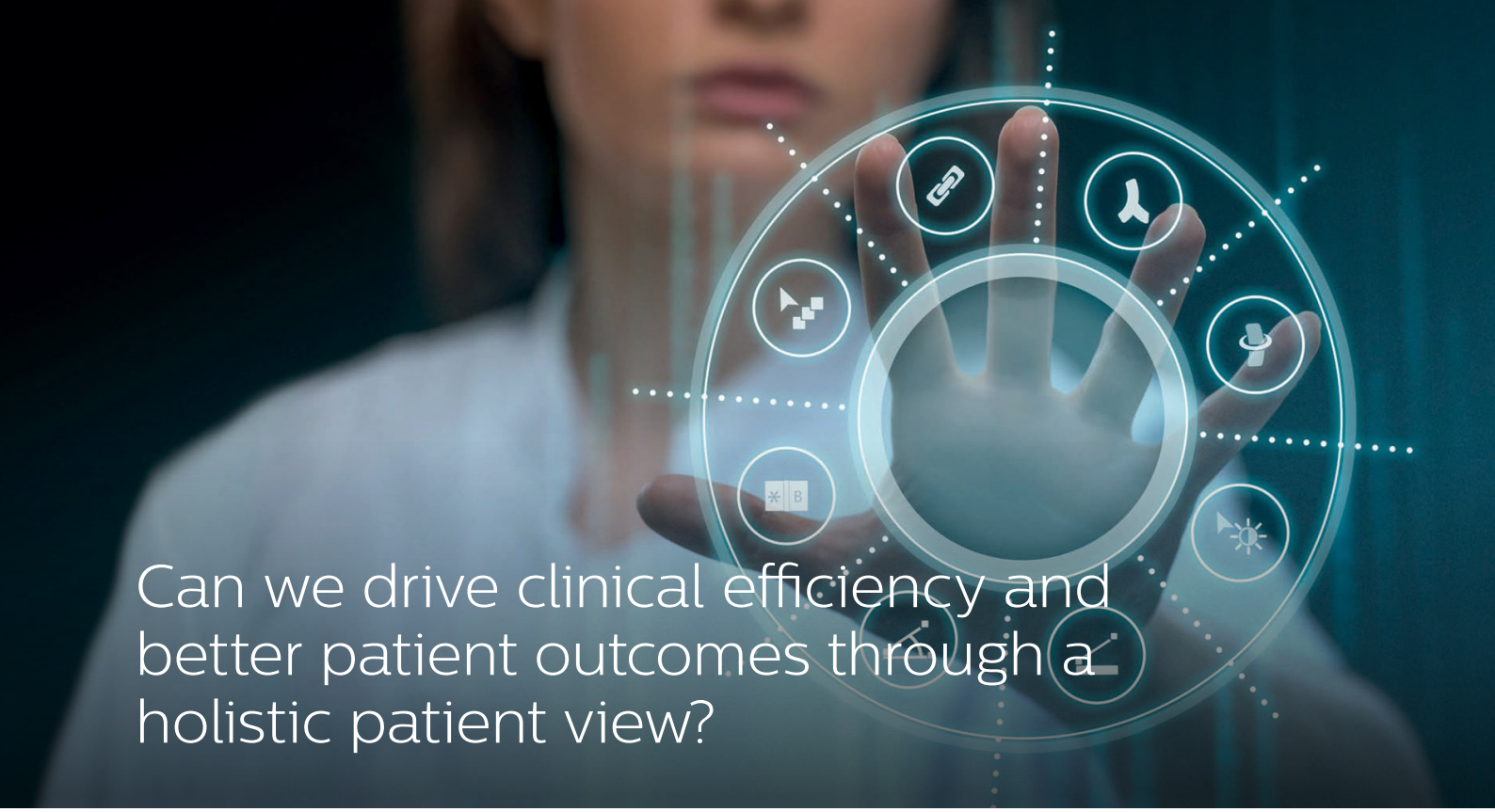
Discussion paper

How technology can enable a holistic patient-centric healthcare experience





Can we drive clinical efficiency and better patient outcomes through a holistic patient view?

Over the last century technology has created vast opportunity for better patient outcomes in healthcare by improving clinical capabilities and will no doubt do so for the foreseeable future. Today the healthcare industry is at a critical juncture when it comes to clinical functionality, clinical workflows and healthcare at home. There is a strong focus on finding and integrating the right technology solutions to meet the needs of clinicians and patients.

"The challenge is finding technology solutions that address today's needs, and importantly, can meet the needs of clinicians and patients in 10 years' time."

As more technologies become available for healthcare delivery and patient healthcare needs become more complex – spanning multiple touchpoints within the healthcare system – a comprehensive single view of the patient has never been more critical for clinical staff and patients themselves. At the same time there is downward pressure and societal expectation on healthcare providers to improve costs, increase clinical efficiency and ensure sustainability of our healthcare system.

While transformation is already underway in healthcare delivery, funding streams that enable it are constrained and will likely grow at levels below cost increases and inflation. Overall sustainability of healthcare delivery will require rethinking of how services are funded as well as a deliberate refocus on health outcome-based measures rather than cost input measures as key performance indicators.

The sheer volume of healthcare data collected every day by hospitals and other healthcare providers means that healthcare IT professionals are challenged to make sense of the data to support clinicians in their care delivery, drive efficiency and deliver improved patient outcomes.

The challenge is finding models of care that address today's needs, and importantly, can meet the needs of clinicians and patients in 10 years' time. This will be especially true given the publicly funded nature of New Zealand healthcare.

Interoperability as a foundation for a holistic patient view

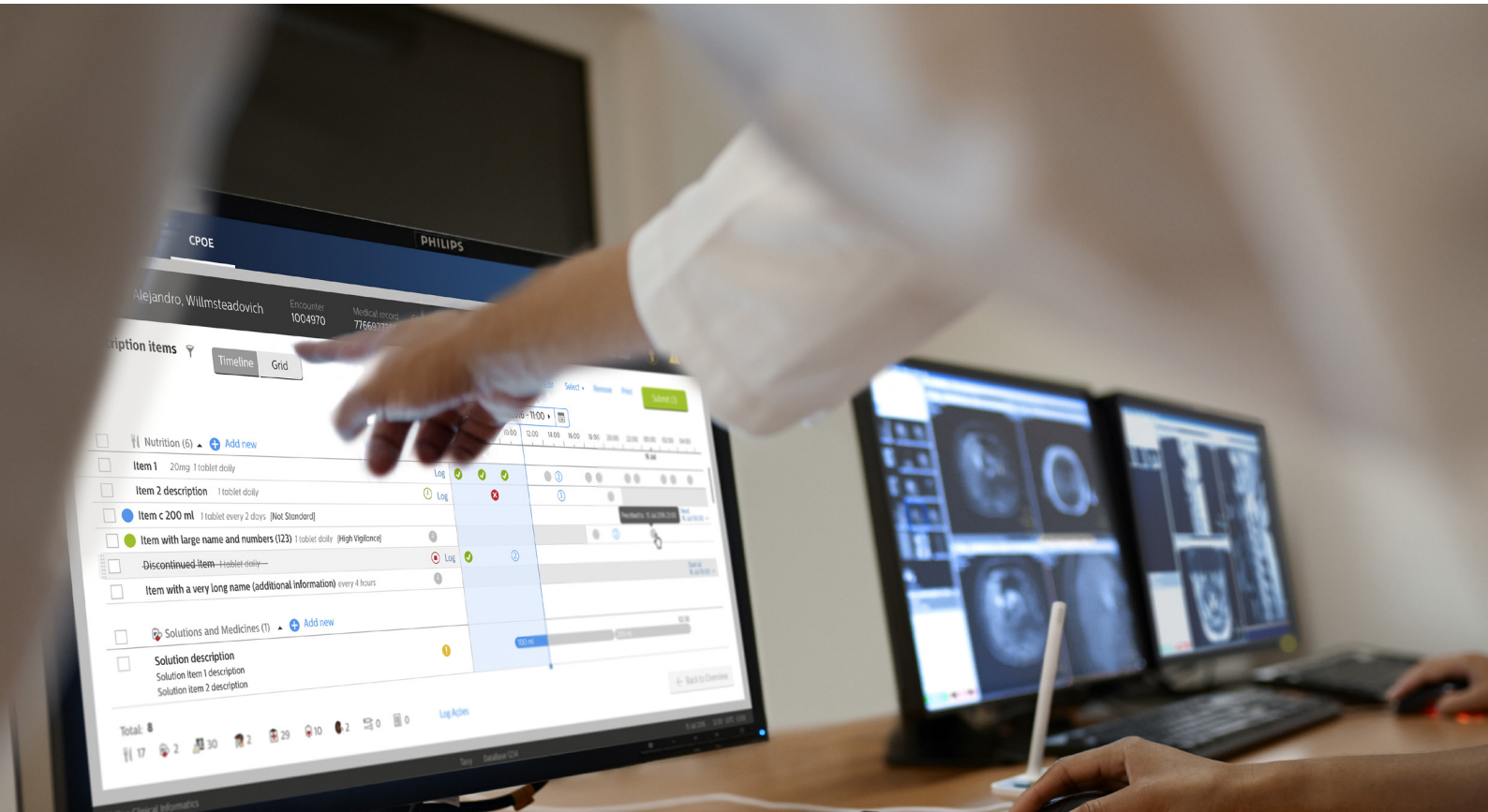
Interoperability is far from a new concept, but despite its long and pervasive presence it remains a relatively unachieved reality within healthcare. This can be attributed in part to many solutions focusing primarily on the experience of a subset of clinician which then leads to bespoke specialist Best of Breed (BoB) systems.

“Integrated clinical decision support is key to improving clinical efficiency.”

These systems are often favoured by clinicians due to their ability to not only meet but exceed the specific needs of a specialist area. As vital as this is, thought also needs to be given to how we ensure the efficiencies gained through bespoke solutions aren’t lost in administration or duplication further down the line, or result in decreased overall patient health outcomes.

BoB products are typically purchased at different times and for different purposes; this means that the functionality and integration of these products may be much less than the opportunity available with a purpose-designed suite of products. To date the preference for BoB systems has meant that systems will be interconnected in a transactional manner, rather than being connected in a more meaningful way that offers value to providers and patients.

Integrated clinical decision support is key to improving efficiency in the New Zealand healthcare system by encouraging clinical practice in alignment with proven best practice. Systems must make it easier for clinicians to focus on the tasks that are best performed by humans rather than tasks software systems can easily undertake. Success for clinicians and patients is achieved when patient data is presented in a tailored, readily available, meaningful and actionable way. **For this reason, a single patient view with all relevant data is critical to improving patient outcomes, clinical efficiency and experience.**



Embracing technological evolution and planning for advancements

Technology continues to support and drive the evolution of every element of healthcare, from the face-to-face delivery of care through to the business operational and supply chain functions of healthcare facilities. We are seeing clinicians increasingly needing to rely on the seamless flow of trusted information to deliver optimal patient outcomes and manage their ever increasing workload.

When disparate systems are supporting various healthcare functions and are not innately connected, we are missing the opportunity to establish a patient-centric system that improves patient safety, experience and clinical efficiency. The disjointed nature of the integration between systems can lead to poorer patient outcomes and clinical overload, as multiple points of failure are introduced into the flow of critical patient information for clinicians.

> "Technology must augment – not obstruct or depersonalise – the relationship between clinicians and patients."

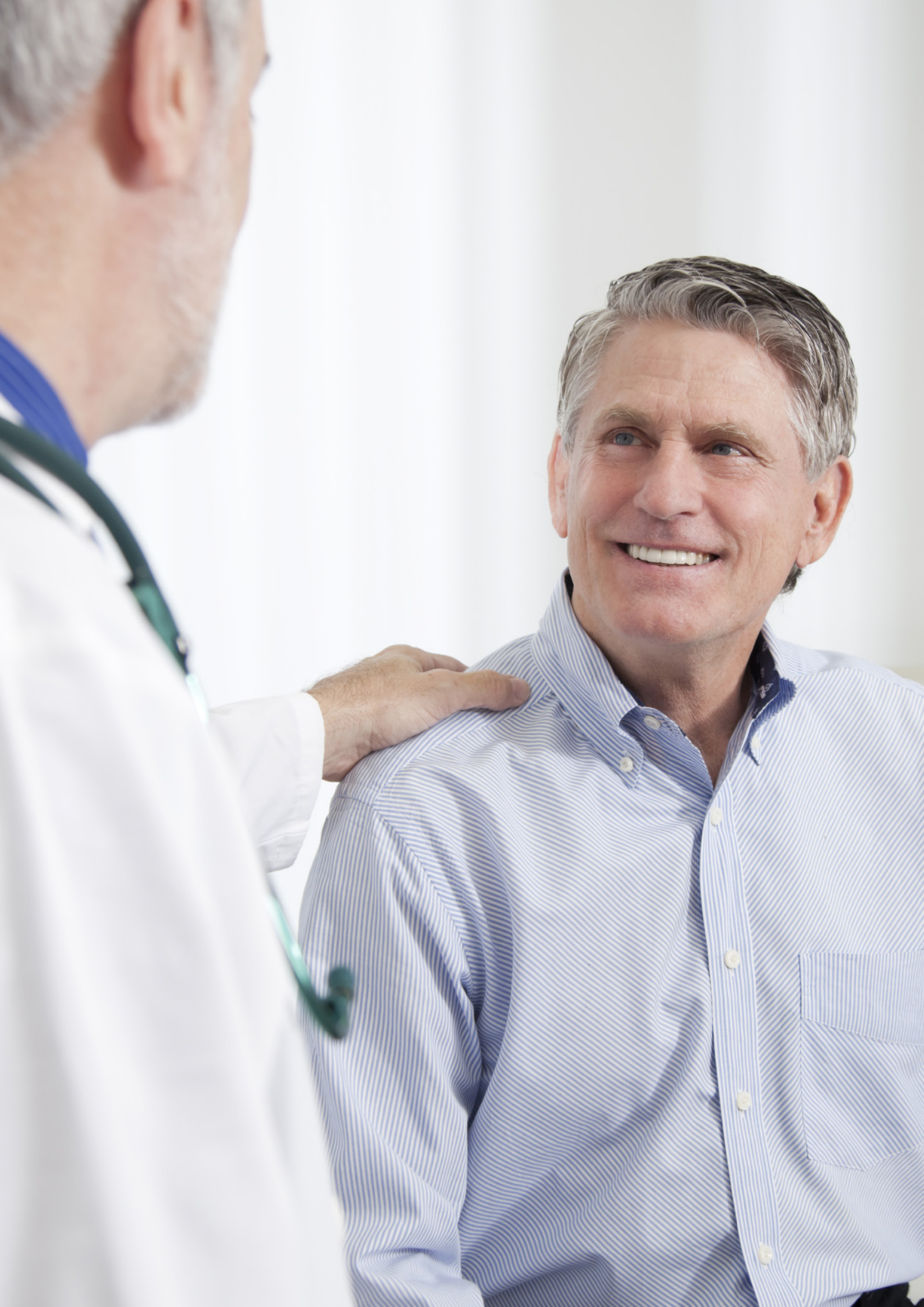
There is immense and unrealised potential in patient health data to enable more personalised care and deliver better patient outcomes by leveraging the country's unique National Health Index (NHI). It is also undoubted that expectations of patient-centric healthcare delivery are soaring, courtesy of the entry into healthcare systems of fiercely competitive technology giants who operate in climates where user experience is the difference between market domination and failure. Technology used in healthcare must augment – not obstruct or depersonalise – the relationship between clinicians and patients.

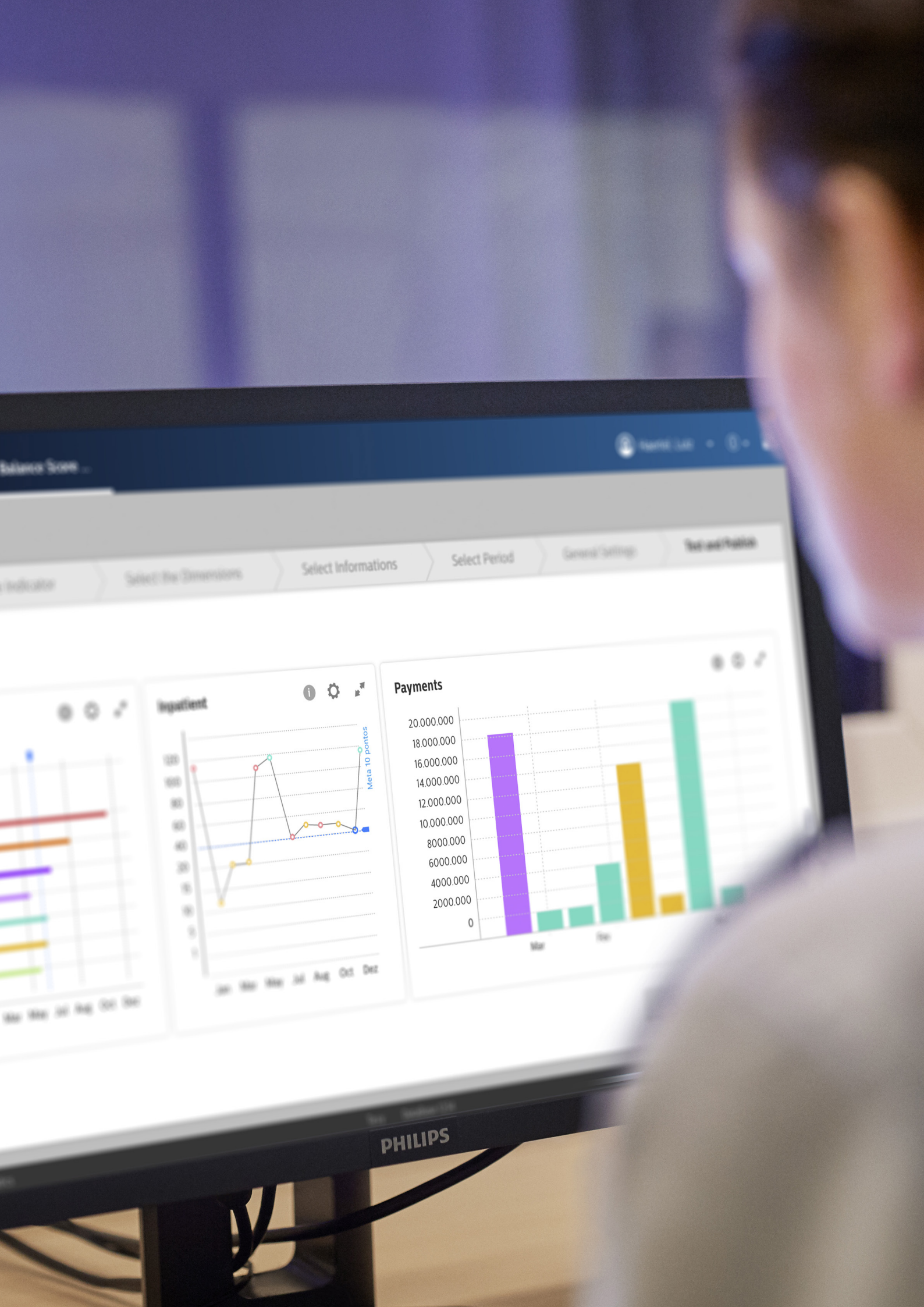
A reccurring source of frustration for patients is being repeatedly called upon to air the same information multiple times to multiple clinicians. A patient-centric view means that the patient journey across all points of contact in the healthcare system are connected and trusted information is available as and when needed. Enabling patients to flow through the system at the fastest rate is the best outcome for that patient, the clinician and the provider; to achieve this, an innately integrated system becomes essential.

There is increasing demand to integrate the exponential growth in patient data – be it generated in a clinical or personal setting – into the bespoke BoB systems to generate a holistic patient view. Even when this can be achieved successfully, the administrative overheads and complexity of maintaining this integration safely is seen as an unsustainable burden for provider organisations who may simply not attempt to integrate the data in the first place.

The Best of Suite (BoS) system seeks to effectively integrate all workflows of a hospital — clinical, operational and administrative for optimum patient, clinical and organisational outcomes. This puts the patient at the centre, ensuring visibility across the patient's continuum of care, simplifying the clinician experience, and reducing maintenance and complexity whilst enabling sustainability of the healthcare system.

The integration of approved new data sources, clinical or otherwise, is done once in BoS and is available across all workflows in the BoS solution, significantly reducing time and effort required to maintain clinical system currency.

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The role of technology in patient management and accountability

In establishing a patient-centric view, it is important to understand the role of technology and meaningful data in enabling patients to be accountable for their health outside of the hospital or healthcare setting. Data can only be meaningful when it can be securely and easily accessed to create actionable knowledge on patient care, clinical efficiency and organisation sustainability.

> "It's crucial to maximise care in the patient's home through integrated clinical workflows which enable care delivery across multiple providers."

A key issue facing the health system is that once a patient is in a hospital, they are in the most expensive place for them to be treated. For this reason, it is crucial to maximise care in the patient's home through integrated clinical workflows which enable care delivery across multiple providers.

Clinical systems must enable and enforce patient accountability with access to – and an understanding of – clinical guidance. Patient information needs to be seamlessly shared with those who can interpret what it means for the care journey of the patient, the outputs from this process then need to be seamlessly delivered to the patient. This must enable the patient and their healthcare providers to be immersed in the patient's care as a wholistic team.

Of key concern is that healthcare IT leaders are juggling an array of increasing challenges whilst the industry continues to shift and evolve at an ever-increasing rate. Achieving a true single patient view is a complex task, whether it is a medical device integration, wearable technologies or the seamless connection of multiple systems, applications, departments, and institutions.

While BoB systems may provide clear information for a component of a patient's care, it becomes less valuable if it is not easily accessed or understood in the context of the wider care journey. Here, we see the importance of BoS systems in providing a macro and micro view of patient data, accessed and leveraged via an electronic medical record (EMR).

Healthcare is also now facing a growing technological reckoning, as cognitive computing and artificial intelligence begin to mature in all sectors. These new ways of working need to be innately integrated to provide a single view of the patient, enabling clinicians to focus on care delivery and not on the underlying technology.

In recognition of this increasing pace of clinical systems evolution, EMRs now embody a fundamental technological shift – a bedrock of clinical workflows and efficiency focused on patient safety and outcomes with innate interoperability that can be built on for years to come.

While the challenges are many, so are the opportunities to positively influence patients and providers through a single patient view with fully integrated care delivery systems.

Ultimately, the opportunity is to use an EMR that allows clinicians to connect and extract meaningful, actionable knowledge engage patients directly in their care and create healthcare organisational views of patients and their health needs.

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