



Government of **Western Australia**  
Department of **Health**

# Building a Digital Future for WA Health

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Department of Health

[health.wa.gov.au](http://health.wa.gov.au)



*WA Health acknowledges the Aboriginal people of the many traditional lands and language groups of Western Australia. It acknowledges the wisdom of Aboriginal Elders both past and present and pays respect to Aboriginal communities of today.*

# WA Health Service Delivery

## Metropolitan Hospitals (Perth):

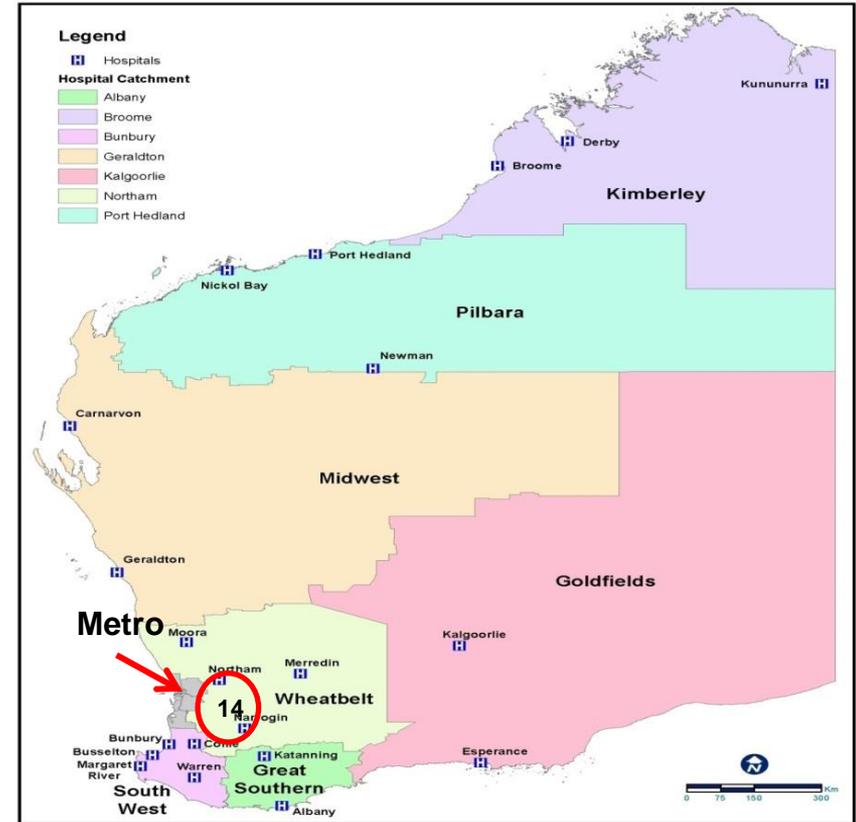
- 5 tertiary hospitals
- 5 general hospitals (three with PPP)
- 4 specialist hospitals

## Country Hospitals (operated by WACHS):

- 6 regional resource centres (Albany, Broome, Bunbury, Geraldton, Kalgoorlie and Port Hedland)
- 15 integrated district health services
- 50 small hospitals/primary health centres
- 2 SJOG facilities with co-located services with public regional centres.

## Non-Government Providers:

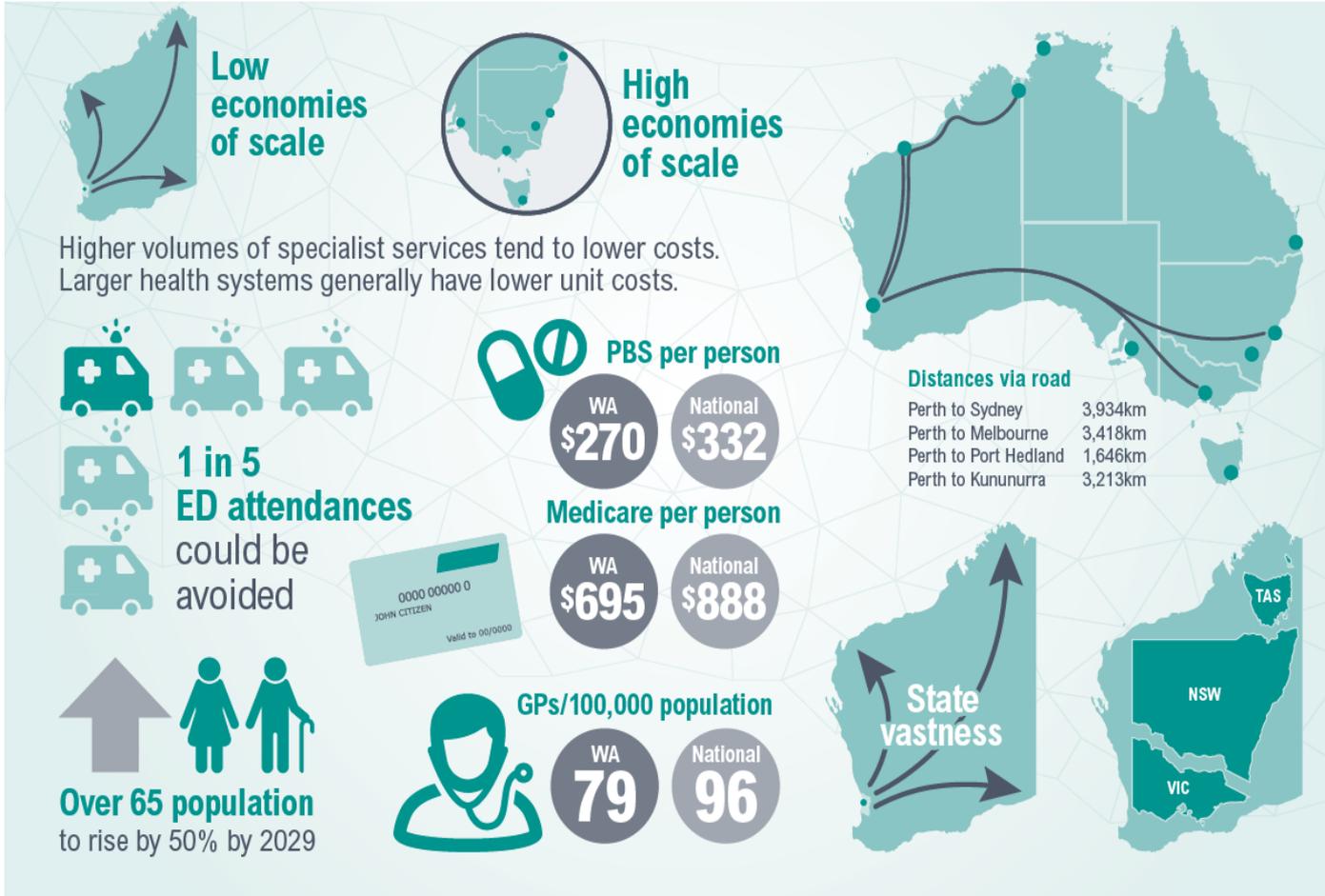
WA Health collaborates with non-government health service providers such as: home nursing with Silver Chain, aged and continuing care with Brightwater, patient transport with the RFDS and St John Ambulance, and primary health care with the Aboriginal Medical Service and Primary Health Networks.



# System Snapshot – 2014/15 vs 2019/20

	2014/15	2019/20	% growth
WA Population	2,528,619	2,642,120	4.5%
Inpatient separations	631,656	732,497	16%
ED attendances	1,000,278	1,055,643	5.5%
Outpatients	2,883,128	3,310,089	14.8%
Separations from specialist mental health inpatient services	13,042	16,498	26.5%
Mental health community service contacts	892,436	1,030,052	15.4%
Births in WA Health funded services	24,232	24,609	1.6%
Health Budget	\$8.05 bn (2014-15)	\$9.48bn (2019-20)	18%

# Paving our future – Sustainable Health Review



# SHR Enduring Strategies and Recommendations



**Commit and collaborate to address major public health issue**

Recommendations  
1–5



**Improve mental health outcomes**

Recommendations  
6–7



**Great beginnings and a dignified end of life**

Recommendations  
8–9



**Person-centred, equitable, seamless access**

Recommendations  
10–15



**Drive safety, quality, and value through transparency, funding and planning**

Recommendations  
16–20



**Invest in digital healthcare and use data wisely**

Recommendations  
21–22



**Culture and workforce to support new models of care**

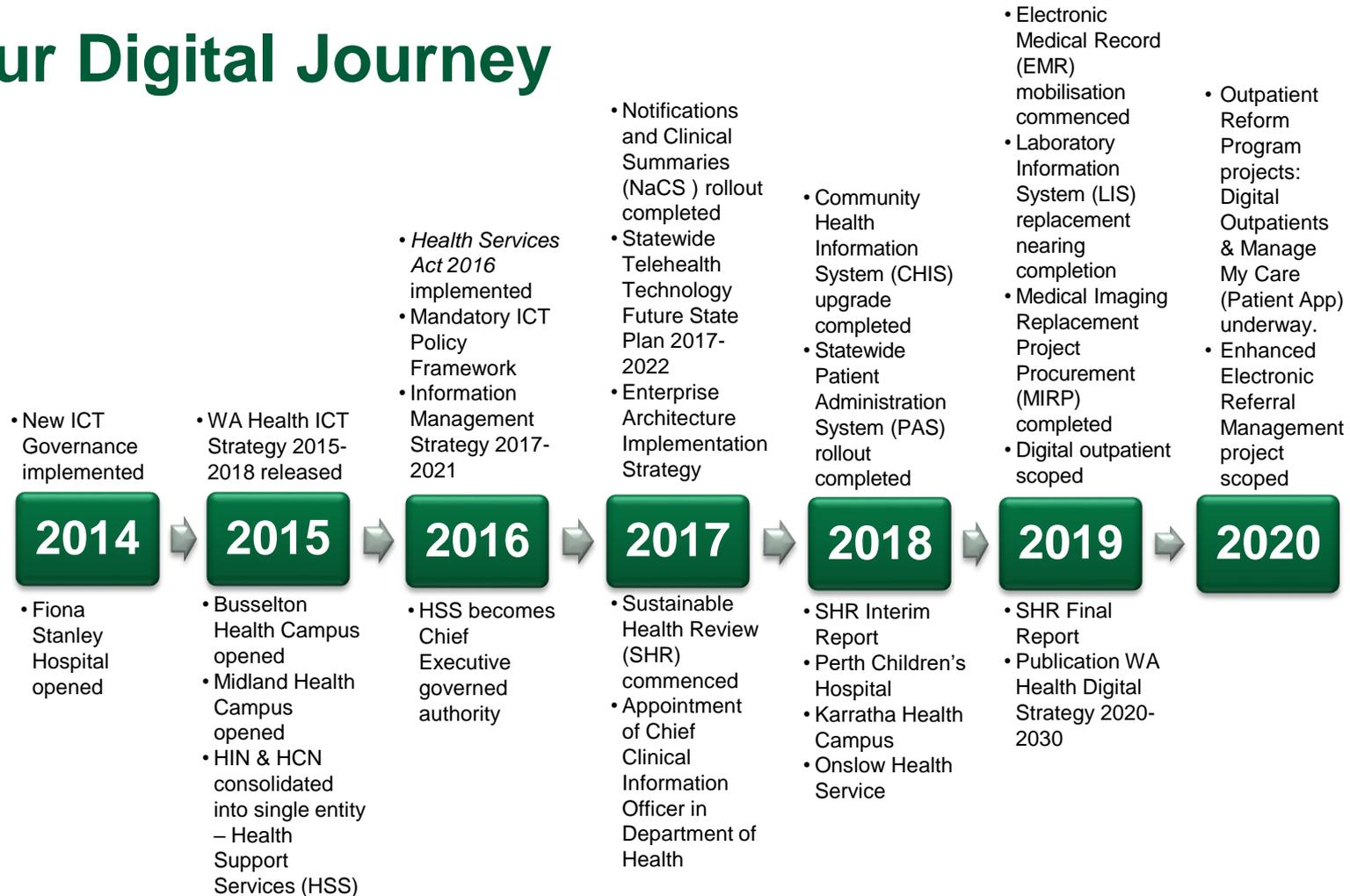
Recommendations  
23–27



**Innovate for sustainability**

Recommendations  
28–29

# Our Digital Journey



# WA Health Digital Strategy 2020-30

- Launched 2 October 2019.
- Strategy is guiding WA Health in prioritising digital investment across the health system to 2030.
- Central to ensuring we have the necessary technical and clinical foundations to enable the introduction of an electronic medical record system.
- Implementation of the Digital Strategy will significantly change the way health services are delivered in WA
  - Better access to health services
  - Better outcomes for ALL Western Australians into the future
- Successful implementation of this Digital Strategy requires the ability to remain focused on strategic objectives, cultivate resilience in a rapidly changing industry and adopt agile approaches to realise both short- and long-term benefits.
- The system is ready for this challenge – it is time to have a more collaborative approach to the way we adopt new technology and deliver innovative health services.

# Strategic Themes



# Our Current Digital Challenges

- Lack of consistent patient-centred technology
- Outdated hardware and infrastructure
- Differing digital maturity levels across various hospitals
- Legacy enterprise systems
- Lack of application lifecycle management approach
- No State privacy and data sharing legislation
- Procurement constraints and some vendor lock-in contracts

# Digital transformation projects

## HealthNext

- The Health Connect stream of HealthNext improves wide area network across the state to support telehealth.

## MIRP

(Medical Imaging Replacement Project)

- All medical related imagery will be available to support the expansion of Telehealth opportunities into the future.

## LIS

(Laboratory Information System)

- LIS is live across all sites in WA Health, with forensic pathology to follow in 2021.

## EMR Mobilisation

(Electronic Medical Record)

- Pivotal in driving patient safety and quality. Prompter diagnosis and more timely treatment.

## Outpatient Reform

- Transforming how outpatient care is delivered by optimising digital capabilities and systems through a wide range of projects.

## HRMIS

(Human Resource Management Information Systems)

- A centralised platform for radiology reports and images such X-rays, CT scans, MRIs, ultrasounds. Enhancing Clinicians capacity to provide timely patient care.

## Digital Capability and Maturity Assessment

- Digital Capability and maturity assessment noted above –assess our current state, set a baseline and areas to prioritise to progress our digital transformation.

# Outpatient Reform Program

A system-wide program of work that aims to position the system and Health Service Providers to provide timely, equitable, cost-effective, and clinically appropriate access to outpatient care.

The Outpatient Reform Program encompasses the following projects:

- Manage My Care
- Enhanced Electronic Referral Management
- Central Referral Service Review
- Specialty Referral Access Criteria
- Digital Outpatients
- Referral Access to Specialist Advice
- Innovative and Alternative Service Delivery Model of Care
- Queueing Theory
- Outpatient Data Quality Improvement Project



# Current environment - COVID-19 response

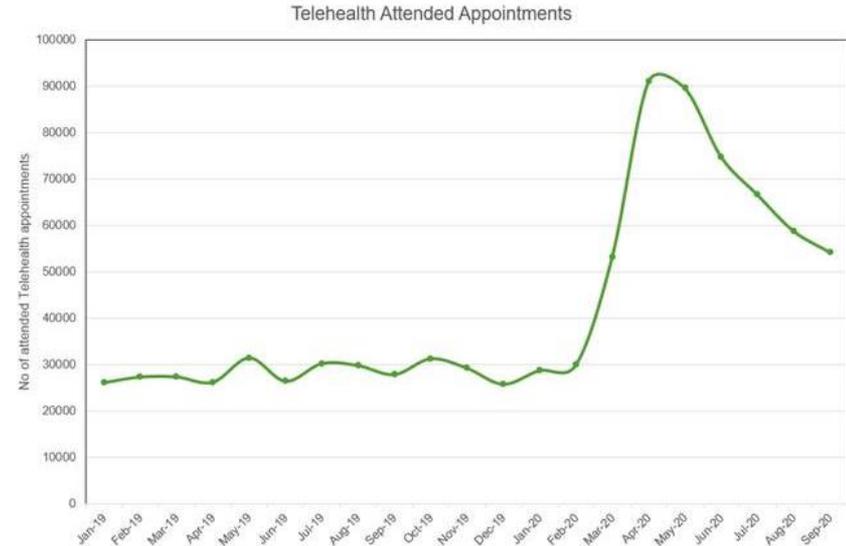
- World-class response to the COVID-19 pandemic
  - Rapid mobilisation of staff
  - Significant planning of public health and clinical/hospital surge measures
  - Rapid procurement and purchasing of PPE, ventilators and medical supplies
  - Constant communication with key stakeholders - State and Commonwealth level
- State of Emergency: *Emergency Management Act 2005, Public Health Act 2016*
- SHICC - state-level centre responsible for strategic coordination of Health response
- Workstreams: Health operations, Non-health operations, Planning, Intelligence, Logistics, Public information
- Current statistics
  - 558,561 tests
  - 823 cases (19 current active cases)
  - 9 deaths, 795 recoveries
- Quarantine arrangements (2,463 international arrivals in hotel quarantine)

# Positive effect of COVID-19 on Digital Roadmap

- Some Digital Strategy initiatives have been expedited (eg. Telehealth)
- In April EMHS established 24-hr command centre at RPH ahead of schedule as a response to COVID-19. System-wide 24-hour WA Health Operations/Command Centre was to be considered in early/mid 2021
- State Government apps used in the Covid-19 response:
  - **PHOCUS** – bespoke automated system to monitor cases and contacts via SMS
  - **G2G Pass** app - an efficient way of applying for and demonstrating proof of an exemption before travelling to or around WA.
  - **G2G Now** app - uses facial recognition and phone location data to ensure people in quarantine remain at their registered address throughout their mandated quarantine period.
  - **Safe WA** app - provides businesses with a digital COVID-19 contact register system and includes key features such as unique QR codes for venues which patrons can scan to register their attendance.

# COVID-19 Telehealth

- Increased volume of telehealth appointments - from March - June 2020 totalled more than 49,000
- 22 new organisations were set up with Video Call and consultation hours increased from 1,010 hrs in Feb to 15,782 in April
- Opportunity to perform a lessons learned to support formal roll out



# Telehealth: WACHS

Telehealth connectivity expanded to reduce the need to travel, which was especially important to protect remote Aboriginal communities when restrictions were in place.

- Telehealth appointments delivered directly to the home or a local community setting.
- Country patients continued to access metropolitan based services by increasing services delivered via Telehealth.
- New digital platforms such as Video Call implemented to support care in the home.

Highlights include:

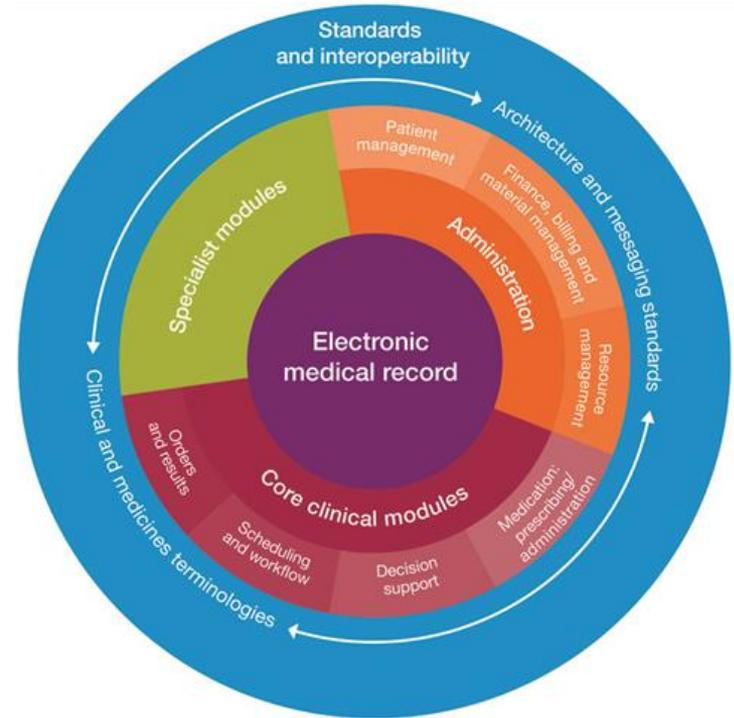
- 22 telecarts and iPad enabled trolleys deployed to regional areas to support critical care and outpatient services.
- 45% increase in technical infrastructure facilitating a 200% increase in medical outpatient appointments.
- More than 100 iPads were issued to assist people to connect with Telehealth.
- TeleChemotherapy services established in Narrogin and Broome to ensure eligible cancer patients could receive care on country and close to home.

# Telestroke Program

- An estimated 700 people in rural WA suffer from a new stroke every year, with regional Australians 19 per cent more likely to suffer a stroke than those living in metropolitan areas.
- WACHS' landmark WA TeleStroke Project includes the Acute TeleStroke Project which uses videoconferencing and phone calls to speed up access for country patients to expert advice and care from stroke specialists in Perth.
- In July 2020 the Dept. of Health received \$9.7m to expand the State-wide Telestroke Service

# What is an Electronic Medical Record?

- A patient-centred system that staff can use to fulfil their patient-care duties without using a paper medical record
- A sophisticated EMR system supports closed-loop medication management and real-time decision support.



Source illustration: Victorian Department of Health and Human Services

# Why have an EMR?

- Enable world-class health service performance
- Expected benefits:
  - Increased medication safety
  - Decreased variation from preferred care pathways
  - Increased insight into care quality, enabling innovation
  - Generally 'better' (ie less broken) clinical workflows
  - Possibly reduced clinical care cost growth rate
- Retire ageing/obsolete applications
- Serve as platform for implementing new technologies
- Better patient outcomes and patient / staff satisfaction



# Measurable benefits are being reported with EMRs in Australia

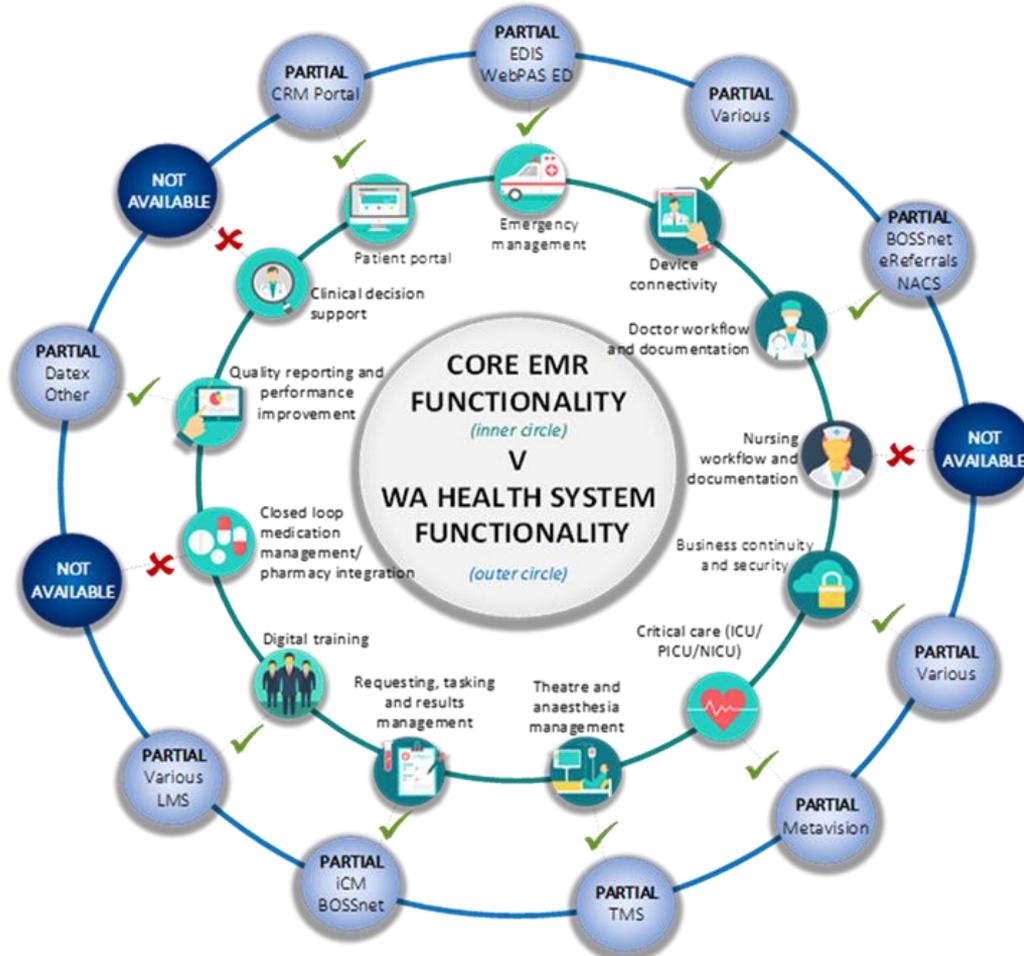
Princess Alexandra Hospital (PAH), which became fully digital early in 2017, show:

- 50% reduction in the rate of cost growth compared with the control hospital
- 14% drop in medication incidents, leading to a reduction in medication costs
- 17% fewer emergency readmissions within 28 days of discharge
- 9% reduction in medical imaging orders
- 56% fewer hospital-acquired pressure injuries
- 37% reduction in healthcare-associated infections
- a 59% increase in early identification of deteriorating patients.

# Principles underpinning the EMR Strategy

- WA Health recognises that EMR functionality implementation is a **journey** rather than a single event. **Phased approach.**
- Our EMR program will be underpinned by a **state-wide, collaborative** approach, **leaving no one behind**
- The program will be **patient-centric** and **clinician owned** and led
- Clinicians **seek delivery of critical but absent functionality as early as possible** while avoiding a large digital divide between healthcare facilities / HSPs
- Our approach should **leverage value from existing functionality where feasible** and appropriate in the early phases of the program
- We should jointly seek to use **agreed, standardised workflows** supported by a common, system-wide EMR platform & application suite, where feasible
- Each step along the journey must align with the vision, **deliver measurable benefits** and support anticipated next steps along the path
- Planning should occur in parallel to understand, and **plan for the infrastructure uplift required** to support full EMR functionality adoption

# Existing WA Health EMR core functionality



# Next Steps: Phased 10 year digitisation

The Digital Roadmap is designed to be agile and pave a pathway from foundational work to the embedding of change and realisation of benefits. Achievement of the outcomes supported by digitisation and digital transformation requires tactical and strategic focus.

## Horizon 1

2020 – 2022

*Setting Up for Success*

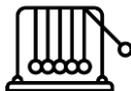


- ✓ Laboratory Information System
- ✓ Medical Imaging Replacement Program
- ✓ Modernise ICT Infrastructure (HealthNext)
- ✓ Outpatient Direct Patient Portal Pilot
- ✓ My Health Record Interoperability
- ✓ EMR mobilisation
- ✓ Digital capability and maturity assessment

## Horizon 2

2022 – 2024

*Early priorities, results and building momentum*



- ✓ Patient Portal expansion
- ✓ EMR
- ✓ Medical Imaging System rollout
- ✓ Human Resources Management Information Systems rollout starts
- ✓ Financial Management Information System rollout starts

## Horizon 3

2024 – 2026

*Driving deeper change and seeing results*



- ✓ Phased start to Shared Care & Third Party Corporate Platforms
- ✓ EMR
- ✓ Business Intelligence Program

## Horizon 4

2026 – 2030

*Embedding change and realizing the benefits*



- ✓ Consumer and Clinical Mobile App libraries
- ✓ Robotic & Process Automation, AI
- ✓ Virtual Reality

# As we enter 2021

- Living with COVID-19
- Additional pressures on the health system and community
- Priorities for the health system
- Mental Health
- Workforce
- Agility & constant learning
- Recovery and Response



# Thank you

