

NSW GOVERNMENT

Transforming healthcare through connection

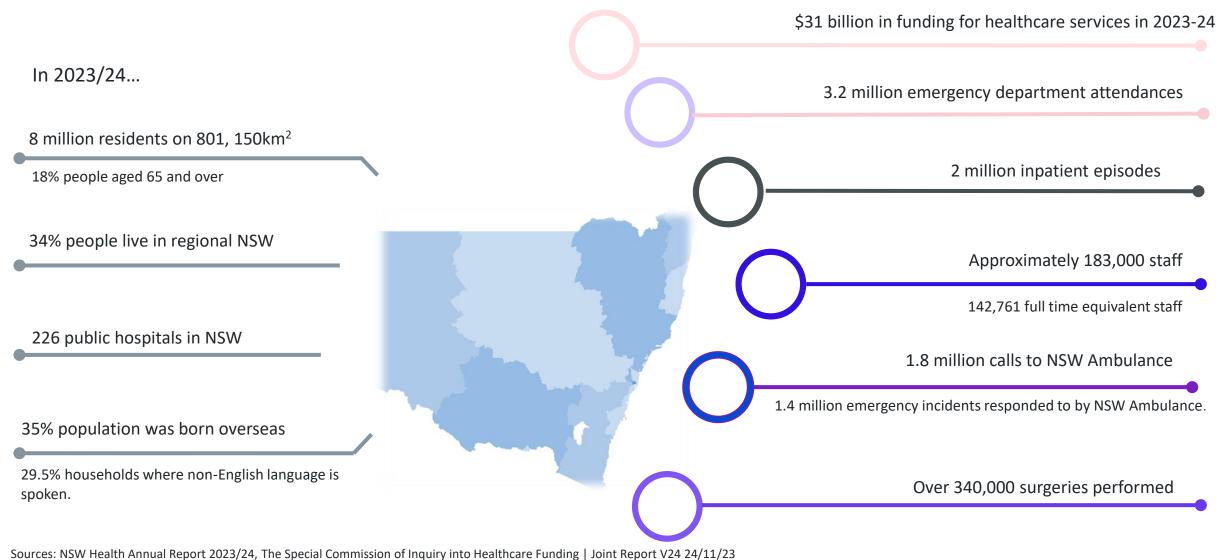
HealthtechX Asia

Dr Amith Shetty Pedram Bidhendi

May 2025

NSW Health: A snapshot





NSW Health



Emergency Department Relief Package

Avoid an estimated 290,000 visits to emergency departments each year once fully implemented



8_8 8_8 8_8

Connect more people across NSW with high quality, accessible and timely care, by expanding alternatives to the emergency department, and by improving the flow of patients through the system

Alternative Care Pathways

Single Front Door

- Expansion of the 'Single Front Door' with new virtual care services for patients with non-life threatening conditions.
- ~178,000 ED presentations avoided per annum at full implementation with all Single Front Door pathways.

Urgent Care Services

- Investment in urgent care services for a further two years through to June 2027
- 114,300 ED presentations avoided per annum at full implementation.
- 49% non-admitted triage category 3,4 & 5 presentations (excluding arrivals NSW Ambulance and NSW Police) could be managed by UCS.

Managing ED Demand

NewGen Matrix

 Development and implementation of an upgraded ambulance matrix (known as the NewGen Matrix)

Computer Assisted Coding

Computer Assisted Coding

- Implementation of an AI enhanced clinical coding system.
- Increased accuracy of coding including coding of more complex cases with real-time prompts for clinician/clinical coder to correct, augment or agree with AI

Creating Inpatient Capacity

ED Short Stay Units

- Investment in an additional 22 ED Short Stay Unit treatment spaces
- The 22 SSU treatment spaces will save around 76,800 ED hours each year at full implementation

Discharge and Concierge Program

- Development and implementation of a discharge and concierge program, to improve patient flow and support discharge planning.
- Release of inpatients bed days through early discharge especially those patients at risk of extended length of stay

Hospital in the Home

- Expansion of Hospital in the Home (HiTH) through the use of virtual care
- 8,800 Inpatient bed days saved per annum after full implementations

April 2025



Operational Data Store

Pedram Bidhendi

Director, System Sustainability and Performance Division,

NSW Ministry of Health

NSW Health

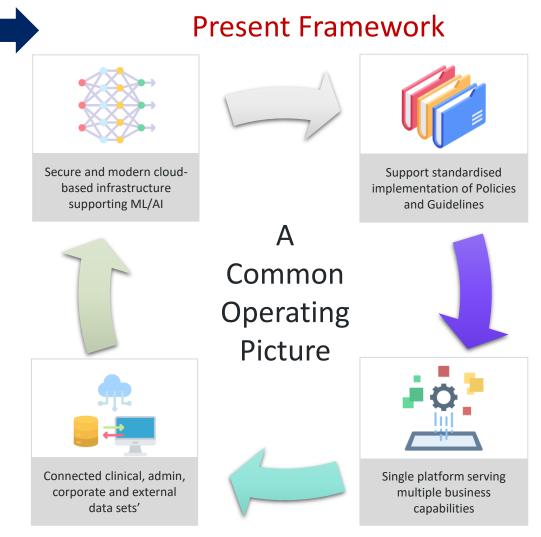


NSW Health's need for an Operational Data Store (ODS)



Past Framework

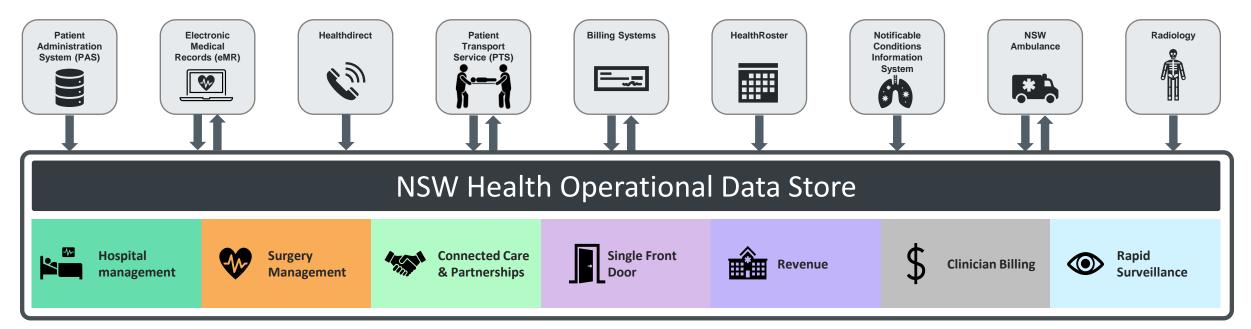
- Lack of seamless data exchange and interoperability across diverse healthcare settings
- Challenges in overseeing complex healthcare operations beyond individual patient-level data
- Focus on patient-centric perspectives rather than servicelevel insights to manage flow, demand, and capacity
- Dependence on unified, curated data for informed decision-making in health system management



Driving priorities and reform initiatives with the ODS



A mature, integrated system of services that can support ensuring people receive the **right care**, in the **right place**, at the **right time** in a financially sustainable manner



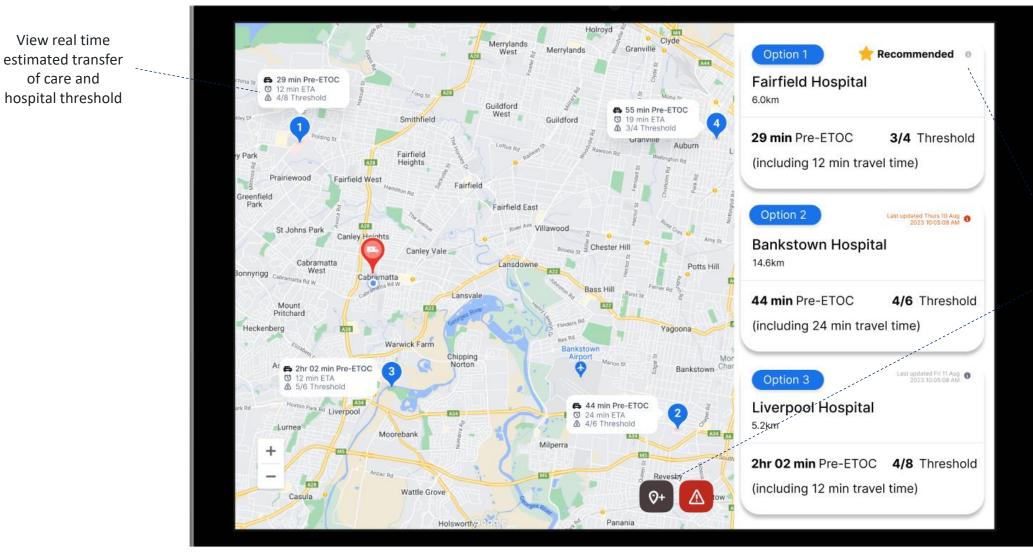
Whole of system enablers:

- Fit for purpose system structure, functions and leadership
- Timely and appropriate information available for informed decision making to support multiple capabilities using administrative, clinical and corporate data sets
- Integrated solutions through health industry standards and customised APIs

Using the ODS to power the Ambulance matrix Hospital -~~management 01 02 Reporting Transfer of Care Data is captured and reported to Paramedics arrive at the care inform current capacity and future setting and transfer care planning 03 Patient Assessment & Treatment Ambulance Dispatch Paramedics assess and provide Call is made to triple zero, dispatch immediate treatment or care to the confirms emergency needs and 04 ambulance is dispatched patient 05 Ç, Care Destination selection and Transport Paramedics use NewGen Matrix to determine the most appropriate care destination (**N Expected Benefits** Outputs Inputs Real-time Demand/Capacity **Clinical Category** Improved transfer of care Clinically appropriate ED's ranked by Pre-ETOC Patient Acuity Real-time ED Throughput Patient and Staff Satisfaction Alternative Care Destinations include appropriate referral pathways Threshold at ETA Patient Location Improved System Flow Previous treating hospital where relevant **Relevant Patient History** Threshold on arrival



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Recommended option based on estimated transfer of care and travel time and where similar across facilities then hospitals nearer to the patient will be prioritised and paramedics can override

Note: The data shown in this wireframe is for the purposes of demonstrating user interface, and is not based on real or existing data





Introduction of IHT Priority Categories and Medically Agreed Timeframe

- NSW Health handles over 10,000 Inter Hospital Transfers per month
- Prioritisation, planning and visibility of delays are essential to patient care and effective patient flow
- Using the ODS and the Patient Flow Portal, there is full visibility of transfers for proactive bed management and escalation of any breaches associated to transfers not occurring within agreed timeframes.

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PTS Reservations Model

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- Reservations model for booking non-emergency transport further enhances discharge planning by having a confirmed pick-up time, providing greater certainty and improving discharge planning
- Clinicians can book transport directly from Patient Flow Portal, with the system returning a booking time
- Implementation of the reservations model has seen a 30% reduction in major transport delays and a 46% reduction in transport crew overtime
- Transport booking statuses are updated in real time through integration with Computer Aided Dispatch systems

PTS						
Transfer Type:		Transport	Mode:	Transport Reason:		Booking Period:
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Created Dt Tm: 22 Preferred Dt Tm: 2		8	Inter-Hospital Tr	Royal Prince Alfred Hospital	The Syd	dney Private Hospital
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 From Location: Ro Hospital 	yal Prince Alfred	•	Inter-Hospital Tr	Royal Prince Alfred Hospital	Blackto	own Hospital
 To Location: Royal Petersham Booking ID: 49338 Status: Planned Awaiting Bed Con Requestor Name: Planned Pick-up: : Booked by: LORD: Transport Reason: (IHT) PTS Service Timef minutes of request confirmed time for users). 	104 firmation: No 22-04-25 15:01 AN, Mary : Inter-Hospital T inter-Hospital T inter-Within 120 sted time (or 30 i	ransfer) mins of	Realtime	display of Transpo ng Status and ETA		



Using the ODS to manage transport for well patients going home



Taxi and Rideshare Bookings

- Previously, low acuity patient transports were managed on an ad-hoc basis via community transport, taxi vouchers, or PTS, leading to inconsistent practices and impacting patient flow
- Taxi and rideshare services can now be booked for well patients ready to go home via the Patient Flow Portal thus providing a centralised and streamlined booking process

Add PTS HealthRide Request For any issues or queries regarding bookings please contact Parient Transport Service on 1300 233 500 or click to view how to make a booking Click here to view the Patient Transport Service Clinical Guidelines	Ward Staff	PTS Team	Patient
Patient Gender: Patient ID: D.O.B.: Age: 57 AMO: ARNDT, Grace-antionette Transport Details Patient Requirements Transfer Type: Pick Up Time	Book via PFP and direct Patient to pick-up point	Despatch to Uber or Taxi service	Receives SMS with ride details
Ready for Pick Up* 22-04-2025 III 30 From Location* Facility/Nursing Home/A_ From Facility/Nursing Cosford Hospital From Address: COSFORD HOSPITAL, 76-100 HOLDEN ST COSFORD 2250 Current Ward: ASPALCCOS (AS Pall Care) To Location* Other Location IV To Address: 100 PITT STREET, SVDNEY 2000 Requestor Name* JONES, Sharon Ward/Unit Phone: IV 0294 81111 HealthRide Approver: SMITH, Johnathan(Nurse Manager) Patient Mobile phone # for SMS Odial/23123		IJCCEDS Uber	Å .•
Patient consents to submitting name and mobile number to HealthRide provider: 1	Contraction Unplanned	Planned	Awaiting Pick-up / En-Route





Improving Patient Flow by operationalising research developed ED START and Early Warning Score (EWS) algorithms by leveraging the statewide data set and modern data analytics functions of the ODS to risk stratify patients in real time when presenting to the Emergency Department

START and EWS provide patient flow decision support and assist to reduce stain on healthcare staff and resources

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Emer				Restricted		No	~	Restricted	73	1 hr 37	. 14	Indeterminate	0 - Low	BVIRAKARE, Da				
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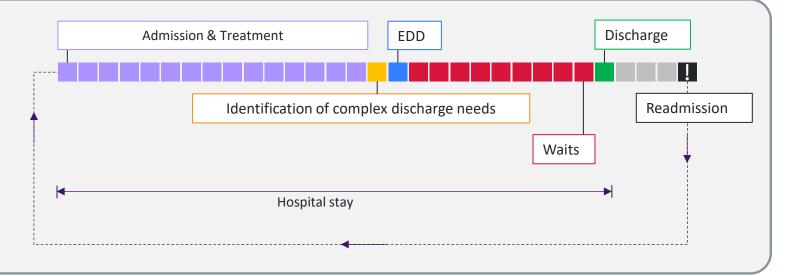
Hospital management Using the ODS for complex discharge planning



Current State

Late identification of patients with complex discharge needs = delays, inefficiencies and prolonged length of stay.

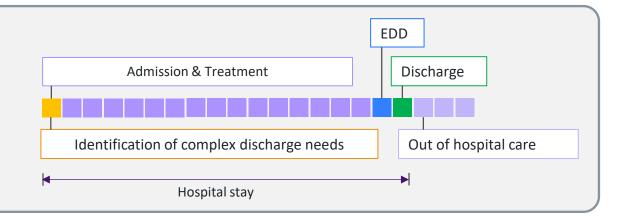
Patients at high risk of readmission often return to hospitals rather than being managed through alternative care models.



Future State

Early identification of patients with complex discharge needs = reduced length of stay and lost bed days.

Increased utilisation of out of hospital care models, e.g. Hospital in the Home (HITH).



Hospital Using the ODS for complex discharge planning



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Hospital Managing Hospital Demand and Capacity



Demand and Capacity ODS driven demand and capacity data modelling with 14 days prediction.

BE	ED DEMAND STATUS	-20
		Wed
		23/04/25
		23/
	Yesterday's Admissions still in ED	10
Unplanned	Predicted Admissions via ED	54
Admissions	Predicted Direct Admissions	5
	Predicted Unplanned Admissions	69
Discord	Booked DOSA	10
Planned Admissions	Booked Overnight	5
	Predicted Planned Admissions	15
	Surge Beds to be closed	0
Beds in Use	Unstaffed beds in use	
Deus in Ose	EDO/23hr requiring an inpatient bed	
	Predicted Beds Required	0
Pred	icted total beds REQUIRED	84
Discharges	Predicted Discharges	64
Beds	Empty Available beds at 7am	0
Pred	cted total beds AVAILABLE	64

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Scenario – Major tertiary Sydney hospital

Predictive modelling indicates:

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- **10** patients remain in the ED from the day before
- 54 will be admitted via ED to an inpatient ward
- 5 patients will need to be transferred from other hospitals or direct from the community
- 15 patients will be booked for theatre or procedures required an overnight bed
- 64 patients will be discharged from the inpatient wards today

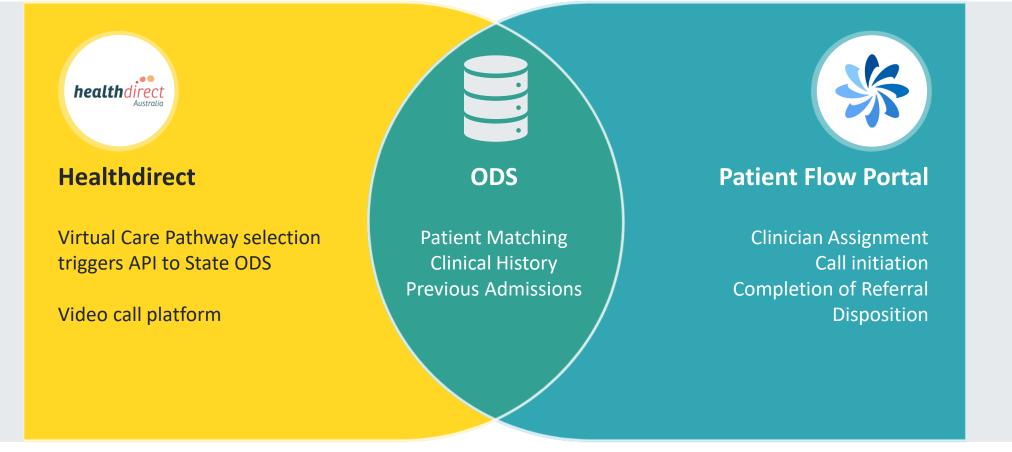
What happens with the extra 20 patients ?

Assists Hospital Managers to prioritise any delays around discharge or transfers or activate Short Term Escalation Plans such as:

- Adding surge beds
- Additional resourcing
- Potentially rescheduling elective surgery







Harnessing the power of the ODS to match patient records from Healthdirect to NSW Health clinical records to support virtual care workflows around referral management



Using the ODS to digitise patient admission and chargeable patient workflows



Integrated workflow



Guided Interview questions



Digital Forms and Signatures

- NSW Health uses manual, paper-based system for patient admissions and billing, which involves printing numerous forms for almost 2 million admissions each year
- Current process is complex and involves many steps, such as moving forms between departments, manual checks, collation, filing, storage, and scanning
- Labor-intensive workflow is inefficient causing delays and frustration for both staff and patients
- Digital workflows and forms guide staff through interview questions, suggests a Financial Classification and generates electronic forms for digital signature on an iPad





April 2025



Single Front Door

Dr Amith Shetty

Clinical Director, System Sustainability and Performance Division,

NSW Ministry of Health



NSW Health

NSW Single Front Door initiative

WHAT

- One contact for urgent, unplanned health needs
 - Information, advice, assessment and triage by RNs
 - Connection to clinically appropriate care
 - Unify and scale care options primary, urgent, virtual models
- Access is quick, easy and free
 - Phone/web/app, language and hearing support, no cost, 24/7 - 365 days
 - 1800 022 222 healthdirect.gov.au

WHO

- Led by NSW Health, delivered by Healthdirect Australia
- Advice and care for all ages

EXPECTED OUTPUTS

- Reduce avoidable ED demand
- Improve the experience of care for patients
- Improve equity of access with virtual options.

STRATEGIC ALIGNMENT

 Regional health strategic plan: Priorities 2, 5
 Future Health:

Strategic objectives 1,2,5,6 • Virtual Care Strategy 2021 – 2026:

All focus areas

- Elevating the Human Experience 2020: Focus areas 1, 3, 4, 5, 6
 - NSW Health Strategic Framework
 for Integrating Care
 - NSW Aboriginal Health Plan 2013-2023: Strategic directions 3, 5
 - National Digital Health Strategy

health

NSW Digital Government Strategy



Healthcare is complex for

Increased ED presentations

for lower acuity issues

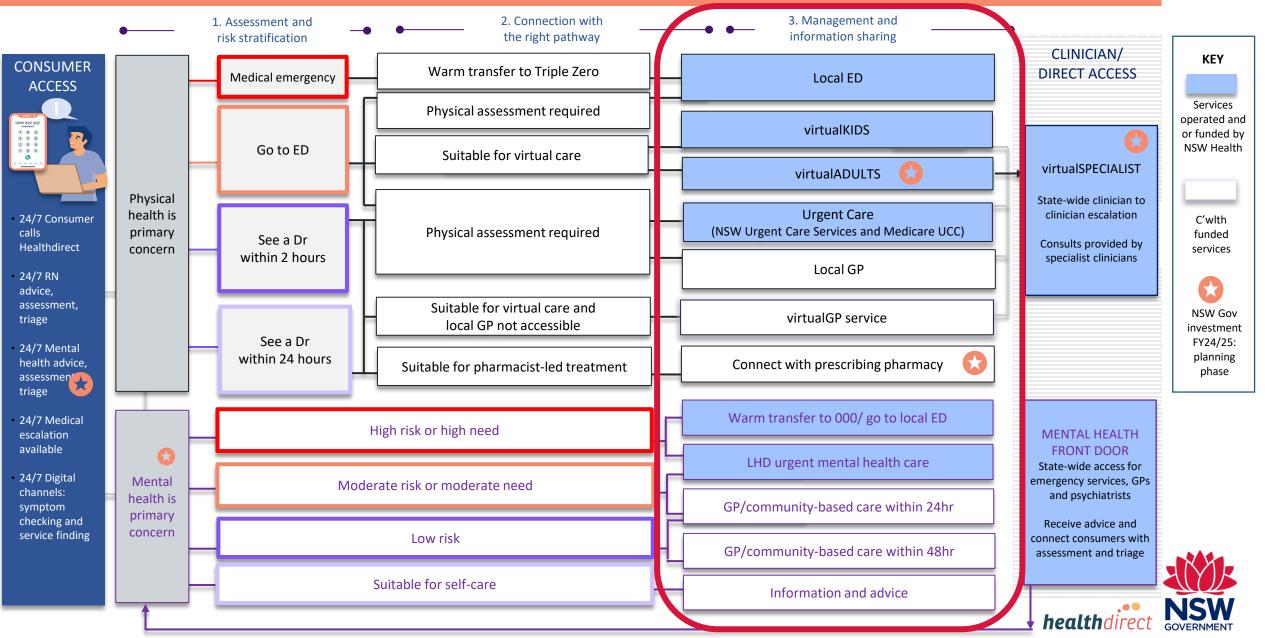
consumers to navigate

Primary care access

challenges

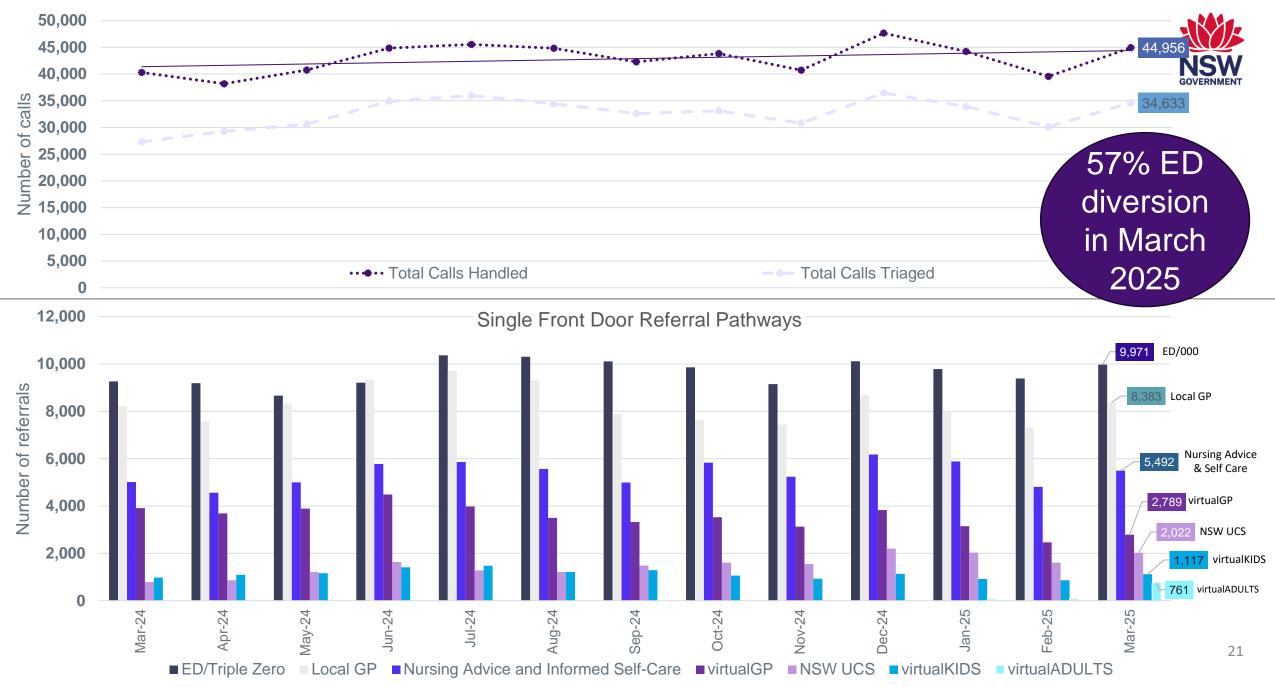
ΝΗΥ

SERVICE LOGIC AND REFERRAL PATHWAYS SINGLE FRONT DOOR



Healthdirect confirm patients' own GP availability and post-care connectedness

Single Front Door Call Volume



People in NSW going to EDs with flu-like symptoms has grown significantly (YoY)

Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023-2024, persons of all ages

Count % admitted 1.600 35% 1,400 30% 1,200 25% 1,000 20% 800 15% 600 10% 400 5% 200 Number of admission umber of presentations —% requiring admission

Source: NSW Respiratory Surveillance Report - week ending 13 July 2024

NSW records almost 40 per cent increase in influenza cases over a week, with emergency departments seeing a rise in admissions - ABC News

ABC News Report:

- Influenza-Like-Illness Surge in NSW
- Impact on EDs: "Influenza is having an enormous impact on our emergency departments at the moment," Health Minister Ryan Park said.

NSW referral pathways are successfully moderating ED demand during flu surge period

categories 0000 0000 care pathway o 2000 2000 Leduency by Frequency by Frequency by 500 0 910412023 22/10/2023 2310412023 21/05/2023 410612023 81/012023 19/1/2023 1810612023 201071202'2 1010912023 2410912023 51112023 311212023 210712025 61071202 .710812025 11122020 28/01/202 21/04/2024 311121202-101031202 71041202 ,31081202. 141011202 11021204 251021202 241031202 Virtual Emergency Department Urgent Care Centre (UCC) Triple Zero Attend ED GP helpline See GP Self-care See other health professionals*

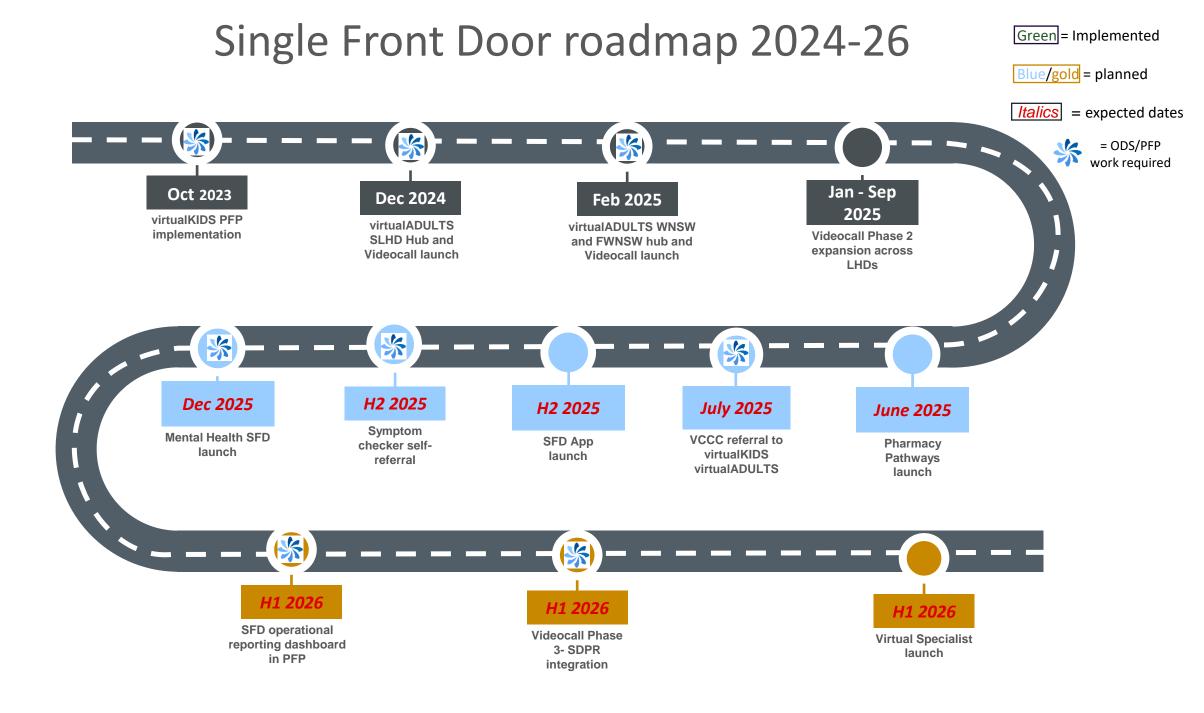
Healthdirect helpline flu-like-illness symptom* weekly triage volume trend by referral outcomes **NSW**

Despite a significant increase in volume during flu surge period, the absolute volume of referrals to physical ED remain relatively stable

*Screening definition

*See other health professionals include pharmacist, dentist, mental health provider, primary maternity care, poison information center, etc.

PF	OGRAM PRIORITIES FY24/25-FY25/26 SINGLE FRONT DOOR
Referral pathways	 Expansion of linked alternative referral pathways: NSW UCS, virtualADULTS Establishment of new services: Mental Health Single Front Door Enhance consumer connection to expanded-scope pharmacists
Communication and engagement	 Public campaign to support consumer behavioural change: tailored messaging for CALD, Aboriginal, priority population groups Clinician/internal communications to build awareness and trust
Digital	 Establish digital self-referral pathways to NSW Health services via Symptom Checker Establish a NSW Single Front Door app
Program	 3-digit strategy – National Front Door Focus on Aboriginal access to SFD and cultural safety Clinical governance: embed enhanced visibility between NSW Health and Healthdirect CG systems Monitor and evaluate program and pathways: Treasury and others Contract and performance management Business continuity processes



NSW Health



Thank you.

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