# **Demand and Capacity Planning**

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## **The Predictive Tool**

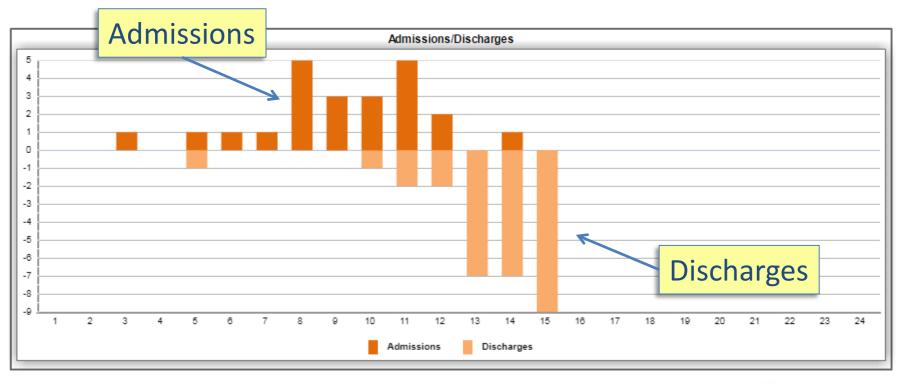


|  | Wed      | Thu      | Fri      | Sat      | Sun      | Mon      | Tue      | Wed      | Thu      | Fri      | Sat      | Sun      | Mon      | Tue      |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| *Prediction data only applies to<br>ED accessible wards* | 22/11/17 | 23/11/17 | 24/11/17 | 25/11/17 | 26/11/17 | 27/11/17 | 28/11/17 | 29/11/17 | 30/11/17 | 01/12/17 | 02/12/17 | 03/12/17 | 04/12/17 | 05/12/17 |
| Predicted total beds AVAILABLE                           | 119      | 107      | 114      | 57       | 44       | 100      | 103      | 107      | 107      | 114      | 57       | 44       | 100      | 103      |
| Predicted total beds REQUIRED                            | 145      | 113      | 93       | 77       | 74       | 123      | 107      | 107      | 111      | 91       | 73       | 74       | 120      | 89       |
| BED DEMAND STATUS  | -26      | -6       | 21       | -20      | -30      | -23      | -4       | 0        | -4       | 23       | -16      | -30      | -20      | 14       |
| Total ED accessible beds                                 | 528      | 528      | 527      | 520      | 514      | 523      | 528      | 528      | 528      | 527      | 520      | 514      | 523      | 528      |
|  | Notes    |
|  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 30   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 20 —   |          | -        |          |          |          |          |          |          |          |          |          |          |          |          |
| 10 -   | _        | _        | -        |          | _        | _        |          | _        |          |          |          |          |          |          |
| •  |          |          |          |          |          |          |          |          |          |          |          |          |          | _        |
| -10  |          | -        |          | -        |          |          |          | _        | _        |          |          |          |          |          |
| -20 -  | _        | _        |          |          |          |          |          | _        | _        |          |          |          |          |          |
| -30  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |



# **The Admission & Discharge Curve**











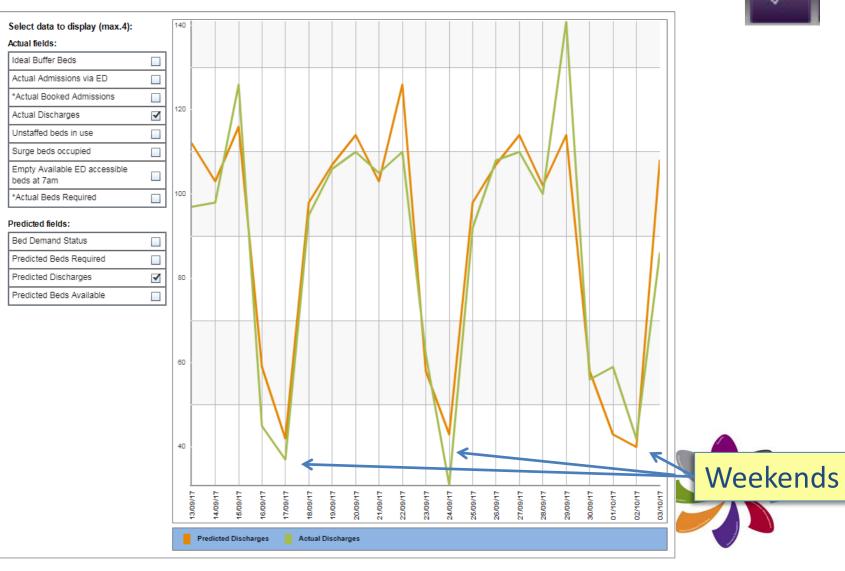


- Number of Ambulances
- Admissions by Specialty

| Specialty Reports            | 0 |
|------------------------------|---|
| LOS by Specialty and AMO     |   |
| Predicted Adm via ED by Spec |   |
| Specialty Activity           |   |
| Specialty Activity Snapshot  |   |

|   |                     |           | Wed        | Thu        | Fri        | Sat        | Sun        | Mon        | Tue        | Wed        | Thu        | Fri        | Sat        | Sun        | Mon        | Tue        |
|---|---------------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Predicted Admissions via ED by<br>Specialty | 21 Day<br>Indicator | Indicator | 22/11/2017 | 23/11/2017 | 24/11/2017 | 25/11/2017 | 26/11/2017 | 27/11/2017 | 28/11/2017 | 29/11/2017 | 30/11/2017 | 01/12/2017 | 02/12/2017 | 03/12/2017 | 04/12/2017 | 05/12/2017 |
| Aged and Extended Care                      | 7                   | 5 Year    | 7          | 6          | 6          | 7          | 5          | 8          | 7          | 10         | 6          | 6          | 6          | 7          | 7          | 7          |
| Aged and Extended care                      |                     | 3 Month   | 7          | 8          | 7          | 6          | 6          | 7          | 7          | 7          | 8          | 7          | 6          | 6          | 7          | 7          |
| Cardiology                                  | Cardiology 6        | 5 Year    | 5          | 4          | 5          | 3          | 5          | 7          | 7          | 7          | 7          | 3          | 5          | 5          | 8          | 6          |
| Gardiology                                  |                     | 3 Month   | 6          | 6          | 7          | 5          | 5          | 7          | 7          | 6          | 6          | 7          | 5          | 5          | 7          | 7          |
| Ear Nose & Throat Surgery                   | 1                   | 5 Year    |            |            |            | 1          |            | 1          |            |            |            |            |            |            |            |            |
| zar noos a misar cargory                    |                     | 3 Month   | 1          | 1          |            |            | 1          |            | 1          | 1          | 1          |            |            | 1          |            | 1          |
| Endocrinology                               | 0                   | 5 Year    |            |            |            |            |            |            |            | 1          |            |            |            |            | 1          |            |
| Endocrinology                               | , v                 | 3 Month   |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Gastroenterology                            | 2                   | 5 Year    | 2          | 2          | 3          | 3          | 2          | 4          | 2          | 3          | 3          | 2          | 2          | 2          | 3          | 3          |
| Gastroenterology                            | -                   | 3 Month   | 3          | 3          | 3          | 3          | 2          | 2          | 3          | 3          | 3          | 3          | 3          | 2          | 2          | 3          |
| General Surgery                             | 4                   | 5 Year    | 5          | 5          | 3          | 3          | 4          | 3          | 4          | 4          | 3          | 3          | 4          | 3          | 4          | 4          |
| General Surgery                             | -                   | 3 Month   | 4          | 3          | 4          | 3          | 3          | 4          | 4          | 4          | 3          | 4          | 3          | 3          | 4          | 4          |
| Curacecleav                                 | 0                   | 5 Year    |            |            | 1          |            |            | 1          |            |            |            |            |            |            | 1          |            |
| Gynaecology 0                               | U                   | 3 Month   | 1          | 1          |            |            |            |            | 1          | 1          | 1          |            |            |            |            | 1          |
| Mental Health 2                             | 2                   | 5 Year    | 2          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 2          | 1          | 1          | 1          | 1          |
|   | 2                   | 3 Month   | 1          | 1          | 1          | 1          | 1          | 1          | 2          | 1          | 1          | 1          | 1          | 1          | 1          | 2          |
| Nephrology 1                                |                     | 5 Year    | 1          | 1          |            | 1          |            | 1          |            | 1          |            | 1          |            | 1          |            |            |
|   | 1                   | 3 Month   |            | 1          | 1          | 1          | 1          | 1          |            |            | 1          | 1          | 1          | 1          | 1          |            |
|   |                     | 5 Year    | 2          | 2          | 1          | 1          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 3          | 1          | 1          |
| Neurology                                   | 3                   | 3 Month   | 2          | 2          | 3          | 2          | 1          | 3          | 3          | 2          | 2          | 3          | 2          | 1          | 3          | 3          |
|   |                     | 5 Year    |            |            |            |            |            |            | 1          |            |            |            |            |            |            |            |
| Obstetrics                                  | 0                   | 3 Month   |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|   |                     | 5 Year    | 2          | 2          | 2          | 1          |            | 1          | 1          | 1          | 3          |            | 2          | 1          | 2          | 1          |
| Oncology                                    | 1                   | 3 Month   | 1          | 1          | 1          | 1          | 1          | 1          | 2          | 1          | 1          | 1          | 1          | 1          | 1          | 2          |
|   | -                   | 5 Year    | 2          | 2          | 2          | 3          | 2          | 2          | 1          | 2          | 1          | 2          | 3          | 4          | 1          | 2          |
| Orthopaedics                                | 2                   | 3 Month   | 2          | 2          | 2          | 3          | 2          | 2          | 2          | 2          | 2          | 2          | 3          | 2          | 2          | 2          |
|   |                     | 5 Year    | 2          | 2          | 2          | 3          | 3          | 2          | 2          | 3          | 3          | 2          | 2          | 3          | 2          | 3          |
| Paediatrics                                 | 2                   | 3 Month   | 3          | 3          | 3          | 1          | 3          | 3          | 3          | 3          | 3          | 3          | 1          | 3          | 3          | 3          |
|   |                     | 5 Year    | -          | 1          | 1          |            | 1          | -          | 1          | 1          | 1          | -          |            | -          | -          | -          |
| Rehabilitation                              | 0                   | 3 Month   |            | 1          |            | 1          | 1          |            | 1          |            | 1          |            | 1          | 1          |            | 1          |
|   |                     | 5 Year    |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Renal Medicine                              | 0                   | 3 Month   |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|   |                     | 5 Year    | 2          | 3          | 1          | 1          | 2          | 3          | 2          | 3          | 3          | 3          | 2          | 1          | 2          | 2          |
| Respiratory                                 | 3                   | 3 Month   | 4          | 2          | 4          | 2          | 3          | 3          | 3          | 4          | 2          | 4          | 2          | 3          | 3          | 3          |
|   |                     | 5 Year    | 1          | 1          | -          | 1          |            | 2          | 1          | 1          | 1          | 1          | 2          | 2          | 1          | 1          |
| Urology                                     | 1                   | 3 Month   | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          |
|   |                     | 5 Year    |            |            | 1          |            |            |            | 1          |            |            |            |            |            |            |            |
| Vascular                                    | 0                   | 3 Month   |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Total for 3 Mo                              | nth*                | 3 monul   | 36         | 36         | 37         | 30         | 31         | 35         | 40         | 36         | 36         | 37         | 30         | 31         | 35         | 40         |
| Total for 5 Mo                              |                     |           | 30         | 30         | 37         | - 30       | 31         | 30         | 40         | 30         | 30         | 3/         | 30         | 31         | 35         | 40         |

## **Understand Your Discharges**



## **Understand your in-flows**



#### • Manage planned admissions along with anticipated capacity

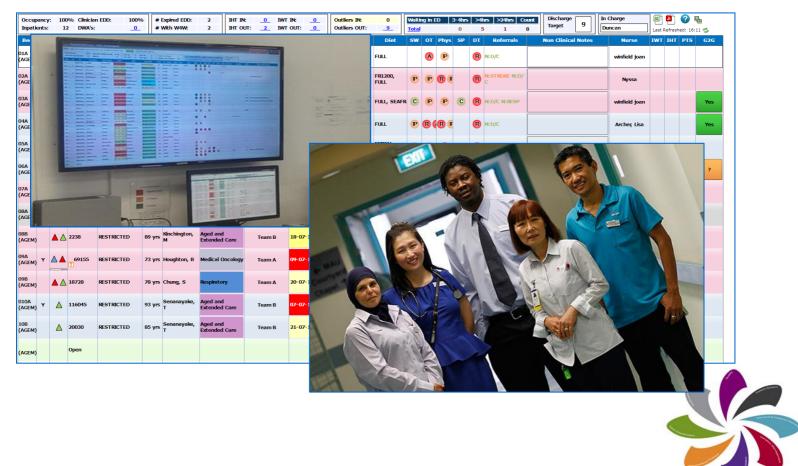
| B                     | ED DEMAND STATUS                    | -22     | -2      | 9        | -13     | -26      | -12      | -16      |   | -15      | -13      | 5        | -16    | -25      |
|-----------------------|-------------------------------------|---------|---------|----------|---------|----------|----------|----------|---|----------|----------|----------|--------|----------|
|                       |                                     | Wed     | Thu     | Fri      | Sat     | Sun      | Mon      | Tue      |   | Wed      | Thu      | Fri      | Sat    | Sun      |
|                       |                                     | 22/M/17 | 23/11/7 | 24/11/17 | 25/11/7 | 26/11/17 | 27/11/12 | 28/11/17 |   | 29/11/17 | 30/11/17 | 01/12/17 | 02M2M7 | 03/12/17 |
|                       | Yesterday's Admissions still in ED  | 14      |         |          |         |          |          |          |   |          |          |          |        |          |
| Unplanned             | Predicted Unplanned Admissions      | 50      | 42      | 46       | 42      | 43       | 50       | 52       |   | 49       | 47       | 46       | 42     | 43       |
| Admissions            | Predicted Direct Admissions         | 13      | 12      | 11       | 5       | 5        | 12       | 14       |   | 14       | 12       | 13       | 5      | 3        |
|                       | Predicted Unplanned Admissions      | 77      | 54      | 57       | 47      | 48       | 62       | 66       |   | 63       | 59       | 59       | 47     | 46       |
| <b>R</b> ecord        | Booked Surgical Overnight           | 12      | 11      | 9        | 1       | 0        | 11       | 9        |   | 12       | 12       | 9        | 0      | 0        |
| Planned<br>Admissions | Booked Medical Overnight            | 1       | 1       | 0        | 0       | 0        | 1        | 1        |   | 1        | 1        | 0        | 0      | 0        |
|                       | Predicted Planned Admissions        | 13      | 12      | 9        | 1       | 0        | 12       | 10       |   | 3        | 13       | 9        | 0      | 0        |
|                       | Surge beds occupied                 | 7       |         |          |         |          |          |          |   |          |          |          |        |          |
| Beds in Use           | Unstaffed beds in use               |         |         |          |         |          |          |          |   |          |          |          |        |          |
| Deus in Ose           | EDO/23hr requiring an inpatient bed |         |         |          |         |          |          |          |   |          |          |          |        |          |
|                       | Predicted Beds Required             | 7       | 0       | 0        | 0       | 0        | 0        | 0        |   | 0        | 0        | 0        | 0      | 0        |
| Pred                  | icted total beds REQUIRED           | 97      | 66      | 66       | 48      | 48       | 74       | 76       |   | 76       | 72       | 68       | 47     | 46       |
| Discharges            | Predicted Discharges                | 68      | 64      | 75       | 35      | 22       | 62       | 60       |   | 61       | 59       | 73       | 31     | 21       |
| Beds                  | Empty Available beds at 7am         | 7       |         |          |         |          |          |          |   |          |          |          |        |          |
| Pred                  | licted total beds AVAILABLE         | 75      | 64      | 75       | 35      | 22       | 62       | 60       |   | 61       | 59       | 73       | 31     | 21       |
|                       | EDD                                 | 28      | 48      | 53       | 6       | 1        | 30       | 13       | T | 2        | 9        |          |        |          |
|                       |                                     | Notes   | Notes   | Notes    | Notes   | Notes    | Notes    | Notes    | 2 | Notes    | Notes    | Notes    | Notes  | Notes    |
|                       |                                     |         |         |          |         |          |          |          |   |          |          |          |        |          |



## Manage your inpatients

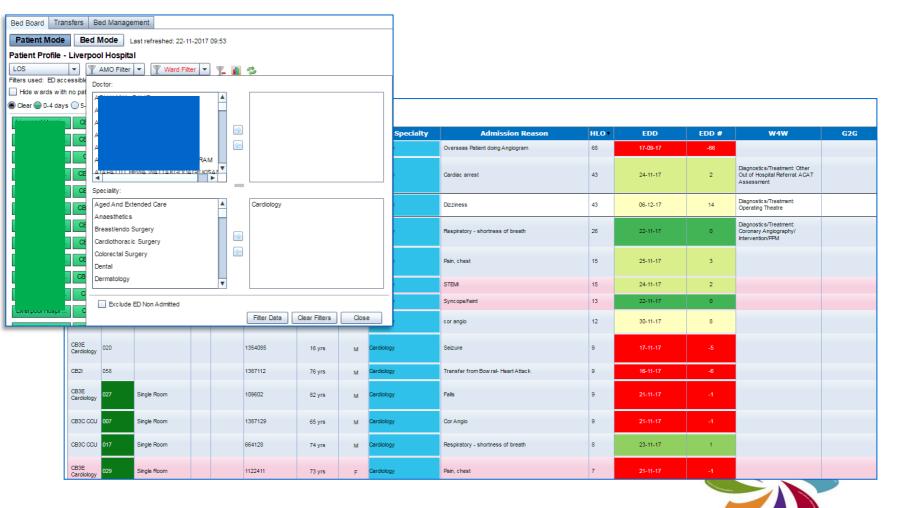


#### • Care Co-ordination: Realistic EDDs based on plan of care



## **Manage Your LOS**





## **Manage Your Delays**



- Identify and log W4W
- Review ward W4W on a daily basis
- Ensure open waits are credible
- Close open waits when completed
- Escalate open waits as required

### NUM's

### PFU NM

- Review Hospital waits daily
- Ensure open waits are credible – manage waits within your scope
- Collate and send W4W report daily to relevant Dept Heads
- Escalate unresolved waits to Hospital Exec

- Ensure W4W is integral to your Weekly and Monthly Flow Meetings
- Use information in W4W reports to identify and prioritise actions to resolve Hospital's constraints

### Exec



## **The Weekly Flow Meeting**

- GM/DO/DCS/DON
- Capacity Predictions
- Extended LOS (Over 9 days?)
- W4W delays
- Waitlist
- Isolation issues



# **Manage Your Outliers**



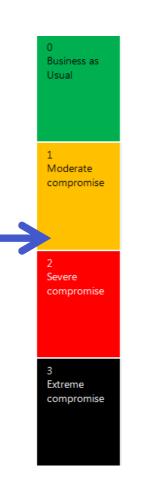
| PatientFlowPortal (Test) V6.2.0.19254   | 53037108   | 🔁 🚧 🙀 🤇  |                             |
|---|--|--|-----------------------------|
| Bed Board: | ct the Statewide Service Desk on 1300 285 533.<br>g queries contact PTS on 1300 233 500. | Facility STEP: 0 🔻 ED ST                           | EP: 0 🔻                     |
| Bed Board Transfers Bed Management  |  |  | <table-cell> 🔍</table-cell> |
| Patient Mode Bed Mode Last refreshed: 22-11-2017 09:47  | Filtered Profile:  | Hospital Profile:                                  |                             |
| Patient Profile -   | ED accessible bed occurancy:<br>Occupancy:   | N/A ED accessible bed occupancy:<br>N/A Occupancy: | 82.6%                       |
| Outliers vsed:  | Number of patients<br>Bed days to date:  | 18 Number of patients:<br>68 Bed days to date:     | 194<br>1406                 |
| Hide wards with no patients 🗹 Display ward description  | Average LOS:<br>Clinician defined EDat   | 3.78 Average L S:<br>0.0% Clinician of fined EDD:  | 8.68<br>21.9%               |
| 🖨 Clear 💿 Outlier 🕘 Non Sutlier (system update) 🍥 Non outlier (user update) Patient Name: Patient ID: 🔤 🍸   |  |  |                             |
|   |  |  |                             |
|   |  |  |                             |
|   |  |  |                             |
|   |  |  |                             |
| CD:1333349 0 🗸  |  |  |                             |
| Child D 🗸   |  |  |                             |
| Day Surger 0 🔻  |  |  |                             |
|   |  |  |                             |
| EMU 0 V   |  |  |                             |
| Home 0 V  |  |  |                             |
|   |  |  |                             |
| i Maternity 0 🗸   |  |  |                             |
| Mental Hea 0 -  |  |  |                             |
|   |  |  |                             |
|   |  |  |                             |
|   |  |  |                             |
| PMB Ren SW  |  |  | l.                          |
| Renal Dial 0  |  |  |                             |
| i Special Ca 0 🗸  | •  |  |                             |
|   |  |  | _                           |

## **Understand Your Triggers**



| Emergency Treatment Performance                 | 81 |  |
|---|----|--|
| ED accessible bed occupancy %                   | 85 |  |
| Patients over 9 days                            | 25 |  |
| Patients with ACCR waiting placement            | 4  |  |
| Patients waiting ACCR review                    | 2  |  |
| Patients accepted for rehab waiting a Bed       | 1  |  |
| Patients waiting rehab consult                  | 2  |  |
| Patients with MRO                               | 0  |  |
| Inpatients waiting surgery/procedure            | 1  |  |
| Patients requiring cardiac monitoring           | 0  |  |
| Patients ready for transfer to another Facility | 2  |  |
| Patients awaiting transfer into Facility        | 2  |  |
| Patients with Waiting For What Reasons          | 15 |  |
|   |    |  |







## **Targeted Escalation**



Facility STEP: 2 ED ST

ED STEP: 2

|                      | T  | oday's Prediction |                      |      |
|----------------------|----|-------------------|----------------------|------|
| Prediction           |    |                   |                      | Beds |
| Patients             | IN | Patien            | Surplus /<br>Deficit |      |
| Unplanned admissions | 45 | Discharges        | 44                   |      |
| Planned admissions   | 6  | Empty beds        |                      | -24  |
| Beds in use          | 17 |                   |                      | -24  |
| Total                | 68 |                   | 44                   |      |

| 3-4hrs | >4hrs | >24hrs | Count  |
|--------|-------|--------|--------|
|        | 6     |        | 7      |
|        | 4     |        | 4      |
|        | 2     |        | 3      |
|        |       |        |        |
|        |       |        | 7      |
|        |       |        | 2      |
|        |       |        |        |
|        |       | 6<br>4 | 6<br>4 |

|                             | Be   | d Status           |                      |                     |
|-----------------------------|------|--------------------|----------------------|---------------------|
| Оссиралсу                   |      |                    |                      |                     |
| ED accessible bed occupancy |      |                    |                      | 108.6%              |
| Total occupancy             |      |                    |                      | 85.0%               |
| Ward Occupancy (all wards)  |      |                    |                      |                     |
|                             |      |                    |                      |                     |
| ED accessible wards         | STEP | Current inpatients | Total available beds | Empty available bed |
| Total                       |      | 190                | 175                  | -15                 |
| IKILA (1 KILLARA)           | 0    | 33                 | 33                   |                     |
| 2BAR (2 BARKALA)            | 0    | 32                 | 32                   |                     |
| 2GUN (2 GUNYAH)             | 0    | 27                 | 24                   | -3                  |
| 3COO (3 COOINDA)            | 0    | 32                 | 24                   | -8                  |
| 3EDO (3 EDO)                | 0    | 9                  | 8                    | -1                  |
| 3JAR (3 JARA)               | 0    | 30                 | 28                   | -2                  |
| 2YAR (YARRABEE / CCU)       | 1    | 27                 | 26                   | -1                  |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |
|                             |      |                    |                      |                     |



## **Reactive strategies to avoid...**

- Open surge capacity
- Cancel planned admissions
- Escalate to encourage discharges



## **Any Questions?**







#### • Understand your In-flows

- ED activity
- Planned
- Manage Inpatient stays
  - EDDs
  - LOS
  - W4W
  - Outliers



## Contact us for:

- Education and advice around the Patient Flow Systems Framework
- Support and training on the Patient Flow Portal and Electronic Patient Journey Board

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Damian Miners 0477 335 278 LHDs: CC HNE FW NBM NS MLHD WNSW WS

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