Whole system focus on the patient and staff issues of exit block and crowding

Using data to predict and persuade

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St Thomas’ ED

- 140,000 ANNUAL ATTENDANCES
- Streaming, initial assessment, RAT
- 23 adult Majors cubicles
- 10 Paeds and separate waiting
- 6 Resus cubicles
- UCC with 8 cubicles – GP/ENP/EM
- AAU, EPAGU, Eyes, SAU, Frailty- all currently M-F 9-5
- In the middle of a major rebuild- massive challenges
Reacting in time?- the past - start of journey 2013
We now have a data as to what occupancy is a warning sign and can react
The effect- Breach numbers Q3 2012-13 V 2013-14

Number of breaches

hour of the day

Number of breaches

0
20
40
60
80
100
120
140
160
180
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0 1 2 3 4 5 6 7

hour of the day

1213 1314
Background

- Patient outcomes poorer with long waits
- Trust penalties for non-compliance
- Emergency patient inflow can vary by 100 patient attendances in a day
- Escalation protocol to maintain safety and improve performance
  - Increasing capacity
  - Increasing resources
  - Maintaining safety
Detail – External Amber

- Triggered within the ED by the Physician in Charge / NIC
- Based in Occupancy levels and waiting times which predict a catastrophic deterioration in performance for the next four hours
- Expected to occur 4 to 6 times a year (based on historic data)
- Response:
  - Increase outflow capability
  - Ensure early decision making
  - Increase capacity within the ED
  - Free-up ED resources
Time to see a Clinician

Time to see A&E clinician

![Graph showing the time to see a clinician throughout the day.](image)
Live occupancy data and detail

Emergency Department - Current Status

Last Updated: 23/09/2016 17:27:54

Total Patients In ED: 68
Waiting at Initial Ass’t: 1
Waiting to be treated: 20
Being treated: 26
DTA - Waiting for bed: 1

Waiting:
- Waiting at Initial Ass’t: 0:29
- Longest wait for treatment: 2:44
- Longest time in department: 4:52
- Longest wait for a bed: 0:31

Infograph:
- Arrivals: 25, 21
  - Last 60 mins: 25
  - Previous 60 mins: 21
- All Modes: 3, 7

Data Quality:
- Left Department: 482 Records

Total number of patient in ED
Visual clue to problem
Area to focus on
Unknowns
Plotting occupancy, flow and breaches

Occupancy in ED
- Team A and B
- Team C
- AAU
- Majors waiting
- Adults waiting
- Whole Department

ED breaches - by arrival hour
- Breaches
- Outflow 'shortfall'

ED Inflow and outflow of Majors patients
- Outflow 'shortfall'
- Arrivals smoothed and shifted forward 3 hrs
- Departures smoothed
Not making it! 4 hour target
Inflow v. outflow We have a good understanding

- If majors occupancy is >24 we get breaches
- If the majors ‘queue’ gets over 20 – everyone breaches
- Outflow gears up late. Inflow > outflow until after 5pm
- Exit block = 10% of cubicle occupied by DTA pts
- 10 failed outflow is much worse than 10 extra inflow
  - 10 majors inflow may only equal 2-3 admissions. All 10 failed outflow need full nursing care etc.
“On Thursday and Friday, the outflow very significantly lagged behind the inflow – on both days the outflow didn’t reach 7 per hour until 6pm or later, whereas the inflow was 8 per hour by midday. Because of this mismatch in flow, Majors was near full by 2pm (around 20 cubicles occupied), with a further queue of 20 patients waiting to be seen. Very high numbers of breaches occurred from the afternoon onwards.”

David Grant
Sustainability

But we got OUTSTANDING in the Sept 15 CQC inspection
Why are we finding flow a problem

- Volume
- Capacity
- Staffing
- Pressures in the hospital
- Competing targets
- Finance
- A major rebuild
Core principle- Quality care

- Quality patient care is effective, safe, personal and timely
- Every patient counts, and to them, every minute counts

- We cannot push patients around the facility simply to make a target – and as yet the in patient side has not got enough frontline capacity and the community end is struggling
- We have plans and beyond the ED is where solutions will be found
Core principles- safe

Ambulances must be unloaded and released so they are available for the next patient whose condition is an ‘unknown unknown’
Core principle - 6 hours in ED and 12 hours in ED

- 12 Hours – from arrival NOT DTA (Not had any of those)
- 3 x 12 hour breaches (from arrival) in last 2 years – sadly all mental health system related
- SO although not making the target we hold the line on OTHER targets

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Doubled at least
Core principles – keep working on throughput
Average (mean) length of stay in minutes (duration in department), 2014-15
What are we doing

- Frailty unit
- Consultants ‘pull’ patients to a dedicated unit
- Shared space with EM Observation Unit
- Flex beds
- Current 5/7 but Jan 17 7/7
## Throughput – Staffing

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<td>-2.7</td>
<td>2.16</td>
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</table>
Exit block and crowding is a patient safety issue

INCREASED MORTALITY, ADVERSE EVENTS, DECREASED QUALITY OF CARE
STAFF STRESS
Risk factor

Mean length of stay during same shift (hours)

1. Left without being seen
2. Mean length of stay during same shift (hours)
   - <1 (reference)
   - 1-2
   - 2-3
   - 3-4
   - 4-5
   - 5-6
   - ≥6
The worry – 12 hours in ED (and this is from DTA)

Number of Patients Waiting More than 12 Hours

- April 2013 to March 2014: 10928
- April 2014 to March 2015: 19995

> 12 Hours

Legend:
- April 2013 to March 2014
- April 2014 to March 2015
Lack of Privacy

A number on the wall and a red line are signs of normalising the unacceptable

Corridor medicine must stop
Conclusion

- Occupancy is a simple measure for understanding day to day flow
- High occupancy may be due to inflow or outflow problems.
- High occupancy due to OUTFLOW indicates exit block -6 and 12 hrs
- Exit block cripples the function of the Emergency Department
- Exit block leads to crowding
- Crowding harms patients and causes staff stress
- Ambulance delays not acceptable
- Hospital capacity must reflect ‘work done’ not ‘work imagined’!
Questions?
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#therearenomorequickwins