


Introduction of a minor injury clinic (MIC) to improve patient flow



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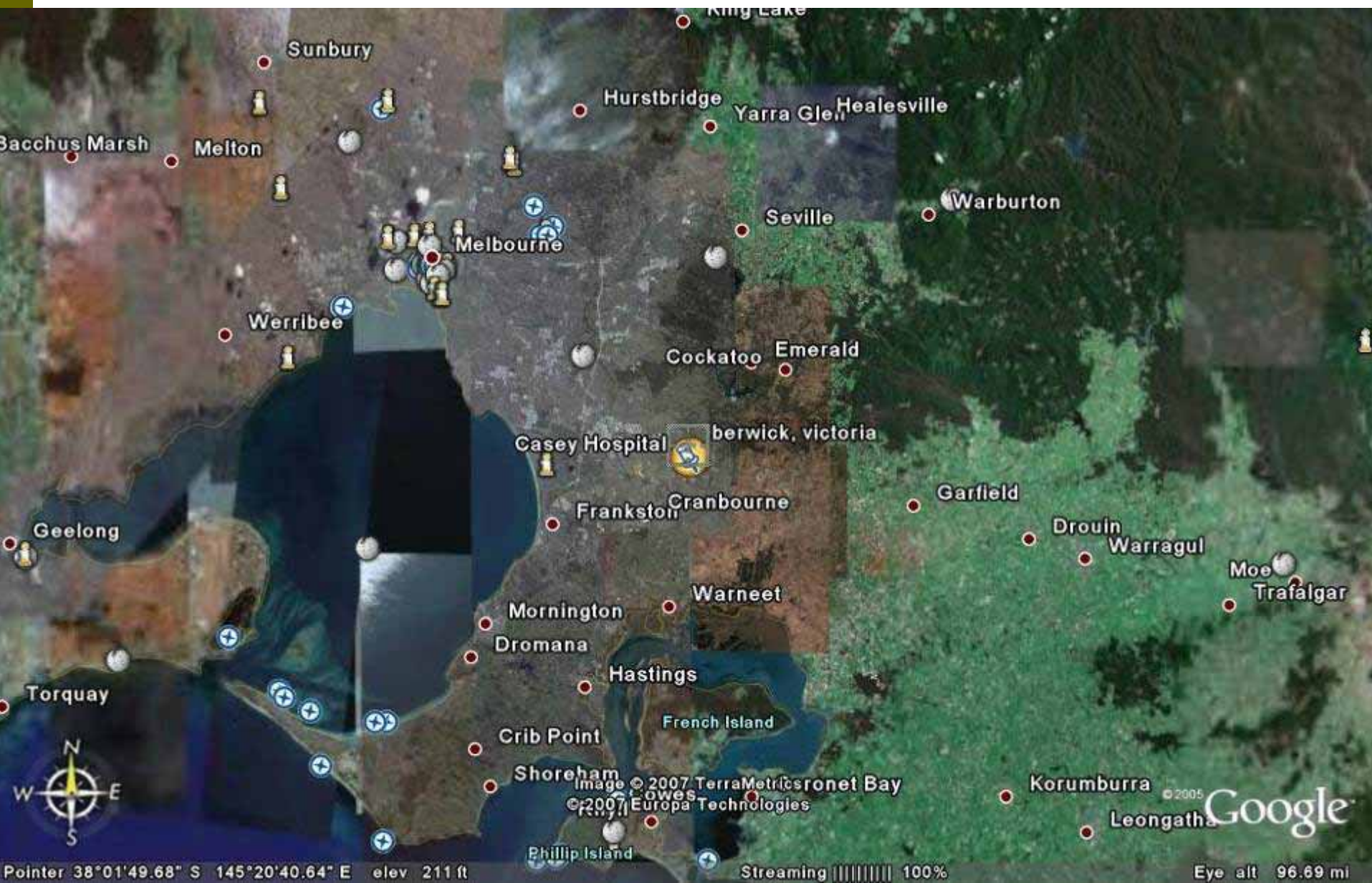
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Casey Hospital

- Newest hospital in Victoria
- Serves fastest growing urban area in Australia
- 120 bed hospital, part of Southern Health (largest health care network in Victoria)
- ED: 40, 000 patients per year.
 - High number suburban trauma
 - Rapidly increasing presentation numbers (24%pa)





Pointer 38°01'49.68" S 145°20'40.64" E elev 211 ft

Streaming ||||| 100%

Eye alt 96.69 mi





Having the first Krispy Kreme in Melbourne ?



Kath & Kim Country

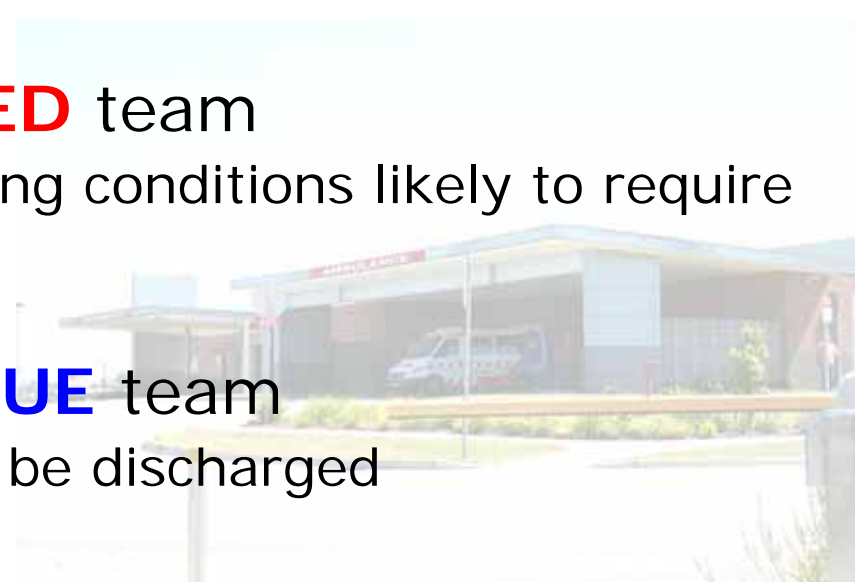


Fountain Gate



Streaming of Casey Emergency

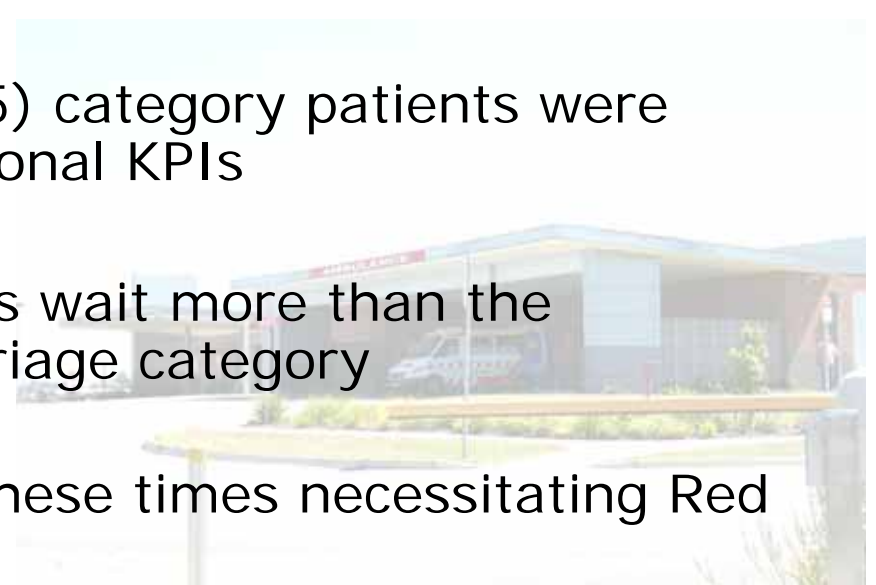
- All triaged patients receive an allocation to one of two streams
- **Admission stream: RED** team
 - For patients with presenting conditions likely to require admission
- **Discharge stream: BLUE** team
 - Patients who are likely to be discharged
- Each team has their designated doctors and nurses



Early data

□ At the beginning of 2006

- During peak times:
 - Monday, Friday and weekend between 12:00pm and 8:00pm
- Waiting time for lower (4 & 5) category patients were beginning to fall outside national KPIs
- 10% to 15% of presentations wait more than the recommended time for the triage category
- Blue team overwhelmed at these times necessitating Red Team doctors assistance
- In turn may prolong RED team waiting time
- Increased length of stay for all ED patients



Possible explanations

- ❑ Young suburban community, sport, recreation, building houses
- ❑ Patient activity reflected summer/leisure time
- ❑ Closure of local GP clinics during weekend/holiday periods
- ❑ Word is out!! The new hospital is open for business, new facilities. If you build it, they will come.



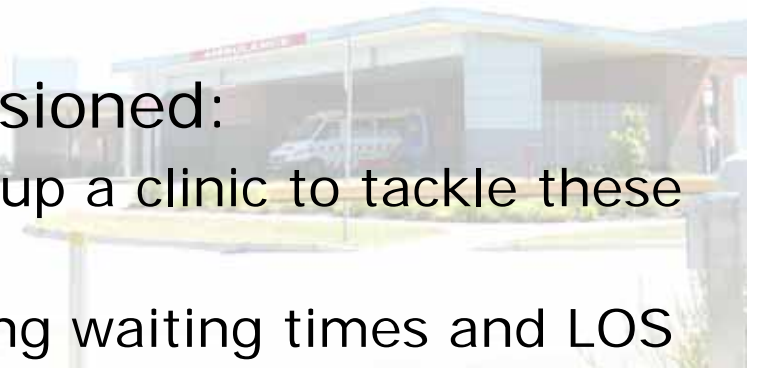
Data Breakdown

- Other data also suggested that approximately 40% - 45% of our category 4 -5 patients presents with minor injuries:
 - Minor sprains/ strains
 - Fractures (reducible in ED)
 - Minor wounds
 - Foreign bodies (eyes, distal limbs)
 - Minor burns



The challenge

- ❑ At a senior doctors' summit
- ❑ Anticipate further increase of patient numbers and acuity
- ❑ A special team was commissioned:
 - Objective is to look at setting up a clinic to tackle these minor injuries
 - To improve or halt deteriorating waiting times and LOS for WHOLE DEPARTMENT

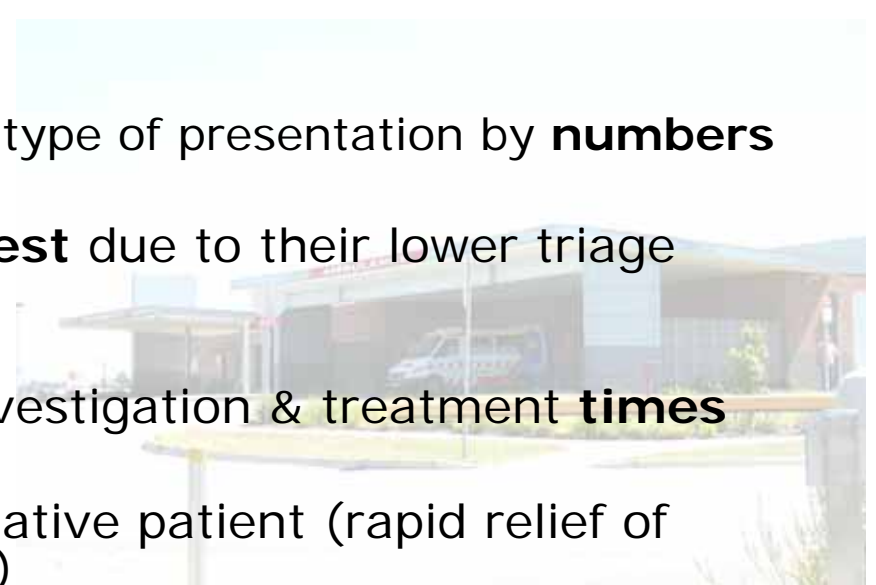


Minor Injury Clinic (MIC) Model

- ❑ Separate rostered Staffing
- ❑ Separate physical space (occupies one corridor within the ED)
- ❑ Treats only minor injuries during peak times

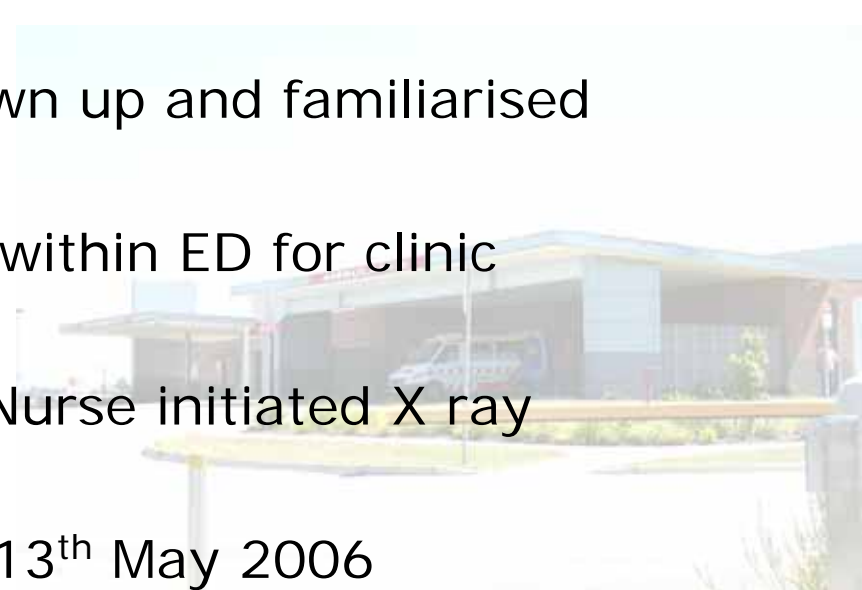
- ❑ Reasons are:
 - Minor Injury is single **largest** type of presentation by **numbers**
 - Patients made to **wait longest** due to their lower triage category
 - Requires the **least** actual investigation & treatment **times**
 - Often have the most appreciative patient (rapid relief of discomfort easily achievable)

 - Best uses of resources
 - a) can be run by medical staff with good breadth rather than good depth of clinical skills
 - b) Often requires only one medical and one nursing staff to adequately manage patient load
 - c) Platform to educate nursing staff perform additional assessment during triage and initiate appropriate investigations



Implementation of MIC

- Medical and nursing staffs identified for clinic
 - Senior staff, decision makers
- Protocols and guidelines drawn up and familiarised
- Setting up of physical space within ED for clinic
- Training of nursing staff for Nurse initiated X ray
- Commencement of clinic on 13th May 2006
- Collection of data







Pilot Study results

- Data collected for:
 - Presentation numbers
 - Waiting Times
 - ED Length of Stay

- Data are taken for the whole department as target for clinic to is improve DEPARTMENT PATIENT FLOW

- Number of patients during the pilot month was:
 - Cat 1: 9
 - Cat 2: 207
 - Cat 3: 742
 - Cat 4: 1023
 - Cat 5: 844
 - Total: 2825



Pilot Waiting Times

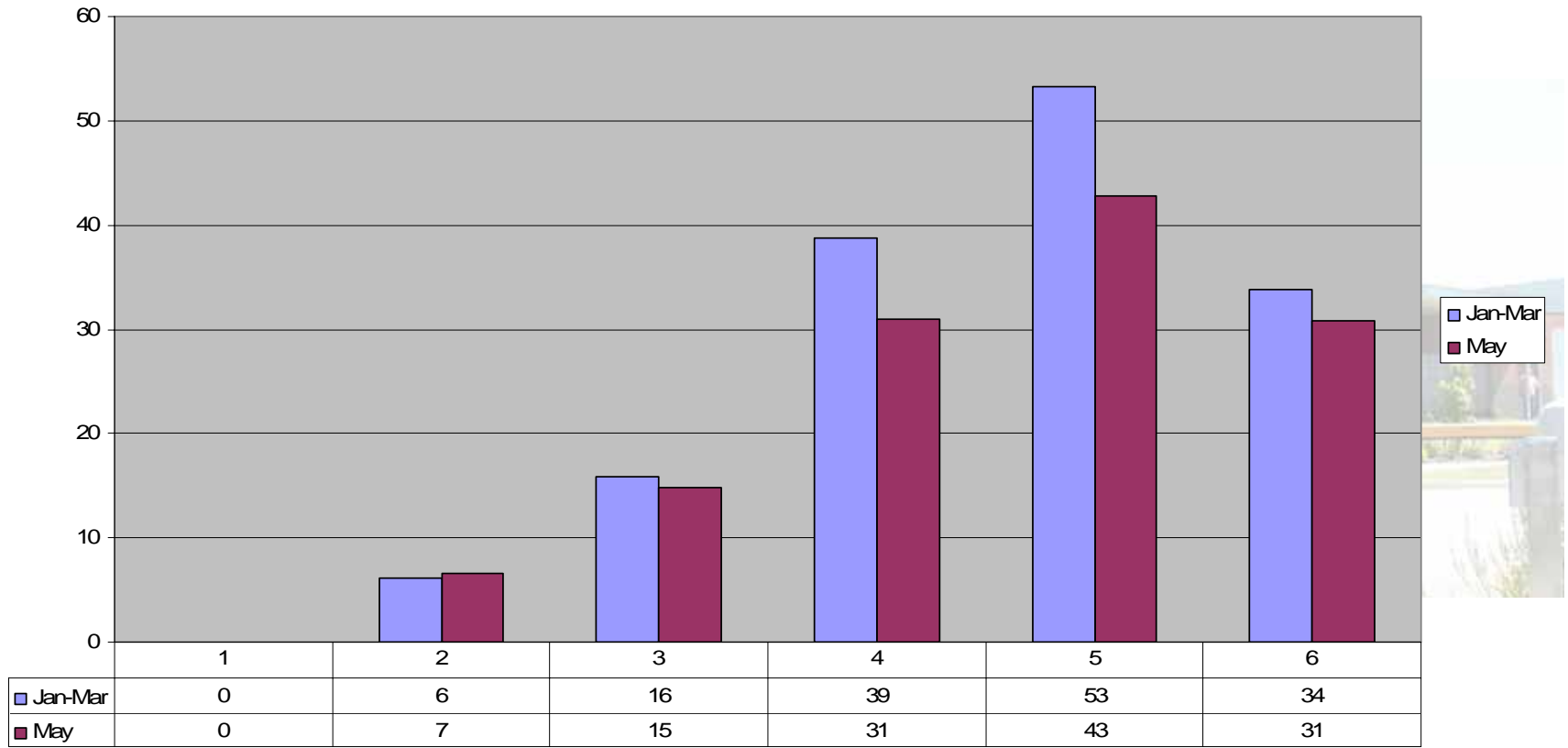
- Main improvement:
 - Cat. 4: 8 minutes
 - Cat. 5: 10 minutes

- Overall only minor improvements in waiting times

Waiting Time (minutes)		
Tcat	Jan-Mar	May
1	0	0
2	6	7
3	16	15
4	39	31
5	53	43
Overall	34	31

Waiting times

Pilot Waiting Times



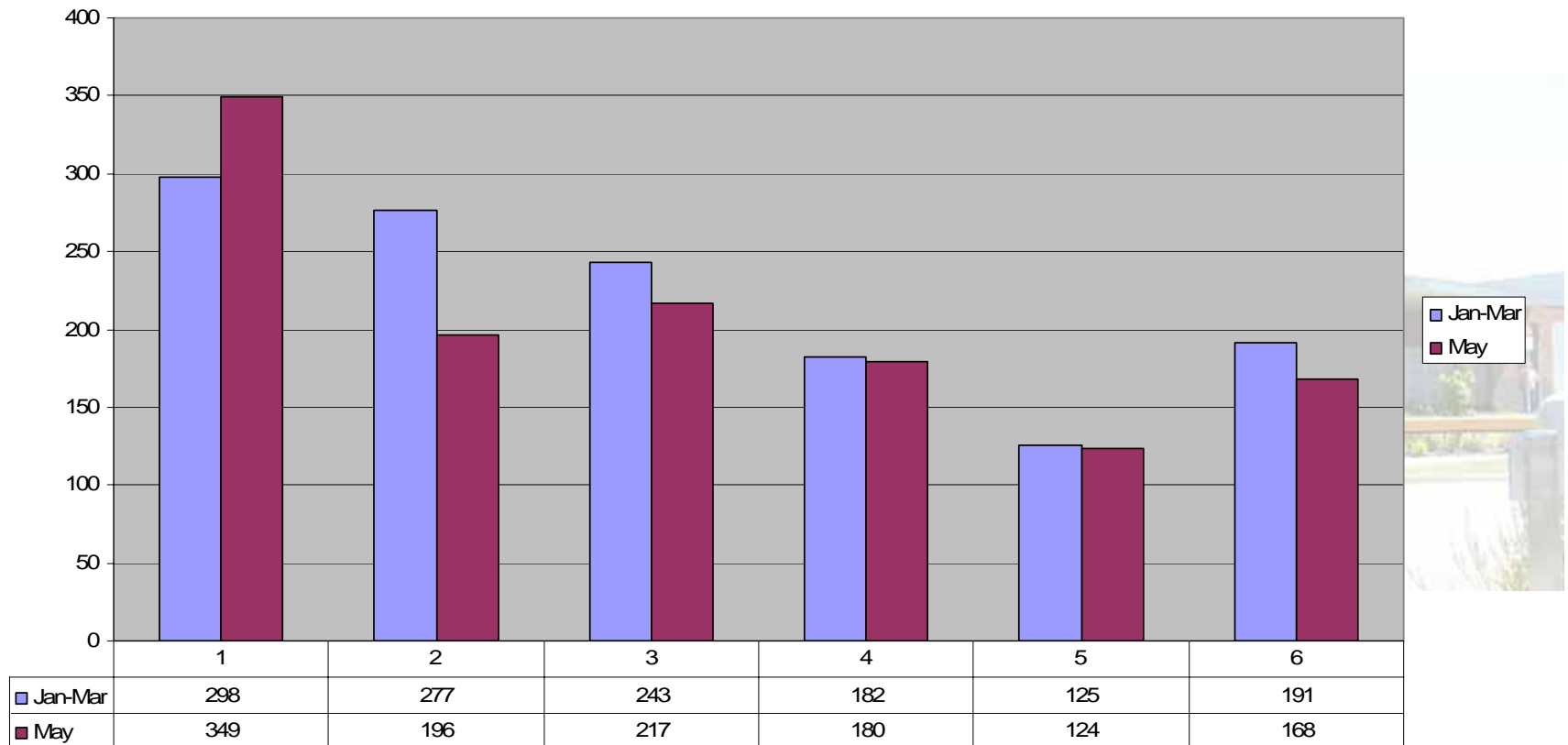
Pilot Length of Stay (LOS)

- ❑ Negligible improvement in minor injury population
- ❑ Surprisingly, the main improvement in LOS is in the higher acuity groups
- ❑ Initial Feed back:
 - Minimised ED crowding (increased cubicles availability)
 - Allowing Admit team doctors concentrate on their job?
 - Fixed treatment times for minor injuries

LOS		
Tcat	Jan-Mar	May
1	298	349
2	277	196
3	243	217
4	182	180
5	125	124
Overall	191	168

Total Length of Stay

Pilot LOS



Decision

- ❑ Even though it is not seasonally adjusted
- ❑ Result so far were promising
- ❑ Decided to continue the clinic into winter months



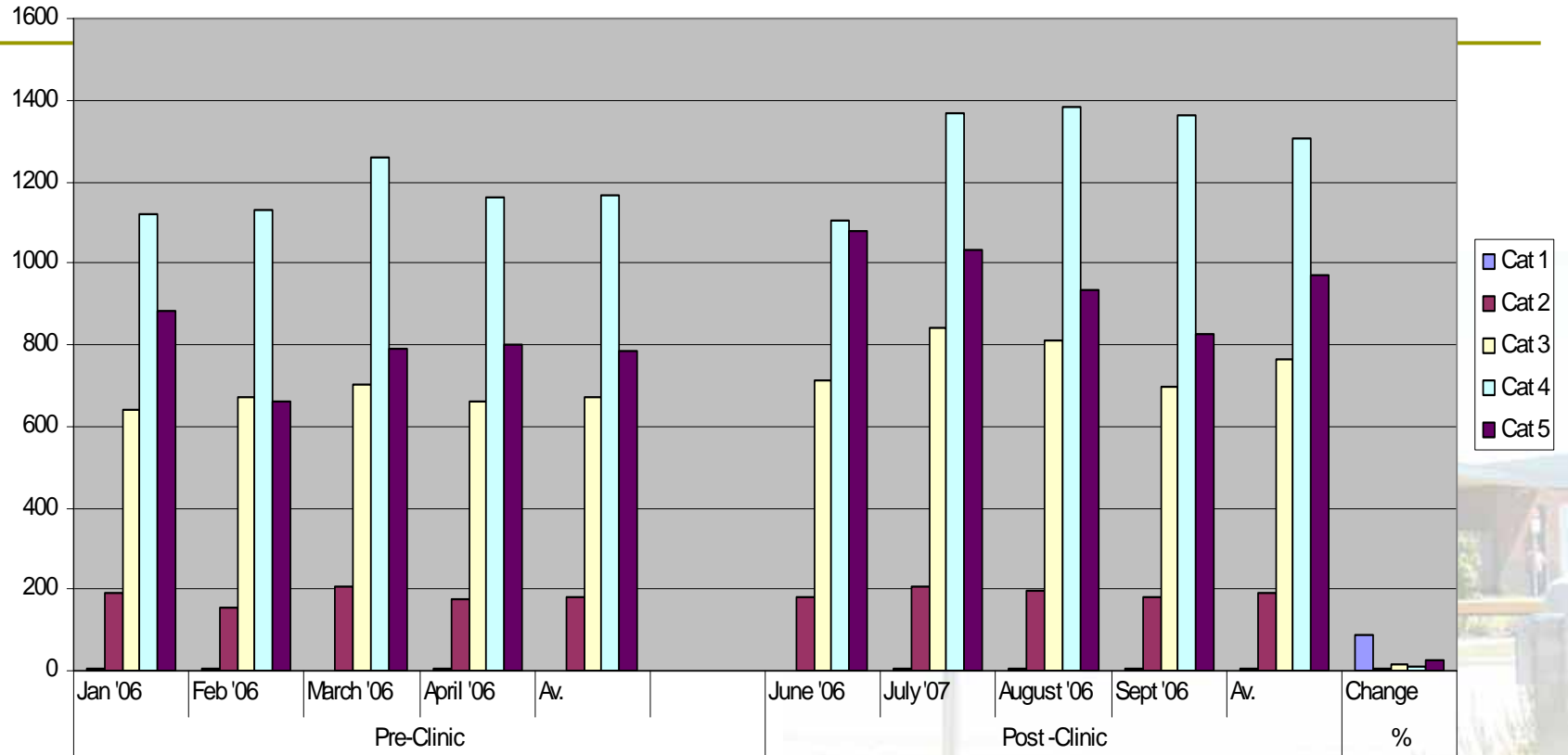
New Data

- Data from the first 4 months of the year (before clinic) was compared with the data in the 4 full months (June to September) the clinic operated:
 - Presentation numbers
 - Waiting Times
 - ED Length of Stay

- Presentation numbers:
 - Increased by average of 5 -24%



Pre / Post Clinic Presentation Numbers



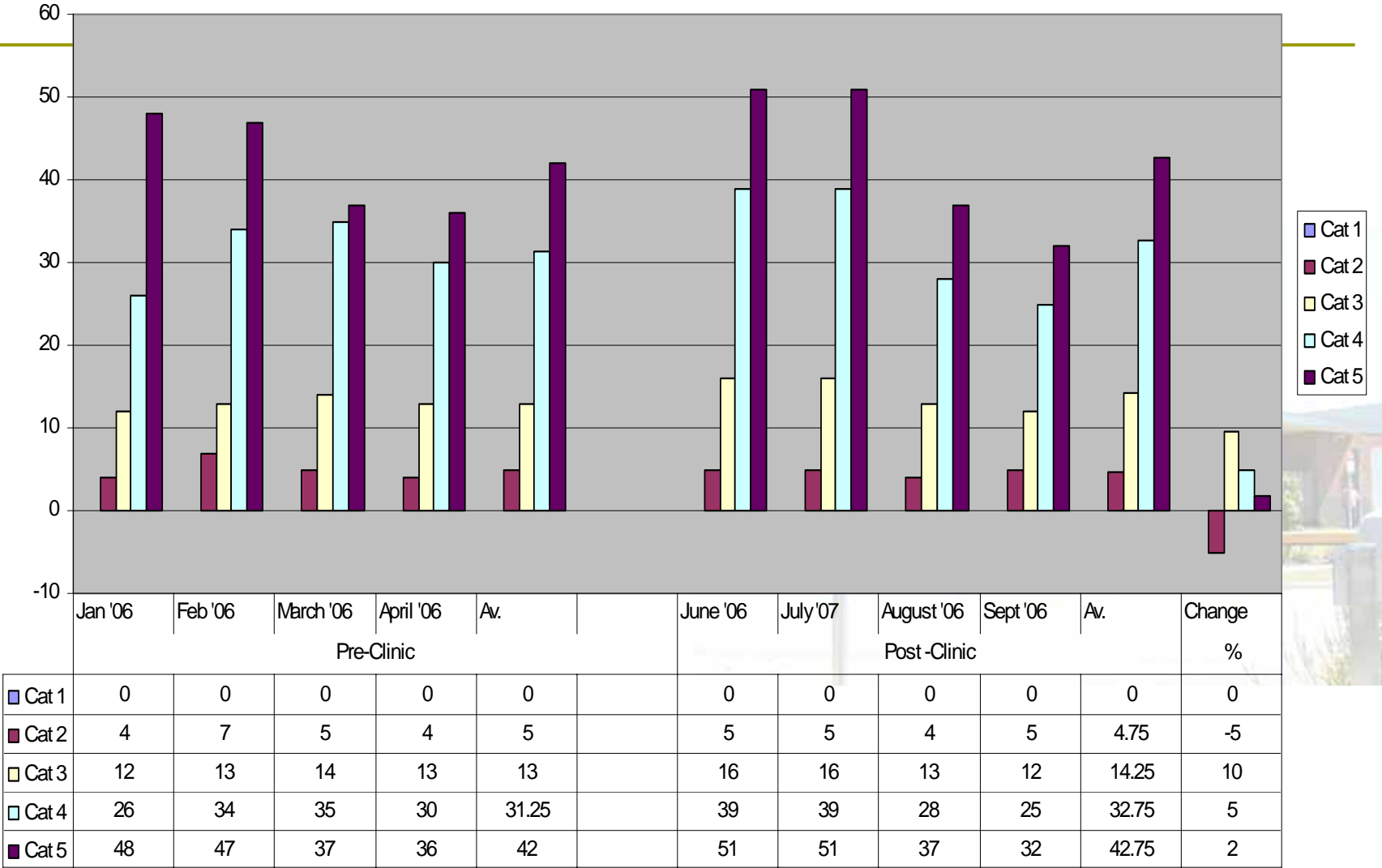
	Pre-Clinic					Post-Clinic					Change %
■ Cat 1	3	3	1	3	2.5	2	6	7	4	4.75	90
■ Cat 2	189	157	207	176	182.25	182	205	194	183	191	5
□ Cat 3	642	670	703	659	668.5	710	839	810	695	763.5	14
□ Cat 4	1122	1131	1257	1162	1168	1104	1370	1384	1362	1305	10
■ Cat 5	881	663	791	798	783.25	1081	1030	935	826	968	24

Presentations

- All increased
- Cat 3 14%
- Cat 4 10%
- Cat 5 24%

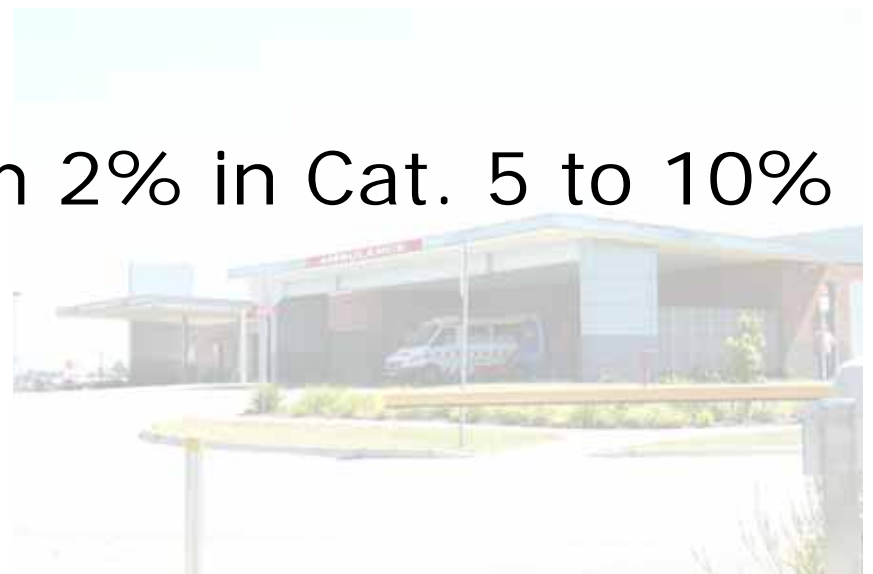


Pre / Post Clinic Waiting Time

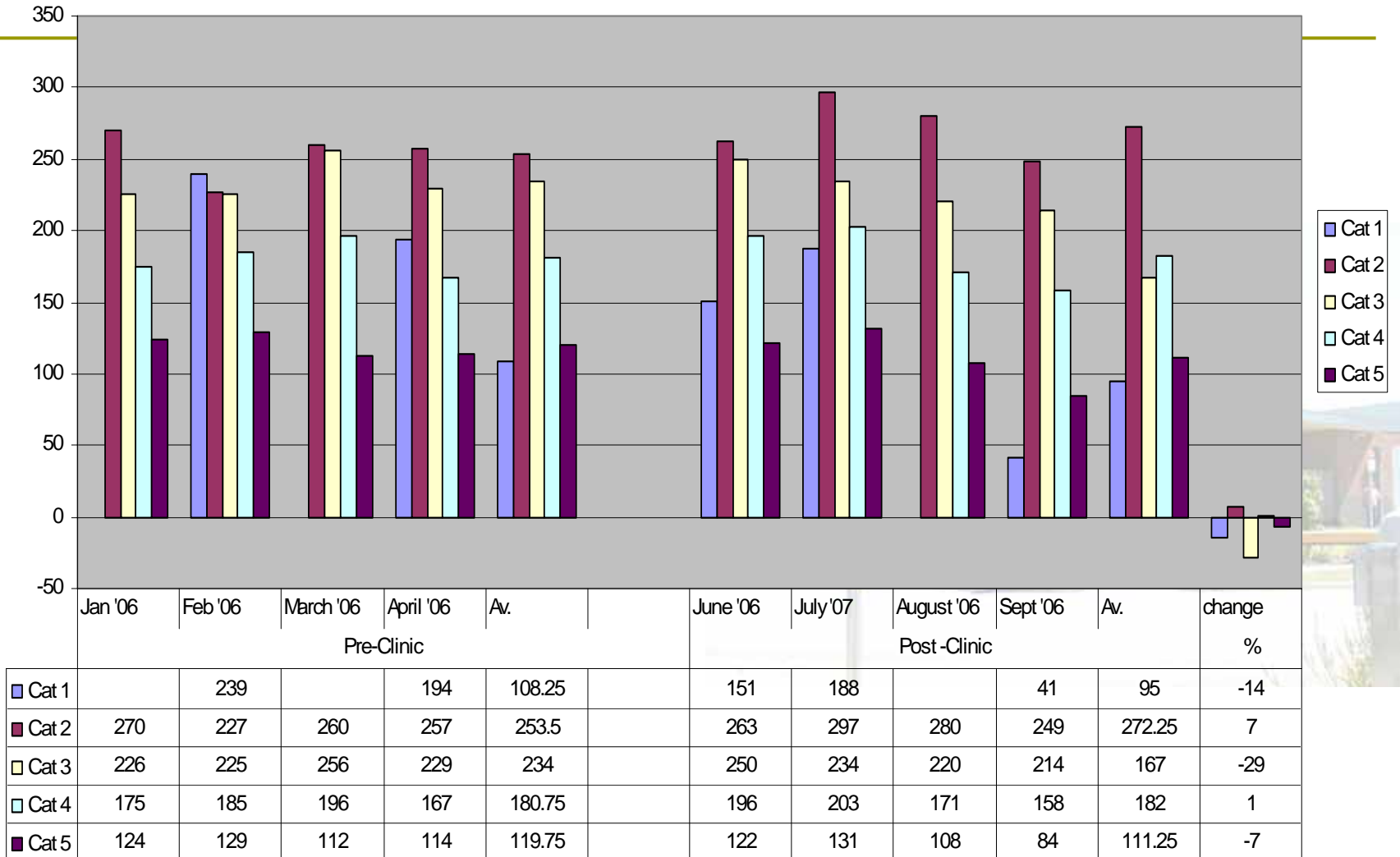


Waiting Time

- Mildly increased in all Triage categories except Cat. 2 which had reduction of 5%
- Increases range from 2% in Cat. 5 to 10% in Cat. 3



Pre / Post Clinic Length Of Stay



LOS

- Triage category LOS increased:
 - Cat. 2: 7%
 - Cat. 4: 1%

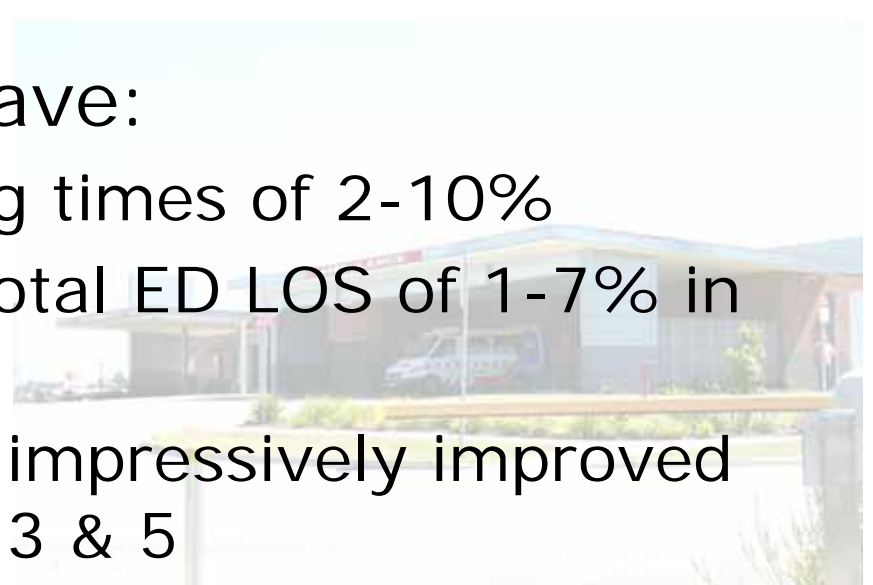
- Improved LOS was matched by
 - Cat. 5: 7%
 - impressive 29% in Cat. 3



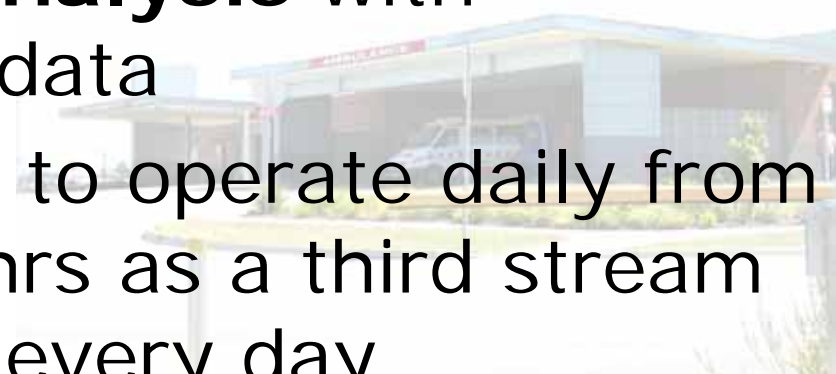
Conclusion

- Despite increase patient load of 5-24%

- Appears Casey ED have:
 - only increased waiting times of 2-10%
 - Moderate worsened total ED LOS of 1-7% in cat 2 & 4
 - Possible outweigh by impressively improved LOS by 7-29% in cat 3 & 5



In the pipe line

- ❑ Continual collection of objective data
 - ❑ Subjective data in Patient and Staff satisfactory survey are being prepared
 - ❑ Formal **statistical analysis** with seasonally adjusted data
 - ❑ Clinic now expanded to operate daily from 10:00 hrs to 20:00 hrs as a third stream (The **GREEN** Team) every day
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- ❑ Despite massive increase in presentations
 - ❑ No change in staff numbers
 - ❑ Small (?significant increase in Waiting times)
 - ❑ (mostly) dramatic decrease in LOS





