New solutions in old bottles: Addressing ED Overcrowding in Christchurch

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Improving the patient journey

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Christchurch Hospital ED

- 72,000 presentations/year
- 48% admission rate
- 23 ED cubicles
- 550 hospital beds

Receptionist

Thursday April 29, 2004

THE PRESS

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Zest Best of the wurst – C1

'A little bit Hollywood' – C11

Emergency dept crisis

CDHB chief orders hospital review

Tara Ross

The Canterbury District Health Board has launched an urgent review of Christchurch Hospital's stressed emergency department after doctors warned that patients were at risk.

CDHB chief executive Jean O'Callaghan announced the independent review yesterday after The Press exposed senior doctors' concerns that the hospital's worsening budget was dragging it back to the days of the Patients are Dying report.

"I have called for the review in response to concerns that have been expressed about the increased numbers of patients in the emergency department and following some clinicians' public statements about patient safety," O'Callaghan said.

"These statements cannot go unchallenged and I need to ensure that if there are problems, they are independently identified along with the appropriate solutions," she said.

Senior doctors have warned that the emergency department is dealing with more patients than it can cope with and the situation is as dire now as it was in the late 1990s, when a Health and Disability Commissioner's inquiry slammed the hospital's ...

... three victims of a major car crash, an ambulance with an unconscious patient, and another ambulance with a cardiac patient arrived recently to an already overwhelmed emergency department.

Every cubicle was in use and there were more patients in the waiting room.

"The consequence of all that was one of the major trauma victims was managed for a period of time in the hallway with an off-duty house surgeon, and me running between the five resuscitations."

That sort of situation was particularly risky, yet there were many examples like that, Ardagh said.

"The nurses were extraordinarily stressed in that situation.

"That's when we're unconfident about the way things are going. It's just happening too often."

O'Callaghan knew the emergency department had been under a lot of pressure at times but said she had not been provided with any explicit evidence to back up the doctors' claims.

Jean O'Callaghan

Yet clinicians and nurse representatives told The Press they have raised their concerns with management before now.

Nurses Organisation ...

Full house: an ambulance delivers another patient to Christchurch Hospital's emergency department.

Christchurch Hospital in setting up the same risky environment.

"You can't have a declining budget in the face of increasing throughput and increasing patients turning up," Begg said.

Family fears more unnecessary deaths

Eight years after the Patients are Dying report, ... seems to have

What this talk is about

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- A case study
  - Improving the Patient Journey Project at Christchurch Hospital
- Real solutions
  - Principles and application based change

Causes of and solutions to ED overcrowding

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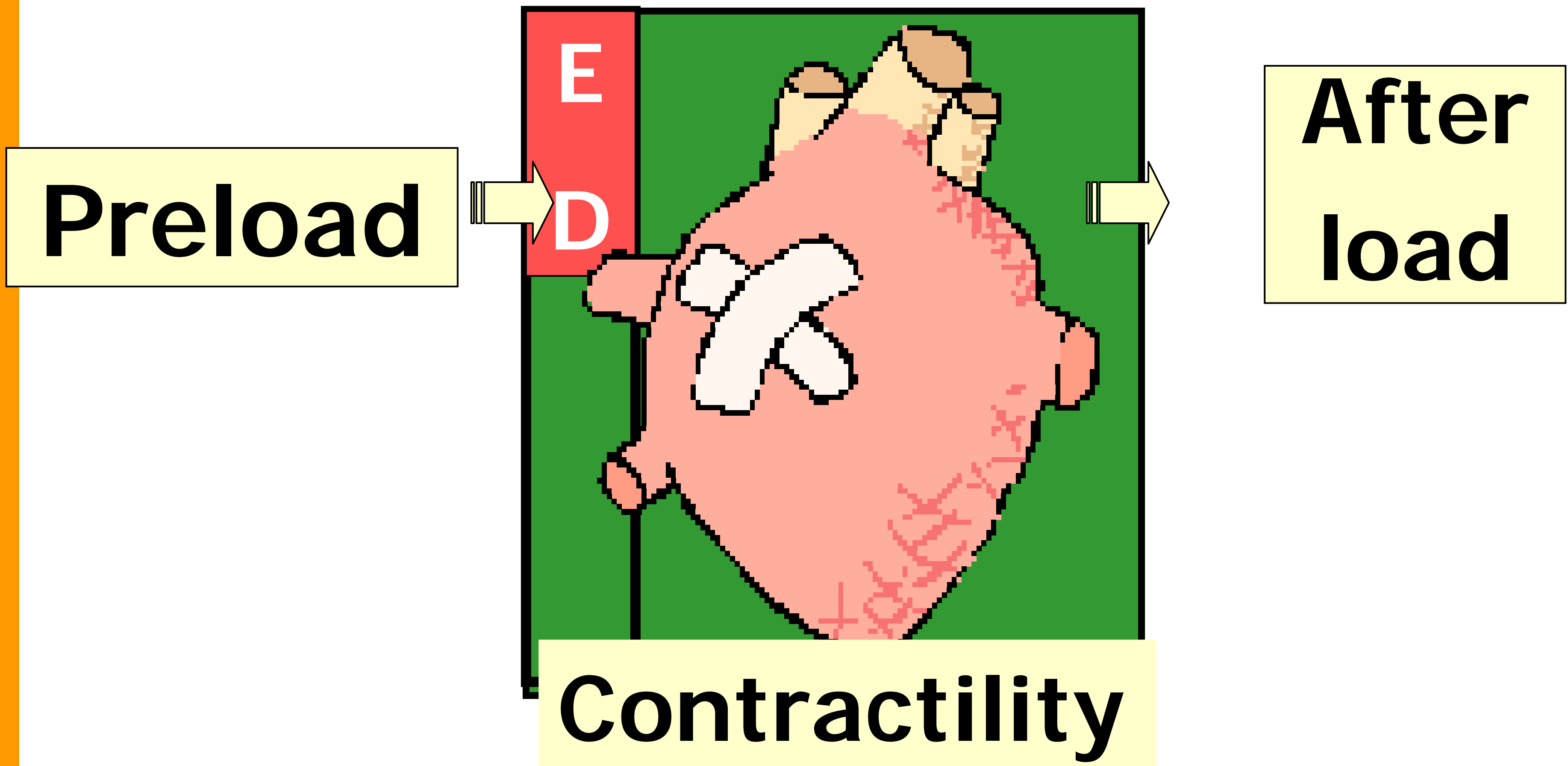
- Cardiac failure analogy
- The patient journey paradigm
- Models of Care template

The Cardiac Failure Analogy



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Principles

1. The causes, and solutions are multi-factorial and should be considered in concert

2. Two of the three areas of contribution are outside the authority of the ED, so it needs to be driven at Executive level

Patient Journey Paradigm

- Take the whole patient journey perspective
  - referral to discharge
  - there may be a number of patient journeys
- Examine it (diagnostics)
  - what things are unnecessary
  - where are the tightest bottle necks
- Fix it
  - Unnecessary steps in the patient journey should be identified and eliminated
  - devote resources to the narrowest bottlenecks first

Principles

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3. **Unnecessary steps in the patient journey should be identified and eliminated**
4. **The narrowest bottlenecks in the patient journey should be fixed first**

Models of Care

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- The models of care describe the itinerary on the patients journey
  - where they go, what happens there and who does it.
- The important 'transformational' or 'value added' tasks need to be focused on
  - resuscitation or stabilisation, diagnostic work up, observation, definitive care etc.

Principles

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5. Important tasks in the patient journey (value added, or transformational tasks) need an appropriately staffed and resourced place dedicated to undertaking that task efficiently and effectively.

6. When the patient has completed that task, he or she moves to the next place, for the next task.

Drivers for change

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Improving the patient journey

- Patients and staff
- Porkupines Report (early 2004)
- Brennan & Kennedy Report (late 2004)
- Improving the Patient Journey Project

Improving the Patient Journey (IPJ)

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Improving the patient journey

- Umbrella of project management
- Whole systems redesign
- Based on data and analysis
- Series of interlinked programmes e.g.

Capacity Planning
Emergency Department
Theatre access
General Medicine etc
After Hours
General Surgery
Radiology

Dealing with the 11am bus……

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Improving the Patient Journey: The Christchurch Story

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Improving the patient journey

- ED length of stay as a key performance indicator (KPI) (4, 6 and 12 hour)
- Traffic light Q-screen changes. Also rolled out to wards to give ward staff a heads up of potential patients for their areas
- Soon to go one step further with AMAU (MAPU) Q-screen available on GM wards

Improving the Patient Journey
the Christchurch Story
Q Screen Changes

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'Unseen' patients – ordered as per triage category these are sorted by Length of Stay [LOS] into colour bands.

LOS 0-1Hr –	No colour
LOS1-2 Hr –	Green
LOS 2-3 Hrs	Yellow
LOS 3-4 Hrs	Red
LOS >4 Hrs	Brown

Patients in ED, seen by Doctor- these are sorted by Length of Stay [LOS] into colour bands as above

Patients admitted to EOA – NOT part of the LOS target. [therefore in blue at the bottom of the Q Screen list]

Improving the Patient Journey the Christchurch Story Q Screen Changes

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LOS	A	Patient Name	Age	T	Complaint	Doctor	Nurse
01:10	*R6	SHARPLES ENA	77y	2	GP. CARD. CHEST PAIN SOB		ROSIE
01:29	*R1	PERON EVA	29Y	2	GP. GMED. PE		DENISE
00:08	*R3	BONO SONNY	73Y	3	AMB. GMED. SOB/HEADACHE		TARYN
02:34	WR	DAGG FRED	63Y	3	GP. EMERG .L SIDED CHEST P		KEITH
00:44	B1	SPEARS BRITNEY	18Y	4	AMB. EMERG. MVA. STERNAL		GAIL
00:41	BC	EASTWOOD CLINT	82Y	4	AMB. EMERG. SEIZURES/HYP		MARG
05:47	F7	GABOR ZSA ZSA	79Y	4	AMB. EMERG. GMED.BACK P	CATTEY, KP	ALASDAIR
03:32	F5	BUSH GEORGE	43Y	4	SEL. EMERG .R) CHEST PAIN	SMITH, MJ	RUSSELL
02:46	B2	SINATRA FRANK	85Y	3	AMB. EMERG. FALL ?KO'D	MARSHALL	DENISE
02:06	F	JONES TOM	77Y	4	AMB. EMERG. INJ. L. HIP	GILBERT,	MARG
02:03	B5	MONRO MARILYN	82Y	4	AMB. EMERG. D &V	FLEISCHER	MARG
01:15	PS	BOWIE DAVID	51Y	4	AMB. EMERG. DEPRESSION	FINCH LC	BETH
01:12	B1	SIMPSON MARG	46Y	3	AMB. EMERG. POST ICTAL	GATTEY,	MIKE
00:59	B2	RICHARD CLIFF	44Y	4	AMB.EMERG.M.V.A/HEAD LAC	MARSHALL	MIKE
00:30	C2	TUDOR HENRY	81Y	3	SEL. EMERG. LETHARGY	FINCH	RUSSELL
16.38	EOA	TURNER TINA	53Y		FAM EMERG CHEST PAIN	CCD TM1 CROZ	AXH6481
15.30	EOA	JAMES BILLY T	40Y		AMB. EMERG. BACK PAIN	EMERGENCY	NVZ2358
06:10	EOA	HAYWARD RITA	70Y		AMB. EMERG. FALL/BACK P	GENMED 7 TH	FRM6366
05:01	EOA	JAGGER MICK	84Y		AMB GMED. CHEST PAIN	GEN MED 4 MO	KCC8947

Applying principles into practice in ED

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- ED Review Team, led by two SMOs, meets twice weekly to review data of all patients >10hrs LOS + targeting triage performance
- Fast-track pathways for some surgical patients and for medical patients
- 7-day front door physio in ED - see 95% pts within 30 mins referral and discharge 60% GM, 85% musculoskeletal patients

See and Start

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- **If dealt with early these low workload cases can be discharged very rapidly**
- **This has the effect of improving flows of other patients in the department**
- **Championed by Nurse Manager and Prof of Emergency Medicine with backing of Health Board**
- **N.B. *Not* about volume but about fostering culture of competency driven practice**

Improving the Patient Journey - Ward developments

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Improving the patient journey

- Acute Medical Assessment Unit – 87% Gen Med patients go through this unit with ALOS 20hrs.
- Expected Date of Discharge for all patients admitted from AMAU
- Nurse or criteria led discharge by protocol - Reduced LOS (0.3 days) and weekend discharges (up 40.6%) in trial wards

Improving the Patient Journey - Ward developments

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Improving the patient journey

- Improved acute theatre access to reduce surgical length of stay and free up beds
- Working on the development of a Surgical Assessment & Review Area (SARA) plus Medical and Surgical Progressive Care Units (HDUs) to create 'hot' medical and surgical floors (to open within next six months)
- Transit lounge identified and to be up and running in <3 months

Improving the Patient Journey: The Christchurch Story

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Improving the patient journey

- **Each of these initiatives frees up bed capacity improving ED access to wards**
- **All clinician driven with support of *Improving the Patient Journey* team**

Emergency Department - Daily Analysis of Time in Department - Detail

Report Start Date 7/04/2007
Report End Date 13/04/2007

Attend Date	Attends	In Dept Time (Hrs)								% of Total					Average Time (mins)
		0 - 1	1 - 2	2 - 3	3 - 4	4 - 6	6 - 8	8 - 12	12 +	0-4 Hrs	4-6 Hrs	6-8 Hrs	8-12Hr	12 Hrs +	
Sat 07 Apr 2007	191	43	33	53	34	25	2	1	0	85.3%	13.1%	1.0%	0.5%	0.0%	144
Sun 08 Apr 2007	219	56	31	39	39	43	8	3	0	75.3%	19.6%	3.7%	1.4%	0.0%	163
Mon 09 Apr 2007	176	49	33	38	21	26	5	4	0	80.1%	14.8%	2.8%	2.3%	0.0%	146
Tue 10 Apr 2007	213	53	38	36	27	33	18	7	1	72.3%	15.5%	8.5%	3.3%	0.5%	176
Wed 11 Apr 2007	176	42	28	27	33	37	5	5	1	72.7%	21.0%	2.8%	2.8%	0.6%	175
Thu 12 Apr 2007	183	53	36	29	21	26	10	8	0	76.0%	14.2%	5.5%	4.4%	0.0%	162
Fri 13 Apr 2007	196	45	27	39	36	35	8	6	0	75.0%	17.9%	4.1%	3.1%	0.0%	173
TOTALS	1,354	341	224	261	211	225	56	34	2	76.6%	16.6%	4.1%	2.5%	0.1%	163

ATTENDANCES BY TRIAGE

Attend Date	Attends	Triage 1	Triage 2	Triage 3	Triage 4	Triage 5
Sat 07 Apr 2007	191	0	18	81	81	11
Sun 08 Apr 2007	219	1	31	96	85	6
Mon 09 Apr 2007	176	1	20	64	78	13
Tue 10 Apr 2007	213	0	37	126	42	8
Wed 11 Apr 2007	176	3	21	80	65	7
Thu 12 Apr 2007	183	2	27	77	77	0
Fri 13 Apr 2007	196	3	18	102	67	6

TRIAGE TARGET TIME

Triage	Target %	% Seen within Target
Triage 1 (Immediate)	100%	100%
Triage 2 (10 mins)	80%	53%
Triage 3 (30 mins)	75%	38%
Triage 4 (60 mins)	70%	45%
Triage 5 (120 mins)	70%	63%

NUMBER (AND %) OF PATIENTS ADMITTED (as recorded by ED and including EOA admissions)

Period	Disch as IP	Triage 1	Triage 2	Triage 3	Triage 4	Triage 5
7 Apr 2007 to 13 Apr 2007	605	8	136	336	125	0
		80%	79%	54%	25%	0%
Target		75% - 90%	60% - 70%	50% - 60%	20% - 30%	5% - 10%

Percentage of Patients leaving ED in Four Hours or less

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Percentage of Patients leaving the Emergency Department in 4 Hours or Less, Feb 06 - Feb 07

Percentage of Patients

100%
95%
90%
85%
80%
75%
70%
65%
60%
55%
50%

% 4 hrs & less Pre Q Screen	Mean	Lower limit	Upper limit
% 4 hrs & less Post Q Screen	Mean	Lower limit	Upper limit
% 4 hrs & less Post AMAU	Mean	Lower limit	Upper limit
% 4 hrs & less Post Review Team	Mean	Lower limit	Upper limit
% 4 hrs & less Review Team Break	Mean	Lower limit	Upper limit
%4 hrs Post 3 Hour Focus	Mean		

Hold on a minute..

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Aren't you turning the ED into a glorified triage post?

What about training? The registrars won't get any experience.

What do we want to achieve in a specialist emergency department?

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- Expert and timely care of the unwell patient
- Prompt, accurate diagnosis and expert early management of patients with significant illness and injury

What do we want to achieve in a specialist emergency department?

- A well developed capacity to rule out significant illness and injury so that patients can be reassured and safely sent home

- Expert management of patients with a wide variety of non life-threatening conditions, including the performance of procedures so that patients' appropriate treatment is not delayed, discomfort is promptly relieved and discharge is expedited

The Future Emergency Department

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- **Resuscitation of the unwell patient**
- **Management of the Undifferentiated Patient**
  - **Particularly efficient 'rule out' pathways, for example Clinical Decision Units - Leeds *et al*.**
- **Definitive management of the Ambulant Patient**
  - **Particularly more procedures, and more procedural sedation/anaesthesia.**

What *don't* we want to achieve in a specialist emergency department?

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- Baby-sitting patients who are under the care of other teams
- Accommodating teams of in-patient doctors, particularly the arrogant and the pedestrian
- Having our own patient care desires thwarted by a department full of patients who would be better served by being somewhere else, managed by someone else

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What do *patients* want from a specialist emergency department?

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To leave!

A final thought….

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It's the patients' time that matters…

If we value this, everything else will follow