



Thoughts on the Unthinkable

Gregory Robertson
Canterbury DHB



THOUGHTS ON THE UNTHINKABLE

THE CHRISTCHURCH MOSQUES MASS CASUALTY INCIDENT

Conflicts of Interest

NONE.....

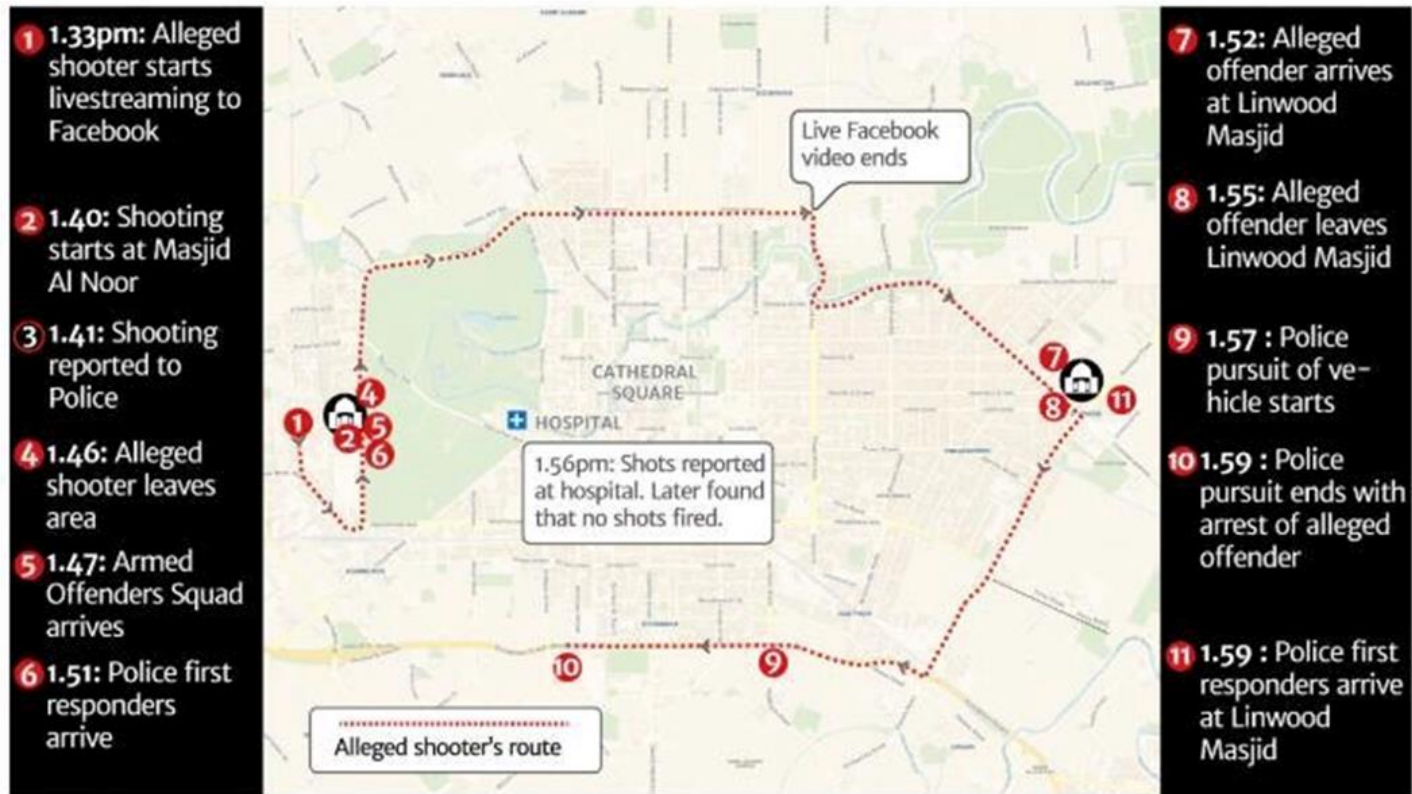
Ambivalence



Outline

- ▶ The Christchurch Mosques MCI
 - ▶ What Happened and how we dealt with it
 - ▶ Hospital Response Beyond Day 1
- ▶ The Differences to the MCI associated with the Christchurch Earthquakes
- ▶ Outcomes
- ▶ Lessons Learnt

The Timeline of March 15 ...Retrospectively

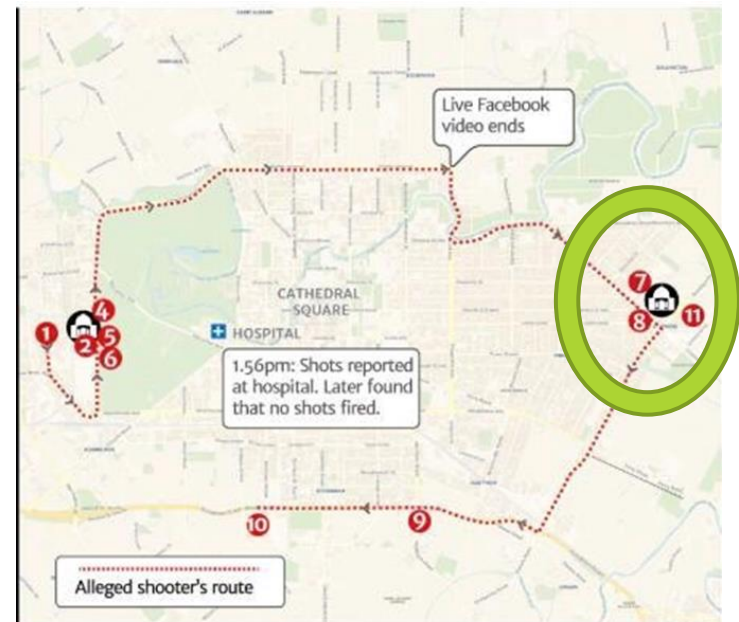


Al Noor





Linwood Mosque





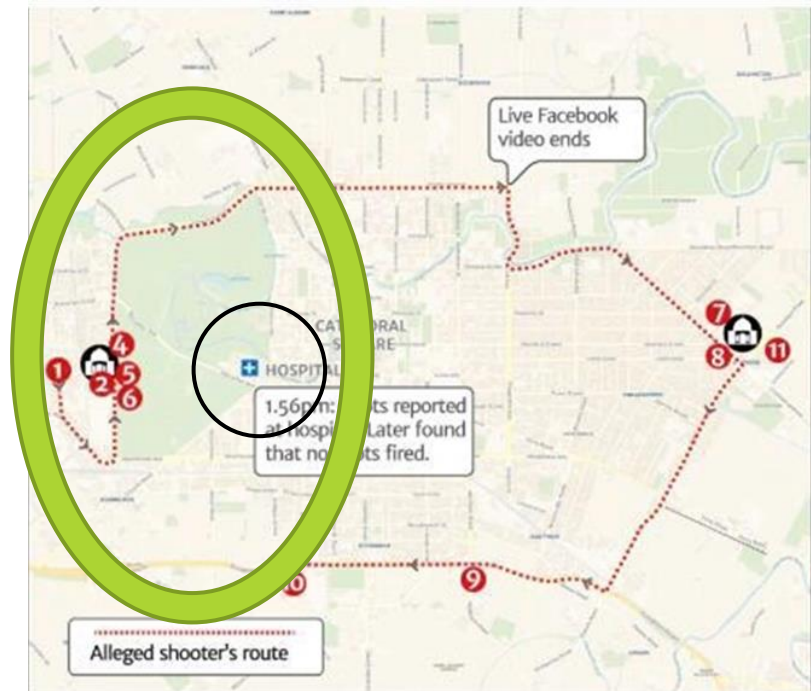
The Arrest

But in Real TimeHappenings “All over City”

- ▶ Reports of Gunshots at Several Locations in Christchurch and also Christchurch Hospital
- ▶ ? One ? Multiple offenders
- ▶ Hospital and Public Buildings in Lock Down
- ▶ NO-ONE Really knows what is happening NOR what is coming

Emergency Department

- ▶ First two patients arrived in ED
- ▶ “Expect Many more”
- ▶ Two more , then Another three,....then 3 heavily armed Police
- ▶ **MCI Protocol Activated**
- ▶ Forty more patients in the next 45 Minutes



The ED Response

- ▶ “Hundreds” of staff converged on ED
- ▶ Multiple Trauma Teams
 - ▶ Lead by
ED/Anaethetists/Intensivists/Surgeons
 - ▶ Staff from different departments helping
 - ▶ E.g. Cardiologist doing echo's for tamponade
 - ▶ Ultrasonographers –fast scans
- ▶ ...Lots of people
 - ▶ Hospital staff, Injured, their Families, Friends

More than just the Trauma teams

- ▶ Administration –booking /ID labels/JFC CODE
- ▶ Cleaning
- ▶ Supply- Dressings/chest tubes/Drapes
- ▶ Pharmacy- antibiotics/Tetanus/tranexamic Acid/Narcotics...
- ▶ Orderlies
- ▶ Social Workers
- ▶

PATIENT LOAD
MOVES THROUGH
THE HOSPITAL
SYSTEM

ED Portion of
MCI over
within ~3
hours

Injuries

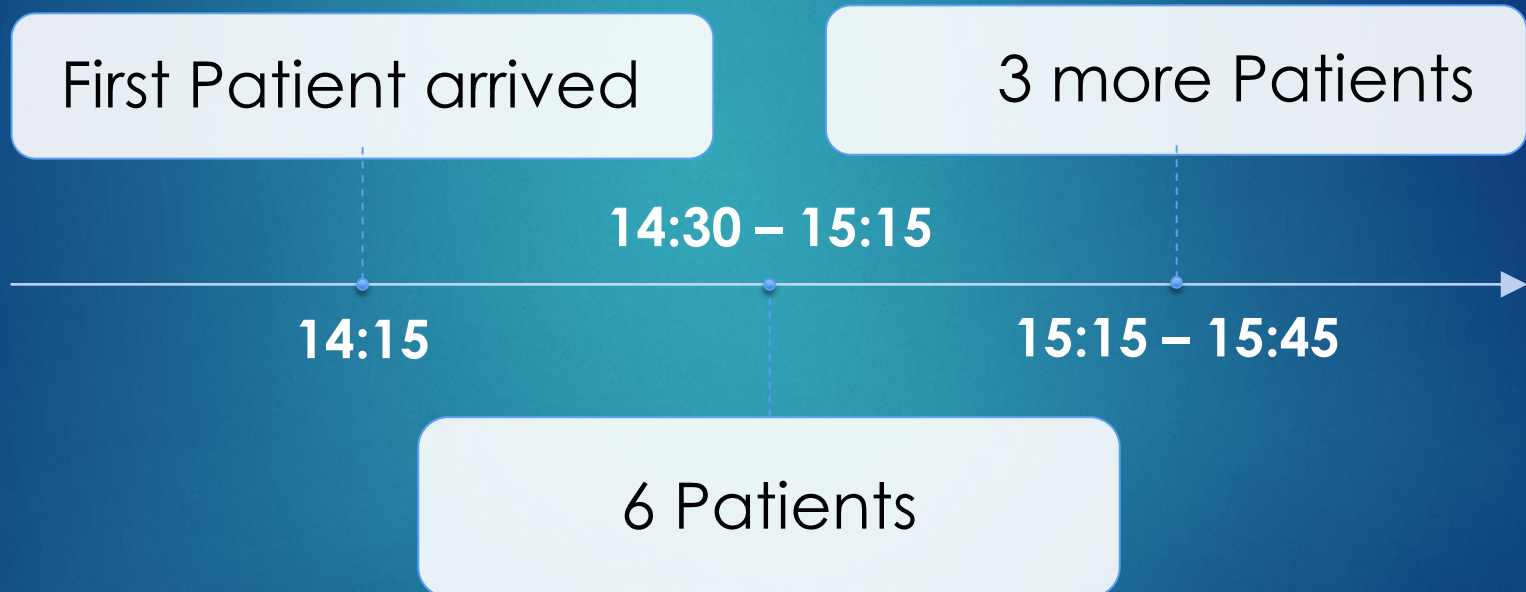
- ▶ **Ranged from**

- ▶relatively minor cuts and grazes and other soft tissue injuries
- ▶To Life ending/Threatening head, chest, abdominal, spinal wounds - single and multiple

- ▶ There were those who were haemodynamically stable ...
- ▶ ... and one who arrived in OT receiving CPR



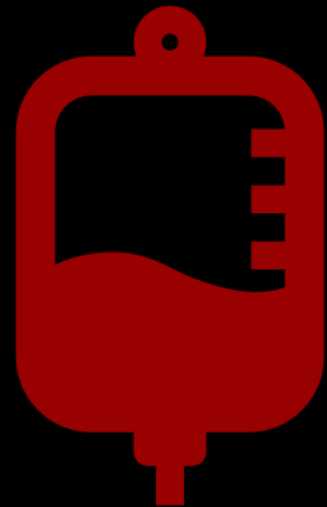
In Theatre



Blood and Blood Products

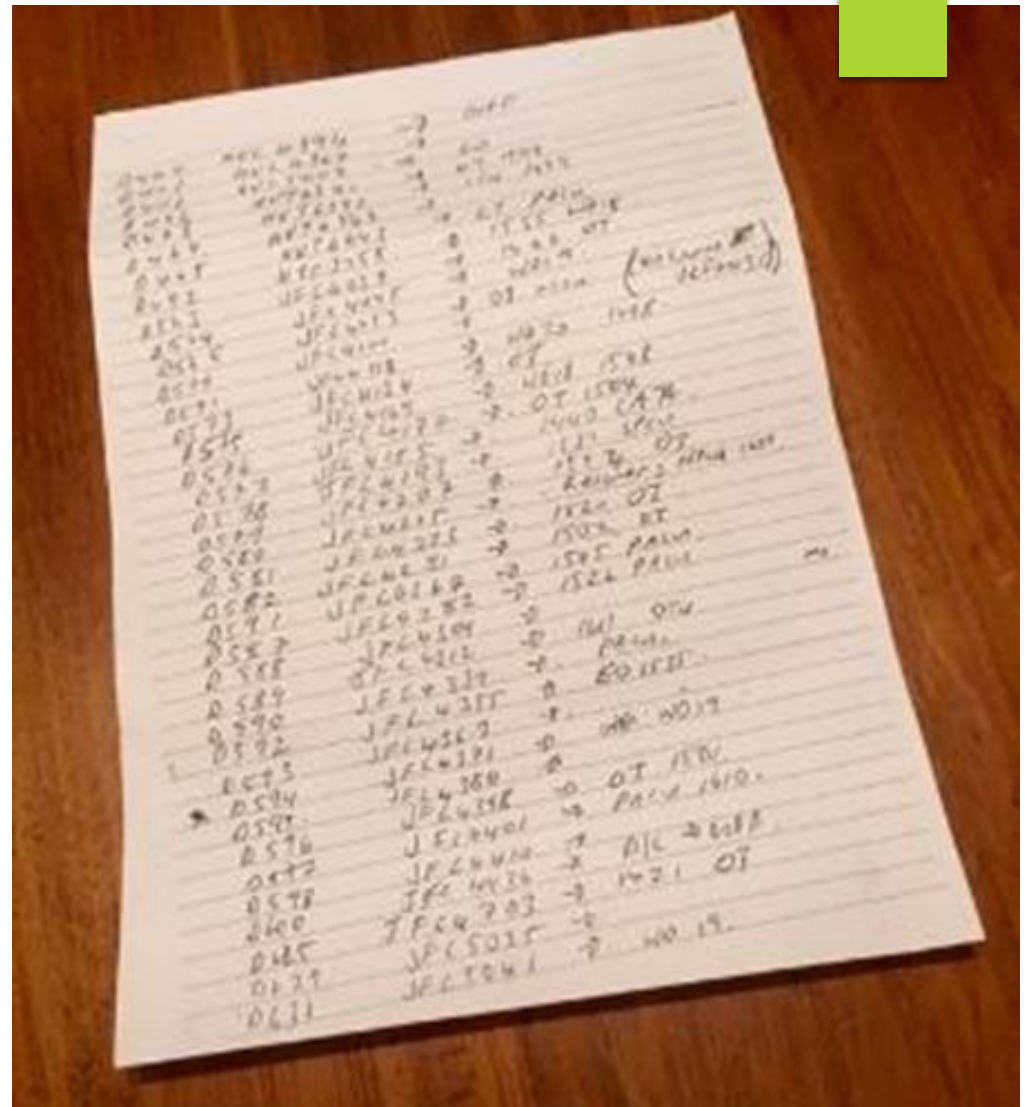
(Logistics)

- ▶ On Friday 15th- 9 Simultaneous MTPs
- ▶ Christchurch Blood Bank issued
 - ▶ 179 Red Cell Units
 - ▶ 17 platelets
 - ▶ 113 FFP units
 - ▶ 46 cry units
- ▶ To support increased demand ,
Auckland, Hamilton and Wellington
dispatched blood



Victims to our Patients...

- ▶ “Fluid situation”
- ▶ Patients Widely dispersed.
 - ▶ ED
 - ▶ TRANSIT
 - ▶ RADIOLOGY
 - ▶ OT
 - ▶ WARDS/ ICU
- ▶ Tracking Patients their location and Injuries



Day One Evening

▶ Operational Planning Meeting 5 pm (HIMT)

- ▶ **Representatives** of each Surgical Department/Anaesthesia/Radiology/ICU/Chief of Medicine
- ▶ NURSING
- ▶ ALLIED HEALTH
- ▶ SURGICAL SERVICE AND DHB MANAGEMENT
- ▶ LOGISTICS
- ▶ DHB COMMS STAFF
- ▶ POLICE



What do WE
need?

MCI CASUALTIES

BAU

Decisions

▶ THEATRE NEEDS

- ▶ OT 7 THEATRES TILL MIDNIGHT (cf 3-2 with BAU)
- ▶ 3 OVERNIGHT (cf 1 with BAU)
- ▶ 10 THEATRES SATURDAY AND SUNDAY (cf 3 with BAU)
- ▶ *Wider DHB Support to run this level of Activity*

Decisions

- ▶ **REDUCE DEMAND ON THE CDHB SYSTEM**
- ▶ INFLOW TO DHB (external)
 - ▶ “CLOSE THE DOORS TO ALL BAR OUR OWN POPULATION”
 - ▶ SPINAL INJURIES
 - ▶ TRANSPLANT
- ▶ REDUCE DEMAND ON SYSTEM OVER NEXT WEEK ?S (internal flow -initial decision for review Monday 18)
 - ▶ NON DEFERABLE /DAY SURGERY ONLY-AS STAFF ALLOWS
 - ▶ ...

15.3.19 To Midnight

20 operations -3612 Minutes
of operating from 1430 hrs

Procedures	Number
Trauma Laparotomies	8
Trauma thoracotomies	4
Spinal Wound exploration	2
Vascular Reconstruction	1
Ortho Ext. Fixation	1
Ortho Int. Fixation	2
Soft Tissue Debridement	2 (1)

Friday 15 - Sunday 17 March

PROCEDURE	15.3.19	16.3.19	17.3.19	TOTAL
TRAUMA LAPAROTOMY	8	3		11
RELOOK LAPAROTOMY		4	1	5
EUA PERINEAL PROCEDURES			2	2
THORACOTOMY	4	1		5
VASCULAR RECONSTRUCTION	1	2		3
SPINAL PROCEDURES	2	1		3
ORTHO INTERNAL FIXATION	2	1		1
ORHTO EXTERNAL FIXATION	1			1
SOFT TISSUE / WOUND	3	9	11	21
UROLOGICAL EXPLORATION		2		1
PLASTICS		1		1
MAXILLO FACIAL		1	1	2
TRACHEOSTOMY		1		1
BAU ACTIVITY		11	17	28

“The Next Days” Communication

- ▶ Daily department Meetings over weekend/ Monday
- ▶ **Daily ALL Involved service meetings**
 - ▶ **ALL MCI PATIENTS DISCUSSED**
 - ▶ Secondary/Tertiary Surveysand further Reviewed
 - ▶ Planned Relook procedures
- ▶ Daily surgical nursing/ Allied Health meetings
- ▶ Additional Surgical CDs meeting

“The First Week”

- ▶ MCI Patients remaining in Hospital

- ▶ 31 Victims in hospital

- ▶ 6 in ICU CHCH
- ▶ 1 IN ICU STARSHIP
- ▶ 4 IN PCU LEVEL CARE
- ▶ 20 WARDS

▶ Heavy Demand on ward Nursing

- ▶ Challenges- Clexane, Diet, Prayer Rooms facilities, Number of Family and Visitors, Pain Management, Psycho-social Support Issues (patients and staff).....

“One month”

15 April 2019

▶ 10 Victims still in Hospital

- ▶ 1 in ICU
- ▶ 1 IN SPCU
- ▶ 3 IN WARDS CPH
- ▶ 4 IN WARDS BURWOOD
- ▶ 1 IN STARSHIP AUCKLAND

▶ Injuries of this group

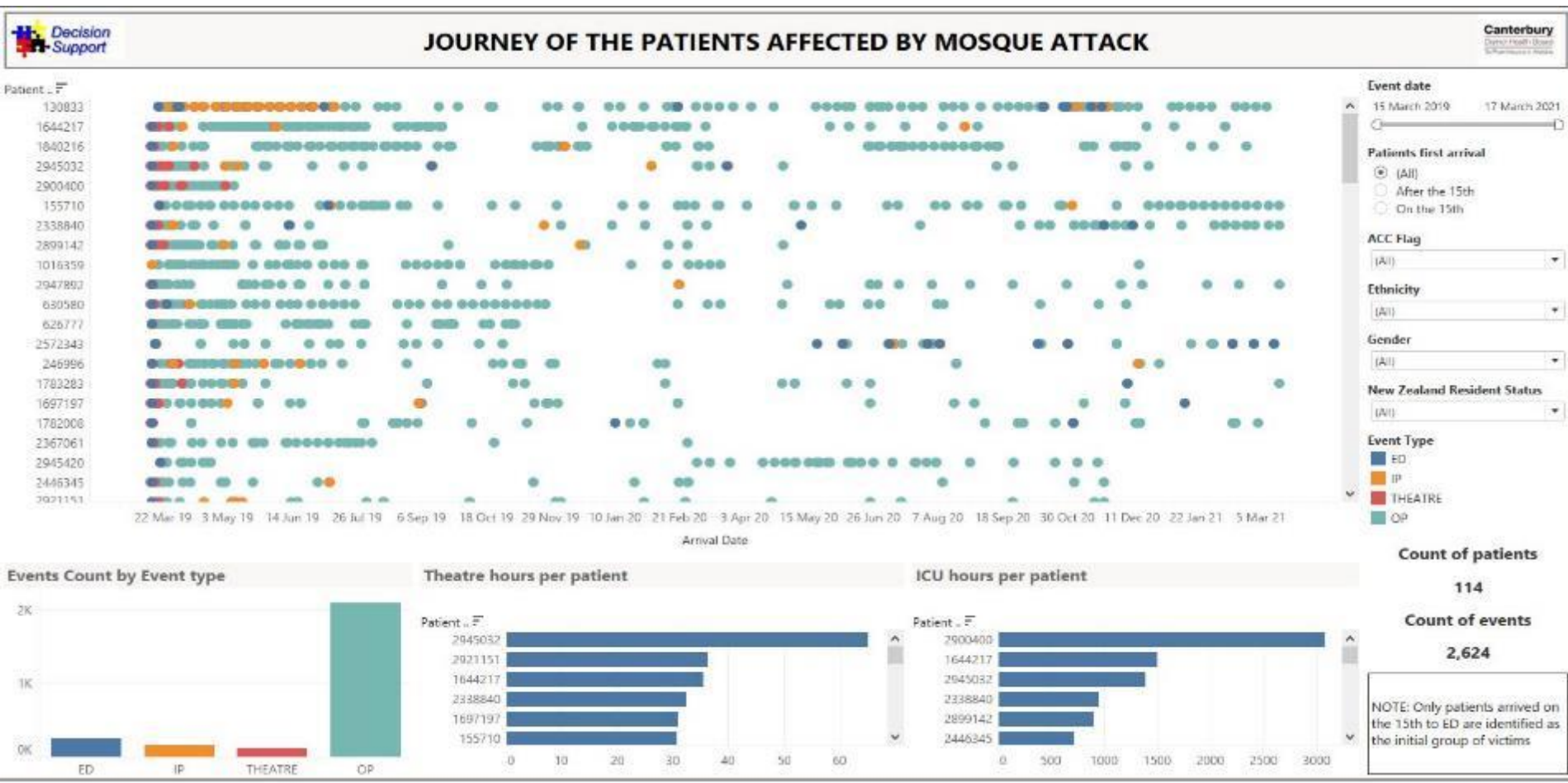
- ▶ Spinal
- ▶ Stomas
- ▶ Major fractures /nerve injuries
- ▶ Complex wounds
- ▶ Pain Management
- ▶ Rehabilitation



Discharges (PRIMARY ROUND)

- ▶ Last discharge
 - ▶ 8 August Burwood Hospital
 - ▶ 7 May Starship

Ongoing interventions



Resources Utilised until June 24

	UNIT		
ED EVENTS		129	
TOTAL ICU	HOURS	3132	130 Bed Days
TOTAL WARD	HOURS	20935	872 Bed Days
OPERATIVE EVENTS		96	
ANAESTHETIC	MINUTES	13050	217 hours

COST

Social Cost -
Immeasurable

\$5.5 -6 million

National and Community Effect

- ▶ DEFERRED Surgery
- ▶ Regional service provision (ICU, Cardiology, Transplant, Complex Endoscopy)
- ▶ National Destination Policy Provision (Spinal)

Christchurch Mosques

MCI

How did we do?

ISS		Estimated Mortality	Mosques MCI number	Mosques MCI Mortality
1-8	Minor	<1%		0%
9-15	Moderate	1-2%	6+	0%
16-24	severe	5-10%	7	0%
>24	Very Severe	~30%	7/8	14%/25%

SOME COMPARISONS

YEAR2	LOCATION	DISTANCE TO CLOSEST HOSPITAL	HOSPITALS	FATALITIES	INJURIES	IN HOSPITAL DEATHS
2011	UTOYA ISLAND NORWAY	38 km	3	69	65	1
2016	ORLANDO FLORIDA	600 m	2	49	53	11
2017	LAS VEGAS NEVADA	5-6 km	8	58	869 (413 GSW)	27 (16)
2019	CHRISTCHURCH	600 m	1	51	129 (49 MCI)	2

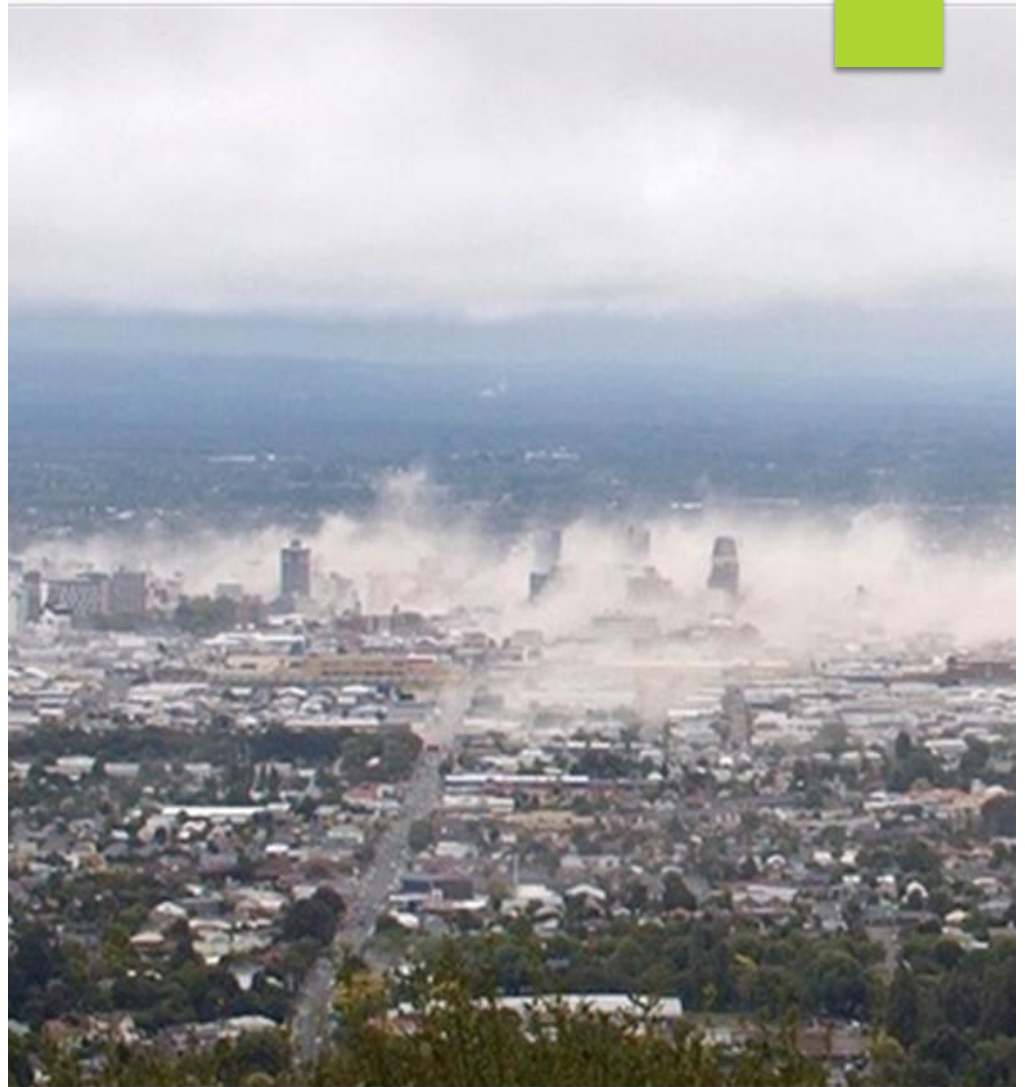
Were we “Lucky”??

- ▶ Single Offender-apprehended relatively quickly
 - ▶ He did NOT get out of Christchurch
- ▶ Friday pm
 - ▶ Teaching Session ED just finished
 - ▶ Anaesthesia Teaching just about to start
- ▶ OT lists marginally less busy
- ▶ Weekend to accommodate acute activity-staff / theatre
- ▶ Surgical Staff competencies /Trauma Service evolution

Or Just Prepared??

► We've been through it before

- Knowing what to expect
- Understanding flexibility required in the Incident Plan





The Christchurch Earthquakes

- ▶ Total community injured 8300

- ▶ **182 Fatalities** (7 in hospital)

- ▶ 3 dead on arrival; 1 died in ED

- ▶ 18 Admitted to ICU

- ▶ 2 deaths

- ▶ 14 ICU transfers out of Christchurch

- ▶ 138 orthopaedic admissions



Psychologically The Mosques event – harder to understand and therefore seemed more challenging

What Could we do Differently

► Communication

Scene to Hospital

activation and contact cascade

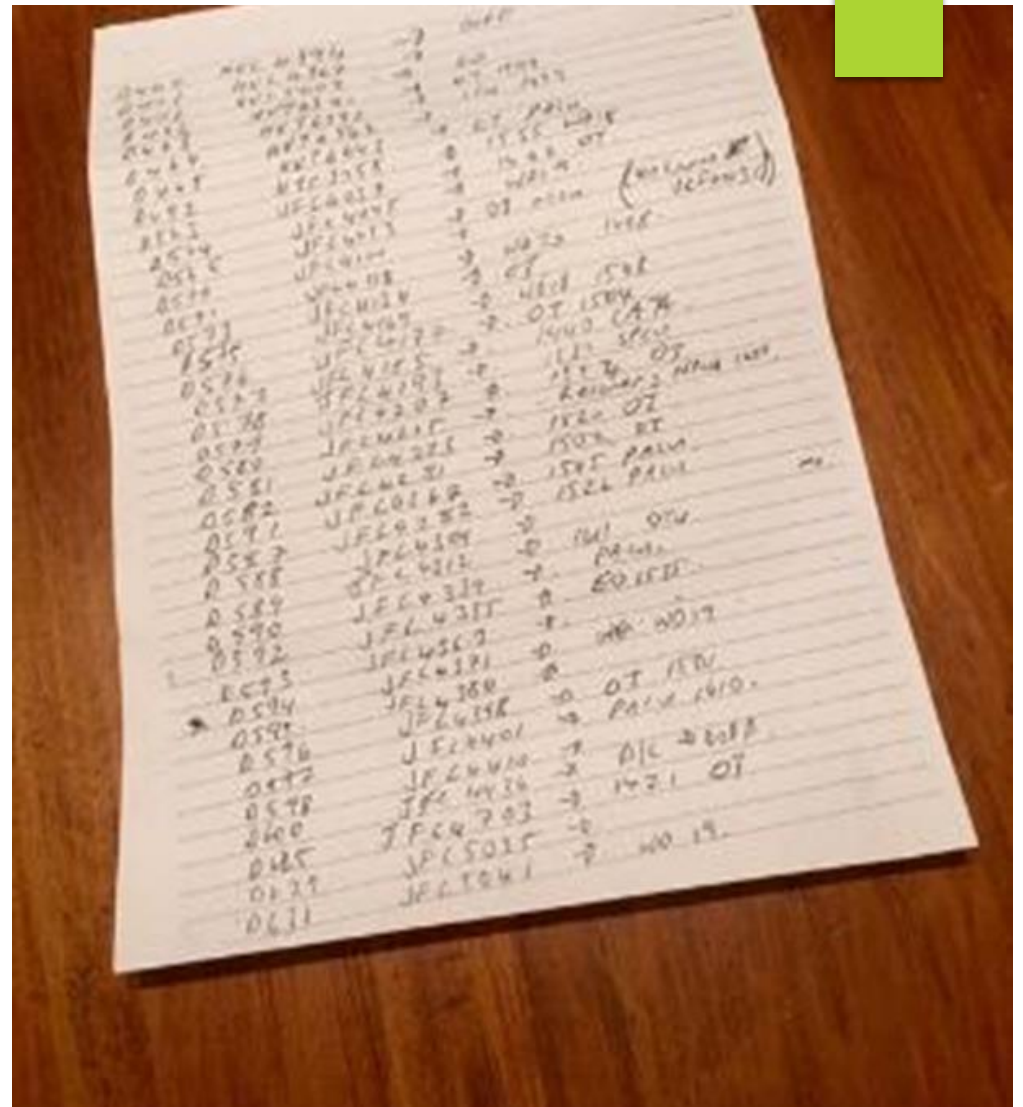
closed loop
communication

to Staff

► Patient Tracking

► Data collection, collation and accuracy

► The CIMS structure and wider connectivity



A Final Word

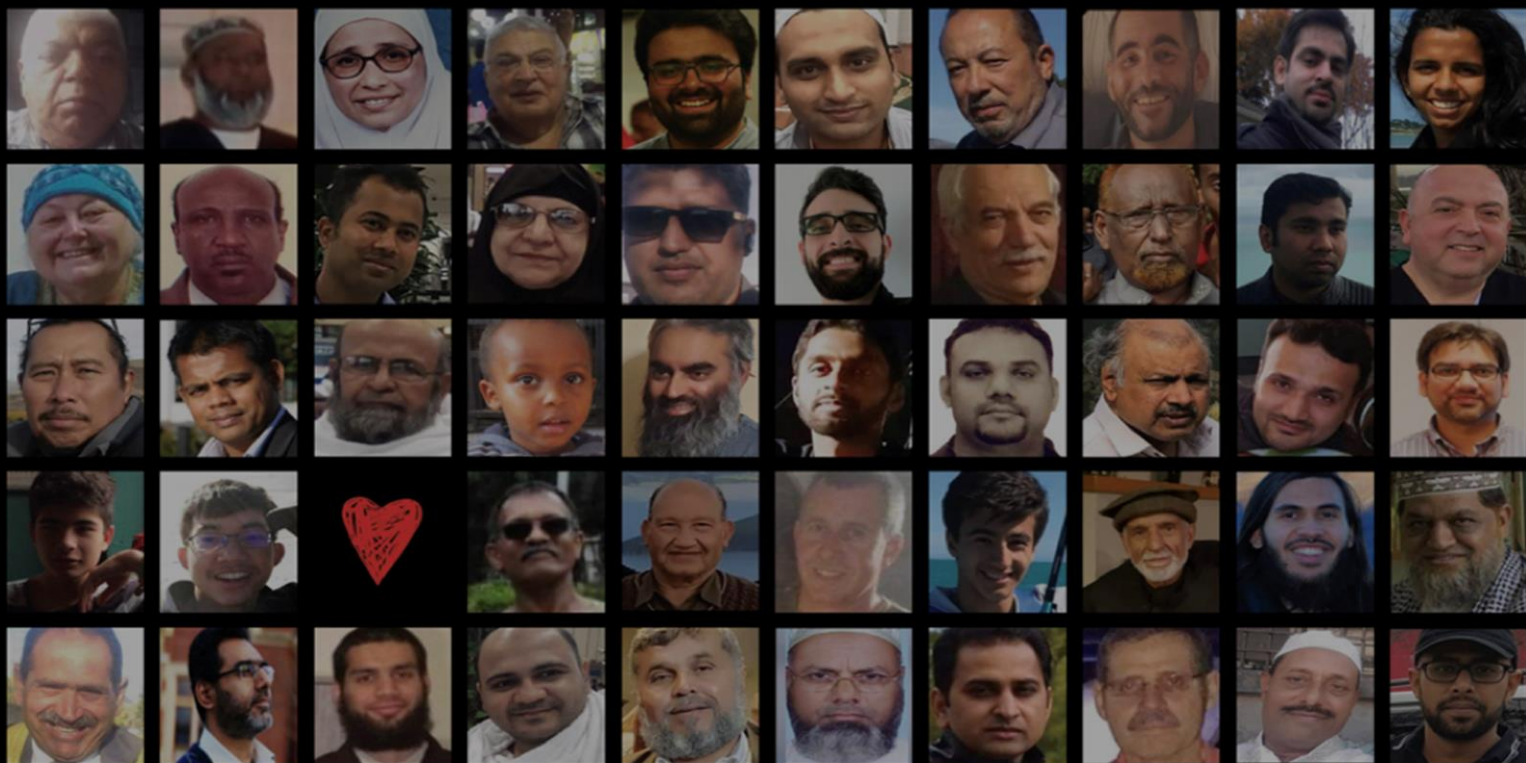
- ▶ The Dignity... Acceptance of outcomes demonstrated... and Forgiveness expressed by the victims of this act of Terror is something we could all learn from ...but I doubt I would be able to...

Demographics of Victims

- ▶ 51 Fatalities
 - ▶ Bangladesh Egypt Fiji India Indonesia Iraq Jordan Malaysia, Mauritius New Zealand Pakistan Palestine Turkey
 - ▶ But they were part of our community
 - ▶ Age Range 3-77
 - ▶ 4 Females 47 Males
 - ▶ 32 individuals loose a spouse
 - ▶ 90 children loose a parent

15 March MCI Victims treated at CPH

- ▶ “49 Victims treated within our MCI protocol”
 - ▶ 2 Fatalities day1/day48
- ▶ “....Plus 80 more”





THIS IS NOT
NZ

As-Salamu

