

National Critical Care and Trauma Response Centre

Yearly Report

July 2015 – March 2016





NATIONAL CRITICAL
CARE AND TRAUMA
RESPONSE CENTRE

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Fiji Deployment (February – March 2016)

2015-2016 highlights

The National Critical Care and Trauma Response Centre (NCCTRC) continues to develop its national and regional response capability as a hub of evidence-based emergency care, research and education, which is readily available to respond to major health incidents.

This report, covering July 2015 to March 2016, highlights key achievements that demonstrate the increased maturity of the NCCTRC:

- From the tasking order on 22 February to the end of the deployment on 15 March 2016, the NCCTRC coordinated the Australian Medical Assistance Team (AusMAT) response to Tropical Cyclone Winston in Fiji. This very successful deployment allowed a team of 21 AusMAT team members to support the Fijian Ministry of Health through three mobile primary health care teams, ongoing support to the Emergency Operations Centre and public health surveillance. In addition to the recognition from the Fijian Government, the AusMAT team integrated seamlessly in the broader response of the Australian Government.
- The NCCTRC, in collaboration with the World Health Organization (WHO), delivered the inaugural Emergency Medical Team Coordination Cell course. The trust demonstrated by the WHO is a testimony to Australian Medical Assistance Teams being one of the world benchmarks for Emergency Medical Teams (EMTs).
- To maintain this global leadership position, the NCCTRC has invested significant resources to improve its capability. The most significant improvements include the mobile laboratory, morgue, infectious disease capability and water filtration system.
- The Royal Darwin Hospital (RDH) Trauma Service, managed by the NCCTRC, maintains Level two accreditation from the Royal Australian College of Surgeons (RACS), while contributing to locally and nationally relevant research projects.
- In 2015, the NCCTRC undertook a review of its clinical governance. This review led to establishing a Medical Director position, which will complement the existing Nursing Director position, and provide medical leadership and support to the Disaster, Education and Research teams.
- In 2015-16, the NCCTRC has developed a research agenda around the wellbeing and performance of field workers, which builds on existing heat management research. This agenda will expand and include other determinants of quality of care in sudden onset disasters.

Abbreviations

AHPPC	Australian Health Protection Principal Committee
AusMAT	Australian Medical Assistance Team
DFAT	Department of Foreign Affairs and Trade
EMT	Emergency Medical Team
HMiMMS	Hospital Major Incident Medical Management and Support
MiMMS	Major Incident Medical Management and Support
NCCTRC	National Critical Care and Trauma Response Centre
NHEMS	National Health Emergency Management Standing Committee
RACS	Royal Australian College of Surgeons
RDH	Royal Darwin Hospital
TEHS	Top End Health Service
WHO	World Health Organization

Response capability

a) Maintenance of Royal Darwin Hospital surge capacity and related infrastructure that is critical to NCCTRC operations

1 Maintaining the trauma service in accordance with Royal Australian College of Surgeons accreditation standards

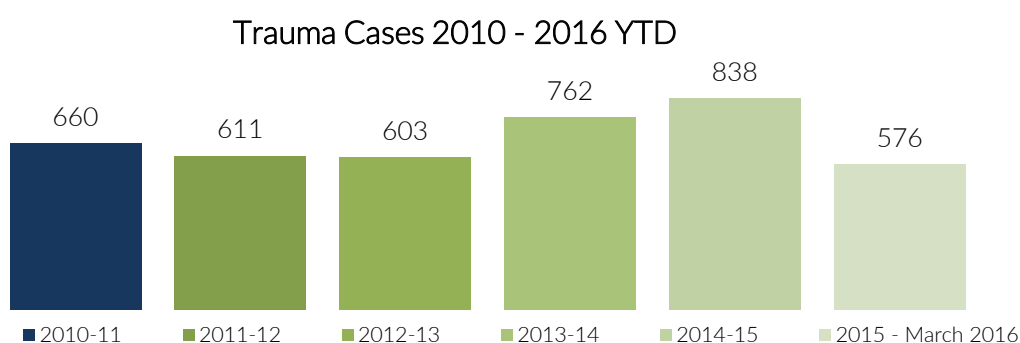
The NCCTRC operates a stand-alone integrated specialist Trauma Service unit within the RDH. The Trauma Service provides specialist door-to-discharge holistic care to severely injured trauma patients in the Top End. The Trauma Service encompasses a multidisciplinary team of medical, nursing and allied health specialists, with Clinical Nurse Consultant-led case management 12 hours per day, Monday to Sunday. The Trauma Service enhances the RDH model of care by assisting to decrease patient length of stay and by acting to reduce patients' rehabilitation times and the need for rehabilitation.

The Trauma Service at RDH continues to be accredited at Level two by the RACS. Efforts are underway to recruit to a neurosurgical position within the RDH. Once recruitment to this position is achieved, the Trauma Service will be able to achieve Level one accreditation from the RACS.

The Trauma Service also funds a Trauma Surgical Fellow to enhance the surgical capability of RDH and retention of expertise. The Trauma Surgical Fellow position is a 12 month contract position with the NCCTRC and commences in January each year.

As per strategic goal number seven of the NCCTRC Strategic Plan 2015–2019, the NCCTRC has permanently recruited to the Trauma Coordinator position and two Clinical Nurse Consultant positions. This recruitment brings a total of four permanent Clinical Nurse Consultants to maintain the core business activities of the Trauma Service .

From July 2015 to March 2016 the Trauma Service has provided coordinated care to 576 patients.



2 Training, exercising and maintaining a surge capacity workforce

Training and exercising

The NCCTRC delivers course packages with the objective of training health professionals in trauma, mass casualty and disaster events of significance, enhancing the capacity of clinicians to manage local emergencies and a disaster response in the region. The courses are listed in annex 1.

A total of 64 education days were provided from July 2015 to March 2016.

During this period the NCCTRC delivered training to 241 participants from Department of Health, Australian Defence Force, CareFlight, St John Ambulance, Northern Territory Fire and Rescue

Service and NCCTRC personnel to ensure preparedness and surge capacity within the region. Over 90 % of participants were Department of Health and NCCTRC employees.

Hospital Major Incident Medical Management and Support (HMiMMS)

As part of activities to maintain RDH's preparedness the NCCTRC delivered the inaugural HMiMMS course in September 2015 over two days.

While traditional Major Incident Medical Management and Support (MiMMS) teaches a structured approach to responding at the scene of mass casualty incidents, HMiMMS focuses on the delivery of care in the hospital environment; this is a key element of maintaining preparedness.

The course, through lectures, group workshops and tabletop exercises, explores the priorities and responsibilities of clinical and administrative responders facing a mass casualty incident in a hospital. It takes an all-hazards approach and also covers special incidents such as burns and chemical hazards. The course introduces the concept of the collapsible hierarchy as a fundamental concept in the hospital based response.

Surge capacity workforce

The Trauma Service ensures the capacity of RDH as a receiving hospital in the event that the hospital receives acute trauma and mass casualty patients.

As part of the NCCTRC's relationship with the Top End Health Service (TEHS), the new entity responsible for operating the RDH service, the NCCTRC provides financial support to the RDH.

The TEHS agreement is being renegotiated. The new agreement TEHS will ensure training, exercising and maintenance of a surge capacity workforce by:

- maintaining a pool of appropriately trained and qualified staff that are made available to the NCCTRC for operational activities as part of an Australian Medical Assistance Team (AusMAT) response
- clinical staff participating in agreed training, exercises and major events to simulate AusMAT deployments
- making health professionals available to NCCTRC to attend and to assist with the delivery of training courses led by the NCCTRC Education Team
- ensuring accessibility to facilities and equipment for NCCTRC national and international deployment activities.
- collaborating with TEHS for health disaster planning and management in the Northern Territory to ensure NCCTRC involvement at hospital and community level is reflected in Northern Territory disaster plans in the event of a local or northern Australia disaster
- the NCCTRC operating, funding, delivering and maintaining the inpatient Trauma Service at RDH in accordance with RACS Australasian Trauma Verification Program minimum standards.

The agreement between NCCTRC and Queensland Health has also been renegotiated to ensure ongoing and additional surge capacity for the RDH. The agreement ensures training, exercising and maintenance of a surge capacity workforce through:

- agreed training opportunities and exercises with NCCTRC and RDH
- sponsorship by NCCTRC for key nurses and allied health professionals from RDH to work alongside staff at specialist units in Brisbane for development, cross training and upskilling
- funding assistance from the NCCTRC to Queensland Health for MiMMS, HMiMMS and AusMAT support activities enhancing surge capability.

The Queensland Health agreement also allowed for recent staffing support. When the NCCTRC's Nursing Director, Ms Bronte Martin, was seconded to the WHO, the agreement allowed the position to be backfilled by Ms Fiona Roberts from July 2015 to February 2016.

3 Emergency planning for RDH and activation plans for NCCTRC

To ensure preparedness for surge capacity the NCCTRC employs the Northern Territory's main Health Disaster Manager, as well as the Principal Emergency Management Advisor at RDH. These two key positions have integrated the NCCTRC, Royal Darwin Hospital and Territory-wide emergency plans, ensuring a high degree of preparedness for the Northern Territory as one of Australia's most disaster-prone regions.

The Principal Emergency Management Advisor is responsible for developing, implementing and evaluating the Royal Darwin Hospital Emergency Management plans in consultation with key stakeholders. While all RDH emergency plans will be reviewed and updated in the coming year, the RDH Emergency Management Committee has determined four top priorities for the next six months:

- RDH Code Brown – Mass Casualty
- RDH Code Yellow – Disruption to Essential Services
- RDH Code Yellow – Disruption to Information and Communication Technology services
- RDH Code Brown – Cyclone.

The position also advises the NCCTRC on the development of internal policies, procedures and operational plans. During 2016 NCCTRC started developing specific internal documents including:

- NCCTRC Ebola Regional Response Plan
- NCCTRC Local Response Operational Plan
- NCCTRC Medical Responses Plan for Major Events.

The NCCTRC has also established a Planning and Research Officer position and final recruitment is underway. This position is responsible for developing, implementing and evaluating operational plans, technical guidelines, AusMAT workforce research, projects and response planning. The primary focus for the first six months of the position is preparedness for WHO verification, through the review of current response capabilities and developing response and field procedures in collaboration with technical experts. The person in the position will also:

- review the Bali response plan
- plan for AusMAT exercising, such as Tour de Timor
- create workforce development packages, including the AusMAT database.

b) Maintenance and ongoing development of AusMAT capacity

1 Training, exercising and preparing personnel for deployment

AusMAT deployments are the most tangible demonstration of the Australian Government's Department of Health investment in the NCCTRC, as recently demonstrated by the AusMAT deployment to Fiji in response to Tropical Cyclone Winston.

Underpinning the AusMAT pool of 700 trained professionals is the NCCTRC's state of the art trauma mobile field hospital, which comprises a 60-bed inpatient facility, two operating tables and full resuscitation and outpatient capability.

The NCCTRC continues to work alongside state and territory counterparts to refine the AusMAT concept. The AusMAT course and manual is under review for updating and refinement. The review takes into consideration feedback and input from Australia's state and territory representatives.

Training

In this reporting period the NCCTRC trained 327 people in AusMAT courses.

The NCCTRC conducted AusMAT Surgical Team Course training over four days in August 2015 at Darwin's Robertson Barracks training quarry (see picture below). The successful training and field exercise attracted stakeholder engagement and media attention locally and nationally, including a visit from Federal Health Minister Hon. Sussan Ley and Health Ministers from Victoria, Australian Capital Territory, Tasmania and South Australia.



Surgical Team Course (August 2015)

Other AusMAT courses included:

- AusMAT team members course in Darwin in October 2015
- AusMAT team members course in New South Wales (NCCTRC provided teaching assistance) in November 2015
- AusMAT Clinical Leaders Course in Darwin in December 2015.

Exercising

The NCCTRC, at the request of Timor-Leste Minister for Tourism His Excellency Francisco Kalbuadi Lay, provided medical support in Timor-Leste for the annual Tour de Timor Mountain Bike race from 13 to 17 September 2015.

This was an opportunity to promote AusMAT training in a real-time exercise. The NCCTRC deployed 16 personnel as a week-long AusMAT emergency medical training exercise and the team provided daily support to about 250 international riders and event support staff.

Preparation of personnel

The vaccination of AusMAT members is essential for deployment preparedness. In 2015 the NCCTRC became the first nationally to have an accredited pharmacist-led vaccination program. The NCCTRC AusMAT pharmacist has been responsible for managing and administering vaccinations to NT AusMAT volunteers at the centre's vaccination clinics.

2 Capability improvements including review and maintenance of AusMAT database and NCCTRC cache assets

The NCCTRC has made a number of capability improvements from July 2015 to March 2016.

Mobile laboratory development

A new mobile laboratory has been added to the NCCTRC's deployable kit. It contains five major pieces providing the capability to serve the mobile EMT1 units as well as the larger surgical EMT2/3 types.

The iSTAT, HemoCue301 and HemoCueWBC machines allow for easy transport with mobile field teams and will provide for accurate rapid point of care measurement of electrolytes, haemoglobin and white cell counts.

Safe whole 'walking' blood transfusions of up to 40 units are able to be provided.

The mobile laboratory now has on site microbiology using real-time polymerase chain reaction. This exciting new mobile technology allows for sepsis screening of major blood, respiratory, gastrointestinal and cerebral infections for patients in the field. These microbiological aspects will expand the diagnostics capability of clinicians in the field and allow them to rapidly identify and isolate infectious patients in the field hospital – a tool not previously available.

Infectious disease capability

As part of the NCCTRC infectious disease and Hazchem response capability, the NCCTRC has invested in 40 CLD500 units which are level C1 fully encapsulated Powered Air Purifying Respirator suits powered by a rechargeable lithium battery.

This increases the capability of the NCCTRC infectious disease pod, which was successfully tested last year during ebola infectious disease training.

The deployable habitat capacity has been increased to five Alaskan shelters with a recent acquisition that includes the capacity to run the shelter with negative pressure isolation to prevent cross-contamination from room to room of airborne organisms. The system includes three components: a filtration system that maintains negative pressure within the shelter, an alarm system that monitors pressure and signals a loss of pressure, and a shelter partition for creating an anteroom entrance to the isolation area.

The negative pressure isolation system controls three elements of indoor air quality: particles, biological and gas phase volatile organic compounds . It includes a high efficiency germicidal pre-filter, sterile sweep ultraviolet light and a final HEPA (high-efficiency particulate arrestance) filter. It can provide negative pressure isolation in the field for up to 10 beds (depending on bed distance) or be simply used with a ward or surgical structure as the anteroom design now provides excellent visibility without intrusion into the surgery or ward area.



Infectious Disease capability during Ebola course

Water filtration system

The NCCTRC acquired a new water filtration system. It provides additional capacity (40 000 litres a day) of fresh water or can be used for redundancy or split teams.

Habitat

With the coming WHO verification and accreditation of the NCCTRC as an EMT, there is a requirement to enhance patient:staff ratios. Additional habitat options were required to house up to 50 personnel in the field. The NCCTRC will test a new shelter from Norway that is used by many non-government organisations, including the International Red Cross, as their habitat option. If the first shelter proves suitable, NCCTRC will purchase additional units in 2016-17 to ensure AusMAT habitat capability is upgraded.

Morgue

The newest acquisition for the AusMAT deployable cache is a mobile mortuary unit. The unit is a modular system, allowing for four to 24 beds to be deployed. Each bed has a refrigerated sheet that is placed inside the body bag. It is connected to a cooling unit and directly cools the remains to between 2 and 4 degrees Celsius, removing the need for a refrigerated room. This new capability can deploy as a 'stand-alone' as part of an EMT field unit or for events where forensic or victim identification delays the repatriation of the body.

Mechanical forklift/digger

The NCCTRC procured the Avant 635 Digger to improve onload and offload capability during deployment. The digger has a range of attachments including, trencher, auger, forks and bucket, allowing sanitation and waste disposal to be established in difficult environments.

AusMAT database

Each jurisdiction has the responsibility to manage their own AusMAT database members. In early 2016, the NCCTRC finalised the outsourcing of the support of the AusMAT database to ILD Consulting, which offers a 24/7 service during deployments. In addition, the NCCTRC has identified nine new improvements of the database. The implementation of the improvements is planned between February and June 2016, with the support of ILD Consulting.

3 Contributing to the ongoing review and maintenance of the AusMAT manual

As part of the AusMAT review, the AusMAT manual is being revised and updated to bring the manual up to date with deployment capability, WHO global standards and terminology.

The NCCTRC recently developed the Clinical Leaders Manual in conjunction with the first Clinical Team Leaders course held in December 2015. AusMAT Clinical Team Leaders will use this reference manual in the field.

c) Maintenance of the NCCTRC's role as Australia's Centre of Excellence for health disaster response

1 Contributing to the strategic direction and development of national response plans and protocols

The Ebola Regional Plan was developed in response to the Australian Government's request for plans covering a variety of scenarios in the Asia-Pacific region. The plan examines an AusMAT response to an isolated or clustered event requiring either a small or extended team to manage infectious patients, and the continuation of care for other hospital presentations where local services are not able to respond.

The NCCTRC has worked with Emergency Management Australia to support an initiative to document capability of AusMAT response options to assist EMA to recognise possible responses during pre-deployment. This was in conjunction with Urban Search and Rescue (USAR) teams from New South Wales and Queensland.

The NCCTRC has tabled three significant proposals to NHEMS related to AusMAT training and development:

- Ceasing AusMAT training for 2016 for a training review including engaging an education specialist to review the content of the AusMAT teaching program
- Creating a special project position to comprehensively review critical numbers and workforce development during the cessation period.
- Developing an exercise to meet the needs of AusMAT members during 2016.

NCCTRC has continued representation on the AusMAT working group and on a number of the sub working groups, including remuneration, education and capability.

The NCCTRC also provides support and leadership to the MiMMS Australia group through expertise, fiscal and administrative actions. The NCCTRC is currently managing the development and implementation of the MiMMS Australia website and database. Work is underway to support the completion and publication of the first adapted Australian version of the MiMMS textbook.

2 Supporting the development, implementation or review of international initiatives that facilitate more timely and effective disaster responses within the region (including the World Health Organization Global Health Emergency Workforce initiatives)

World Health Organization (WHO)

- Emergency Medical Team Initiative - Asia-Pacific Emergency Medical Team Coordinators training, October 2015

The NCCTRC, collaborating with the World Health Organization, delivered the inaugural Emergency Medical Team Coordination Cell training course, establishing a regional pool of 32 people to assist in specialist health coordination needs in the immediate aftermath of sudden disasters and outbreaks (see picture).



WHO EMT Coordination Cell course (October 2015)

- WHO Global Emergency (Foreign) Medical Teams Meeting, Panama December 2015

Global EMT community, donors and disaster affected member states engaged in dialogue on strategic governance, direction and key updates of the EMT initiative. NCCTRC presented twice to the global forum on AusMAT capability and experience in the field, in addition to leading the concurrent Asia-Pacific regional forum.

Bali, Indonesia

- NCCTRC – Rumah Sakit Umum Pusat Sanglah Hospital collaboration

NCCTRC met with the Vice Governor of Bali and several heads of department in March 2016 to assess the preparedness of the health care services and others should there be another major disaster in the region.

During the 2015-2016 period, the NCCTRC organised several visits to Bali. During these visits, the NCCTRC examined processes, policies and practices to assist the existing surge capacity of the emergency department and improve the quality of patient care and efficiency of the patient journey. The NCCTRC also evaluated disaster policy at Sanglah Hospital to identify and develop an education and improvement program in support of response to an event of significance.

Timor-Leste

- Tour de Timor Mountain Bike race

The NCCTRC provided medical support for the annual Tour de Timor mountain bike race.

The NCCTRC sees this invitation not only as a training exercise for AusMAT, but also as a collaborative and capacity building opportunity with the Timor-Leste Ministry of Health.

- SEARO World Health Organization meeting Timor-Leste

A two-person team was deployed for a week to provide emergency medical coverage for the South East Asian region conference for health ministers.

These two personnel attended all high level functions as the principal medical support and provided training to ambulance service and local medical staff during the conference. Ten people required medical treatment over the five days of the conference.

Pacific Region

➤ MiMMS

The NCCTRC has secured funding from Australia's Department of Foreign Affairs and Trade (DFAT) to deliver disaster training in the Asia Pacific region. This multi-year commitment aims to increase the capacity of the local response to mass casualty incidents and disasters. Two participants from the Pacific Islands will receive fully sponsored instructor training that will allow them proceed to instructor status, building independent capability in the region in the future.

The faculty to deliver this disaster training in the Pacific has been assembled from multiple jurisdictions in Australia on the basis of experience, educational skills and enthusiasm.

3 Identifying and implementing lessons learned from exercises and deployments

Continuous quality improvement (CQI)

➤ Trauma

The Trauma Service chairs quality and clinical governance activities and trauma committees such as a bimonthly Trauma Service Morbidity and Mortality review, trimonthly RDH Trauma Management Committee, and the NT wide trauma system. The Trauma Service also organises a monthly trauma breakfast in-service at RDH.

These committees provide the forum to review trauma morbidity and mortality cases across the division, ensuring continuous quality improvement. They also allow the review and development of trauma related protocols at service, hospital and pre-hospital levels.

➤ Education

The CQI framework of the Education team is underpinned by three pillars:

- Post-course assessments of participants: the Education team identifies the knowledge and skills that the participant should have gained, and whether the course outcomes are being reached. The Education team then assesses if the course is at the right level and if the selection of participants was appropriate.
- Evaluations from both participants and faculty: the information is collated, interpreted and distributed with recommendations to improve or change the course as required, in consultation with content experts.
- Professional bodies & health standards: the Education team always ensures the course content is in accordance with current standards and professional regulations, and the delivery method utilises adult learning.

➤ Deployment

In addition to the EMA-led debrief following each AusMAT deployment, the NCCTRC has several ways to review its operations. For Tropical Cyclone Winston, the Disaster Preparedness and Response team had an internal debriefing, followed by an 'all of NCCTRC'

debriefing. This year, the NCCTRC also decided to invest into an review, subcontracted to the Humanitarian Advisory Group. Outcomes of these reviews will be available in July 2016.

Following Tour de Timor deployment exercises, the deployees complete an anonymous survey that assists them to identify issues arising during their deployment and any quality improvement that is required for future missions. During deployment they also have access to a register to capture any issue experienced on deployment.

The register forms part of a formal debrief with deployment team leaders that occurs directly after the mission. A final report is tabled at the NCCTRC management meeting with issues raised, identified and how these will be addressed.

Prior to the next Tour de Timor deployment exercise, the identified Team Leaders are provided a copy of feedback results and include risk mitigation strategies in their planning.

➤ Clinical governance

A review of clinical governance arrangements within NCCTRC was undertaken. The review also assessed the NCCTRC's medical expertise needs to identify areas requiring recruitment of personnel to ensure ongoing clinical expertise in training, disaster preparedness and response, and research. These personnel will also provide a surge workforce for Royal Darwin Hospital in line with the goals and KPIs of NCCTRC 2015 –2019 Strategic Plan .

In addition to recommendations addressing the NCCTRC's approach to clinical governance, the report recommended the creation of a NCCTRC Medical Director position to provide strategic oversight of the medical aspects of all NCCTRC teams and of clinical governance processes.

4 Leading, coordinating and conducting research activities that influence and enhance national response protocols and decision making processes

The NCCTRC's Disaster, Preparedness and Response team has conducted research activities led by Dr Matthew Brearley. The key area of interest to date has been the welfare of AusMAT members during deployment and of emergency response personnel more broadly.

Based on our response regions, a key risk to the responders and the overall success of deployments is heat stress. To mitigate the risk of heat stress, pre-deployment heat acclimatisation guidelines were developed for AusMAT members and published in February 2016 (Pre-deployment heat acclimatisation guidelines for disaster responders. Brearley M. Prehospital and Disaster Medicine 31(1):85-89, 2016).

The NCCTRC has undertaken, in collaboration with the University of Tennessee, a research project to increase AusMAT leaders' visibility of team welfare during deployment. The tool anonymously assess members' sleep quality and quantity, access to food and fluids, heat stress, psychological impact and overall workload. After trialling the questionnaire during training courses and a Tour de Timor deployment, the NCCTRC used the end product for the first time during the 2016 AusMAT Fiji deployment. This provided the team leader with up to date information permitting welfare management of the team. A paper describing the development of the questionnaire and its use in Fiji is currently in development.

Nutrition is an important contributor to responder wellbeing. To ensure AusMAT members are adequately nourished during deployment, the NCCTRC is collaborating with the Defence Science and Technology (DST) Group to quality assure the nutritional content of the six AusMAT ration pack variations. In the initial stage of the collaboration, Dr Brearley attended the Defence Feeding Systems Symposium in 2016 and presented an overview of nutrition in disaster settings. The collaboration will result in an NCCTRC–DST co-authored paper describing the provision of nutrition to medical responders in disaster settings.

For a full list of published papers, refer to Annex 2.

d) Response to Australian Government requests for disaster and medical assistance and reporting on the patient care and services delivered during the deployment

Fiji AusMAT deployment

On 22 February 2016 the Australian Government tasked the NCCTRC to coordinate the Australian medical response to the devastation caused by Tropical Cyclone Winston in Fiji. The NCCTRC deployed 21 AusMAT personnel to Fiji. The deployment was led by the NCCTRC's Acting Director Disaster, Preparedness and Response, Ms Abigail Trewin.

The 21 AusMAT personnel were deployed in two teams to Fiji; the final team members returned to their home states on 15 March 2016.

The deployment saw medical teams reaching people in remote areas of Fiji that were impacted most by the cyclone.

The AusMAT response, integrated and led by the Fijian Ministry of Health, comprised primary health care outreach teams and treated 1768 patients over the deployment period. The team provided support to the Emergency Operations Centre of the Fijian Ministry of Health, as well as in the field at sub-divisional and divisional level.



Fiji deployment (February - March 2016)

Interstate surge capacity

The NCCTRC considers it important to report its activation during the Ravenshoe incident in Queensland in June 2015. Although it occurred outside this reporting period, the activity was not captured in the previous report.

Following the explosion of the Serves You Right Café in Ravenshoe on 9 June 2015, the NCCTRC was asked to prepare for the potential transfer of burns patients, as there was a risk that the Queensland burns units might be overwhelmed. Over 36 hours, two potential transfers were reported to the NCCTRC. All patients were in the end managed by Queensland Health Services, but

the incident demonstrated the ability of RDH and the NCCTRC to offer assistance as a surge capacity for neighbouring states.

Local response

In response to the Daly River flooding in December 2015, the NCCTRC offered TrackMi to coordinating authorities. In previous local disasters, TrackMi proved useful to monitor the evacuation of remote communities, as it did in 2015 during Cyclone Lam for example. On this occasion, TrackMi was not required.

The NCCTRC also made available two trauma nurses to assist with recommencing clinic services. The nurses were offered to Primary Health Care but were not required.

The NCCTRC continues to be ready to support local needs during disasters and events of significance.

National collaboration

e) Maintenance of collaborative relationships with relevant health organisations (including response counterparts) and participation as a member on the Australian Health Protection Principal Committee, the National Health Emergency Management Standing Committee and the AusMAT Working Group.

The NCCTRC continues to engage with key health and disaster organisations relevant to its activities through formal partnerships as well as briefings, visits to the NCCTRC or participation in conferences. The list in Annex 4 details the main partners of the NCCTRC. The list below is a summary of the 2015–16 highlights at local, national, regional and global levels.

Local counterparts

The NCCTRC Trauma Coordinator accepted a position on the St Johns Quality and Clinical Governance Committee, which met for the first time in August 2015.

The NCCTRC has a strong engagement with Australia Defence Force command in Darwin, which supports the NCCTRC's training and activities. The NCCTRC has welcomed the new Commander 1 Brigade, Brigadier Ben James and has continued engagement with relevant military counterparts, both local and visiting international forces throughout the region.

The NCCTRC works closely with the NT Fire and Rescue Service (NTFRS) and maintains a strong relationship with NTFRS stakeholders and NT Police Commissioner Mr Reece Kershaw.

National committees

The NCCTRC participates in relevant committees at national level, and has 100% attendance at Australian Health Protection Principal Committee (AHPPC), National Health Emergency Management Standing Committee (NHEMS) and AusMAT Working Group.

Regional engagement highlights

- Visit to the NCCTRC by His Excellency Mr Burhan Gafoor, High Commissioner of Singapore
- Visit from Head of Mission for Makassar Mr Richard Mathews
- Visit from the High Commissioner of Bangladesh Mr Kazi Imtiaz Hossain.
- Visit from the first Assistance Secretary DFAT South East Asian Region Mr Alistair Cox

International engagement

Dr Ian Norton commenced his second year of secondment with the WHO headquarters as the Project Leader for the Emergency Medical Teams (EMT) project. In September 2015, Ms Bronte Martin, the NCCTRC Nursing Director, joined Dr Norton on secondment to develop a quality assurance program for global classification, mentoring and verification for international EMTs deployed in response to sudden onset disaster.

f) Work collaboratively to ensure the Department of Health is appropriately informed and involved in relation to activities that involve other Australian Government agencies and international organisations or governments

The NCCTRC informs the Department of Health of relevant activities through ongoing discussions and exchanges. In 2015–16, NCCTRC collaborated at different levels: organising visits by dignitaries, representing the Australian Government in international forums, responding to requests for information related to the NCCTRC, collaborating with the WHO, deployments and exercises.

Some highlights are listed below.

Dignitaries

- In August 2015, Federal Health Minister Sussan Ley visited the Surgical Team Course with Health Ministers from ACT, South Australia, Victoria and Tasmania during the Australian Health Ministers Advisory Council meeting held in Darwin.
- The NCCTRC received a visit from Prime Minister Malcolm Turnbull in November 2015. The Prime Minister received a briefing and tour of the NCCTRC.

WHO collaboration and international forums

- The Department of Health and the NCCTRC worked closely to obtain the endorsement by the AHPPC to register the AusMAT capability as an EMT with WHO.
- The NCCTRC jointly prepared for and attended several international meetings including the WHO EMT workshop in Panama (December 2015) and the EMT special advisory group meeting at the Humanitarian Networks and Partnerships Week in Geneva (February 2016.)
- The Department of Health supported the use of core funding to host the first WHO EMT - Coordination Cell training, inviting health professionals and disaster managers from the Asia-Pacific region to Darwin in October 2015.
- The NCCTRC attended the WHO Western Pacific Region Strengthening National and Foreign Medical teams in response to disasters workshop in September 2015 in Manila, the Philippines.

Deployments, courses and exercises

- The NCCTRC and the Department of Health had ongoing discussion during the deployment to Fiji for the response to Tropical Cyclone Winston. Both organisations worked hand in hand in the pre-deployment and deployment phases, and prepared together the EMA-led debriefing in Canberra.
- The NCCTRC and the Department of Health collaborated to prepare the AusMAT training review and the AusMAT Human Resources review.
- The NCCTRC informed the Department of Health in relation to the preparation of the 2015 Tour de Timor.

Annexes

Annex 1 – List of courses per category

NT: Trauma, Disaster and Pre-Hospital

Australian Resuscitation Council Advanced Life Support Level 1 Course
Australian Resuscitation Council Advanced Life Support Level 2 Course
Australian Resuscitation Council Advanced Life Support Level 2 Recertification Course
Australia Trauma Team Training, Darwin
Australia Trauma Team Training, Katherine
Emergency Management of Severe Trauma
Hospital Major Incident and Medical Management Support Advanced Course
Major Incident Medical Management and Support Advanced Course
Major Incident Medical Management and Support Team Member Course
Remote Area Trauma Education Course, Julanimawu
Remote Area Trauma Education Course, Gapuwiyak
Remote Area Trauma Education Course, Katherine
Remote Pre Hospital Trauma and Disaster Course, Gove
Sponsorship for Northern Territory Government Department of Health staff to attend College of Emergency Nursing Australasia Trauma Nursing Program Emergency Module held at the National Critical Care and Trauma Response Centre

AusMAT

AusMAT Clinical Leaders Course, Darwin
Australian Medical Assistance Team Members Course, Darwin
AusMAT Team Members Course, New South Wales
Australian Medical Assistance Team Surgical Team Course, Darwin

Pacific Training

Pacific MiMMS Advanced Course
Trauma Team Training

Annex 2 – List of publications

Disaster response related papers

Pre-deployment heat acclimatisation guidelines for disaster responders. Brearley M. *Prehospital and Disaster Medicine* 31(1):85-89, 2016

Cooling methods to prevent heat related illness in the workplace. Brearley M. *Workplace Health and Safety* 64(2):80, 2016

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Annex 3 – NCCTRC Strategic Plan 2015–2019

Strategic Goal 1

Deploy for sudden onset disaster and medical emergency responses in austere and resource poor settings

Strategic Goal 2

Build northern Australia's surge capacity for trauma and disaster events of significance

Strategic Goal 3

Create opportunities arising from unique training, research methodologies and content expertise

Strategic Goal 4

Exceed and engage continuous quality improvement practices for internal and external systems and processes

Strategic Goal 5

Drive and lead professional standards

Strategic Goal 6

Leverage relationships locally, nationally and internationally to enhance medical disaster and health emergency response capabilities

Strategic Goal 7

Build a highly skilled and culturally sensitive workforce

Strategic Goal 8

Safeguard ongoing future viability

Annex 4 – Key partners

Local

Top End Health Service, Northern Territory Department of Health

Northern Territory Government

CareFlight

St John Ambulance Northern Territory

Northern Territory Fire Rescue Service

Australian Defence Force

Charles Darwin University

National

Department of Foreign Affairs and Trade

Emergency Management Australia

Australian Health Protection Principal Committee

National Health Emergency Management Standing Committee

Australian Medical Assistance Team Working Group

Australian Trauma Quality Improvement Program

Royal Australian College of Surgeons

Major Incident Medical Management and Support Australia

Flinders University

National Health and Medical Research Council, Centre for Research Excellence, Integrated Systems for Epidemic Response

Australian National University, Field Epidemiology Training Program

Regional

Western Pacific Regional Office – WHO

New Zealand Medical Assistance Team

Rumah Sakit Umum Pusat Sanglah Hospital Bali

Association of Southeast Asian Nations Coordinating Centre for Humanitarian Assistance Centre

Association of Southeast Asian Nations

East Asian Summit

Pasifika Medical Association

Global

World Health Organization – Global Emergency Medical Team Secretariat

Advanced Life Support Group, United Kingdom