application or video call. The results and opinions were recorded in a mobile application and a specific website. We analyzed the general characteristics and outcomes of the prehospital ACLS using video communication.

Results: A total of 11,054 consecutive out-of-hospital cardiopulmonary resuscitation cases were recorded, and 3,352 underwent prehospital ALS using video call. Prehospital ROSC was 23.3%, survival upon hospital arrival was 13.6%, survival admission was 19.5%, survival discharge was 10.6%, and survival with good neurologic outcome was 6.0%. The reasons for no prehospital ALS included no request from a provider (29.1%), cardiac arrest during transport (20.9%), communication failure (11.6%), and family refusal (11.1%).

Discussion: As a result of providing prehospital ACLS with direct medical direction through remote video calls to cardiac arrest patients, the prehospital ROSC rate, survival admission, and discharge rate improved. Advantages of this type of medical control by video communication were ease of control of the patient`s family, more precise communication with paramedics, and continuous confirmation of the real patient's status and monitoring parameters.

Red Cross and Red Crescent Health Information System (RCHIS): Functional Design and Usability Testing Protocol

Ms. Roxanne Moore, Ms. Laura Archer
International Federation of Red Cross and Red Crescent Societies, Geneve, Switzerland

Introduction: The Red Cross and Red Crescent Health Information System (RCHIS) combines the functionality of an Electronic Medical Record (EMR), Health Information System (HIS), as well as Human Resource and stock management system. Its purpose is to facilitate patient quality of care, early warning for outbreak detection, accountability/reporting, and resource management. Short-term, emergency medical teams and support staff responding to acute clinical needs in a humanitarian context are the intended end users.

Aim: To explain the functional design principles and usability testing protocol implemented in initial RCHIS design and development phases to ensure technological fit within the humanitarian medical context.

Methods: RCHIS development followed the patient-user journey, with each patient/staff interaction encapsulated by a microservice. The integration of multiple microservices enabled RCHIS to mimic various patient journeys. The functional scope of each microservice was designed by medical end-users and was further used for access management. The value and variable design, including validation rules, were led by health informaticians and existing medical standards. Intuitiveness and ease of use guided User Interface design, with targeted medical end-user feedback collected on a twice-monthly basis in addition to early design workshops, field immersion, and post-development pilot testing.

Results: Support and implementation of RCHIS were not inherently guaranteed. As such, the process of co-designing with end users had the primary benefit of ensuring effective scope and technological fit given the humanitarian context, but also the secondary benefit of improving internal acceptability and advocacy.

Discussion: The added value of digital health records as a quality assurance mechanism is well documented. However, the increased workload and reduced employment satisfaction affiliated with the rise of EMRs illustrated a need to re-evaluate current design and use within clinical settings. The design and development approach taken for RCHIS is one attempt to improve human-computer interaction in the clinical setting.

Stroke Prehospital Informed Decision-Making Using EEG Recordings (SPIDER)

Mr. Wayne Loudon[1], Associate Professor Andrew Wong[3,4], Dr. Simon Finnigan[5], Professor Vivienne Tippett[2]
1. Queensland Ambulance Service, North Lakes, Australia
2. Queensland University of Technology, Kelvin Grove, Australia
3. Royal Brisbane and Womens Hospital, Herston, Australia
4. University of Queensland, St Lucia, Australia
5. University of Queensland Centre for Clinical Research (UQCCR), Herston, Australia

Introduction: The acute care of stroke involves the administration of a clot-dissolving drug (thrombolysis) and/or its removal using endovascular clot retrieval. Earlier intervention results in significantly improved patient outcomes. Clinical assessment scores have limitations, and studies have shown that even the most robust scores have a reported false-negative rate of >20% for large vessel occlusive strokes that may be eligible for clot retrieval, while inappropriate bypass may delay delivery of thrombolysis.[1] Quantitative Electroencephalography (QEEG) has been shown to have a very high sensitivity and specificity in the identification of acute stroke versus matched controls in an in-hospital setting.[2,3]

Aim: The SPIDER study commenced in Brisbane, Queensland on September 3, 2018, and is investigating the use of an EEG recorder to gather data on acute stroke patients presenting to a metropolitan ambulance service.

Discussion: The data collected will guide the development of a simple numerical output reference to guide decision making. The data may aid in identifying large vessel occlusive stroke and patients eligible for endovascular intervention. The QEEG will provide a more accurate and cost-effective tool for the prehospital clinician over other imaging technologies and can guide early destination decisions. This presentation discusses the implementation of a pre-hospital research platform, integration with the clinical dispatch matrix, staff engagement, patient recruitment, and the success of the project so far.

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Tracking Patients in an Earthquake Response: The Bad, the Better, and the Best

Miss. Paula Grainger
Canterbury District Health Board, Christchurch, New Zealand

Introduction: Tracking patients through health systems is fundamental to coordinated care provision. However, it is an inconsistent element of emergency preparedness. This presentation presents findings of a study undertaken after the 2011 Christchurch Earthquake, and the resultant nationally implemented changes.
Aim: The intent was to investigate options to improve patient tracking in a mass casualty event. By looking at one scenario involving a mass casualty presentation with the central responder disabled by electricity loss, standards of practice were outlined and made scalable to meet the needs of various events.
Methods: Clinical and clerical staff involved in the event's patient tracking were interviewed. Data were analyzed using thematic analysis and reported using the structure, process, and outcomes framework.[1]
Results: Structures were material and human resources. Material resources were identification number systems, technological requirements, disaster-specific documents, minimum data for entry, digital/paper/hybrid registration systems, and digital-paper integration. Human resources were role allocation, and familiarity of plans, roles, processes, tools, and facilities. Process identified the activities to manage unidentified patients, triage, registration, and ongoing tracking processes. Outcomes were management of patient flow, patient-care provision, and patient-family reunification.

Initial implementation was local. Structures and processes were agreed upon, with varying response levels according to the incident scope, while staying as close to business as usual for familiarity. National implementation followed via a Ministry of Health working group involving different district health boards. The group developed a consensus on the minimum data to be entered and the process to merge patient identities of initially unidentified patients. Written tools were shared for standardization.
Discussion: With inter-agency and inter-organization emergency response, standardized processes and information are required. Collaboration prior to events can mitigate issues when an event occurs.

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Use of a Novel Electronic Patient Care Record System at Mass Gathering Events by St. John Ambulance Victoria

Ms. Crystal Gao[1,2], Dr. Zheng Jie Lim[2,3,4],
Mr. Brendan Freestone[2,3], Ms. Kristy Austin[2,3],
Mr. Rob McManus[2]
1. Faculty of Medicine, Nursing & Health Sciences, Monash University, Clayton, Australia
2. Event Health Services, St John Ambulance Victoria, Mount Waverley, Australia
3. Clinical Services, St John Ambulance Victoria, Mount Waverley, Australia
4. Ballarat Health Services, Ballarat Central, Australia

Introduction: The growing number of mass gathering events (MGEs) in Victoria has seen an increase in demand for event health services and the need for real-time reporting of medical incidents at these events.
Aim: Since 2016, St. John Ambulance Victoria has introduced an electronic patient care record (ePCR) system with the aim of improving patient care and satisfaction. It appears that this ePCR system is the first of its kind to be trialed at MGEs by a volunteer organization.
Methods: A qualitative study was conducted to determine strengths and limitations of the ePCR system by compiling results of surveys and interviews and through anonymous feedback from volunteers and patrons (event organizers, patients). This study is ongoing.
Results: It was found that the use of ePCR:
1. Allowed for collection of relevant data to assist in future planning of MGEs
2. Aids the overall coordination of first aid delivery at MGEs faster relaying of patient information to event commanders reduction of paperwork
   improved ability to locate first aid crews using GPS tracking
3. Received positive feedback from first aiders, event organizers, and patrons
4. Was deemed easy-to-use (4/5), acceptable (4.3/5), and helpful (4.1/5) by our members

Discussion: These experiences demonstrate that ePCR is well-received, easy to use, and leads to improved patient satisfaction and treatment outcomes at MGEs. Furthermore, the ability to collect and analyze real-time data such as GPS location tracking, incidence heat maps, and patient demographics facilitate future event planning and resource allocation at MGEs. It is acknowledged that this study is preliminary, and the trialed use of an ePCR system has been limited to metropolitan areas and MGEs with <1 million patrons. The intent is to continue this study and explore the use of ePCRs at larger MGEs and events in rural or regional areas.

Watching to Save Lives

Mr. Raphael Herbst, Dr. Eli Jaffe
Magen David Adom, Tel Aviv, Israel

Introduction: As Israel's National Emergency Medical Services (EMS) provider, Magen David Adom (MDA) is