Use of Postmortem Computed Tomography in Disaster Victim Identification: Current Japanese Methods and Challenges

Maiko Yoshida MD, PhD[1], Ayumi Motomura MD, PhD[2], Yohsuke Makino MD, PhD[3], Hisako Saito MD, PhD[1], Hirotaro Iwase MD, PhD[1]

1. Chiba University, Chiba, Japan
2. International University of Health and Welfare, Narita, Japan
3. University of Tokyo, Tokyo, Japan

Introduction: In Japan, victims of large-scale disasters are usually identified by non-objective means. In the case of the 2011 Great East Japan Earthquake, ~90% of the bodies were identified based on nonobjective means such as facial features or belongings, which resulted in misidentification. At present, the situation remains the same. However, according to global standards, a method referred to as "disaster victim identification" (DVI; individual identification of disaster victims) is recommended by the International Criminal Police Organization; in this method, a multidisciplinary investigation team integrates objective information such as dental charts and DNA. Furthermore, recently, there has been a movement to employ postmortem computed tomography (CT) for personal identification, and radiologists are expected to be included in the DVI team.
Method: In the Department of Legal Medicine of Chiba University in Japan, individual identification via CT or magnetic resonance imaging was conducted in forensic autopsy cases of unknown identities when there was an assumed person for the body and the antemortem image of the person could be acquired. Two certified radiologists interpreted and compared the antemortem CT with the postmortem CT taken prior to autopsy and assessed whether the two images were compatible to indicate the same person.
Results: A total of 20 cases were judged. In all cases, two images were compatible, indicating the same person. Image-based identification was particularly useful when dental findings or fingerprints were unavailable for comparison and there were no family members available for DNA testing.
Conclusion: In the future, this method will be applied to large-scale disasters.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s51
doi:10.1017/S1049023X23001656

Development and Implementation of Prioritized Care in a Tertiary Hospital Intensive Care Unit During the Sars-Cov-2 Pandemic

Filippo Boroli MD[1,2], Didier Tassaux MD[1], Annie-Claude Paubel RN[1], Helene Lenoir RN[1], Jerome Pugin MD[1], Olivier Hagon MD, RN[3,4]

1. Division of Intensive Care, Geneva University Hospitals, Geneva, Switzerland
2. Center for Humanitarian Medicine and Disaster Management - WHO Collaborating Center, Geneva, Switzerland
3. Division of Tropical and Humanitarian Medicine, Geneva University Hospitals, Geneva, Switzerland
4. Center for Humanitarian Medicine and Disaster Management - WHO collaborating center, Geneva, Switzerland

Introduction: In the event of a major event or disaster, the intensive care unit (ICU) should be able to offer an adapted and proportional response, within a limited time frame, to the influx of patients who can benefit from the technical facilities of the University Hospitals of Geneva. We developed an innovative approach to ICU care aimed to guarantee continuity by protecting healthcare staff from excessive fatigue and by tailoring the care provided from individualized care to the best care for the most people.
Method: A modified organizational and systematic investigation method (MINOS, Paries - 2013) was used to elaborate an ICU security model; threats to activity shut down were identified and their prevention, recovery, and mitigation were planned. These actions were updated following the evolution of the crisis. Crew resources management (CRM) and bedside simulations were used in the implementation phase.
Results: The ICU security model pillars were staff protection and patient management; the identified threats to activity continuity were lack of human resources, activity overload, medical errors, pressure sores and healthcare acquired infections; they were evaluated at intermediate or high risk to patients' safety. The prioritized care plan was developed to control, recover, and mitigate these threats. It consisted in: adaptable level of ICU care, modular organization by cell, huddles, matrix for activities prioritization and controlled delegation method. Before implementation, 55 nurses and 46 doctors were trained by CRM courses and simulations. The pilot phase was deployed in one cell, from December 2021 to January 2022; 67 patients were admitted in the period; 13 adaptations to the original plan were introduced. No critical safety issues were reported.
Conclusion: The prioritized care could be an adapted and proportional ICU response to a major event allowing the continuity of the activity while protecting staff from overload. Further tests are needed.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s51
doi:10.1017/S1049023X23001668

Clinician Consensus on "Inappropriate" Presentations to the Emergency Department in the Better Data, Better Planning (BDBP) Census: A Cross-sectional Multi-center Study of Emergency Department Utilization in Ireland

Niamh Cummins PhD[1,2], Louise Barry[3], Carrie Garavan[3], Collette Devlin[4], Gillian Corey[5], Fergal Cummins[1,5], Damien Ryan[1,5], Conor Deasy[6], Gerald McCarthy[7], Rose Galvin[4]

1. School of Medicine, Faculty of Education and Health Sciences, SLÁINTE Research and Education Alliance in General Practice, Primary Healthcare and Public Health, Health Research Institute, University of Limerick, Limerick, Ireland
2. Department of Paramedicine, Faculty of Medicine, Nursing and Health Sciences, Monash University, Melbourne, Australia
3. Department of Nursing and Midwifery, Faculty of Education and Health Sciences, University of Limerick, Limerick, Ireland
4. School of Allied Health, Faculty of Education and Health Sciences, Ageing Research Centre, Health Research Institute, University of Limerick, Limerick, Ireland
5. ALERT Limerick EM Education Research Training, Emergency Department, University Hospital Limerick, Limerick, Ireland
6. Emergency Department, Cork University Hospital, Cork, Ireland

https://doi.org/10.1017/S1049023X23001656 Published online by Cambridge University Press