

Conclusions: Key elements must be considered in developing, implementing, and evaluating of disaster health management policies to ensure the success of these policies.

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(P1-111) Japan Medical Association Team (JMAT)

T. Nagata,¹ T. Ishihara,¹ H. Inasaka,¹ T. Sakamoto,¹
M. Akashi,² Y. Otomo,³ K. Koriyama,⁴ H. Kobayashi,⁵
T. Ido,¹ S. Ishi¹

1. Committee on Disaster Medicine, Tokyo, Japan
2. Research Center for Radiation Emergency Medicine, Tokyo, Japan
3. Acute Critical Care and Disaster Medicine, Tokyo, Japan
4. Kitakyushu, Japan
5. Tokyo, Japan

Disaster preparedness is one of the national priorities. In Japan, disaster medicine is defined as a part of the national medical plan initiated by Ministry of Health, Welfare and Labor. The Japan Medical Association is the largest professional physicians' group in Japan, and has contributed to all kinds of disaster relief work regionally and nation-wide for years. Based on past successes, the Japan Medical Association proposes a new disaster action plan named Japan Medical Association Team (JMAT). The primary mission of JMAT is to deploy to the disaster scene requested and work for disaster relief. JMAT covers the acute to sub-acute phase of disaster response, and also collaborate with other agencies. In the preparation and mitigation phases, the Japan Medical Association work for establishing mutual disaster aid partnerships, disaster plans, networks with other agencies, team building, disaster medicine training and education, etc. In Japan, the Disaster Medical Assistant Team (DMAT) has been established based on the experience of the 1995 Kobe Earthquake, when lots of preventable trauma deaths occurred because of delayed medical response. The mission of DMAT is to deploy to the scene immediately and triage/transfer the most serious disaster victims outside the scene for advanced medical care. DMAT covers the first 48 hours of disaster response phase, and then JMAT takes charge of the work. JMAT will also respond to chemical, biological, radiological and nuclear disasters, and international humanitarian work. The present issues of establishing JMAT are 1.training and education for Japan Medical Association members, 2.establishing cooperation with other agencies, and 3.having presence at the Central Disaster Committee, Cabinet Office, Government of Japan.

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(P2-1) Large Civilian Jets Configured for Aeromedical Use: Implications for Disaster Health

S. Curnin

Health - Disaster Preparedness & Management Unit, East Perth, Australia

Background: Australia is a vast and isolated country and often the only viable option of transporting multiple casualties is using fixed wing aircraft. A number of civilian aeromedical services and the military are responsible for the evacuation of casualties, both nationally and internationally. Due to Australia's increased operational commitments, the military can no longer be expected to provide a rapid aeromedical deployment. This

situation, coupled with the limited surge capacity of Australia's civilian fixed wing aeromedical services, highlights the need for Australia to improve preparation and readiness for a large scale civilian aeromedical response.

Discussion and Observations: Historically, the use of large jets configured for aeromedical use has been exclusively the domain of the military. Yet in recent years the use of large civilian jets configured for aeromedical capability has been suggested as a solution. The purpose of this paper is to explore the role of large civilian jets configured for aeromedical use in the event of a disaster with multiple casualties. This study involved an extensive literature review and an international study tour of aeromedical services that are at the forefront of using large jets in aeromedical evacuation. The findings identified that standard civilian jets can easily be reconfigured for transporting multiple casualties. It is argued that this strategy can be an inexpensive and effective option and should be included in emergency preparedness arrangements. The aim of this paper is to prompt disaster health agencies in Australia to consider the use of a civilian jet system that can be used for a disaster requiring a large scale aeromedical response.

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(P2-2) Suicide Attack Response Considerations for First Responders

C.R. Foerster, J.A. Mohr, J.E. Patrick, A. Richman

Disaster Medicine and Management, Philadelphia, United States of America

Introduction: All first responders must be prepared to respond to suicide attacks. Staging safe and effective responses to these incidents requires knowledge of a number of unique considerations.

Methods: The research presented in this presentation used reviews of open source information along with site visits to multiple suicide bombing sites in Israel and the United Kingdom to determine the important considerations for first responders responding to suicide attacks. What is presented is not a specific standard operating procedure but rather a common framework that can help to facilitate a coordinated and effective response from all agencies involved.

Results: Civilians and private security guards can play an important role in detecting the planning and execution of suicide attacks and sometimes even in their interdiction in the imminent attack phase. The suspicions of civilians must be taken seriously and citizens should be encouraged to report these suspicions immediately. The first responding emergency services personnel must be able to effectively begin their agency's response to the attack while maintaining a strong situational awareness. Also on scene, strong frontline commanders are needed to work together to lead a coordinated response. Interagency communication and using a scaled response is of increased importance at these incidents when first responders could be targeted by the secondary attacks or an initial threat that has not yet been neutralized. First responders can take the initial steps to promote the return to normalcy that is important after terrorist attacks. In the aftermath of attacks, efforts should be made to establish a collective knowledge within the emergency services community to share lessons learned in the response.

Conclusion: The results of this research can help local agencies plan for suicide attack response and also provides a strong foundation for future research to further investigate responses to the varying types of suicide attacks around the world.

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(P2-3) Analysis of Chest Compression Rate and Its Affect on the Quality of Chest Compressions

Z.T. Emberts,¹ J.H. Schwab,¹ A.L. Williams,¹ M.L. Birnbaum,² P.D. Padjen,³ A. Bhattacharya,¹ S.K. Olson¹

1. Emergency Education Center, Madison, United States of America
2. Madison, United States of America
3. College of Nursing, Oshkosh, United States of America

Background: In the last 50 years of modern-era cardiopulmonary resuscitation (CPR), survival rates remain dismal, worldwide. International CPR guidelines recommended a compression rate of at least 100 per minute. There is little evidence documenting if and to what extent high compression rates affect the quality of chest compressions.

Objectives: An objective of this study was to evaluate the effect mean compression rate (MCR) had on the overall quality of chest compressions. Investigators hypothesized that MCRs > 110 would result in a smaller percentage of adequate: compressions (PAC); depth (PAD); and recoil (PAR).

Methods: In this observational pilot study, basic life support providers were recruited from prehospital and in-hospital settings to provide 10 minutes of continuous chest compressions, based on the 2005 American Heart Association guidelines. An adequate compression was defined as a compression that was > 35 mm, had full recoil, and correct hand position. Data were recorded using the Laerdal PC Skill reporting System.

Results: Ninety four (91.3%) of 103 participants completed 10 minutes of compressions. Rescuers represented a variety of backgrounds, average age of 35.5 ± 11.0 years. Fifty eight (56.2%) rescuers had performed CPR in the last two years, and 54 (52.4%) practiced prehospital EMS. Providers that did not complete the entire 10 minutes tended to have a higher MCR than those completing 10 minutes, 114.2 ± 19.3 vs. 105.8 ± 15.4 respectively. Within the first two minutes, rescuers with a MCR > 110 delivered 45% of their compressions adequately, compared to 60% when a rescuer's MCR was < 110. This initial disparity was primarily due to decreased PAR, not decreased PAD. After 2 minutes, higher MCRs correlated with decreased PAC, due to decreased PAD.

Conclusions: Data indicates a higher MCR results in decreased PAC, PAD, and PAR, likely attributed to increased rescuer fatigue.

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(P2-4) Prehospital System Development in Jaffna, Sri Lanka

P. Bollinger,¹ J. Zimmerman,² K. Bertermann,³ R. Nominathan,² D.R. Woodyard²

1. International Programs, Tigard, OR, United States of America
2. Colombo, Sri Lanka
3. Tigard, OR, United States of America

Introduction: This case study presents the development of a pre-hospital system in Jaffna, Sri Lanka. The case then outlines the development of the system, examines its first year of operations, and investigates possible reasons for the results of the development of the prehospital system in Jaffna. Finally, the case discusses the continued operations of the system.

Methods: This case study qualitatively researches the development of the Jaffna prehospital care system by looking at indicators of success in human resources, technical knowledge and community awareness. The case study also quantitatively examines the utilization and financial performance of the system during its first year of operation.

Results: According to indicators, the implementation of the model and its functioning can arguably be considered successful in terms of utility, and in many regards financial stability. The system has already responded to over 2,000 emergency calls in its first eleven months of operation. The main ambulance and call center has managed to operate at only a \$13.50 USD loss during its first twelve months of operation. It has established quality standards by utilizing trained Emergency Medical Technicians (EMT) and ambulances featuring basic life saving equipment. The system has also integrated itself as a part of the overall health system of the community it is serving.

Conclusions: The system's success in development should be examined as a potential model for implementing prehospital care in a developing and middle-income country setting, while keeping in mind factors outside of the system that were integral to its developmental success.

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(P2-5) Pre- and in-Hospital Time Delays in Acute Stroke Management in Estonia

K. Gross-Paju,¹ R. Adlas,² U. Sorro¹

1. Stroke Centre, Tallinn, Estonia
2. Ambulance Services, Tallinn, Estonia

Background: Short intervals between stroke onset and thrombolysis determine the efficacy of this procedure. Guidelines for stroke management were introduced in 2005 in the West-Tallinn Stroke Centre and in 2008 in the Tallinn Emergency Medical Services. Since 2006, annual joint stroke meetings of pre- and in-hospital staff have been held. These meetings included analysis of time delays of thrombolized patients.

Objective: The aim of the study was to analyze changes in time delays in acute stroke management and adherence to treatment guidelines.

Methods: Pre- and in-hospital data of all consecutive ischemic stroke patients who received intravenous thrombolytic therapy were recorded prospectively at the Stroke Centre. Data from the implementation period of thrombolysis (2005–2008 i.e., 1st period) were compared to recent data from 2009 to 01 September 2010 (2nd period). The data from all stroke patients presenting to ambulance services were analyzed separately from 01 September 2009 to 01 September 2010. Recorded procedures were compared to current treatment guidelines.

Results: A total of 115 patients received thrombolysis at the Stroke Centre. The Alarm Centre assigned the correct priority