

in country vulnerability, 126th of the total 180 countries. According to the report of the Ministry of Forest and Environment in 2018, flood is one of the principal climatic hazards in Nepal. According to the Department of Health Services Nepal, 3,500 children die each year due to water-borne diseases (WBD). The objective of this study is to analyze the climate change impact focusing on floods and WBD for the past two decades.

Method: A secondary data analysis method was used to analyze the impact of floods and WBD attributed to climate change. Data was obtained from Nepal Risk Reduction Portal (<http://drrportal.gov.np>), Nepal Annual Health Reports (2000–2021), Nepal Government Vulnerability and Risk Assessment reports, and reputable journals.

Results: Climate-related disasters have increased by six-fold in 2021, as compared to 2000 in Nepal. Among the people affected by disasters 71% of them are due to floods. Flood events during the last 21 years have a fluctuating trend with highest and lowest events observed in 2017(388) and 2015(15) respectively. Heavy and unusual rainfall patterns as a major indicator of climate change is likely to cause riverine floods and flash flooding by melting the glaciers. The incidence of diarrhea disease rose by 4.39% for 1°C increase in ambient temperature in data analysis collected on temperature and diarrhea from July 2002–June 2014.

Conclusion: The findings suggested that increased temperatures in Nepal might have induced a change in flood events and the incidence of WBD (such as diarrhea), thus emphasizing the importance of climate change adaptation plans, flood risk management, and WBD surveillance to be prioritized and put in place to mitigate the effects of climate change.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s178–s179
doi:10.1017/S1049023X23004624

Psychological Emergency Cell and Prehospital Emergency Medical Service Integration into the Care Pathway for Victims

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Introduction: The Medical-Psychological Emergency Cells (CUMP) are integrated in France into the pre-hospital Medical Emergency Services (SAMU). The objective of this study aims to show an integrated course of care and the major interest of the inclusion of the Psychological Cells in the structures of the SAMU.

Method: The CUMP of the Toulouse Area is made up of Psychologists, Nurses, Psychiatrists, professionals or volunteers sent or put on alert. Interventions take place immediately under the aegis of the prehospital medical care department or in a deferred manner within the first 48 hours. All subjects having at the time signs of acute stress, peritraumatic dissociation, behavioral disorders, are invited to follow-up consultations within 48 to 72 hours. The objective of this work is to show the continuity of care and the pathway of patients coordinated from an emergency call to several months beyond.

Results: During 2021, 222 situations were handled, either individually or collectively. 94 were assaults (physical, psychological, or sexual), 55 were accidents (traffic accident, fire, explosion, etc.), 50 were confrontations with death (attending a suicide, death, etc.), 13 were traumatic bereavements, and 10 a context of a health disaster. Overall, 1,109 patients were seen immediately on site, 192 post-immediate in less than 48 hours and 197 had repeated individual consultations.

Conclusion: 1) The participation of the same professionals in immediate and post-immediate care makes the prevention of chronic post-traumatic stress more effective.

2) The articulation with the care structures for lasting psycho-trauma establishes consistency in the course of care: sensitivity to signs of distress, dissociation or stupefaction.

3) The links with the pre-hospital emergency medical aid service make emergency specialists aware of the psychological component of traumatic events.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s179
doi:10.1017/S1049023X23004636

Development and Validation of a Repeatable Exsanguination Simulator Using Live Tissue (RESULT)

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Introduction: Proper packing technique is crucial to minimize blood loss and successfully stop fatal junctional (axilla, groin, and neck) bleedings. Several medical simulators and mannequins are used to teach techniques for manual pressure and wound packing. Live tissue training (LTT) using animal models represents a high-fidelity simulator, but the number of times massive hemorrhage can be practiced is limited due to cumulative blood loss of the animal. Moreover, the animal's potent coagulation limits the reuse of injuries. The study aimed at creating and validating a reproducible and repeatable exsanguination simulator to be used for high-volume training.

Method: This study was approved by the regional animal ethics committee (Dnr 17953-2020). All animals were fully anesthetized throughout the duration of experiments. A repeatable exsanguination simulator using live tissue (RESULT) was created using commonly available materials to add reproducible junctional bleedings in an LTT context. A canister of porcine or bovine blood is connected to a standard gravity infusion set with roll clamp and pump chamber removed and added to a 100 cm 3-way stopcock connected to a 60 ml syringe. The free end of tubing is surgically inserted into the hind leg of a pig and placed inside a 5 cm long and 5 cm deep wound cavity. The simulator was evaluated with instructors controlling the rate of bleeding using the syringe while training participants packed the wound.

Results: According to the instructors, participants benefited from the additional training made possible by using RESULT. Instructors received direct feedback on applied manual pressure and packing through the resistance of the syringe plunger. Moreover, participants found the increased number of repetitions beneficial to their training. The animals had no change in status from the multiple bleeding interventions.

Conclusion: Both participants and instructors found the novel bleeding model useful for high-volume training in stopping massive junctional bleeding.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s179–s180

doi:10.1017/S1049023X23004648

ASEAN Strategy for Enhancing Knowledge Management on Disaster Health Management

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Introduction: ASEAN Leaders' Declaration on Disaster Health Management (ALD on DHM) (2019-2025) was adopted by the ASEAN Summit in November 2017 to strengthen the DHM system at national and regional levels, and the Plan of Action (POA) to implement the ALD on DHM was endorsed by the ASEAN Health Ministers Meeting in August 2019. Knowledge Management (KM) is one of the five priority areas in the POA with the relevant targets including the regional academic network establishment, organization of regional academic conferences, publication of the ASEAN academic journal on DHM, and so forth. The ARCH Project Phase2 (ARCH2), which started in January 2022, focuses on aiming to support implementation of this POA.

Method: The ARCH2 will support the establishment of the ASEAN Academic Network on DHM (AAN-DHM) and the ASEAN Institute for DHM (AIDHM). In addition, the ARCH2 will support the promotion of academic activities on DHM which shall be conducted under the AAN-DHM in collaboration with the AAN member institutes and AIDHM.

Results: Terms of Reference (TOR) of AAN-DHM was endorsed by the 15th ASEAN Health Ministers Meeting in May 2022. Afterward, the National Focal Point (NFP) institutes for the AAN were nominated among all ASEAN Member States (AMS). The first meeting of representatives of the NFP was held in September 2022 to discuss several areas such as governance of the AAN-DHM, the organization plan for the ASEAN Academic Conference (AAC), and the publication plan of the ASEAN Journal. Simultaneously, the TOR of the AIDHM was prepared for further discussion of its establishment.

Conclusion: The AAN has already been established to initiate the preparation of its academic activities. The AAC on DHM is scheduled to be held in November 2023 in Indonesia as the first regional event for accelerating academic activities toward enhancing KM on DHM in the region under the AAN-DHM.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s180

doi:10.1017/S1049023X2300465X

A Modified Delphi Study to Improve Prehospital Mass Casualty Incident Response

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Introduction: The Novel Integrated Toolkit for Enhanced Pre-Hospital Life Support and Triage in Challenging and Large Emergencies (NIGHTINGALE) project was awarded to a consortium to design an innovative toolkit featuring different technological solutions for prehospital mass casualty incident (MCI) response. Translational science (T) methodology was undertaken to develop evidence-based guidelines for MCI response.

Method: The consortium was divided into three work groups (WGs) MCI Triage, Prehospital Life Support and Damage Control and Prehospital Processes. Each WG previously collected data through the project T1 scoping review stage to provide the foundation for the initial T2 modified Delphi draft statements to present to WG internal focus groups for content and NIGHTINGALE study objectives. Their refined statements proceeded to WG specific external focus groups for further editing to be clear and concise for the following modified Delphi consensus rounds. Final WG statements were presented to modified Delphi experts for their consensus using the STAT59 platform with instruction to rank each statement on a seven-point linear numeric scale, where 1 = disagree and 7 = agree. Consensus amongst experts was defined as a standard deviation ≤ 1.0 .

Results: After three modified Delphi rounds, 18 of 24 statements attained consensus by the MCI Triage experts, eight of 25 by the Prehospital and Life Support and Damage Control experts, and 23 of 28 by the Prehospital Processes experts.

Conclusion: The three work groups will utilize consensus statements during the NIGHTINGALE project T3 phase to create evidence-based MCI response guidelines.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s180

doi:10.1017/S1049023X23004661