

Review Meeting of Disaster Risk Reduction of National University Hospital Buildings in Ministry of Education, Culture, Sports, Science and Technology (MEXT) (2015/12/8)

Topics: Disaster Risk Reduction of National University Hospital Buildings

Venue: Ministry of Education, Culture, Sports, Science and Technology (MEXT) (Tokyo)

On Dec. 8, 2015, Prof. Shinichi Egawa lectured in the Review Meeting in MEXT about the Response of Tohoku University Hospital (TUH) in Great East Japan Earthquake (GEJE). This review meeting is periodically organized to enhance the disaster risk reduction of national university hospitals at the timing of many retrofitting of the university hospital buildings will occur within several years inviting the experts in architecture and civil engineers to the Ministry. All national university hospitals are built and managed by MEXT, while other public and private hospitals are built by its owner and managed by Ministry of Health, Labour and Welfare (MHLW).

Prof. Egawa talked about the preparedness of TUH before GEJE, actual structural, non-structural and functional damage of TUH, the role of TUH in the vast Tohoku region and its network to support the local hospitals affected by GEJE, recovery process to normal activity and building back better including disaster risk reduction and failsafe strategy of TUH, and the significance of Sendai Framework for Disaster Risk Reduction. Prof. Egawa stressed and recommended the strengthening of DRR function of university hospitals to serve as tertiary and disaster base hospitals.

Some of the experts in architecture worked for the reconstruction of affected coastal areas and officers in MEXT showed great concern in the affected region and Tohoku University. This type of well-organized review meetings will produce better policies from the Ministry based on the scientific evidences and opinions of experts to reduce disaster risks in university hospital buildings and functions. MEXT is taking actions to promote the DRR in all national, public and private university hospitals that are doing education, clinical practice and research.


As a central university in the affected area, the role of Tohoku University and IRIDeS becomes more important to establish practical science of disaster risk reduction from the lessons learnt from GEJE.

第一段階: 3月11日
入院患者及び職員の安全確保と
緊急のトリアージ体制の確立

- 14:46 地震発生
- すべてのライフライン停止
- 20分で災害対策本部設置
- 被害・安否状況確認
- トリアージポスト設置
- DMATによる情報収集
- 開腹手術6件: 終了・閉腹

災害対策会議

*** 震災の最前線になるであろう**



Immediate response of TUH in GEJE

病院被害



There were no structural damage, but non-structural damages in TUH



第二段階: 発災1週間目まで
病院機能の復旧と仙台市周辺の医療機関への
支援及びトリアージの継続

「すべての医師は総合医として活動して欲しい」

第三段階: 発災2-3週間目まで
県内外の医療機関への支援強化

「最前線の病院を絶対に疲弊させるな」
最前線の医師の「顔」が見える関係

第四段階: 発災3-4週間目以降
避難所の長期的な診療体制の整備、
病院の正常機能への復帰

「転院要請には無条件で最大限に対応」

透析患者の遠隔搬送

- ・ 気仙沼市における透析医療機関は気仙沼市立病院のみ
- ・ 発災前は夜間透析患者35名を含む168名
- ・ 陸前高田、南三陸でも透析不可能
- ・ 東北大学病院血液浄化部、各地の透析医会、DMAT、災害医療コーディネーター、自衛隊、救急隊のネットワークを活用



Process of recovery and the role of TUH in the vast affected area

The first wide-area transportation of hemodialysis patients from Kesenuma to Hokkaido via TUH with network oriented coordination with Drs, DMAT, Self Defense Force.

構造物被害と対策

- ・ すべての建物が再使用可能
- ・ 外来の一部、および古い研究棟は非構造物の被害が大きく、耐震対策のための改修を要した。
 - 医局の長期間仮住まいが必要
 - 研究棟(医局)の改修は優先度が低くなりやすい
 - 最新技術も用いられた



建て替えずに免震構造化(免震装置プレロード工法)

New technology employed to make the building seismic free without demolition.

ライフライン対策



Facilities to assure the emergency lifelines

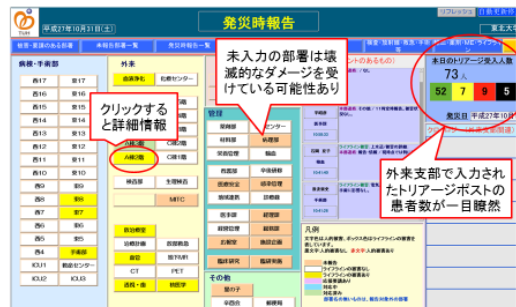
検査部の対策



Failsafe strategies in the laboratory

東北大学病院 災害医療情報システム(震災後)

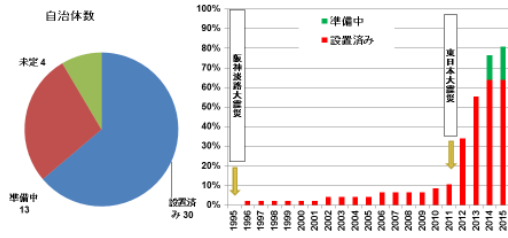
- ・ 発災時報告と定時報告を視覚化
- ・ 毎月1回の緊急一斉放送訓練および総合防災訓練で確認



Emergency information system in TUH

災害保健医療コーディネーター全都道府県調査

災害医療国際協力学調べ 2014年8月時点



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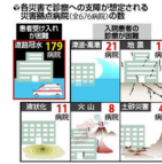
Trends of disaster medical and public health coordinators in Japanese prefectures.

厚労省調べでは

災害拠点179病院「孤立」…豪雨・津波で冠水

読売新聞 5月10日(日)12時9分配信

ツイート 70 シェア 388



災害時に緊急医療の中核となる全国676か所の災害拠点病院のうち4分の1にあたる179病院で、津波や豪雨によって周辺道路が冠水し、患者の受け入れが困難になる恐れがあることが厚生労働省の初の実態調査で分かった。

このうち8割超では対策を講じていなかった。地震や津波などで入院患者の診療ができなくなる病院があることも判明。厚労省は都道府県に対し、拠点病院を増やすなど地域内での患者受け入れ体制強化を求めている。

<http://headlines.yahoo.co.jp/hl?e=20150509-00050148-yom-soci>

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There are strong social needs of DRR in the disaster base hospitals through out Japan.

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