How did companies and occupational health cope with the Great East Japan Earthquake?

: a prompt report from a questionnaire survey and discussion at the multidisciplinary occupational health staff society

Hiroshi FUKUDA MD PhD
Dept. of General Medicine, Juntendo University, Tokyo, Japan

The Great East Japan Earthquake
earthquakes × tsunami × nuclear accident

3.11, 2:46 pm

1, Facts of the Great East Japan Earthquake

- Earthquake magnitude and height of tsunami
- Change of death toll and number of people missing
- Overview of nuclear accident and current government response

2, Current status and change of medical support

- Medical support in the acute phase
- Medical support in the chronic phase
- Support from outside the disaster areas using IT
- Information provided by each academic society

3, How did companies and occupational safety and health staff respond to the great earthquakes?

- Questionnaire survey
- A case study of disaster-stricken company

Scope of this report

Reported by the Metropolitan Police Department, March 5, 2012

1, Facts of the Great East Japan Earthquake

Death
15,854
Injured
6,023
Missing
3,274
Size and time of earthquakes

Height of tsunami

Sendai airport damaged

Fukushima Daiichi nuclear disaster

Power saving in my home

Sendai 9m
Hachinohe 8m
Miyako 19m
Kamaishi 9m
Minami-Sanriku 15m
Rikuzentakada 15m
Onagawa 17m
Sendai 9m
Fukushima Daiich 14m
Hitachi 5m

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Sendai airport damaged

Fukushima Daiichi nuclear disaster

Power saving in my home

-48% !!
2. Current status and change of medical support

Fukuda H, Juntendo University General Medicine, the 30th ICOH conference, Mexico, March 18-23 2012

Yomiuri News 2011/4/16

DMAT Medical support in the acute phase

Established after the Hanshin-Awaji Great Earthquake after 1995, sent 1,000 members to the site on the next day and by March 22, total 320 teams closed their activities.

http://www.pref.yamagata.jp/

Shelters Medical support in the chronic phase

Ootsuchi area 2011/4/26

Medical Coordinator Medical support in the chronic phase

Kamaishi area 2011/4/26

Suzuki M, Juntendo University General Medicine, the 30th ICOH conference, Mexico, March 18-23 2012

Medical Coordinator

- The coordinator is useful to take balance between many medical volunteers from all over Japan.
- Mental care support
- Shelter visiting
- PCAT

Fukuda H, Juntendo University General Medicine, the 30th ICOH conference, Mexico, March 18-23 2012

Rescue 311 Support from outside of the disaster areas using IT

http://www.311er.jp/

which provides medical-related consultations to victims of the disaster using IT

http://www.311er.jp/

The project started by 10 founding doctors.
Volunteer doctors grew to 180 in only 2 weeks.

The project uses a dedicated and secured server.

case: 25ys old female, CC: Illegal bleeding

When an e-mail is received, we make a first-touch ASAP.
The median of the time till first touch is 23 minutes.

Chief complaint of Rescue311 clients

A Trend of the Rescue311 clients, Apr.-Nov. 2011

A source of the Rescue311 clients

Academic society Information providing
3. How did companies and OHS staff respond to the great earthquakes?

1) Questionnaire survey n=150

The multidisciplinary occupational health staff networking activity

Results: affiliation

- Company: 80%
- Health insurance association: 15%
- Hospitals / OHS provider: 5%
- Others: 0%

The scale of company

- <50: 0%
- 50-999: 15%
- 1000-2999: 30%
- 3000-9999: 45%
- 10000+: 10%

Occupation

- Doctor: 80%
- PHN: 15%
- Dietician: 5%
- Physical Trainer: 0%
- Hygienist: 0%
- Labor department: 0%
- Psychologist: 0%
- Student: 0%
- Others: 0%
Countermeasure of company against this Disaster

- Establishment of the headquarter
- Confirming safety of employees and families
- Investigating and restoring damage of office
- Sending of relief supplies
- Collecting donation money
- Support their employees who wish to be volunteers
- Action for rolling blackouts and electricity saving
- Care for their employees who claimed illness
- Information dissemination to their employees
- Information dissemination to their stakeholders

Free comments... continued

- For a week after the earthquake, we held an early morning meeting with representatives from each department every day.
- Staggered (Flex) commuting due to stoppage of transportation services
- Volume of electricity consumption by office was posted.
- We established and initiated an action by a disaster countermeasure meeting by building.
- As our industrial complex is occupied by multiple companies, destruction of pipelines and damaged upstream companies caused stoppage of production due to raw materials unavailable.
- We are an exporting company and work for assuring our product safety using a Geiger counter.
- We are worried about the health of our workers who work for removing debris.
- and so on ...

Free comments...

- We have recently recognized that evacuation due to an earthquake and due to collapsed nuclear plants are totally different in actions required.
- We came to know that the actions would require hefty amount of time and that more organizational responses (including cooperation between the administration and companies and between the central government and local governments) would be the key.
- We are one of the TEPCO group companies. We can’t tell you it in detail, but we are placed in a tragedy more than you may imagine.
- When an issue arisen that tap water in Tokyo might have been contaminated with radiation, we gave away potable water bottles to all employees who have small kids.
- We provided information on mental care after the disaster and radiation risk communications.
- We provided an interview to high-risk employees who work for our Tohoku Office, close to the affected area.

A case study of disaster-stricken company

- SMC corp.
- products of SMC

number of employee : 1300
The company did fall and trip prevention measures

- March 11 2:46 p.m. Earthquake hit the area.
- March 11 3:10 p.m. Completed evacuation of all 6,540 employees in 5 plants in Japan. Only 3 employees got abrasion. In Kamaishi Plant, 200 workers were unable to go home due to tsunami.
- March 12 3:20 p.m. All fixed phone and mobile phone services downed.
- March 12 4:50 p.m. Confirmed the degree of damages in Kamaishi Plant. Sent an e-mail requesting for restoration works.
- March 12 9:20 a.m. Connection with Kamaishi Plant established over satellite phone. Confirmed the damage condition.
- March 12 10:00 a.m. Construction companies dispatched workers for Kamaishi.
- March 12 2:00 p.m. Requested the construction companies to build prefabricated houses.

- March 13 7:20 a.m. Issued an instruction to procure materials to Kamaishi Plant (emergency relief supplies stored in the warehouse and other goods necessary for withstanding prolonged damage conditions).
- March 13 3:30 p.m. Started transportation of relief supplies from three domestic sites (Soka, Yamatsuri and Akita) via trucks.
- March 14 4:00 p.m. Relief supplies arrives from Akita.
- March 15 5:00 a.m. Relief supplies arrived from Soka and Yamatsuri.
- March 15 10:00 a.m. Arrived materials for prefabricated houses. Started construction.
- March 29 Accepted moving-in to the prefabricated houses.

People evacuating to the backyard of the company

Workers who were unable to go home due to the tsunami

As I approached to Kamaishi, I met more vehicles of the police authority and the Self Defense Force.
Buildings of SMC’s plant

the inside of buildings

prefabricated houses

Occupational nurse of SMC

the Otsubi town an Kamaishi City had more than 40 evacuation centers

Disaster countermeasure office
Lessons learned from our discussions

1. Findings from victim companies should be shared by many companies.
2. In the disaster area, there are concerns of secondary health hazards caused by dusts, asbestos, back pains and excessive works in removing debris.
3. It is essential to understand the status of the affected area and to share such information with many people from the viewpoint of risk communication.
4. For companies, not only acute phase measures but also actions for a long term perspective (nuclear plant accident, securing electricity, actions against mentally worn patients, information dissemination to employees and stakeholders and creation of jobs,) will be required.
5. It seems that we as industrial health professionals have a great role in restoration of the devastated area and companies there.

Thank you for your attention!