

## Development of medical demand survey system in disaster first response phase

\*NORIO NARITA<sup>1</sup>, AKIRA FUSE<sup>2</sup>, TSUNEKI SAKIBARA<sup>3</sup>

1.Kesennuma City Hospital, 2.Nippon Medical School, 3.PASCO corporation

In the Great East Japan Earthquake, we suffered serious damage on both government offices and medical institutions. Telecommunications and roads were disconnected and we could not contact the disaster area. Disaster medical coordinators could not collect damage information. For that, medical support had to be delivered ad hoc. For delivering medical support effectively and efficiently, we try to apply aerial disaster survey in disaster first response phase.

In this system, special camera for aerial disaster survey takes very high resolution photos even flying with over 100km/h, and measures photo-center coordinates simultaneously. Photos are filed on geographic information system (GIS). Aerial photos display only external damage situation of facilities, and we never know the functional damage or number of refugees there. In order to solve this problem, we made damaged information sheet for facilities (SOS sheet). SOS sheet shows the damage situation by numbers and pictogram. This sheet is spread on the roof to be identified from aerial vehicles.

Demonstration experiments were held in Kesennuma, joined 7 organizations. We could recognize SOS sheet from aerial photos, and find easily the photos from GIS system. And, to draw numbers and spread SOS sheet was performed easily.

This method is available in any type of facilities like hospitals, nursing homes, schools and shelters.

Keywords: Disaster Medicine, communication, Disaster first response phase, Geographic information system, Emergency Medical Information System

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