

Healthcare Technology Aspects of Disaster Planning – based on the post Tsunami Experience

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A. Abstract

S.A.T.H.I. has been involved in implementing the Healing Touch Project which has been sponsored by OXFAM Trust India. This Project was started after the Tsunami disaster in Tamilnadu to bring the fruits of Telemedicine, a new thrust technology in Healthcare Informatics to the victims. Being a new field, more than expected problems were faced. However despite a delayed start (in May, this year), the project has managed to provide mental health support to the victims while they were at home.

This pilot project can show the way forward to extending the fruits of technology in post Disaster Management. For that to occur, this technology should be more widely based, awareness should be present, it should be existing and available for immediate use as and when disasters occur.

Keywords: *Telemedicine, Disaster Management, Telemental health, PTSD*

B. Introduction:

Healthcare Informatics is a new and upcoming specialization. It holds the promise of improving the healthcare scenario of our country though

- Increased Efficiency
- Better monitoring of health status of the community
- Upgrading the skills of Existing Health workers
- Telemedicine

We from SATHI have been working to provide a Telemedicine based Healthcare support system for the Tsunami victims. Though the pilot project has

been completed, it is being carried on by the local NGOs on their own accord for not only Psychiatric care but also general medical needs. and hence been proved to be sustainable. It shows promise on the way forward to managing disaster.

C. The Project

Owned and conceived by
OXFAM TRUST INDIA

Consultants, Technical Inputs and Implementing Agency

S.A.T.H.I.

Our basic guiding principle was that “More people die of after-effects of natural disaster than the disaster itself”. We felt that Telemedicine can and should provide a solution to control the “Disaster after the disaster”

After signing an MOU, SATHI proceeded to do a Needs Assessment through a field visit to the affected areas in 2nd half of January 2005. Our Survey showed that As far as healthcare is concerned, The first and second phases of the disaster were well managed by the Government at least in Nagapattinam District. However there was a need for Mental Health Support due to high incidence of

- Sense of Loss and bewilderment
- Alcoholism
- Panic Reactions
- Survivors still in grip of fear & shock
 - Loss of Family members and loved ones
 - Anxious & depressed
 - Displaced & unemployed
- Inability to get back to work
- Ignorant about tsunami
 - What was it?
 - Will it strike again?
 - How to be prepared?
- How to cope with the after effects

The occurrence of this problem was articulated by WHO and also accompanied by the Realization that the steps taken by the Government for up gradation of mental health of the victims were inadequate as well as wrongly directed. There was a

- Mismatch between needs and services
- Inadequate number of mental health specialists
- Increasing trend of psychosocial effects – depression and alcoholism
- Stress and fatigue among relief workers
- No community participation

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D. Outcomes

1. A model of telemedicine network has been developed. The design of this model is specific to the needs and integrates the service providers with field level facilitators.
2. The capacity of the field level NGOs has been built in terms of the operation of the telemedicine network, skills to conduct counseling sessions at the community level.
3. Unified approach to respond to the disaster situation with application of the communication technology and network of health and other professionals has been developed. This would enable us in not only reducing response time to future disasters but also this professionals including service providers network will be readily available in future. This could prove to be the precursor for the National Network of Service Providers for Disaster Response.
4. The project has contributed to defining the modalities for disaster preparedness.

E. The project cycle

The project was conceptualized in January. All initial processes, identification of Stakeholders, Operators, locations etc were ready by Mid February. 6 -7 units were planned in the periphery and one in the center. SCARF (Schizophrenia Research Foundation) was identified as the central unit, which would provide Mental Health Support. This selection was based on the aspects of willingness to do voluntary work as well as familiarity with language as well as proximity to the affected areas so that in case of need actual transfer and care should be possible

Units in the periphery were to be located in various places depending on

- How much affected the population was
- Willingness of Local NGOs,
 - To run the system
 - To pay for the running costs
- Proximity to the exchange (To allow ISDN Connectivity)
- Access to government channels

The units were to be located in the PHC or Government Hospital and run by The Health workers with supervision and support by local NGOs. OXFAM had promised funding support for the Machines as well as for Maintenance and connectivity for the first 6 months

The project however could not start till Middle of May due to the reasons outlined below:

- Funding was slow. It was never fully released so the scope of the project had to be decreased
- Connectivity

- ISDN lines were promised within 2 days of application, but took a minimum of 2 months.
- In some areas as the exchanges are too old so the project had to be shelved after extensive preparation
- Satellite connectivity was promised (From the French Govt) in three locations but the antenna did not work
- ISRO connectivity was beyond the budget
- New type of technology, So
 - Doubts about the project
 - Delays meant that continues retraining of volunteers was required.

Currently there are three systems (out of the planned 8 -10), 2 in the periphery and one in the center (SCARF). A full-fledged consultation using telemedicine started on 15.6.05. As of May 2006 around 240 persons in the tsunami - affected areas were provided with counseling, treatment and pharmacological support.

There have been thrice weekly sessions where inpatients were asked to come to the local Telemedicine center, they were seen online by Doctors from SCARF, Counseling was done, The medicines which were prescribed by the doctors at Chennai were provided to the patients by the attending volunteers – a separate stock of medicines used was kept locally as no chemists were available in the periphery.

Currently, the patients in Dharmakulam and surrounding areas requiring Mental Health support have been largely treated. The volunteers from Dharmakulam are now asking for online treatment for other specialties like General Medicine, Cardiology etc. 149 Patients were examined and 49 tele-counselling sessions took place there in the six month period from (June to December 2005) Two possible suicides have been prevented in the same location.

ISDN connectivity was a problem at one place (Kariakal) and there the project could start only in February this year. The results however are gratifying with a need for expansion to general medical services at both location with the decrease in the need for mental health support.

An outcome analysis has been done by an independent evaluator and the results of the same are being enclosed.

F. Discussion

Telemedicine – literally medicine from a Distance – is a means of improving access to healthcare for far flung and remote communities by providing a virtual doctor at his doorstep. It is expected to be the next big leap in health care. It has a force multiplier effect in widening the reach and access of Medical Specialists. This will be the single most factor to allow India to reach the status of “Healthcare for All” by 2020, most probably earlier.

In Disaster situations, Health problems occur broadly in three phases. Use of IT can improve the outcome in all three. We from SATHI had endeavored to provide a demonstration of the expected benefits following the Tsunami. This paper is a preliminary report of this project - called “The Healing Touch”, which has just barely begun. Being a new technology, we faced many problems some of which are still unresolved, but despite that we do have evidence of the benefits possible. We have learned some lessons on how to implement.

Based on these, we propose that to be ready for disaster, the following needs to be done

- Create awareness of telemedicine, make it popular so that projects like these do not have long gestation periods - A running system is more likely to work in Emergencies so Penetration of IT usage among the medical and healthcare community needs to be promoted.
- Information Technology should be used to create pre disaster statistics like
 - General Information of Topology, Population Distributions, Health Needs etc (GIS)
 - Database of Health service providers
 - Database of other stakeholders like NGOs etc
 - Simulation Techniques and testing of systems for disaster situations
- To obviate funding problems, funding for Healthcare and IT should be a part of the budget of any disaster
- Training and pre testing for disaster situations should be done for Healthcare facilities as well as NGOs and Government in all places specially Disaster prone areas

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ISED, - running the project in Dharmakulam.
PEDA, who are running the project in Kariakal

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