

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

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A. Summary

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.

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. The project though still incomplete and under implementation shows promise in showing 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

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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

80 –90% Of the population had a lowered mental Health status, A situation which would improve in most but would sink to the level of requiring specialist help in around 4 –5%.

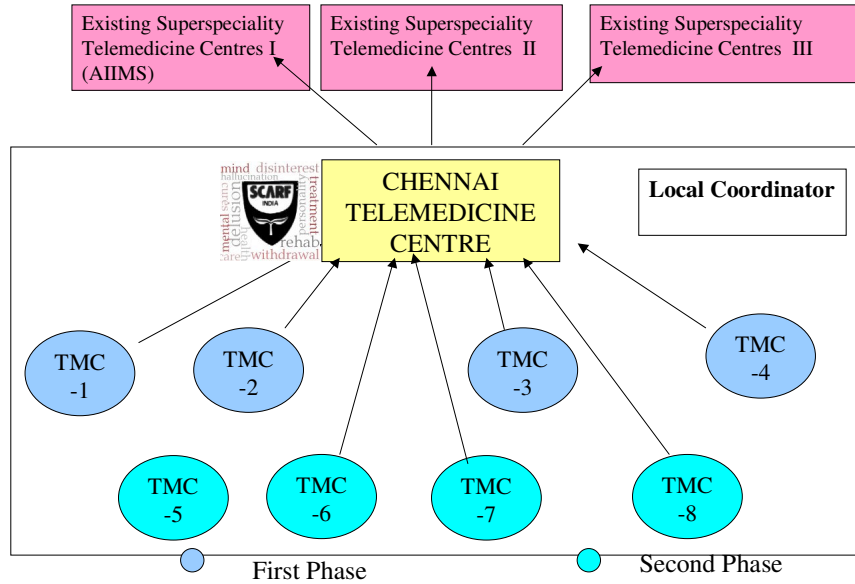
Telemedicine was felt as the right solution to the problems as it would

- Allow the specialist to identify the 4-5 % population who require help
- Ensure access to specialists' services
- Ensure quality of services
 - Treat the health workers too who might themselves be affected
- Enable people
 - to articulate their needs
 - participate in interactive sessions with experts
- Enable service provider to be need specific
- Strengthen the health care delivery system
- Increased efficiency of service provider -more coverage

The Healing Touch Project was conceptualized after the Needs Assessment survey. In this visits to the field areas were accompanied by interviews of various Stakeholders – Community, NGOs as well as Government Officials. The unique features of this project were that it was

- ❖ Community based
- ❖ Village level operable
- ❖ Integrated with present health system
 - vertically: primary - secondary – tertiary
 - horizontally: among the networked units
- ❖ Empowering the community
- ❖ Exemplary partnership
 - between Government, NGOs, Community and development support agencies

The Telemedicine Network

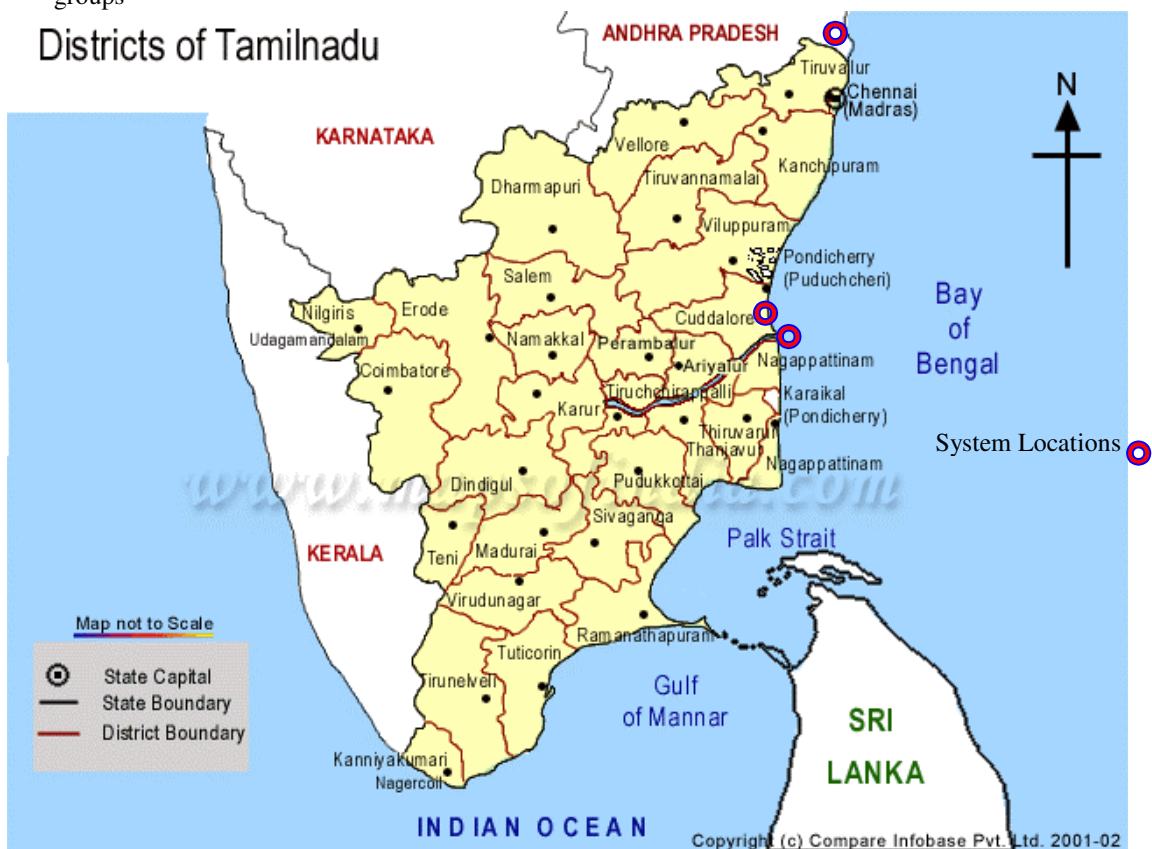


Processes followed were

- ❖ Health needs assessment
- ❖ Designing of telemedicine network
- ❖ Advocacy & Orientation of all stakeholders Capacity building of community mental health team (frontline workers of Government, NGOs and community) Advocacy and social mobilization of IMA, Indian Association of Psychiatrists)

- ❖ Sensitization of women self help groups

Districts of Tamilnadu



The network would provide Counseling (through Video Conferencing for the victim) in the presence of the health worker. As we were aware that the the Health Worker may be a victim too and suffer himself herself from stress overwork . Expert Backup would be provided for the mental Health Support with Individual and group sessions possible. No travelling would be required by the victims with the volunteers provided Continuous learning and supervision on the job as well as on the spot.. Thus it was adaptable to all needs.

A Tele conference based training module was developed which was

- Based on assessed needs
- Considered Human Rights perspective
- Incorporated WHO guidelines –Some separate suggestions for relief worker and affected people were present in these guidelines
- It provided on the job and continuous training using an innovative interactive and participatory training methodology
- supported by audiovisuals

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 is still not fully released
- 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, 2 in the periphery and one in the center (SCARF). ISDN connectivity is still a problem at one place. The places where connectivity has been established and the system up and running, the results are gratifying. 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.

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 learnt 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

G. Acknowledgements

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SCARF (Schizophrenia Research Foundation, Anna Nagar, Chennai) who are providing psychiatric consultations and Mental Health Support

ISED, who are running the project in Dharmakulam.

The following were contributors to the planning or shall be part of the project as it expands:

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PREPARE, Chennai

FACE, in various places in Nagapattinam

ARWEL, (Cheyyar)

SEWALAYA

Ms I-Diagnosis.com who supplied the telemedicine systems for the third location