

# TELE-DERMATOLOGY IN NEPAL THROUGH C.H.E.S.T. NEPAL

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*C.H.E.S.T. Nepal is providing the technical expertise such as dermatological consultations through real-time teleconferencing and store and forward method also whenever required from DI Skin Health & Referral Centre (Sister Organization) in Kathmandu Nepal.*

### Introduction:

The community health education and services by telehealth (C.H.E.S.T.) Nepal, is a non-profit organization established since 2009. It's an initiative utilizing information and communication technology for health as a platform for providing services aimed at overall community development. A real-time telemedicine and "STORE and Forward" method of setup is used to provide services for patients with skin diseases, and at the same infrastructure is also used to provide education and other vocational training services to rural communities, as per their needs.

C.H.E.S.T. Nepal is providing the technical expertise such as dermatological consultations through real-time teleconferencing and store and forward method also whenever required from DI Skin Health & Referral Centre (Sister Organization) in Kathmandu Nepal. A unique feature of this project is that the program is owned and run by the community. It is a hospital to community network.

People are receiving regular dermatological consultations and treatment by renowned dermatologists of Nepal. Supply of drugs is made by C.H.E.S.T. to local distributors but due to the scenario that Nepal is facing people also receive the prescriptions and avail the medications from a nearby drug store. This enables villagers to purchase these medicines at a lower price than other retail outlets. Vocational training of computers, sewing has been successfully completed and running in Gerkhutar village of Nuwakot district.

As per the future plans set during its establishment C.H.E.S.T. Nepal has already been implemented in the terai village in Dhanusa district in the southern plains.<sup>1,2</sup>

Telemedicine is a fascinating example of how new technology can offer new medical diagnostic and therapeutic services, or offering existing services in a way that is more convenient to the patients or the doctor. It would be a bonus if such technologies also 'save billions' as have been claimed in the past.

### Current situation:

To many parts of the world technology has already been established like a day to day need. Internet and its various uses are not of big issues. However even today in remote areas of Nepal many people are unaware about this technology. When describing about these technology people find it unbelievable; that they can have a doctor consultation from their own town and do not need to travel long distances or compromise their treatment.

These are circadian modern methods for the developed countries but in developing country like Nepal with different socioeconomic & geographical variations where it takes more than 5 hours to travel 90 kilometers it is still a process in progression.

After establishing the teledermatology in Nepal we have been able to provide consultation to almost 500 patients and have a complete detailed record of 308 patients until July-29-2016. Following demographics are data study of patients who have received dermatological consultation from dermatologist at DISHARC via teledermatology established by C.H.E.S.T. Nepal.

Recently there has been a certain level of change in the community i.e. teen aged children as well as community people themselves are lacking about the do's and don't's and proper use of the intranet<sup>4</sup>

related resources. Many people are losing their jobs because of the new tender process and IT related requirements. Many families bring in mobile, gadgets and laptops from the foreign employment and they are lacking necessary knowledge of its proper use. We came to know they use it to watch movies, play game or use social media to certain extent. Therefore the future plan is to conduct workshops in remote areas of Nepal under the philosophy of C.H.E.S.T. to raise awareness among the community people; in return they will be driving their community for change. C.H.E.S.T. hope is that the initiative it has started will bring change in the community and also receive further help from all the concerned government and non-government organizations who work in this field.

**Demographics:**

308 recorded cases were seen from the Terai area of Nepal. People of various backgrounds and specially of poor socioeconomic background benefited from this project. Although they were suffering from various problems they were unable to get an expert opinion due to lack of doctors in their area, financial constraints, lack of awareness etc. From children to elderly everyone was able to receive proper dermatological consultation in their own hometown.

Of the total 308case there were 169female and 139male patients.

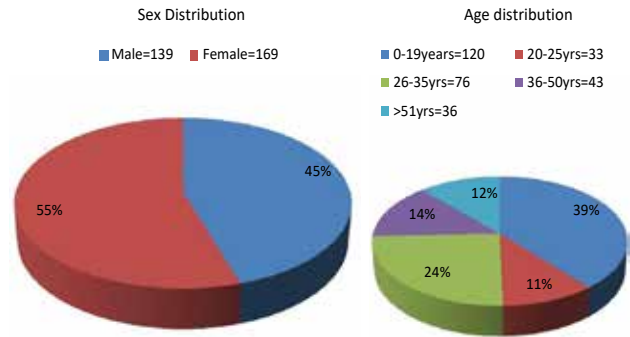
Age ranged from neonates to elderly. There were 120patient of 0-19years of age, 33 patients 20-25years, 76patients 26-35years age, 43patients 36-50years and 36patients were above 51years of age

The most common cases were Tinea (70casees) followed by Vitiligo (25new cases)

	Total=308	Male=139	Female=169
0-19years	120	57	63
20-25years	33	9	24
26-35years	76	35	41
36-50years	43	24	13
>51years	36	14	22

Total= 308patients  
Male= 139  
Female= 169

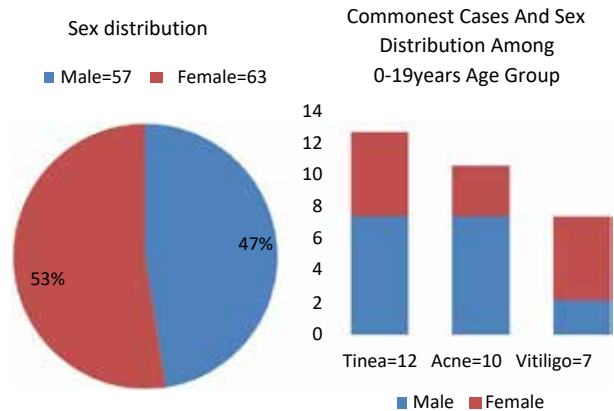
Among the total patients seen 55% were female and 45% were male.



**Demographics: 0-19 years**

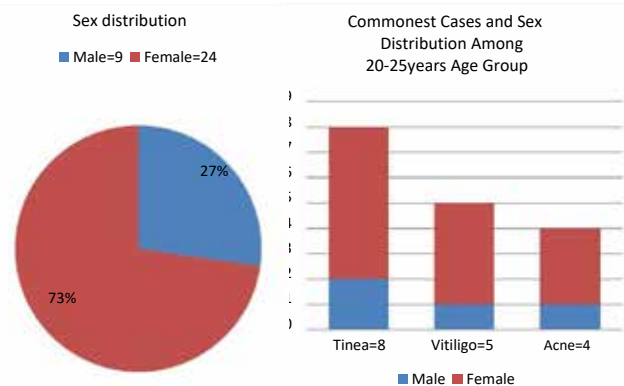
Total=120  
Male=57  
Female=63

Top Disease: of the total cases Tinea infection was the commonest among this age group with a total of 12patients. There were 7cases of Vitiligo and 10patients with Acne Vulgaris



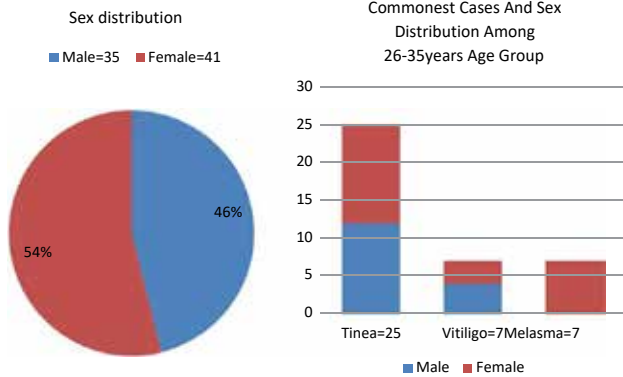
**Demographics: 20-25years**

Total=33  
Male=9  
Female=24



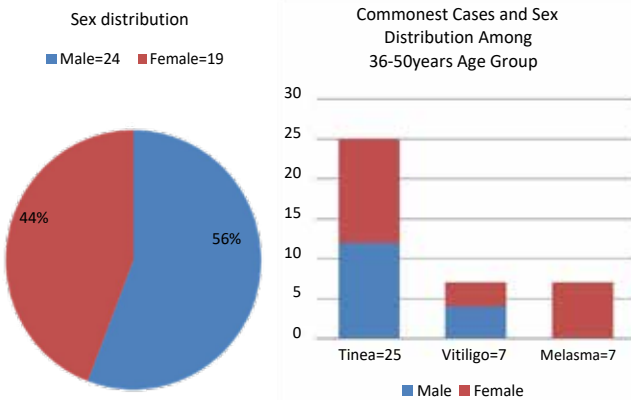
**26-35 years**

Total=76  
Male=35  
Female=41



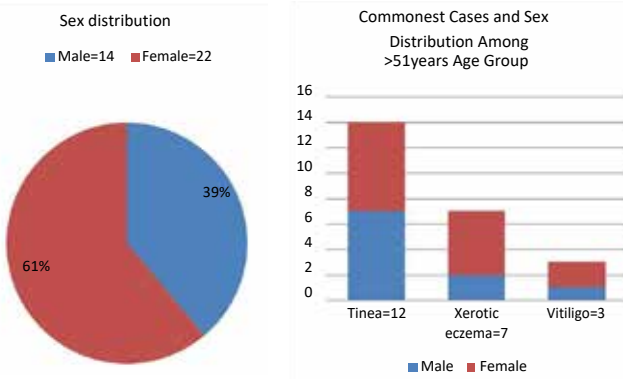
**36-50 years**

Total=43  
Male=24  
Female=19



**>51 years**

Total=36  
Male=14  
Female=22



**Conclusion:**

One of the major challenges faced by telehealth is sustainability. Schemes for self-generation of revenue, persistent motivation of community members and ensuring their active participation is crucial for this. It is also essential to identify other hurdles and objectively assess the outcome at regular intervals.<sup>1</sup>

Figure 1. Official Logo of C.H.E.S.T. Nepal



Figure 2. Community members of remote mountain village; Gerkhutar<sup>1</sup>



Figure 3. Tower of Mudikuwa<sup>4</sup>



Figure 4. Teleconsultation from DISHARC, Kathmandu Nepal to remote village in Terai; Bavangama<sup>1</sup>



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