

Live Telecast of Scientific Sessions: JIPMER Experience

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Abstract

Objective: To study the effectiveness of Live Transmission of Scientific sessions. **Methods:** Retrospective study of Feedback proformas was done after completion of Live Telecast of 112 scientific sessions. **Results:** Both audio and video quality was satisfactory after analysing the feedback received from centres participated in the live telecast programmes. **Conclusion:** Live telecast is an important tool of knowledge sharing.

Keywords: Live Telecast, Scientific Session, Telemedicine

Introduction

The role of information technology and communication in the field of medicine is making a revolution. Telemedicine is sharing of medical knowledge over distance, with the aid of telecommunication [1]. Telecommunication systems encompasses simple standard telephone lines to the system of transmission digitalized signals with modem, optical fibre, satellite links, wireless technologies [2]. Distance learning in medicine has a vital role to play in both developing and practicing medicine [3,4]. Distance learning is a concept of learning that integrates different technologies and learning media [5]. This study

is based on experience of using telemedicine and telecommunication tools for sharing the scientific session through live telecast held in the department of plastic surgery, JIPMER, Pondicherry, India.

Materials and Methods

This is the retrospective analysis of 113 scientific sessions which were live telecasted from the year February 2014 to January 2017 held in the Department of Plastic Surgery, JIPMER, Pondicherry, India. Following equipments were used:

1. Handy Camera with following Specifications:
 - 1/5.8 in BSI CMOS with 10 Mega Pixels
 - 62x optical zoom; 80x Intelligent Zoom
 - 1080/50p AVCHD 2.0 format at up to 28 Mbits/sec
 - Manual focus
 - Wi-Fi control features
 - 3 in LCD display
 - Video Recording
 - Recording Media in SD card
 - Video Capture Format: AVCHD 2.0 and MP 4
 - Support Audio input
2. Login ID in www.ustream.tv web portal was created (free) for streaming and sharing the web link for viewing live scientific session.
3. Internet Connectivity (minimum 512 kbps) provided by National Knowledge Network (NKN), Ministry of Health & Family welfare (MOHFW), Govt of India was used.

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4. Wi-Fi Router.
5. One Tripod stand to fix Handy camera.

Following are sequence of methodology adopted:

1. Handy Camera was fixed on a tripod stand. Wi-Fi was connected in the Camera for Live Streaming the Scientific session focusing the speaker and his lecture being presented by him as shown in Figure 1 & 2.



Fig. 1: Set up for Live Scientific Session

2. The web link (<http://www.ustream.tv/channel/16689468>) was shared through email to other centres for them to view the live scientific sessions by clicking the web link in their Smartphone, Tablets, Desktop or Tablet with internet at any place like Lecture Theatre, Hostel, Home, OPD, OT, etc.
3. Centres / Individual's Desktop/Laptop/ Tablet/Smartphone may be connected to LCD Projector for viewing by large gathering. For Audio headphone (by an individual) or external speaker (for large crowd) may be used.



Fig. 2: Live session being telecasted & viewed in Smartphone & Laptop

4. At the end of the presentation, discussions between speaker & participating centres was allowed over telephone/mobile (number

already given to centres). Feedback regarding the connectivity, audio and video quality was analysed by studying Feedback forms sent to the centres & received by email (figure 3).

Feedback Form

[To be submitted by participating Centre to JIPMER, Pondicherry after the event by Email: notmjipmerpondicherry@gmail.com, raish27@gmail.com]

1. Topic :

1. Date & Time :

2. Place

- Local : From JIPMER, Pondicherry

- Remote : (Name of participating Centre / Medical College)

2. Technology Platform, Learning Platform and Environment

- Self / Group

- Desktop / Lap top / Tablet / Class Room / Studio

3. Network: Public Internet / NKN (National Knowledge Network)

4. Outcome

4.1 Overall quality of the telecast : Poor/ Average / Good

4.2 Audio clarity of the telecast : Poor/ Average / Good

4.3 Video clarity of the telecast : Poor/ Average / Good

4.4 How was the Question and Answer Session: Poor/ Average / Good

4.5 How do you rate this teaching session : Poor / Average / Good

4.6 Would you like to recommend your friend and also attend yourself similar Session in future: Yes/No

5. Suggestions/Remarks:

6. Difficulty faced at your end (e.g.: No computer/Desktop/internet/ Projection screen/LCD projector/ Lack of man power / Network failure, etc.)

7. Contact details:

Name of the Participant/ Centre / Medical College:

Name of the Nodal Officer :

Email Address :

Mobile/ Landline No :

Fig. 3: Feedback Form

Results

Department of Plastic Surgery Telecasted 112 Scientific Programme (Seminars) to Medical Colleges of South India (>160) & other centres using Telecast Video Camera and NKN Connectivity (free) given by Ministry of Health and Family Welfare (MOH & FW), Govt of India with free platform (www.ustream.tv) for telecasting the session. Question Answer (discussion) was allowed through telephone and text message. Sessions quality was monitored by studying feedback forms received from centres. Quality (audio, video, clarity) was found satisfactory.

Discussion

Information technology and communication has the potential of supporting an array of advanced services for healthcare. Distance learning is a tool for self-education, tests, services and for the examinations in medicine [6]. Grimson et al. in Dublin has explained the necessity to participate in continuing professional development or continuing medical education. The use of Information Communication Technologies (ICT) is one of the best ways to participate in scientific sessions conducted at some privileged institutions [7,8]. Students have the freedom to choose and listen to programs which they find interesting and essential which are not available in the parent institution they belong to. A live telecast in addition makes it in time with reality. During our live telecast session queries were allowed over texts or through conversation over telephone number given to the centres viewing the session. Advantage of this method is cost effectiveness (as NKN internet connectivity used was provided free of cost by MOHFW, Govt of India to JIPMER, Pondicherry) and allowed students to attend scientific sessions irrespective of place (Hostel, home, OPD, Operation theatres etc.) [9]. Further, Communication skills of participants are also enhanced. Resident doctors are exposed to IT communication technology and better discussion is possible from various centres at the same time. A pilot study on JIPMER model of live telecast of scientific session & knowledge sharing received British Medical Journal (BMJ) Award in 2014, following which these sessions were continued and this study was planned. Use of telecommunication in improving distance learning in medicine is highly effective. Students have the benefit to know the recent advances in various fields of medicine which may be lagging in the place

they belong to. Live telecast also creates an impact of real time participation and discussion is also possible through texts and conversation through telephone. The main advantage of this approach is cost effectiveness and this may be extended to other departments and other centres.

Conclusion

Live telecast of scientific session is an effective method of knowledge sharing. A large randomized controlled study is required to validate live telecast as one of the information technology tool in medicine.

Conflicts of interest: Nil

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