

## **5.2 CCTV SECURITY TELEPHONE SYSTEM**

Advanced telecommunication technology today offers vastly improved and sophisticated telephone equipment with never-before features and capabilities.

Advanced systems are now available in which a single instrument acts as a multi-button phone.

Most telephone systems have flexible circuits that allow telephone calls to be transferred to another area, for example, to the admitting office.

In smaller hospitals, this eliminates the need for a telephone operator during the night. Some other new features are: Touchtone dialling, call pick up, call forwarding, conference capability, transferability of incoming and outgoing call, video conferencing, social media calling and direct dialling.

Car telephone which hasn't made a big foray into the Indian scene yet, is expected to have a major impact on communications for hospitals.

Made accessible by use of cellular technology, car telephone will play a big role in contacting doctors who are on the move particularly because the use of a mobile phone is prohibited while driving.

Within the hospital, interconnecting telephone should be provided for all departments and section including operating room, ICUs, nurses' stations, offices, maintenance, housekeeping, and elevators.

A telephone service outlet should be provided midway in the elevator shaft to connect the telephone in the elevator.

All intercom telephones should be dial type that permits intercommunication without calling the hospital switchboard.

Many hospitals provide telephones in patient room.

Patients can make long-distance calls directly with the facility of remote metering or transmission to a computer so that automatic changing of the concerned patient is accomplished.

The practice of installing jacks in all patient rooms for use of plug-in telephones is now considered obsolete.

However, jacks may be provided in multi-bed general wards for the use of sick patients who cannot come to the nursing station to receive or make a call.

Public telephones should be provided at convenient location for outpatients, visitors and staff, particularly in the outpatient area, inpatient areas, emergency department, near the labour-delivery suites and in the father's waiting room, if there is one.

Pay phones leave hospital switchboard free for patient care and official use.

In addition to public telephones, there should be a convenient room where visitors, outpatients and hospital personnel can make assisted STD and ISD calls.

At the construction stage, conduits should be provided to facilitate installation of telephones wherever

necessary, keeping future needs in mind.

Telephone instruments are sometimes selected for image rather than functional utility.

For example, an egocentric administrator of a medium-sized or small charitable hospital may like to add many unnecessary but costly features to his telephone without regard to the questionable return on investment and the overall effect it will have on the economy of the hospital.

Features such as multiple push button sets, electronic speaker phones, CRT display units, automatic dial features and memory devices can add much to cost but give little in return.

Today's decisions may appear less than optimum, and equipment and instruments may become obsolete in a short time.

It is therefore important to institute a planning process that define functional requirements, technical capabilities, and organizational considerations over intermediate and long range periods.

### **5.2.1 Choosing the Right System and Vendor**

Now that the Indian telecom department that was once a government monopoly is privatized, hospitals will do well to consider the following recommendations in selecting the telephone vendor:

1. Study and understand the communication needs of the hospital.
2. Determine the financial status of the company, its reputation and track record, and find out how long it has been in the field.
3. Talk to other hospitals / institutions that have installed the company's product and similar system.
4. Similarly, check with the operators in those hospitals who use, and maintain the equipment.
5. Get assurances that the system can be upgraded.
6. Find out the technical knowledge and competence of the company's technicians who will be installing the system.
7. Make sure that the company will train the hospital's personnel both to operate and maintain the system and provide post-installation services.

### **5.2.3 INTEGRATED SERVICE DIGITAL NETWORK (ISDN)**

The Integrated Service Digital Network (ISDN), which is poised to take the communication world by storm, will revolutionize our communication systems and with them our lives.

Digital switching system, which is an advanced computer by itself, will be able to handle voice, data, text and image transmission – all on the same telephone line.

In other words, telephone, computer, printer, fax and almost anything else that is electronic can be plugged into a single telephone line to provide an integrated communication system.

#### **5.2.4 PUBLIC ADDRESS SYSTEM AND PIPED MUSIC**

A public address system or wired or overhead paging is invaluable for making announcements to a large number of people in assembly halls and other strategic location.

The system should be designed for zone paging so that information can be transmitted to selected places without disturbing patients and hospital staff in other areas.

Suitable background music can be piped throughout the hospital during selected hours.

Many Christian institutions broadcast devotional songs and worship programmes over the public address system.

Individual speakers in patient rooms give patients the option to switch the transmission off.

Where piped music, the public address system and television system are bundled together, a cut-in feature for announcement should be included.

Announcements may be made from several places depending on the nature of announcements.

#### **5.2.5 TELEVISION AND CLOSED CIRCUIT TELEVISION**

Television once considered a luxury, has now become common place as a source for news and entertainment.

Many hospitals also provide for patients entertainment, information and educational and health programmes by way of television, video and closed circuit television.

Cable TVs provide a variety of entertainment, sports and educational programmes. Many hospitals provide these avenues of entertainment of their patients.

A television system becomes a closed circuit television (CCTV) when the hospital generates its own video programme and feeds it into the distribution system.

In some hospitals, CCTV is used in the operating room to transmit information to consulting doctors for advice and to residents and students for teaching purposes.

It is also used in cardiac catheterization procedures for displaying an X-ray image of the catheter position.

In advanced countries, CCTV is used by the nurses to view children in isolation, and for visitor-patient two-way viewing.

Inclusion of audio facility provides an opportunity for children to communicate with their parents when the latter are in isolation and children are not permitted to visit them.

When CCTV is used in the operating rooms on a permanent basis, a good quality camera is required, and it should be adopted for use with the surgical lights.

Most modern surgical lights are adjustable for positioning and focusing the camera. CCTV is widely used in hospitals for surveillance operation.