Entertainment and Clinical Information Systems:

Patient-centric Care in Hospital

Enhancing the Healing Environment

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Timely communication, good information, and rest, are keys to reducing patient anxiety and building an environment where medicine and treatment plans can effectively run their course. Technology can assist medical staff helping them deliver the best care possible; it can also provide information and entertainment to patients, helping them feel more comfortable. Patient Infotainment terminals are increasingly popular in hospitals, where they can serve the needs of both staff and patient, right from the bedside.
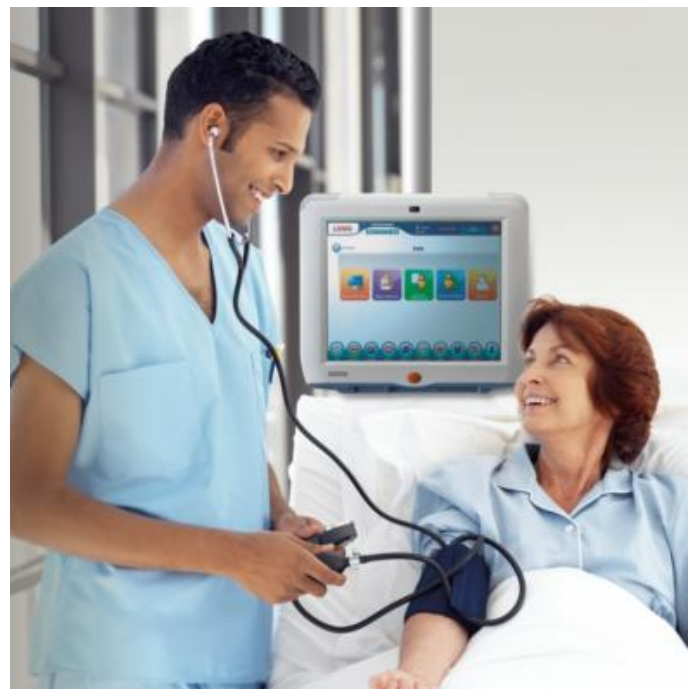
Trends in Patient Education and Entertainment Systems

Today's hospitals and clinics are undergoing a transformation. Doctors and nurses still make the rounds, but thanks to modern technology, they have access to real-time data virtually anywhere and at any time.

Improving Doctor-Patient Communications

Bedside patient terminals can be used by doctors to augment diagnosis and treatment discussions with patients. Connected to hospital information systems (HIS), they can serve up x-rays, high resolution images, medical history, and other information that can assist doctors in patient consultation and treatment. Internet connectivity allows the hospital

to consult with family members who may be remotely located, using such technologies as VOIP. Communication is efficient and focused.

Patient-centric Services

Patients can avail themselves of services from Infotainment terminals as well. Surfing the web, listening to music or video on demand, calling friends and family via Skype—these are all possiblities. But the patient can also get medical information provided by the hospital, send alerts to nurses and staff, transact banking, even do work while at hospital depending on their medical condtion. These trends are keeping patients happier, giving them pertinent information regarding

their health, and easing anxiety by allowing them to feel more in control.

Benefits for Care Givers and Receivers

It is obvious that patient infotainment systems deliver tangible benefits to both patients and medical staff. There are also business benefits and potentials for new revenue streams that can be reinvested into medical technology, ensuring hospitals have access to the best tools on the market.

Integrated Solutions

Software and services are designed to meet the needs of care givers and receivers. Patient-centric applications might include internet/intranet services, Skype and VOIP services, video teleconferencing software, media on demand, video capture, music, shopping, and so on. Treatment-centric applications could include treatment education material, real-time retrieval of patient data, bedside registration/check out, community service and notifications, and alarm signaling.

Revenue

Hospitals may monetize some offerings to create revenue streams that can be re-invested in medical care. People are accustomed to pay-for-use services. This could easily be applied to media on demand, internet access and the like. Advertisement revenue is another possibility. For example, a maternity ward might allow key suppliers of newborn products to advertise on infotainment devices in post-delivery care, even providing shopping links via the web.

System Integrator Insights

Experienced product manufacturers, service providers and system integrators can make or break a project. The best advice is to choose a reliable top tier vendor with local sales and support staff that can offer service and customization, post sales follow up, budget control, replacement services, connected partners, industrial/medical grade equipment, and has a strong reputation in the industry. The right partner can facilitate cost-effective, profitable solutions, with rapid ROIs and long-term support.

Facility Preparation

Proper planning and product selection are essential and their choice is influenced by facility type. The choice must be made between using current infrastructure which may limit system selection, or letting choice of system drive renovation of an existing facility.

New vs Existing Facility

A new facility can pre-cable for its computer technology, adding network and power drops to patient rooms and building a wireless infrastructure with adequate coverage. Infotainment terminals can

be planned in the room design, and cables to terminals can be hidden in trays in the retractable arms.

The design must be flexible so that regular technology modifications during install are quick and simple to make. This includes cable and termination types, location of end devices or changes to system features.

An existing facility can replace TV sets, and choose lightweight terminals that are easily placed on table tops or mounted on walls in patient rooms. System selection may be affected by available space and infrastructure. For example, screen size may be limited by space constraints or weight restrictions on mounting hardware. Some solutions might include mounting the screen on a swivel arm at the bedside, table or on the wall. Such a system would require detailed coordination with other bedside devices as well as confirmation of the availability of power and data outlet locations on the patient room headwall.

Many patient education and entertainment access systems are moving toward IP-based solutions requiring UTP. This means that it is necessary to review existing coaxial systems to consider upgrading them as needed.

Infotainment Terminals for Bedside

Advantech has been delivering medical market solutions for over a decade and works with the top ten solution providers in the medical computing industry. Quality, industrial design, longevity support and complete customization services are offered by the AdvantechCare service team. When choosing any product for patient infotainment, the following checklist is a good starting point:

- ✓ Cost-effective
- ✓ Touchscreen
- ✓ Remote control
- ✓ RFID
- ✓ Smart Card
- ✓ Durable
- ✓ Anti-bacterial enclosure
- ✓ Easy to clean and disinfect
- ✓ Flexible mounting solutions
- ✓ Quiet/silent operation
- ✓ Low heat dissipation
- ✓ Flexible communications
- ✓ Easily updateable
- ✓ Digital TV Tuner
- ✓ Flexible audio options
- ✓ UL60601-1 certified
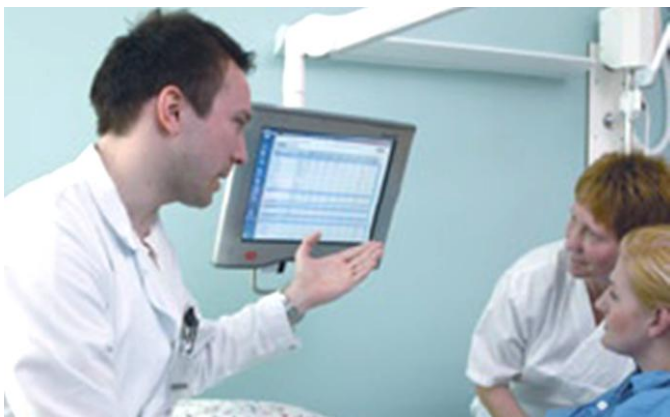- ✓ EN60601-1 certified
- ✓ IPX1 and IP65/NEMA4 certified

Advantech infotainment terminals meet all the requirements on this checklist and are well worth considering for hospital and healthcare infotainment solutions. In addition, Advantech Healthcare Infotainment terminals are the first product family at Advantech to run a dual configuration of both Windows and

Android operating systems. This makes it possible to extend mobile device applications to service-oriented interactive terminals. In the future, there will be even more convergence with seamless applications among different intelligent platforms, allowing people to access information wherever they may be.

The proof of any solution can be measured by its success. The St. Olav and New Ahus hospitals in Norway have completed their goal of placing "a terminal next to every bed." The PIT series solution serves up TV and radio over control, and nurse call applications.

At Ireland's National Maternity Hospital (NMH), seven maternity and postnatal care rooms were installed with patient infotainment terminals to help new moms and dads educate themselves in how to take care of newborn babies. New moms can watch the videos on PIT devices to learn about things such as: bathing their babies, breastfeeding, tips for easing postnatal discomfort, and the correct way to use car seats.

The private-sector Hong Kong Sanatorium & Hospital uses Advantech terminals as a differentiator and to deliver its motto of "Quality in Service, Excellence in Care." enhancing medical treatment, minimizing errors, positively identifying medical staff and their patients, and having fingertip access to information.

Further Integration

Patient Infotainment Terminal solutions don't stop at the bedside. They can be integrated with other systems in hospital to create intelligent solutions throughout the facility, such as scheduling systems, signage information displays, and connected ancilary businesses (beauty salon, pharmacy, convenience store, food services). They can even use network technologies to extend the reach of a doctor to remote locations providing tele-health care and personal healthcare management choices.

For more information about Advantech Healthcare Infotainment solutions, AdvantechCare Services, or other Advantech offerings, please visit: www.advantech.com.