

Quality Service by Cancer Hospitals

Project

Cancer Hospital Information Management System (CHIMS)

Organisation

Department of Atomic Energy (DAE),
Government of India

Implemented by

Department of Atomic Energy



The Cancer Hospital Information Management System (CHIMS) is a fully indigenous, user friendly, modularised and integrated application software developed to address the needs of medium to large sized Cancer Hospitals and Medical Research Institutions across the nation and helps National Tumour Registry to conduct analytical studies related to cancer trends in the country. CHIMS is an outcome of blended synergy of domain knowledge from leading Oncologists in the country and technical expertise from experienced IT professionals.

CHIMS aims at providing accessible and affordable cancer care to the common man prone to cancer, addressing the requirements of curative and palliative patients and support in reducing the mortality rates due to cancer. This, amongst other things, by creating a sharable common platform for information and data exchange in cancer care and research.

Challenges

- Due to paper-based transactions, the patients were wasting time at different departments to get different reports/bills.
- Manual generation of medical and MIS reports was error prone.
- Delays in generation of bills and reconciliation of transactions by the finance department.
- Inconsistencies in manual billing.

- Due to the non-availability of online information, doctors had to go through various files.

Solution

CHIMS focuses on unique features related to cancer diagnosis, treatment and cancer specific parameters, marking of treatment sites on patient image templates, archiving of patient images on Image server, retrieval of DICOM images from PACS server and integrating them with CHIMS solution through Health Level - 7 (HL7) protocol. CHIMS also provides Electronic Medical Record Information, which is a structured and chronologically ordered presentation of patients' information to assist the doctors, clinicians to quickly navigate through the patients' medical history, diagnostic investigations, treatment plans and treatments given.

Established methods of cancer treatment are radiation therapy, chemotherapy and surgery. Teletherapy, a part of radiation therapy, is imparted to the patients on various Telecobalt machines like Bhabhatron, Equinox, Theratron etc or on Linear Accelerator machines like Trilogy, Novalis Tx, Clinac 6EX etc. ROIS captures all the details of the treatment plan, dose and procedures used for treatment, treatment response, toxicity details, equipment transfers and treatment conclusion. Chemotherapy deals with the protocol

planning, drugs and cycle duration fixing, treatment details capturing, toxicity and side effects recording and response evaluation features.

Along with generic healthcare modules, CHIMS includes Comprehensive Management Information System, that provides registration trends, lead time for admission, bed occupancy rate, lead time for investigations/reports, lead time for surgery, readmission rates, mortality rates, expenditure and revenue trends.

Outcomes

- Single keystroke billing and cashless transactions.
 - Optimal utilisation of resources.
 - One-time online data capture.
 - CHIMS solution is implemented at Tata Memorial Hospital (TMH), Mumbai.
 - During 2013-14, 35,197 new cases were registered at TMH in addition to 5,739 cases in Preventive Oncology.
 - Under Surgical Oncology, 39,522 patients were treated at TMH in the year 2013 as against 28,055 in 2012.
- Apart from TMH, the same solution is replicated at Homi Bhabha Cancer Hospital and Research Institute, Visakhapatnam and Homi Bhabha Cancer Hospital, Sangruru. Also, Nuclear Medicine software, a part of CHIMS is implemented at Radiation Medicine Centre, BARC for Thyroid Management. ●