

## CSIR, HP kickstart cloud-enabled eHealth initiative

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India's premier research and development body, Council of Scientific and Industrial Research (CSIR) and Hewlett Packard (HP) announced the launch of a rapidly deployable and fully integrated cloud-enabled eHealth Centre (eHC). The eHC solution has been developed jointly by CSIR and HP. The first eHC has been successfully implemented and tested in partnership with OP Jindal Gramin Jan Kalyan Sansthan, 3M India, Maharaja Agrasen Medical College (MAMC) and Orion eServices at Chausala village in Kaithal district, Haryana. Over 4000 patient visits were recorded in the first 100 days of operation.

This initiative is an integral part of the CSIR 12<sup>th</sup> plan vision for Enabling Affordable Community Health through Information Technology (EACH-IT) and CSIR is providing the required connectivity, medical equipment and infrastructure. HP is providing the required Information technology infrastructure including IT equipment and cloud enabling the electronic medical records (EMR) solution with remote monitoring and consultation and a health policy dashboard. Medical aseptic training, specialized medical consumable kits, electronic stethoscopes, corrosion protection and solar reflective coatings for eHC were provided by 3M India. Orion eServices provided integration of the medical equipment and other devices with the health cloud and training to the eHC personnel.

"This initiative of CSIR and HP creates a platform for the fourth paradigm of science, data-intensive discovery, while bringing affordable healthcare services to the doorstep of people. CSIR, is now positioned to use the eHealth Center data for novel discoveries to create ultra affordable health care products and services," said Professor Samir K Brahmachari, chief mentor CSIR-OSDD Unit, director general, CSIR and secretary, DSIR, Ministry of Science and Technology.

The eHealth Center is a fully integrated cloud-enabled healthcare solution that can be set up to provide affordable and preliminary healthcare in remote areas that have no immediate access to primary healthcare. The solution integrates medical instruments that collect basic patient health data with an eHC Health Cloud and enables medical diagnosis through remote consultation using built in video conferencing options. This initiative marks the increasing interest of the government in deploying smart healthcare solutions like telemedicine to help provide medical services and reach out to far flung places.

The basic health care infrastructure in rural areas in India is based on the population norms of having one Primary Healthcare Centre (PHC) for every 30,000 people and one sub-centre for every 5000 people. A study conducted by the Indian Institute of Public Opinion found that 89 per cent of rural Indian patients have to travel an average of eight km to access basic medical treatment and the rest have to travel even further.

The eHC solution addresses these challenges. It is a solution that is housed in a standard shipping container which can be quickly transported to remote areas of the country by air, rail or land transport. It is affordable and easily deployable as compared to brick and mortar alternatives and is equipped with basic cloud-integrated diagnostic equipment, a telemedicine studio, laboratory and a pharmacy. Paramedics can staff the eHC, with specialist medical interventions provided through remote medical consultation. This minimizes the need for onsite skilled doctors in isolated locations. Remote monitoring of the eHC functioning and its equipment is done through the eHC Health Cloud, minimizing absenteeism and equipment downtimes.

The eHC Health Cloud integrates the process of healthcare delivery and health data collection. This centralized patient information sets the platform for data-driven research such as disease surveillance by tracking disease patterns and risk factors. The health profile of the region as well as monitoring of the daily usage of the eHC is enabled by an integrated eHC dashboard, providing comprehensive yet digestible analytics that will help health policymakers.

"HP is collaborating with government health authorities and organizations to reinvent medical processes, modernize systems, and develop solutions that dramatically expand access, improve healthcare, and save lives. The eHealth Centre is an example of our commitment to social innovation and to the government's priorities, reiterating our belief of shared value," commented Mr Neelam Dhawan, VP & GM, Enterprise Group and country managing director, HP India.