CSIR, HP launch cloud-enabled eHealth initiative

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New Delhi: India's premier research and development body, Council of Scientific & Industrial Research (CSIR) and Hewlett Packard (HP) jointly launched a rapidly deployable and fully integrated cloud-enabled eHealth Center (eHC), which has been co-developed by the two organizations. The first eHC has been successfully implemented and tested in partnership with O P Jindal Gramin Jan Kalyan Sansthan, 3M India, Maharaja Agrasen Medical College (MAMC) and Orion eServices at Chausala village in Kaithal district, Haryana. Over 4,000 patient visits were recorded in the first 100 days of operation.

It is an integral part of the CSIR 12th 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 Limited. Orion eServices provided integration of the medical equipment and other devices with the health cloud, and provided 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, Government of India

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.

The basic healthcare infrastructure in rural areas in India is based on the population norms of having one Primary Healthcare Center (PHC) for every 30,000 people and one sub-center for every 5,000 people. However, the existing public health

infrastructure is challenged by absence of tools for remote management and monitoring, as well as lack of standardized or accessible health data. A study conducted by the Indian Institute of Public Opinion found that 89 percent of rural Indian patients have to travel an average of eight kilometres 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 by 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 on-site 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 Center 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, Vice President and General Manager, Enterprise Group and Country Managing Director, HP India.

The first eHC at Chausala is operated by and remotely connected to Maharaja Agrasen Medical College (MAMC). The O P Jindal Gramin Jan Kalyan Sansthan facilitated access and delivery of the solution in Chausala village as well as the necessary social engineering.