

CHIRON

Present day healthcare is under pressure: demographic and socio-economic challenges from an ageing population and a constant rise in the numbers of people suffering from chronic and cardiovascular diseases and various handicaps to the need for affordable 'global' healthcare provided by fewer and fewer professionals and medical infrastructures that can respond to the demands of critical, often mobile, patients.

Chiron, an ARTEMIS JU project, intends to combine state-of-the art technologies and innovative solutions into an integrated framework for effective and person-centric health management throughout the complete (health)care cycle.

FROM TREATMENT TO PREVENTION ~

An effective response to these challenges requires major changes in the delivery and management of care, with a shift from 'health care' to 'health management'. In other words, from 'how to treat patients' to 'how to keep people healthy'. The Chiron project involves 26 partners (large corporates, SMEs, universities, research centres and two hospitals) from eight different countries. Its aim is to exploit the enormous potential of ICT to realise radical change in healthcare by developing an overall, integrated system architecture to produce a "continuum of care" or an integrated health management approach in which health is patient-centric both in the home, the hospital and nomadic environments.

The reference architecture will ensure interoperability between heterogeneous devices and services, reliable and secure patient data management and a seamless integration with the clinical workflow. This person-centric approach puts the needs of the citizens, the medical professionals and the whole community at the core of the

design while a knowledge-based system that integrates past and current patient data and community related statistical data in a large, distributed repository that is secure, easily interpretable and accessible by authorised persons. Finally, proactive computing will see embedded systems that anticipate the needs of people and are self-adapting, thereby enriching the quality of life and fostering patient empowerment.

PERSONALISATION ~ In line with its objectives Chiron intends to develop a number of personalised solutions such as the continuous multi-parametric monitoring of physiological and psycho-emotional state, environmental parameters, patient activity and lifestyle related factors. Furthermore, an evolving patient profile will include all the relevant health aspects of the user and a personalised risk assessment model based on the medical history of the patient will be constantly updated. Personalisation will also be contained in a coaching system to help the patient to reduce immediate risk and improve long-term recovery. New, advanced tools will facilitate real-time processing, computer-aided analysis and accurate visualisation of medical images.

IMPLEMENTATION ~ The Chiron project will specify these new solutions, implement them with a focus on issues such as data security, privacy, trust and information, validation of

the research results along with the technical and clinical assessment of the proposed solutions as well as the socio-economic impact.

Project duration: 36 months
Start date: 01/03/2010
Total Costs: 18.1 M€
26 partners from 8 countries

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