



Editorial

The Hospital of Future Could be One's Own Home

In digital hospital technique and personalized medicine the firm in Eindhoven has been a model. Health and biotechnology branch of the firm exhibits a challenging innovation potential. With about 375 in the life science domain active undertakings in Europe between Amsterdam, Rotterdam, Delft, Utrecht and Eindhoven, the worldwide highest concentration of medical knowhow lies in the country. In the reported ranking the firm Philips made room in summit position in the year 2015 before Samsung, Huawei and Siemens. The undertaking with its main office in Eindhoven employs about 114000 coworkers in more than 100 countries and achieved a turnover of 24.8 milliard Euro. Philips opened the brain-port at Eindhoven on a more than 100 hectares big compound for other startups and technological undertakings. With around 50 laboratories more than 10000 coworkers the high-tech campus at Eindhoven is the biggest science park in the world. Since it's founding in the year 1891 Philips promoted the business in the sphere of cardiology emergency medicine as also the health care at home.

“The hospital of future could be in your own house” clarifies Fred Boekhorst, the Vice President of Philips and manager of research programmes personalized health in Eindhoven.

With at present around 76000 patents in the whole world the Eindhoven innovators set up their achieved scientific knowhow in the medicine and hospital research.

Since the year 2014 Philips with its monitoring programme has reached 275 million patients with chronic diseases and has sold yearly about 250 million Euro health applications in the area of patients and clinics.

With that many move around for big data in health service branch. The undertaking at Eindhoven accomplishes in between the evaluation of more than 1 million patient data per day. The concerned pieces of information generate from Wearable also from just introduced in USA diabetes-App for chronic diabetics. As chief of personalized medicine Boekhorst formulates ambitious goals. By the year 2025 we want to improve the life of 3 milliard human beings annually and to ease by personalized medical applications.

Armed with big data in health-system, the doctors should develop a workable personalized consultancy. The data are as for example sent on the cloud at the Philips Health Suite Digital Platform to the corresponding service provider on the e-Care Coordination application where

a comprehensive view on the disease remain at the disposal of the provider.

The compilation and analysis of bigger quantity of data permit the doctors to know the disease pattern and accordingly to develop the adaptable diagnosis. On the basis of ongoing supervision and right time analysis a quick attack is possible in case the condition of the patient deteriorates. The data should naturally remain the property of the patient. With one of the most innovation uniclinics in Europe, Radboud University Nijmegen Medical Centre as the first academic hospital of Europe, Philips has gone for a joint venture. The IT partner sales-force develops for the concrete clinic insertion, a transportable sensor technology for patients with COPD (chronic obstructive pulmonary disease). The newly developed sensors are bound with cloud-based technology and therefore guarantee the monitoring of the patients round the clock. The sick is thereby capable of controlling his wellness himself/herself. So the COPD infected can himself follow up how heart and lungs in day-to-day basis function and can provide independent medical support as per requirement.

In the radiological section of the Uniclinic Utrecht Philips tests in the teaching hospital a new patented system for high intensive focused ultrasound (Hifu) which makes possible the removal of cancer cells completely without scalpel. Therefore the patients become directly again mobile without any stay in hospital. This noninvasive advance system ushers in a new age in wellness system, not only with cancer.

In a special laboratory on high technology campus at Eindhoven the undertaking investigates since 2000 the lifestyle and attitude of human beings in their surrounding in order to

be able to draw conclusion on thereby developed disease photos.

Discrete cameras record the digital consumption, the free time attitude as also movement profiles. The scientific evaluation for the time being proceeds, the first results will be announced by the laboratory chief Mirjam Wouters by the end of 2016.

“The lifestyle is three times stronger decisive factor for the development of diseases than the genetic disposition” Boekhorst admits of the research work a high standard.

Evert J Van Loenen in hospital laboratory in Eindhoven sketches how would the digitalized sickroom of future appear. On a video wall as for example depression can be prevented with a stroke patient by referred psychic stabilized message. Therefore private photos, natural pictures or children’s drawings of their own family, natural sky or sunlight as also light effects of irradiation are also suitable. All these can significantly improve the psychic presence of the sick and distinctly reduce the lingering in clinic.

“The action for example of energy efficient light solutions through LED technique out of their own, research branch has brought here encouraging results” says Van Loenen on the personalized patient chamber of future.

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Ref: VDI Nachrichten, 18 March 2016, Nr. 11/12, Technik & Wirtschaft, Seite 19.
