Talking point

E-Health: New medical and nursing options help doctors, health insurers and patients

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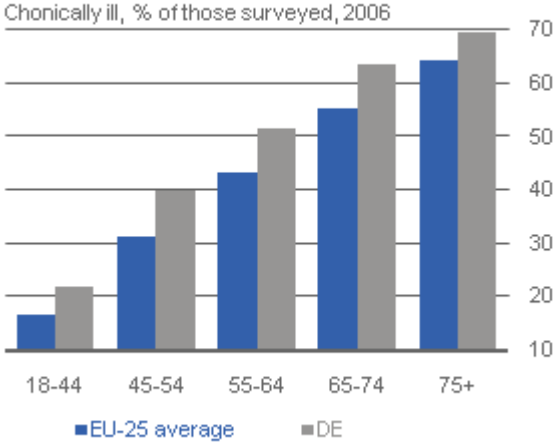
The Tele-Health fair at CeBIT 2009 was not the first occasion to show that patients, doctors and health insurers can benefit from the use of modern information and communication technologies in healthcare (e-Health) whose scope extends beyond the actual medical equipment segment. Applications such as online consultations, assistance systems and health games are already being used successfully. The diverse range of e-Health applications opens up new opportunities for ensuring that medical and nursing care remains affordable in an ageing society with growing numbers of chronically ill persons.

Not only the Tele-Health fair at CeBIT 2009 has shown that the use of modern information and communication technologies for healthcare (e-Health) extends well beyond the much-debated electronic health card and the usual narrowly defined biomedical technology (such as ECG machines, ultrasound and MRI scanners). Patients, doctors and health insurers alike can benefit from the new technological solutions for treating the sick and those requiring long-term care. The medical and nursing options opened up by these technologies provide major opportunities especially for an ageing society.

The challenges generated by demographic developments are huge, though. For example, the German social security system has to be primed for the share of over-65s rising by 50% over the next 20 years, while the share of over-80s will in fact double. Demographic change will weigh even more heavily in Germany because the rates of chronic illness among Germans are higher than the average of their European neighbours – and treating these illnesses is particularly expensive.

Germans suffer more than their European neighbours

Chonically ill, % of those surveyed, 2006



Source: Eurostat, 2009

Essentially, the diverse e-Health applications help sick people or persons requiring long-term care to perform the majority of routine tasks for themselves at home. This improves patients' quality of life and at the same time lightens the load on health insurers. As the four following examples show, e-Health is not a vision from the distant future but is already a proven success in many areas.

- Tele-monitoring allows patients to check their own blood pressure, pulse rate and blood sugar levels. The monitoring device automatically transmits this data to the patient's doctor in digital form.
- For patients who require regular monitoring the online consultation complements the traditional visit to the doctor without completely replacing it. The doctor in charge of treatment is also helped by a camera to make a (visual) tele-assessment of the patient's current state of health. If necessary, an additional expert can quickly be brought into the online consultation in an advisory capacity. Without needing to be present this additional expert can also have online access to the relevant information from the patient's medical records maintained by the doctor in charge of treatment. This e-Health application is already being used in many cases, particularly to treat sufferers of Parkinson's disease. An online consultation saves patients from having to make arduous journeys to a doctor's surgery and then having to wait a long time to be seen.
- Intelligent assistance systems, like radio-linked monitoring and control technology, supplement personal nursing care. These systems enable people requiring long-term care to lead more independent lives in their accustomed social and domestic environment. Examples of such assistance systems are interconnected smoke, gas and patient fall alarms, intelligent "tablet dispensers" that remind patients of the correct times to take their regular medication, and sensors for logging the movements of the home care patients. If there are

wild deviations from typical behaviour patterns the system automatically alerts the emergency call centre linked to it.

- Health games help elderly people to stay mentally and physically fit for longer. Brain training games, for example, are used to treat Alzheimer sufferers. There are also “Exer” (as in exercise) games, which feature advanced, motion-sensitive controllers, that are used for physiotherapy (for example, to build up muscles, for yoga or for balancing exercises).

These four examples illustrate how e-Health can improve medical and nursing care of patients, help doctors and lighten the load on health insurers – all at the same time. Even though e-Health is not restricted to treating chronically ill persons and those requiring long-term care the applications are particularly promising for such cases. For example, e-Health solutions help the chronically ill to spend shorter cost-intensive stays in hospital and extend the intervals between the required regular examinations. The European Commission expects that in Germany e-Health could reduce the costs of hospital stays alone by around EUR 1.5 bn per year. The German Association for Electrical, Electronic & Information Technologies (VDE) estimates that e-Health initiatives could cut the costs of treating chronic cardiac insufficiency by one-third.

Despite all the fascinating technology involved it cannot be ignored that the profitability of e-Health applications always depends directly on health policy decisions, especially on standard cost reimbursement by health insurers and long-term care insurers. Policymakers must therefore be conscious of their responsibility for future generations when promoting e-health applications. For the bottom line is that e-Health in an ageing society with growing numbers of the chronically ill can make a decisive contribution to keeping the necessary medical and nursing care affordable.

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