

New technology enables patients to become involved and engaged in their own health and ill-health. Quality standards and privacy must be ensured

New technology means new patient role

Although personalised services and patient engagement are high on the political agenda, our health care system still largely treats patients as passive recipients. This tradition is poorly suited to the growing number of patients with long-term conditions who must actively weave life and health together (1). In other areas, technology has become a key tool for participation, influence and control over one's personal circumstances. Individuals manage their own banking and act as their own travel agents online, and they increasingly expect these options from the health services too.

In this issue of the Journal of the Norwegian Medical Association, Sølviik and co-workers describe how new technology offers a safe and effective means for those who wish to do so, to manage most of their own anticoagulation therapy (2). Involving and engaging patients in their care has been shown to give better results (3). Technology can enable the patient to make decisions based on their own preferences, allowing them greater control over how treatment affects their life. Health policy makers and patient organisations welcome a more active role for patients (4). However, the health services are strangely behind the rest of society when it comes to adopting new technologies that support patient self-management.

It is patients themselves who make day-to-day decisions about their health. The most infirm non-institutionalised elderly manage their own conditions over 90 % of the time. Used properly, technology can support patients' competence and skills in this important self-management work. Existing electronic services in the health care field can be divided into two groups: those that provide access to knowledge and decision-making support and those that offer digital two-way contact with the health services.

Patients have long had access to health information online. What is new is a broad array of applications (apps) that combine user interaction, data capture, information and social media. The apps «learn» from the user response, enabling them to provide customised advice. Disease-specific apps may improve understanding of the disease experience. It has been shown that visualisation of blood glucose measurements, physical activity, carbohydrate intake and insulin levels gives diabetics a better grasp of how and why their blood sugar levels vary (5). Sensors that measure, for example, INR values, help patients to make correct treatment choices, as Sølviik and co-workers demonstrate (2). At the University Hospital of North Norway, patients now have electronic access to their own medical records. Helsenorge.no is the official portal for health information and access to selected registers.

There are no reliable statistics on the number of health apps, but Apple announced that they have exceeded 900. In the past year, the major players Google, Microsoft, Samsung and Apple have all launched technologies that will smooth the way for future health apps and health-related research.

Initiatives regarding a two-way digital communication are fewer and to a greater degree part of local research and innovation projects. A number of digital question-and-answer services are available, while video consultations are used increasingly within mental health, rehabilitation and emergency medicine. A relatively large study of digital sensor-based remote monitoring of patients' health status (for example, blood sugar levels), coupled with proactive guidance on how to self-manage treatment, showed a reduction in both health service utilisation and mortality (6). An electronic individual plan

gives the user active control of goals and plans and ensures that everyone in the health care team is kept up to date. In addition, there is now a growing market for services in which individuals can receive advice and diagnoses via health apps that connect them with specialists in dermatology, mental health and mother-and-child health – plus, of course, the large wellness market.

Like all effective measures, these tools are not without side effects. The electronic solutions are being developed by a mixed group of private and public bodies with varying motivations and viewpoints. A number of apps do not adhere to professional guidelines (7). Some information services intentionally create fear and uncertainty in the hope of motivating consumers to purchase health care products. Improper use of monitoring technology risks medicalising our private lives and pushing us towards a tyranny of prevention. In the white paper «One Citizen – One Medical Record», the Norwegian authorities set themselves the goal of providing us with quality-assured digital health services, but the regulations that make it possible for consumers and health care professionals to find and adopt secure and effective solutions, are still missing (8).

Using technology to involve and engage patients in line with their vision of «the good life» is good medicine. There is an urgent need to put in place evidence-based guidelines to guarantee the quality of technological self-management aids.

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