



# Summary

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## eHealth monitor 2013



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# eHealth, further than you think

The Netherlands faces the challenge of ensuring that healthcare retains a good level of quality and remains accessible and affordable. The ageing of the population places greater demand on healthcare, while at the same time the number of people able to provide care is decreasing.

A quarter of citizens in the Netherlands have one or more chronic diseases, such as COPD or heart and vascular diseases (Dutch National Institute for Public Health and the Environment (RIVM), 2013).

“eHealth is the use of new information and communication technologies and in particular internet technology to support and enhance health and healthcare.”

A large share of healthcare costs are spent on caring for this group. To slow down the increase in healthcare costs while ensuring that it is still possible to offer the requisite healthcare with the available staffing levels, it is necessary to organise healthcare differently.

eHealth<sup>1</sup> offers opportunities for promoting the freedom and self-sufficiency of patients and can be applied to help organise healthcare more efficiently. eHealth therefore offers an important means of future-proofing healthcare. In her Letter to the Parliament on eHealth dated June 2012, the Dutch Minister for Health, Welfare and Sport (VWS) set out these opportunities, while making the point that adoption of eHealth by patients and professionals alike is a necessary condition for eHealth to succeed. With this in mind, she arranged for actual develop-

## **eHealth monitor 2013**

The national eHealth monitor was conducted by Nictiz and NIVEL. The survey monitors the availability and use of eHealth applications by healthcare users and healthcare providers. Two different approaches were adopted to carry out the survey. The first was a consultative phase, comprising interviews with twenty-one stakeholders from the field of healthcare. The second was a survey of questions sent to respondents from the healthcare consumer panel of Nivel and the medical panel of the Royal Dutch Medical Association (KNMG). Section 2 of the survey report provides more detailed information on the structure of the survey, the stakeholders consulted and the composition of the survey panels.

This first eHealth monitor is aimed primarily at the curative side of healthcare. This does not mean that eHealth is not of relevance for long-term care, quite the contrary. The second eHealth monitor to be published in 2014 will therefore also focus on long-term care. In this way, we can do justice to the importance of eHealth in both sectors.

*1 The definition of eHealth adopted in this report is in line with the definition applied by the Dutch Council for Public Health and Healthcare (RVZ) (van Rijen, de Lint and Ottes, 2002)*

ments and progress in the use of eHealth to be monitored on a yearly basis. Core aspects to be monitored are the extent to which eHealth applications are available, the extent to which they are used, factors affecting the use of eHealth (positively or negatively) and the effects experienced.

This document provides a summary of the findings of the first eHealth monitor, which was conducted by Nictiz and NIVEL in the first half of 2013. It is an initial survey of doctors, health-care users<sup>2</sup> and a number of other stakeholders, and will be repeated each year. As of 2014, it will be possible to identify trends. What's more, by comparing the findings of this eHealth monitor with international surveys and other studies, it will provide an initial overview of where the Netherlands currently stands and what developments can be expected. Because eHealth is a broad concept, focus is placed on a number of specific ICT applications in healthcare. Applications were chosen that are expected to contribute to efficiency and affordability, as well as to the self-management of patients, continuity of healthcare, patient safety, quality of healthcare and accessibility.

*2 The eHealth monitor refers to "healthcare users". By this we mean any Dutch citizen who has access to the healthcare system. Not every healthcare user is necessarily a patient as well.*

## eHealth, further than you think

The title of the survey reflects its core findings. On the one hand, it is clear that the Netherlands is no longer at the start of the process. In practice it has progressed a lot further than people realise in some areas. On the other hand, there are still significant aspects that can only be achieved if key obstacles are overcome.



# 1. General overview: The Netherlands scores well, but there is still a lot to be done

Expectations with respect to eHealth in the Netherlands are favourable. The survey finds that these expectations largely correspond with what is generally described in (inter)national literature as the potential added value of eHealth. In concrete terms, the following six expectations can be identified:

- Self-management by patients will be encouraged, for example by enabling them to view their medical records. Patients are increasingly becoming (co-)managers of their condition or disease, so it is important that they are kept sufficiently informed.
- Efficiency and affordability will be facilitated, for example by carrying out remote consultations, remote diagnoses, online therapy and screen-to-screen communication instead of visits, and by providing better management information, in turn ensuring the more effective organisation of healthcare.
- The continuity of healthcare will be enhanced, by improving the exchange of information between the various healthcare providers, such as general practitioners, hospitals, care facilities, rehabilitation centres and home care.
- Greater patient safety will be assured, by preventing errors (in medication), for example through





support in decision-making.

- The quality of healthcare will improve, as it can be measured more effectively and patients can be provided with better information on which they can base their decisions.
- Accessibility will improve thanks to solutions such as online appointments, e-consult and online treatment.

### **eHealth monitor:**

#### **Summary, infographic and survey report**

The findings of the eHealth monitor 2013 are presented in three different ways. You are now reading a summary of the eHealth monitor 2013. An infographic is provided alongside this summary, presenting the key findings of the survey in graphic form. The infographic is intended for people who want to see the main points of the survey at a glance, using their tablet or smartphone. A detailed report is also available.

The survey report, infographic and summary can be downloaded from [www.nivel.nl](http://www.nivel.nl) and [www.nictiz.nl](http://www.nictiz.nl).

As part of this monitor, stakeholders were interviewed, including representatives of healthcare users, healthcare providers and businesses. Many of the respondents highlighted the importance of encouraging self-management and social participation on the part of patients. However, the survey shows that healthcare users rarely use self-management tools and often do not even want to use them or do not know if they want to use them. The expectations of stakeholders probably require some

adjustment here, based on a more realistic view of what health-care users find important. When it comes to expectations as regards efficiency, this adjustment has already been made. Many stakeholders are reticent when it comes to gains in efficiency, especially in the short term. Some respondents even expect costs to go up (at first at any rate). In particular, representatives of healthcare providers and professional organisations point out that introducing eHealth takes time and that it would be wise to moderate expectations to a certain extent.

Stakeholders find that the Netherlands is doing well compared with other countries. This is confirmed by several comparative international surveys showing that the Netherlands is one of the front runners. It has made particularly good progress in the use of digital records by general practitioners (and also medical specialists) compared with other countries. However, when it comes to the electronic exchange of patient data between healthcare providers, within hospitals as well as between different establishments, there is still a lot to gain. As a result, key opportunities for gains in efficiency, quality, patient safety and continuity have yet to be exploited. Various parties specify a lack of interoperability and standardisation as obstacles for exchanging data. It is worth noting in this respect that (umbrella organisations of) healthcare providers reproach ICT providers for not adopting a more proactive approach, while ICT providers say that they very much welcome standardisation. There is obviously a requirement for 'central coordination' here, but this is difficult without a shared vision of who is to make such a move.

A lack of integration may explain why people find that the process of applying eHealth in healthcare is largely in a phase of trial and experimentation: “At the moment, eHealth is often only implemented on a small scale and is a hotchpotch of trial and experimentation”. Providers of eHealth applications in particular indicate that progress should be faster. There are concerns about the climate of innovation in the Netherlands.

Respondents reveal a relative lack of awareness about eHealth among healthcare users and healthcare providers. The aspect of ‘financing’ is mentioned most often as a factor impeding progress. A few providers point out that subsidies are not always set appropriately, so they can have a distorting effect on the market. Uncertainty is expressed about legislation, privacy and information security. There is also a need for more evidence of the effectiveness of eHealth.

On the other hand, experience in eHealth continues to grow, for instance in general practitioner and mental health services. There is also a lot of knowledge about the basic conditions involved in implementing eHealth. Clear objectives and a good business case are important factors in this respect, as well as the basic technical and organisational terms. Consideration must also be given to willingness to support and change management.

## 2. The current situation in figures

To ascertain the current situation, it was decided to divide eHealth applications into the following four categories in the eHealth monitor survey:

1. Searching and updating of healthcare information by healthcare users;
2. Communication between healthcare users and healthcare providers;
3. Management of records by healthcare providers;
4. Electronic communication between healthcare providers.

This document sets out the key findings of the survey for each category.



## **2.1. Searching and updating healthcare information: Self-management applications are rarely used**

Access to the internet is well organised in the Netherlands. Nearly all Dutch citizens have access to the internet (94%). Citizens are also starting to extensively use the internet as a source of information for healthcare matters: 66% search for information on diseases or treatment on the internet.

However, it is a different situation with eHealth applications that call for greater individual effort. Little use is made of eHealth applications aimed at self-management. Even the number of people interested in using them in the future remains quite low. Examples include carrying out a self-diagnosis via the internet (6%), updating your own medical data online (4%) or using your telephone to set a reminder for taking medication (2%).

## **2.2 Communication between healthcare users and healthcare providers: More options offered than used**

The survey reveals that healthcare users are still poorly informed of the options offered by healthcare providers with respect to online communication. For example, two in three healthcare users have the



option of requesting a repeat prescription from their general practitioner via the internet, whereas only one in five healthcare users are aware of this option.

It is also noticeable that online communication between healthcare users and healthcare providers is still mainly seen as a replacement for the telephone. It is used for making appointments, requesting repeat prescriptions and asking questions.

Healthcare providers rarely offer eHealth applications enabling healthcare users to view their records or lab results. Almost half of healthcare users indicate that they would like to have the option of viewing their records via the internet. Yet doctors are reticent about providing access to results of tests and laboratory samples, prescribed diagnoses or notes in the records. They also do not have plans to offer options enabling patients to add information to their own records online.


The majority of doctors do not know if they want this or do not want this. They are however in favour of enabling patients to view their prescribed medication online. There may be an opportunity here to allow for greater self-management, because healthcare users and healthcare providers seem to be of the same opinion in this respect.

48% of general practitioners experience favourable effects from contact



with patients via the internet. The effects reported in the survey primarily concern accessibility and efficiency. For example, general practitioners report that patients like it (81%), that it has made the practice more accessible (68%) and that online contact with patients enhances the efficiency of providing care (51%). Just under a third of medical specialists (32%) experience favourable effects from online contact with patients. Specialists indicate that the reported effects primarily concern accessibility (69%). They also say that patients like it (84%) and that it improves the continuity of care (41%). Significantly fewer doctors indicate that online contact with patients leads to cost savings (general practitioners: 16%, medical specialists: 18%).

### **2.3. Management of records by healthcare providers: General practitioners are further ahead than medical specialists**



Most medical records are now updated electronically and no longer on paper: 93% of general practitioners and 66% of medical specialists update their records primarily or exclusively electronically. 15% of medical specialists update their records primarily or exclusively on paper. Although the process of automation in doctors' surgeries has advanced significantly, the fact that paper records are still kept managed relatively often in parallel to electronic records leads to risks in terms of the consistency of medical records.

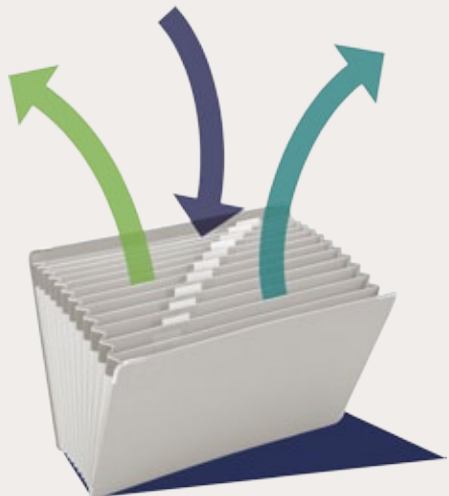
When prescribing medication, nearly all general practitioners (88-98%) receive an automatic message

to flag up if the patient is allergic to the drug in question or if there is a contraindication or interaction between different drugs. With medical specialists, this percentage is significantly lower (30-60%). Such messages are important for ensuring drug safety, so there is more progress to be made on this point. A significant proportion of general practitioners (48%) and medical specialists (42%) are interested in having further options for saving data electronically, for example correspondence with other healthcare providers.

#### **2.4. Electronic communication between healthcare providers: Further improvement is possible**

Many doctors exchange patient data electronically. Nearly all (83-90%) of general practitioners exchange patient data electronically with public pharmacies, emergency general practitioner services and hospitals. Almost half (46%) of medical specialists exchange patient data electronically with general practitioners and one in three (32%) with colleagues within an establishment.

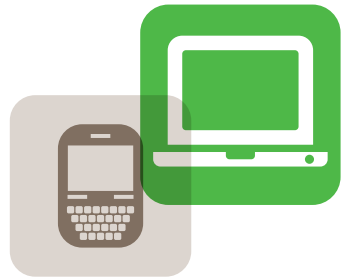
Here too, medical specialists apparently have fewer options than general practitioners. Despite the fact that electronic data exchange is already quite established, further progress is clearly possible,





for example exchanging information on drugs. This is important for patient safety.

At present, 48% of general practitioners and 43% of medical specialists indicate that they would like to increase the number of options for exchanging data electronically. General practitioners would like to send and receive more image files, correspondence with other healthcare providers and electronic data from medical records held by other general practitioners (for new patients). Medical specialists would really like to have a current overview of healthcare users' medication taken at home as well as correspondence on referrals and discharges.



Nearly all general practitioners (94%) and two thirds of medical specialists experience a positive effect from exchanging data on patients electronically. These doctors above all experience improved efficiency, quality and continuity in the process of providing healthcare. This is in line with the policy expectation that exchanging data electronically can contribute to ensuring a high degree of quality and reliability in healthcare as well as continuity in healthcare.

Some relatively new developments are starting to gain ground, which will enable changes to be made in work processes in the field of healthcare. For example, three-quarters (75%) of general practitioners have remote consultations with dermatologists to obtain their opinion about an image of a patient's skin.

One in three (34%) obtain such opinions from cardiologists about an ECG and one in seven (14%) obtain opinions from lung specialists about a pulmonary function test (spirograph).

At the same time, there is still little enthusiasm for digital consultations with other healthcare providers via screen-to-screen communication. This is possible with one in ten general practitioners, a fifth of medical specialists and a third of psychiatrists. In all groups of practitioners, we can see that a significant proportion of the group (43 to 80%) indicate that they do not want this or do not know if they want it. Less reticent are psychiatrists with respect to contact with other doctors and medical specialists with respect to contact with specialist colleagues outside the hospital.



### 3. Next steps – challenges and possible solutions

Although automation in the field of healthcare has advanced quite far, the large-scale adoption of self-management applications has yet to be achieved. Further progress is also to be made in areas such as patient safety and continuity of healthcare. Stakeholders still envisage a large number of challenges ahead and have devised a few solutions. However, there is no shared vision about how eHealth can be developed more quickly and who is to play what role.

It is important to realise that eHealth is a generic term for a large number of different applications, with each of these applications having its own dynamics and opportunities. For



eHealth to succeed, the focus has to be placed on specific applications for which there is most support and with which added value can be achieved. This eHealth monitor identifies where opportunities lie, although it is still the case that financing, legislation, regulations and the demand for coordination remain key factors. The opportunities are:

#### 3.1. Show people what is possible now and increase awareness among healthcare users

Dutch citizens are familiar with using the internet. They also use the internet to search for information on diseases or treatment. Many doctors indicate that it is possible to request repeat prescriptions and ask questions via the internet, or that

they have plans to make it possible for patients to make their own appointments. The survey shows that healthcare users are poorly informed about these options. So the first obvious step is to increase awareness about the options available.

In addition, greater visibility about the added value of eHealth for healthcare would be beneficial for the general image of eHealth. There is little awareness of how ICT can enhance quality and safety in patient care, or how ICT offers options for increasing the comfort and position of patients.

Many healthcare users are already familiar with using ICT, for example to handle their banking affairs, book holidays, send e-mails or interact on social media. In terms of healthcare, the survey shows that using ICT is not such a familiar thing for them to do. eHealth applications that can help in the active management of their health and disease, and in updating their own medical data, are rarely used and many people

indicate that they do not want to use these applications or that they do not know if they want to. It is possible that people simply cannot imagine what such applications entail. Better information on what eHealth applications can offer for healthcare users (and increasing the visibility of good examples) may



encourage acceptance and generate demand.

An effective strategy for change will gradually introduce new eHealth applications in healthcare to healthcare users as well as doctors. Each step is a step in the right direction: making an appointment with a general practitioner via the internet or being able to view one's own medication records via the internet.



### **3.2. Invest in data exchange**

Many doctors hold electronic records with data on their patients. This is the case with nearly all general practitioners, yet to a lesser extent with medical specialists. At the same time, progress in electronic data exchange is lagging behind, for instance in the exchange of electronic data between medical specialists and general practitioners. Another example is the exchange of data between departments within the same hospital, for instance to obtain an up-to-date medication overview from the hospital pharmacy. In 2011, the Dutch Healthcare Inspectorate observed that delays in exchanging electronic data would lead to risks for patient safety. There is a large degree of willingness among doctors to exchange such data electronically. In view of the tremendous importance of patient safety, and the risks for patients and healthcare establishments if data is not electronically exchanged, there is a high degree of urgency to address this point.

### 3.3. Enable patients to view their medication records

Ensuring that electronic records are properly managed is a basic condition for accessibility of information. This also applies for healthcare users. Many healthcare users (39-49%) say that they want to view their medical records, whereas a large number of doctors are more reticent about this. Where both parties see eye to eye, is the provision of information on prescribed medication. This is information that doctors need themselves, that they also want to share with their patients and that patients would like to have. We believe that making information on medication accessible may be a first step in the process of making patient records more accessible.

### 3.4. Increase awareness and enhance skills among doctors

Doctors still have gaps in their knowledge about the practical aspects of eHealth. For instance, they state that they do not know how electronic data exchange relates to the existing legislation and regulations or how an IT system has to be configured to meet requirements. With doctors too, if they

know more, they will be able to use eHealth more effectively. Refresher courses may help, as well as including eHealth skills as a subject in training courses. It is also true for doctors that change has to take place on a step-by-step basis.



## 4. Whose move is it?

During the interviews with stakeholders, the lack of coordination was often highlighted as being a significant problem. Central government is generally seen as the appropriate party for fulfilling this role of coordination. However, developments in the organisation of healthcare reveal a quite different trend: the role of coordination in healthcare is moving towards insurers and local authorities. The time has probably come for central government to adopt a different approach in terms of coordination, based on the example of the 'meaningful use' programme in the United States. The programme is linked to the Medicaid and Medicare incentive programmes.<sup>3</sup> In short, the US Government sets clear guidelines together with a specific timeline, which it uses to show healthcare providers the conditions they have to meet within a fixed period to be eligible for financing. This approach has led to the parties involved in the field making investments so that they secure funds in the future. The Dutch healthcare system is organised very differently to how the Medicare and Medicaid programmes are organised. This means that the US system cannot be copied just like that. However, the essence of the programme is that the government defines a clear timeline and imposes consequences if this timeline is not met. It goes without saying that insurers will also be able to play a role in this process in the Dutch situation.

<sup>3</sup> Medicare is a programme run by the Federal US Government. It is a social insurance programme for US citizens aged 65 years and over and for people with a disability. Medicaid is organised by the Federal Government and the individual States. It provides medical healthcare insurance for people with low income and resources. According to the Henry J. Kaiser Family Foundation, 16% of the US population are eligible for Medicare and 21% of the US population are eligible for Medicaid.

In any event, it is also up to the parties involved in the field to make a move: healthcare professionals, healthcare establishments, insurers, ICT providers and healthcare users. They are in a position to actually advance eHealth applications that clearly offer added value. There is a unique opportunity for the Netherlands to retain its leading position in the area of eHealth and even to further extend it. Who knows, eHealth may then not only offer solutions for ensuring that healthcare stays affordable, it may also give an opportunity for the Netherlands to forge ahead in the world of innovations.





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