



Federal Ministry
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The Electronic **Health Card**



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Dear citizens,

the German health system is an efficient system in which various parties ensure health provision for the public. But medical progress means that diagnoses and treatments are becoming ever more specialised and medical knowledge is now documented in many places. So it is often difficult for doctors to inform themselves adequately of all the findings of their colleagues although they are treating the same patient.

One important goal of a modern health policy is therefore to make the system more transparent for all involved. The Electronic Health Card is a big step in this direction. This clever little card, which will gradually replace the previous Health Insurance Card, is an innovation that will directly benefit people. It will smooth the way for more quality, more security and more efficiency in the health system.

The Electronic Health Card helps to reduce bureaucracy and to improve communication to all involved in health provision – for the benefit of the patient and to safeguard our health system in the long term.

To this end, the health card brings together various useful functions: for example, introducing the electronic prescription and documenting medicines on a voluntary basis can very quickly reduce unwanted and dangerous interactions between different medicines. This improves the

quality of treatment and the safety of drug treatment. The most important factors are: Every patient decides for himself or herself whether medical data are saved on or with the card and, if so, which data. Every individual thus retains control over this sensitive information.

Anyone who travels a lot will be pleased. Because from the start the European Health Insurance Card will be printed on the back of the health card. This will allow the insured to benefit from unbureaucratic medical treatment in other european countries.

But the strengths of the Electronic Health Card can only fully develop when the insured use the new opportunities from conviction. I am sure that this brochure will help.

Yours

A handwritten signature in black ink, appearing to read 'Hilke Schneider', written in a cursive style.

Federal Minister of Health



Progress in credit card format

Today's Health Insurance Card was introduced in 1995 to replace the quarterly medical insurance record card used previously. This card, which almost everyone knows and uses now, will be gradually replaced by the new Electronic Health Card. You will ask yourself: Why do we need a new card? What makes the Electronic Health Card different from the previous Health Insurance Card?

Firstly, just like its predecessor, your Electronic Health Card contains administrative data. These include your name and date of birth and details of the insurance and the health insurance number. Just like the old Health Insurance Card, the new health card is used as proof of insurance and thus entitles the holder to avail himself or herself of services from contracting doctors.

But the new Electronic Health Card can do much more: whereas the old Health Insurance Card only had a simple memory chip, the new Electronic Health Card contains a microprocessor chip. This chip is programmable and can execute many different tasks.

For example, prescriptions will no longer be issued on paper in future. They will be made available to you in electronic form with the help of the card.

In addition, you can have personal health data saved using the card. For example, this can be basic medical data for emergency care or

documentation of medication taken to inform the doctor or pharmacist treating the patient.

Protection of the data is clearly regulated by means of a comprehensive security concept. An encryption process ensures that information saved about you is always protected against unauthorised access. Furthermore, sensitive health data can be accessed only in conjunction with an electronic Health Professional Card. This is a personal card for doctors, dentists, pharmacists and other personnel with authorised access, for example.

The Electronic Health Card is an important step in the modernisation of health systems; it contains many chances and opportunities. This brochure is designed to give you a first overview.

The insured parties decide for themselves whether and to what extent they avail themselves of the new opportunities for the better availability of their medical data. You alone decide on what data are saved.

You will find additional information at:

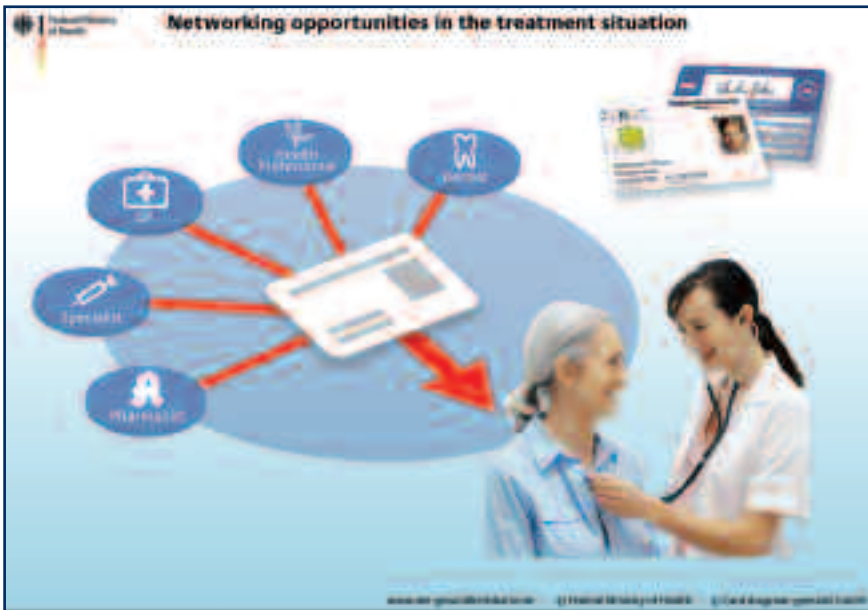
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Step-by-step towards a better network

The Electronic Health Card costs the insured parties nothing. The new card will be sent free of charge to all insured people by their health insurance provider and the Personal Identification Number (PIN) will be sent in a separate letter.

With the introduction of the new card approx. 80 million people with statutory and private health insurance, 21,000 pharmacists, 123,000 registered doctors, 65,000 dentists, 2,200 hospitals as well as the private and statutory health insurance providers will be connected to each other.

A project on this scale is unique in Europe and represents an enormous technical and organisational challenge. That is why the Electronic Health Card will not be able to do everything from the outset. It will be gradually expanded with new functions.



What the card can do from the start

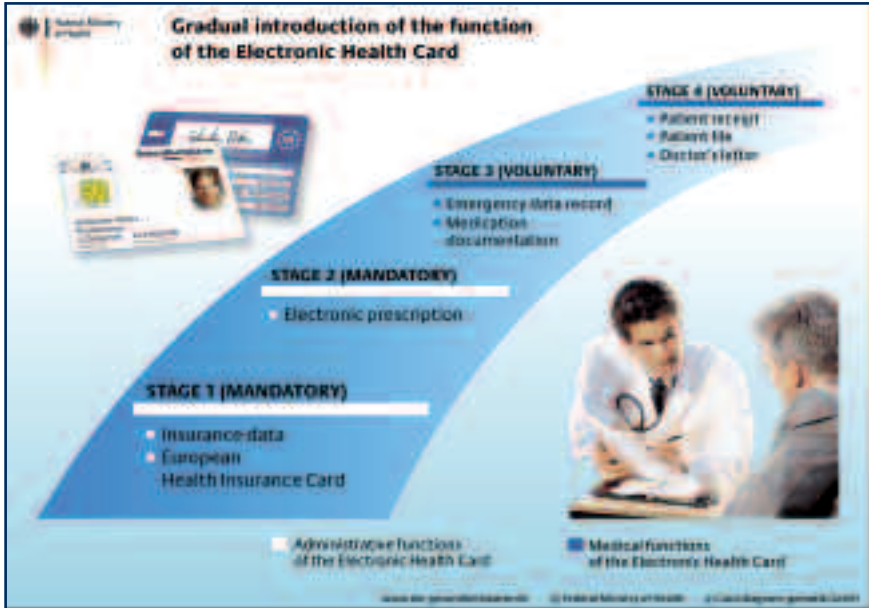
From the very start, your administrative data will be saved on the card. These include the patient's name, date of birth, insurance and surcharge payment status, address and the health insurance provider. These data are used for the purposes of invoicing, among other things – just like the old Health Insurance Card. What is new is that these insurance data are not just saved on the card, as has been the case to date, but that they can be compared in an online process when you are visiting the doctor and they can be updated if necessary. This means that the data are always kept up to date, e.g. if your address or surname changes.

At the same time, the card can transfer a paperless prescription – the so-called electronic prescription. This will mainly facilitate the administration and invoicing of the around 700 million prescriptions issued each year.

Moreover, the European Health Insurance Card is printed on the back of cards belonging to members of statutory health insurance providers. This will allow the insured to benefit from unbureaucratic medical treatment in other European countries if they fall ill.

These functions of the new card are mandatory for members of statutory health insurance.





What the card will be able to do in later expansion stages

Gradually, the Electronic Health Card will be given new functions that go well beyond the scope of the old Health Insurance Card. Use of these additional medical functions is voluntary for all insured people.

Alongside the administrative data and the electronic prescription, the voluntary medical applications of the emergency data record and, in a later stage, medication documentation that are important for safe treatment with medication will be introduced as early as the test phase. Medication documentation enables all medicines prescribed by a doctor to be documented by the pharmacist or, where appropriate, the doctor when the medicine is

handed over. Furthermore, the insured person should be able to allow non-prescription drugs bought in a pharmacy to be stored on the card. This means that the doctor and pharmacies have an overview of which medicines the patient has actually received. This reduces the risk of dangerous interactions between different drugs.

If the patient desires, emergency data can be stored on the card, for example sensitivities to medication, allergies and chronic conditions. This means that a doctor can quickly start appropriate medical treatment in an emergency.

In a further stage, with the consent of the insured party it should be possible to store doctors' letters on the health card. This means that when a patient is being treated by several doctors information can be quickly exchanged among the medical experts.

The electronic patient file (Elektronische Patientenakte – EPA) will be the final stage of the health card in the long term. It can contain references to the individual health record, important laboratory findings, operation reports, X-ray images and digital data from other examinations.

Third parties, for example employers, are not entitled to see the health data of an employee or applicant. They do not have the second key to data access, the Health Professional Card. Any unauthorised access by third parties will be prosecuted in the criminal courts.

My data belong to me

The patient alone has control over his or her data. Each one decides whether and which personal health data are to be saved and who can see the data and when.

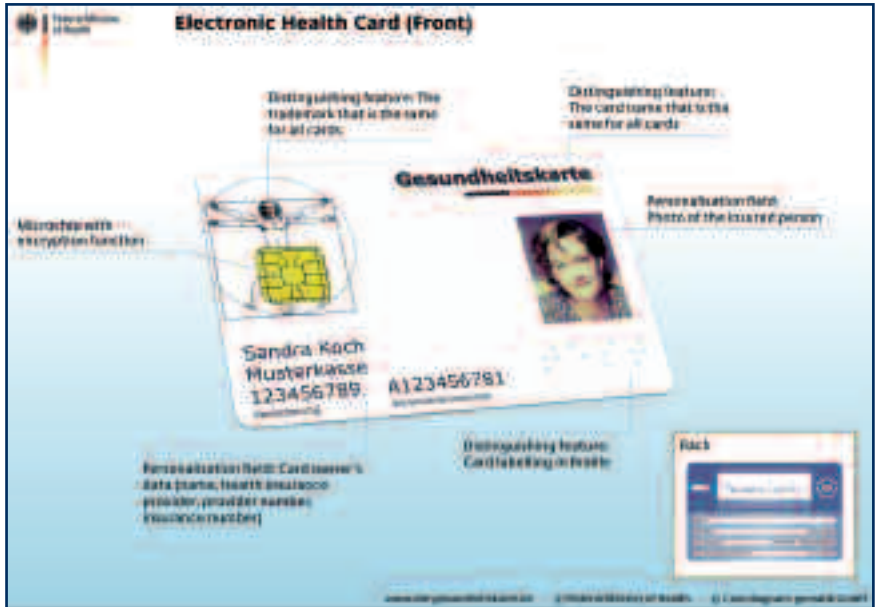
Health data in black and white

The patients have better access to their own health data and thus an overview of this information for themselves. They can have the data printed out by the doctor or pharmacist. Solutions for exercising the insured persons' access rights will be tested as early as the test phase.

The picture is new

The printed photo unmistakably identifies the insured person as the holder of the card.

Visually, the Electronic Health Card differs from the old Health Insurance Card mainly through the holder's photo. The photo will make it much more difficult for the card to be misused. A health card without a photo will be issued only to children under 16 and people who cannot have an appropriate photo taken, e.g. people in need of constant care. Furthermore, labelling the card with Braille is being trialled in the test phase (see graphic on page 11).



The user grasps the potential of the new health card only at second glance. Because “inside” the new Electronic Health Card is completely different from the old Health Insurance Card. Unlike its predecessor, it is not a memory card; it has a microprocessor.

If lost, the card is worthless and useless for any other person. The data are encrypted. Only the PIN in combination with an electronic Health Professional Card allows access to sensitive personal medical data.

The personal data safe

While the technical world discusses bits and bytes, server structure and storage places, we simply imagine: with the health card, each and every one of us has a personal safe containing strongly protected health data.

Personal health data are intimate and highly sensitive information. The strictest requirements therefore apply to the protection of the data. The patients have to be able to rely on the greatest possible security and confidentiality.

If the patient so wishes, these data can be called up, for example in surgeries or hospitals, and are thus available where they are needed. The data from the health card can also be read during home visits and in emergency situations.

Mandatory data:

- Administrative data, such as patient's name, insurance and surcharge payment status, health insurance provider and date of birth
- The functions of the electronic prescription
- The European Health Insurance Card

Voluntary data:

- Documentation of medication prescribed
- Saving emergency data (allergies, drug intolerances, etc.)
- Personal medication risks (e.g. during pregnancy)
- The electronic patient's file (diagnoses, X-ray images, etc.)

The two keys principle

With the consent of the patient, doctors, dentists or pharmacists have access to health data. With their electronic Health Professional Card they have the first of two keys to access the health data. But in most cases, the Health Professional Card is not enough.

Anyone who wants to open the safe with the health data usually needs two keys. Because nothing happens without the second key – the personal health card – and entry of a PIN by the patient. The PIN works just like a bank card or the PIN on a mobile phone. Furthermore, all access to the data is recorded, with the 50 most recent accesses being stored.



No health data can be read without the consent of the patient!

The PIN must be entered

- If the medical information from the card is to be viewed. The PIN is then mandatory for reasons of data protection.
- If doctors or pharmacists, for example, want to save data using the card. The patient must enter his or her PIN as sign of consent.

It is not necessary to enter the PIN

- if the patient is no longer capable of entering a PIN. In an emergency of this kind, the doctor or paramedic can access the emergency data directly using his or her Health Professional Card.
- when reading in the mostly administrative data from the health card at the doctor's surgery reception.

This multiple safeguarding of the personal safe protects the health data from misuse and rules out access by unauthorised people.



In further expansion phases, doctors' letters, diagnoses and treatment data will also be available electronically. This will improve the quality of treatment because the doctors can better harmonise their medical action – and also complement each other.

The Electronic Health Card is therefore a good and practicable solution for the various requirements in practice: on the one hand, health data are more available with the card, i.e. quicker and irrespective of location. On the other hand, the card offers a maximum degree of data protection – all in the interests of your health.



THE ELECTRONIC PRESCRIPTION

Every year, around 700 million prescriptions are issued in Germany. Today, many doctors already use their PCs to issue prescriptions. However, the prescriptions are still printed on paper, signed and handed over to the patient. After the patient has presented the prescription to the pharmacist it is once again recorded electronically for charging. That costs time and money.

A prescription is handled and reprocessed up to five times in doctors' surgeries, pharmacies and pharmacy accounting centres. This makes administrative processes unnecessarily elaborate and expensive.

The electronic prescription and the associated possibilities of electronic communication ensure more efficiency. Because in future all prescription data, from issuing to charging, will be available in electronic form.

The electronic prescription in practice

At the doctor's

- The doctor selects a drug.
- He checks the risks to the patient by comparing the drug documentation and personal medication risks.
- The doctor issues the electronic prescription and makes it available to the insured party in electronic form.

For the information of the insured person, the doctor can also give him or her a paper voucher containing the name of the drug, information on dosage and tips on taking the medicine. This voucher is only for the information of the insured person and is not a valid prescription.

The insured person can now present the prescription to a pharmacist. It works like this:

At the pharmacy

- The pharmacist calls up the electronic prescription using the Electronic Health Card.
- The pharmacist checks possible medication risks.
- Upon request, the pharmacist supplements the medication documentation.
- The pharmacist hands the medication over to the patient.
- The pharmacist deletes the electronic prescription.

But, as in the past, the insured party can ask someone else to collect a prescription from the pharmacy for him or her. Electronic transmission routes for the electronic prescription are being developed so that mail-order pharmacies can be used.



THE EUROPEAN HEALTH INSURANCE CARD

From the outset, the European Health Insurance Card (EHIC for short) is printed on the back of the Electronic Health Card. It enables unbureaucratic medical treatment for insured parties.

All the data that are needed to ensure medical services and reimburse costs in other european countries according to European Community law are stored on the card.

The European Health Insurance Card has uniform features throughout Europe, e.g. the EU emblem and the order of the text fields. This ensures that the card can be recognised and applied in the european member states.

The following is on the European Health Insurance Card:

- the surname and first name of the card holder,
- his or her date of birth,
- the first ten digits of his or her health insurance number as a Personal Identification Number,
- a code number for the health insurance provider,
- a code number for the card and
- the card's period of validity (expiry date).

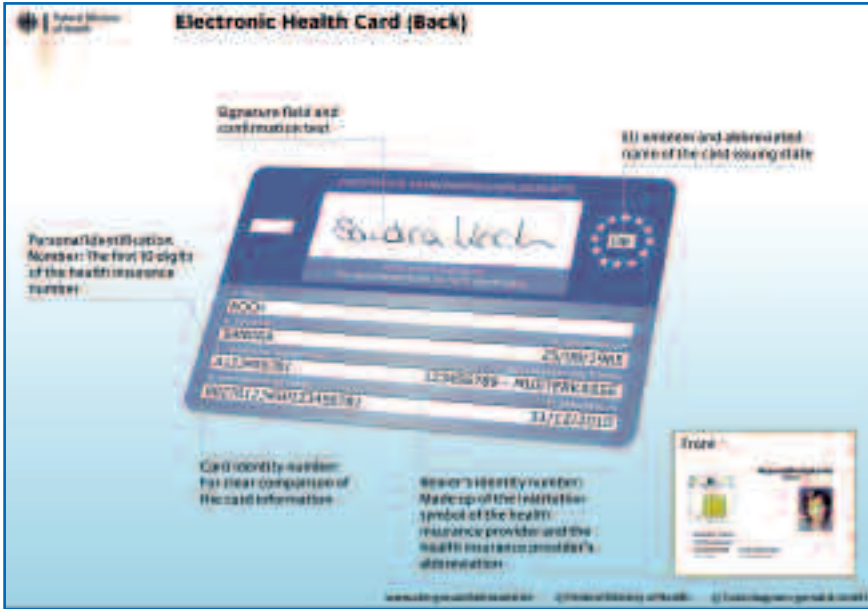
Plastic instead of paper in Europe

Even now, people with statutory health insurance can ask their health insurance provider to issue them with a European Health Insurance Card. With the introduction of the Electronic Health Card, all entitled insured people will then automatically have a European Health Insurance Card on the back of their card.

Presenting the card is enough to receive medical treatment in another European country in the event of an accident or an acute illness. It entitles the holder to avail himself or herself of those services that prove to be medically necessary during a stay in the territory of another EU member state. The nature of treatment and the probable length of stay are considered in this connection (see graphic on page 20).



The most important functions at a glance



The entitlement arising from the European Health Insurance Card applies only to immediately necessary medical care (broken leg, bad tooth, viral infection, etc.) or to continuing care in the case of chronic conditions, such as diabetes.

People with statutory health insurance can use the European Health Insurance Card for outpatient or inpatient treatment in a medical emergency in all EU states and in Iceland, Liechtenstein, Norway and Switzerland. Medical services can be used there under the same conditions that apply to people insured in the host country.

The European Health Insurance Card

- ensures medically necessary treatment for citizens who travel frequently in Europe.

Improved exchange of information in Europe

In the medium term, it will be possible to make health data records, such as emergency data or medication documentation available throughout Europe as voluntary applications of the health card.

DATA FOR AN EMERGENCY

Whether it is a case of a traffic accident, an accident at work, a domestic or sports accident, heart attack or stroke – in the German emergency system a doctor is always on the spot within ten to fifteen minutes. In the over two million deployments each year (not including air, mountain and sea rescues), the emergency doctors provide the immediately necessary medical care. Often their work and the subsequent care in hospital save lives.

So that the doctor is quickly informed

In an emergency it is essential that the doctor makes the right diagnosis as quickly as possible and starts the appropriate medical treatment without delay. That is a challenge for every emergency doctor because he or she usually does not know the patient. He or she does not know whether the patient suffers from a chronic condition. He or she has no information on whether the patient is intolerant of a certain medication or has allergies. And in many cases there is no one at the site who can provide information about the emergency patient

The most important functions at a glance

In this way, the emergency doctor finds out about basic illnesses or allergies and can act more quickly and specifically. And we will all benefit from this if we are ever the victims of an emergency.

if the patient himself or herself is no longer capable of doing so.

The new Electronic Health Card can help here. The insured person can have important information for emergency treatment stored on the card and that is available to the doctor quickly in an emergency.

Medical emergency data at a glance

The so-called emergency data record on the Electronic Health Card took up the idea of the “European Emergency Pass” already available today in paper form.

Emergency data:

- Diagnoses: e.g. basic illnesses, allergies and individual risks of the insured person
- Medication intolerances: e.g. an intolerance to penicillin
- Information on major operations or other therapeutic actions
- Information on current medication relevant to an emergency

Furthermore, the insured person should be able to save important contact data so that relatives, friends or a GP can be informed in the event of an emergency.

Data access in an emergency

When emergency medical care is being provided, there is no need for the PIN to be entered actively in order to access the information stored on the card. In this situation, the doctor can access the emergency data directly using his or her Health Professional Card, for example.

MEDICATION DOCUMENTATION

Drugs are an elementary component of modern medical treatment. However, with drug treatment there is also a risk that the effect of a drug can be weakened or cancelled out in conjunction with other medication. In the worst case, the prescribed combinations of drugs can endanger the patient's health or even result in death.

There are many reasons for this. Due to the wealth of different active agents and preparations it is increasingly difficult for doctors to do justice to the demands of an appropriate and safe drug treatment. This is increasingly a challenge, even for acknowledged experts. Moreover, the doctor providing treatment often does not know what medicines have been prescribed by colleagues. Interactions or double prescription then remain unnoticed.

Moreover, many patients also take non-prescription medicines without the knowledge of the doctors treating them. But these preparations can also interact with the prescribed medicines.



Even with cautious estimates, it must be assumed that every year more people die as a result of the unwanted effects of medication than on the roads.

The most important functions at a glance

The medication documentation is realised within the scope of the gradual introduction of the Electronic Health Card. It is a voluntary application.

The health card helps to minimise the risk of unwanted interactions. This is how the medication documentation on the card works in practice:

At the doctor's

The doctor checks the medicine that he or she wants to prescribe against the medication entries already on the card and the personal medication risks if they are in the medication documentation at the request of the patient.

Here, too, access to the documentation is according to the two key principle. The doctor can access the medication documentation only with his or her Health Professional Card. By entering his or her PIN, the patient consents to this access and gives the doctor his or her Electronic Health Card.

Now the doctor can view the documentation and compare these patient data with regard to medication risks.

On the basis of this check the doctor can prescribe the appropriate medicine with an electronic prescription.

At the pharmacy

The pharmacist can open the medication documentation on the card with the help of his or her Health Professional Card, once again according to the two key principle and with the consent of the patient. At this point, he or she can check the prescription again for medication treatment risks, such as interactions, drug intolerances or double prescriptions, and then save the medicine issued. Non-prescription drugs and medicines administered by the doctor (e.g. vaccinations) can also be stored in the patient's medication documentation. They can also be included in the pharmacist's safety check.



Advantages for the patients

The medication documentation on the health card is voluntary for the patient. It can greatly increase safety in drug treatment and self medication and minimise risks.

With the medication documentation the doctor has all the important information at a glance.

Medication documentation

- improves the quality and efficiency of drug treatment,
- gives an overview of the patient's medication status,
- allows drugs to be compared with regard to interactions, repeated prescription, intolerances in the case of certain illnesses and atypical dosages,
- helps to prevent incorrect treatment with drugs and thus contributes to more safety in drug treatment.

The electronic doctor's letter

Every year, many millions of results are collected in everyday treatments in Germany. Doctor's letters are written on results of examinations and after stays in hospital and are used for doctors to communicate with each other. The Electronic Health Card makes provision for insured people to make these doctors' letters available electronically to other doctors voluntarily and on their own decision.

This is designed to close information gaps and ensure improved communication between all doctors involved in the treatment process, both in outpatients and in inpatients. The electronic doctor's letter – as a component of the electronic patient file – will help to greatly ease everyday life

for patients with chronic diseases or several conditions who have to consult many doctors.

THE ELECTRONIC PATIENT FILE – EVERYTHING ON ONE CARD

X-ray images, ultrasound images, laboratory results, doctors' letters – everything that the insured person himself or herself usually has to laboriously gather together, should be stored together in the electronic patient file in a few years. This file should contain all data relevant to treatment – from the medication to the diagnostic image data. The Electronic Health Card offers access to it – with the consent of the insured person.

In the first phase of its introduction, the card initially offers the opportunity of electronically storing the medication documentation and the emergency data, for example, on a voluntary basis. This can be the start of establishing a subsequent usable patient file that can be used across institutions.

A reference on the card also allows the treating doctor to see whether the patient is taking part in a structured treatment programme for certain chronic conditions, so-called Disease Management Programmes (DPM).



The advantages of the electronic patient file

The better the treating doctors are informed of diagnosis results and the treatment status of their patients, the better they can harmonise their treatment to the medical needs. With the voluntary electronic patient file, results, details of treatment and much more essential medical information can be called up quickly where it is needed with the approval of the patient.

There will be no need for the laborious search for existing medical results. Doctors in hospitals and in outpatient surgeries can make the data accessible to each other. This will make the links between outpatient and inpatient treatment processes better.

Repeated examinations, which are an additional burden on the patient, can be reduced. This is not only in the interests of the patient, who will receive better harmonised care; it also helps the resources of the health system and contributes to more efficient care.

With the electronic patient file it will be much easier to interlink hospitals, rehabilitation facilities, specialists and GPs across the country. Cooperation in the whole German health system will thus be encouraged overall and facilitated.

The electronic patient's card

- ensures better traceability of patient information,
- increases treatment reliability by the doctor providing treatment,
- increases the patients' responsibility,
- helps to reduce multiple examinations,
- encourages cooperation of all service providers involved in the treatment process,
- facilitates everyday life in doctors' surgeries and hospitals.

The patient decides what is saved

The patient has complete freedom to decide and dispose of all documentation processes in the electronic patient file. But ultimately, the more information the electronic patient file contains and the more responsibility the patient uses in building it up, the more effectively it contributes to a better quality of medical care.



The legal foundations

In 2004 the Health Care System Modernisation Act required health insurance providers to expand the previous Health Insurance Card into an Electronic Health Card. The introduction of the health card is laid down in Article 291a of Social Code Book V.

This requirement is the basis for the introduction of the Electronic Health Card. This is where questions of data protection, data security, organisation and financing are regulated. It also specifies which functions the Electronic Health Card will have and which technical requirements, the so-called telematic infrastructure, have to be put in place.

For example, the legal framework states that the health card should have a mandatory administrative part and a voluntary medical part. The individual functions and applications are also listed. In close cooperation with the Federal Commissioner for Data Protection it was specified precisely who may access the individual patient data and under what conditions.

The organisational foundation

An important precondition for implementing a large-scale project of this kind is an organisational structure in which the tasks are clearly distributed and all important players are involved.

The Federal Ministry for Health commissioned an industrial consortium (bit4health) under the auspices of IBM Deutschland GmbH with the scientific and technical support of the project.

In January 2005 the top level associations of self-administration founded gematik – Gesellschaft für Telematikanwendungen der Gesundheitskarte mbH for the quick introduction and future further development of the Electronic Health Card.

This operating company has the task of introducing, maintaining and further developing the health card, the electronic prescription as well as guaranteeing other telematic applications, such as the electronic patient file. A key role is assigned to gematik GmbH in this context.

The shareholders of gematik GmbH, which has its headquarters in Berlin, include The Federal Chamber of Doctors and Dentists, The Federal Association of Statutory Health Insurance Doctors and Dentists, the German Hospital Association and the German Pharmacists' Association. They represent the so-called service providers in the health system.



The parties that bear the costs are represented in the shareholders' meeting by the Federal Association of the Health Insurance Providers AOK, BKK, IKK, the Federal Association of Agricultural Health Insurers, the Federal Miners' Health Insurers, the Sea Health Insurers, the Association of Office Workers' Health Insurers (VdAK), the Association of Workers' Health Insurers (AEV) and the Association of Private Health Insurers (PKV-Verband). Representatives of the Federal Länder and from the world of science and industrial associations sit in the advisory council of gematik GmbH. Patients' representatives, the Federal Data Protection Commissioner and the Federal Agency for Security in Information Technology also take part there.

The test phase

Interlinking all service providers in the health system and issuing 80 million people with personalised cards can take place only gradually because of the complexity of the demands. The introduction of the Electronic Health Card will therefore take place in several stages:

- The Electronic Health Card will be initially trialed under laboratory conditions and then in selected test regions before the new card is gradually issued nationwide.
- The individual functions and applications of the Electronic Health Card will be built up and introduced gradually.

The “Ordinance concerning test measures for the introduction of the Electronic Health Card”, which entered into force on 9 November 2005, specifies the general conditions of the test measures. Among other things, it regulates the test phase, both with regard to the extent of functions to be tested and with regard to the number of participating insured people in each section and stage.

In December 2005 laboratory tests started to demonstrate the functioning of the individual applications. Furthermore, this stage should also answer the question as to whether the card complies with the required data protection regulations.

The decentralised tests in various regions follow the laboratory tests. The basic suitability of the entire system for practical use will be trialled with these tests.

Initially the tests will start in model regions with approx. 10,000 insured people under real usage conditions. This will take place in eight Federal Länder: Baden-Württemberg, Bavaria, Bremen, Lower Saxony, North Rhine-Westphalia, Rhineland-Palatinate, Saxony and Schleswig-Holstein. After evaluation of these tests and any adjustments that may be necessary, the card will then be tested in regions with around 100,000 insured parties.

The insured people will then be informed by their health insurance provider of when their personal Electronic Health Card will be issued.



Administrative data

From the very start, the Electronic Health Card contains so-called administrative data, such as are stored on the previous insurance card. These are personal information: name, date of birth, sex and address.

Furthermore, there will be information on the health insurance, such as health insurance number, insurance status (member, family member or pensioner) and personal surcharge status (two per cent or, in the case of people with a chronic condition, one per cent of annual gross income).

Braille

Labelling the card with Braille is being trialed in the test phase. “EGK” for “elektronische Gesundheitskarte” (Electronic Health Card) is to appear in Braille on the bottom right-hand corner of the front of the Electronic Health Card.

Digital signature

With a Health Professional Card the doctor can generate a qualified electronic signature that replaces the former hand-written signature, for example when issuing an electronic prescription.

eHealth

eHealth is used as an umbrella term for applications of information technology (IT) systems to process health data. eHealth includes a large number of IT-based systems where data can be stored electronically, exchanged over secure data connections and evaluated using computers.

If patients so desire, they can have emergency data, such as drug intolerances, allergies and chronic conditions, stored in one of the sections on introduction of the health card.

Emergency data

From the outset, the European Health Insurance Card (EHIC) will be printed on the back of the Electronic Health Card.

European Health Insurance Card (EHIC)

This operating company gematik GmbH has the task of introducing, maintaining and further developing the health card, its applications and guaranteeing the supporting technical infrastructure. A key role is assigned to it in this context. The top-level associations of self-administration are the shareholders behind gematik GmbH, which is based in Berlin.

gematik–Gesellschaft für Telematik-anwendungen der Gesundheitskarte mbH

Administrative data such as patient's name, insurance status, health insurance provider and date of birth are stored on the Electronic Health Card. Most of these data can be read freely with the help of a reader device without any additional security measures. All other data are saved on the Electronic Health Card in areas designed for this purpose which are then accessible only together with a Health Professional Card and, in most cases, only after authorisation by the patient (entering the PIN). Thus, for example, the electronic prescription or a reference to it is stored in one area of the card.

Health data

If patients so desire, they can have emergency data stored in another area of the memory in one of the first stages of the introduction of the health card.

Health Professional Card (HPC/HBA)

The electronic Health Professional Card (HPC) is a central element of the security concept of the Electronic Health Card. Doctors, dentists, pharmacists and other health professionals are required to identify themselves with their electronic Health Professional Card every time they access an Electronic Health Card. Other professional groups who work in the health system will be able to have appropriate cards in future if they need access to parts of the health card for their work.

Insurance number

New insurance numbers will be issued along with the introduction of the Electronic Health Card. Just like pensions insurance, this number will remain the same for a whole life, even when changing the health insurance provider.

Mail-order pharmacy

Electronic prescriptions can also be redeemed at a mail-order pharmacy.

Medication documentation

In one of the first expansion stages of the Electronic Health Card, all medicines prescribed by a doctor can be documented when they are handed out at the pharmacy. Furthermore, there it will also be possible to allow non-prescription drugs to be stored. The medication documentation contains the medicines that the patient has actually received. The data are therefore updated by the pharmacist and, where appropriate, by the doctor. Because experience shows that not every prescription issued is actually redeemed in the pharmacy. The explicit agreement of the patient is always needed to save the information.

With the medication documentation doctors and pharmacists will have an overview of medication. This means that the current medication provision can be matched to the patient's existing medicines.

In a few years, the electronic patient file will combine a plethora of other medical data in addition to the actual personal data. It will be introduced in the wake of future expansion stages of the Electronic Health Card. Among other things, the electronic patient file can contain the individual health record, important laboratory findings, operation reports, X-ray images and digital data from other examinations.

**Patient file
(electronic)**

Patients have the right to view stored data. This means that they will receive a comprehensive overview of their own health data. Within the statutory scope, patients can determine which data are to be displayed and which not. What is important is that the insured people decide which data are stored, read and processed in conjunction with the health card.

Patients' rights

The insured person's data are also protected with the Personal Identification Number (PIN). The doctor can view the personal data only in conjunction with this number. However, the PIN is not needed for emergency data or the electronic prescription.

**Personal
Identification Number
(PIN)**

Prescription (electronic)

An electronic prescription is a paperless prescription that the doctor can save on or with the help of the Electronic Health Card. This works only in combination with the electronic Health Professional Card. The electronic prescription is drawn up in the doctor's surgery on a computer and is redeemed at a pharmacy or mail-order pharmacy.

The doctor's Health Professional Card adds the doctor's electronic signature. The electronic prescription is redeemed at a pharmacy and deleted only when the patient has received his or her medicine.

Security and data protection

Doctors, dentists, pharmacists and hospitals can access sensitive health data only via an encrypted communication route. In this connection, they have to identify themselves to the system with strict security using their electronic Health Professional Card.

In addition, the patients must give their consent to the data access with their health card and their person.

Self-administration

In Germany, statutory health insurance is implemented jointly by independent administrations with their own legal personalities. According to the principles of democratic self-administration, the statutory health insurance providers and associations of statutory doctors and dentists meet their task of providing health care to the public. Self-administration has the statutory task of expanding the Health Insurance Card into an Electronic Health

Card. To this end, it formed the operating company gematik.

The word telematic is formed from the terms telecommunication and information technology. It means nothing more than that data records from remote computer systems are connected with each other over a remote data connection. Telematic is the foundation for providing services across areas in networked medicine.

This means that GPs can use telematic to communicate better with specialists and they can use it to communicate better with hospitals. Results and treatment plans can be exchanged more easily and are available directly at the location of current treatment.

Trials with the Electronic Health Card started with laboratory tests at the end of 2005. Practical trials will take place in selected test regions on a section-by-section and step-by-step basis. The nationwide issue of the Electronic Health Card will gradually be organised from the test regions.

Telematic

Test regions

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