getemed

Foto: plainpicture/Mira

Telemonitoring

Modern communication solutions for
fast and reliable patient care

Cardiac function diagnostics

Vital signs monitoring

Telemonitoring

Telemonitoring
Solutions for a modern healthcare

Demographic developments and the rapid increase in chronic illnesses such as congestive heart failure and diabetes account for the enormous potential of telemedical solutions. Telemonitoring in particular is becoming more important as a means to combat the problems associated with these developments. It can be used to enable high-risk patients to independently and regularly record their vital-signs data and information about their state of health and to provide this information to their doctors. Networked systems can detect relevant changes in the state of health quickly, thus improving the patient's care and quality of life.

Innovation – the telemedical platform
GETEMED has been providing systems for out-patient care of high-risk patients for over 25 years and has been a pioneer in telemonitoring for over ten years. The latest innovations include an open telemedical platform which was developed jointly with Deutsche Telekom AG. It spans the complete data chain, from end devices used by the patient at home to the patient's file located in a telemonitoring centre, hospital or doctor's practice.

Mobile telemonitor for home use – PhysioMem®
The patient can use PhysioMem® to record a three-channel ECG as well as blood oxygen saturation (SpO_2) at home and transfer the data to the doctor in charge. Depending on the symptoms or events, the patient can

carry out a daily two-minute measurement or activate continuous online streaming of ECG and SpO_2 to the telemonitoring centre.
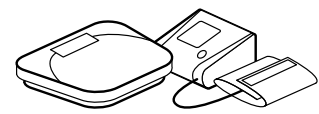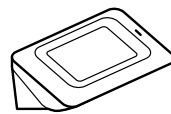
Heart of the system – the PhysioGate®
The versatile communication unit PhysioGate® forms the heart of the system in out-patient care. Data from all ambulatory medical and/or non-medical end devices are collected by PhysioGate® and sent to the patient files in encoded form via GSM or DSL. In addition to the data acquired by the end devices, the high-resolution graphical interface provides dialogs for patients to manually enter subjective data, e.g. to answer questions regarding their well-being or medication compliance, as well as to view graphs of the previous measurements taken. Due to its bidirectional communication capabilities, PhysioGate® can be configured to meet the needs of each individual patient.

eHealthConnect 2.0 networking platform
With eHealthConnect 2.0, the telemonitoring centre possesses an extensive data management and analysis tool developed by the Deutsche Telekom AG. The platform enables doctors to provide constant care for high-risk patients. It can be integrated into existing systems in hospitals or networks, or can be used as a service located on Deutsche Telekom's secure, high-performance computing centres.

Components

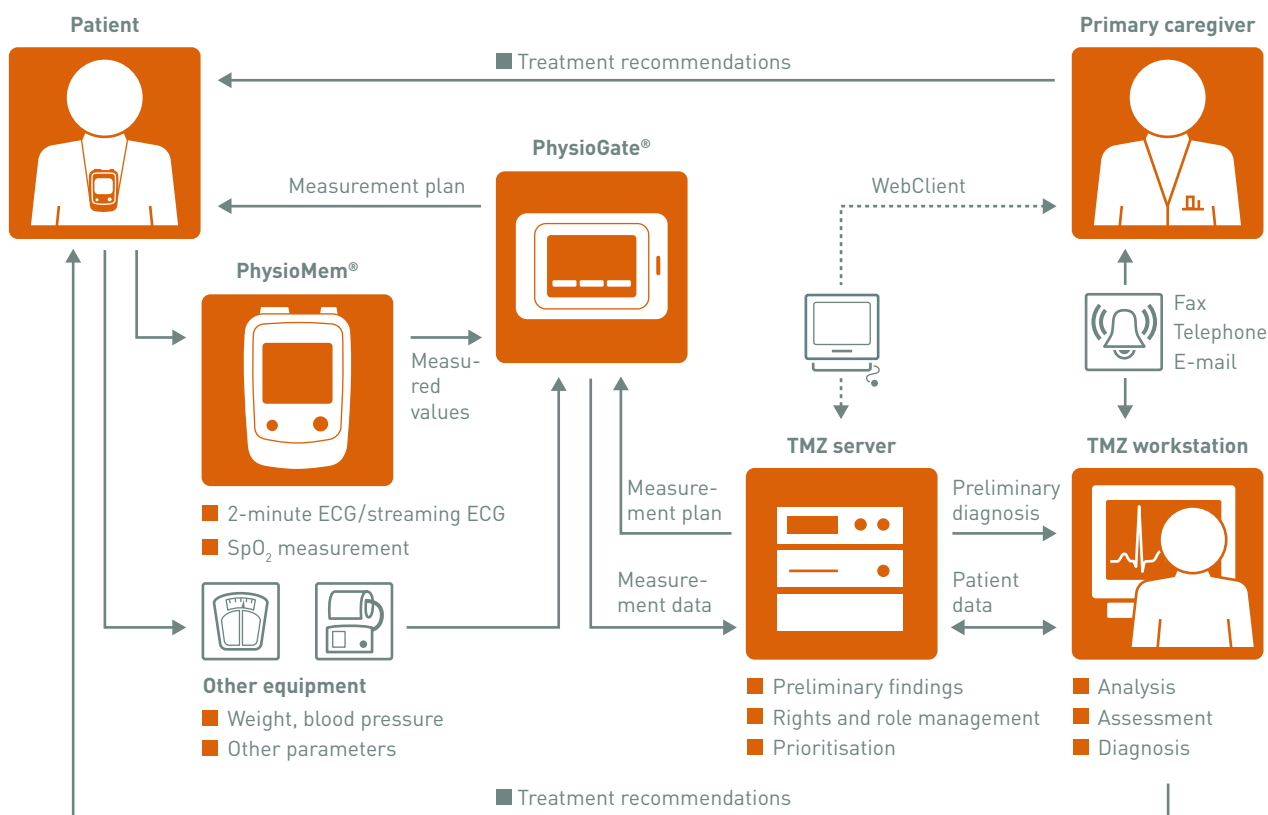| eHealthConnect 2.0	PhysioMem®	PhysioGate®	Other equipment
Application for the management and analysis of patient data in the telemonitoring centre	Mobile telemonitor device for recording ECG and oxygen saturation at home	Versatile communication platform – collects and transfers data from the home to the patient's file	Used by patients to easily monitor their blood pressure, weight, glucose, etc.

MASIMO SET®

fast
reliable
efficient

Patient

Treatment recommendations

Primary caregiver

PhysioGate®

Measurement plan

WebClient

PhysioMem®

Measu-
red
values

Fax
Telephone
E-mail

- 2-minute ECG/streaming ECG
- SpO$_2$ measurement

Other equipment
- Weight, blood pressure
- Other parameters

Measure-
ment plan

Measure-
ment data

TMZ server

Preliminary
diagnosis

Patient
data

TMZ workstation

- Preliminary findings
- Rights and role management
- Prioritisation

- Analysis
- Assessment
- Diagnosis

Treatment recommendations

Complying with medical standards
The eHealthConnect 2.0 platform supports the most common medical standards for networking care providers, cost centres and patients. Significant performance features include the central management of master data (Master Patient Index), the administration of medical data (eGA, ePA), import and export functions (e.g. diagnoses, reports or images), interfaces (e.g. HL7 v2/v3, DICOM, IHE), long-term archiving, coding support (e.g. ICD 10), authorisation and access management, device administration and the integration of patient call systems.

Standard values provide orientation
The encoded data that is sent daily to the electronic records in the telemonitoring centre by the patients is assigned to the corresponding patient, analysed and compared with the standard values stored in the file. This results in priorities for the system users to influence their workflow, i.e., patients with deviating daily values or conspicuous analysis results are placed higher on the processing list and will be attended to first.

Fast response in the event of a call for assistance
Incoming patient calls for assistance can be taken straight away. When a patient calls, their file opens with all the information concerning their state of health, their address, the nearest medical services and the contact details of other caregivers. A live transfer of the ECG and the oxygen saturation can be started if necessary. All results are compiled clearly and can be viewed or received by other authorized caregivers.

Highlights

Versatile communication platform

Supports various care programmes

Fast and regular availability of vital-signs data

Prompt response by carers of chronically ill patients

Increased patient compliance

Better quality of life

Optimisation of healthcare costs

getemed