



Vital for Diabetes



Vital cooperation...

1. Introduction

The healthcare sector continues to see rapid developments in research, financing, cooperation, transparency and organization. At the same time, healthcare costs are on the rise, largely due to the steady increase in the number of patients with chronic diseases, such as Diabetes, Chronic Obstructive Pulmonary Disease (COPD) and Coronary Artery Disease (CAD).

Healthcare professionals are faced with the challenge to utilize existing resources in the most effective manner, while maintaining or improving the quality of care. This forces us to think about the most optimal form of disease management and integrated care networks. Effective organization of these requires IT solutions that go beyond the capabilities currently offered to healthcare professionals.

For instance, software solutions should support task delegation, workflow, multi-disciplinary cooperation, and extensive reporting, with the focus on maximizing the quality of patient care. This is obviously a complex challenge, also given the fact that many patient need treatment for multiple co-morbid chronic diseases.

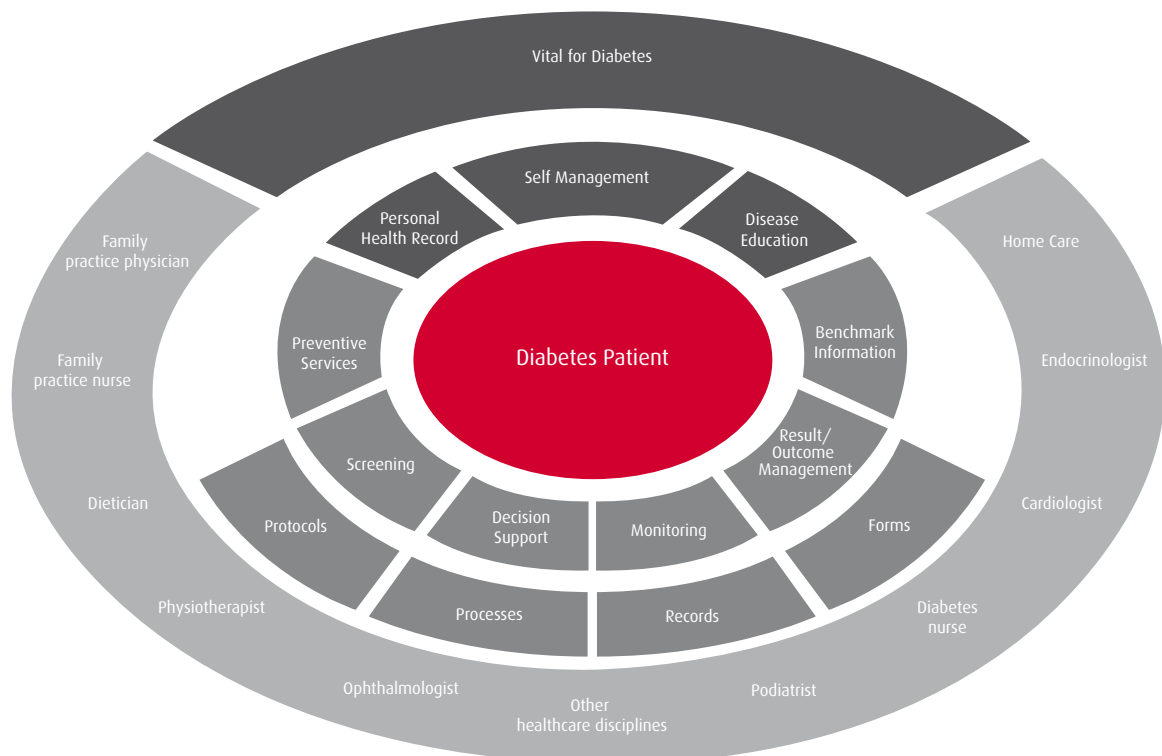


fig.1 Vital for Diabetes supports the entire integrated care networks

Disease management
Preventive services
Screening
Protocol based treatment
Task delegation
Structure data capturing
Treatment plans
Patient self-management
Education
Integrated care network
Cooperation
Care options
Outcomes/Results
Reporting
Benchmark information

fig.2 Aspects of disease management

Change is a constant for healthcare organizations and treatment protocols, which requires software that is flexible and covers a wide spectrum of disciplines. Current IT systems are too rigid in functionality, and mostly focus on administrative functions, falling short in supporting multi-disease management and integrated care networks.

Software Platform

VitalHealth is the first global software vendor offering a web based platform that is generic and flexible enough to make multi-disease management and integrated care network support a reality, for both care providers as well as the patients themselves.

VitalHealth

VitalHealth was founded as a joint-venture by the Mayo Clinic (USA) and the Noaber Foundation. The objectives of VitalHealth are to deliver both economic as well as social return. The Mayo Clinic, an internationally recognized top clinical institute, provides VitalHealth with clinical knowledge and is an early adopter of the VitalHealth products. The Noaber Foundation is a Dutch institution that focuses on social venturing in the healthcare IT sector.

2. Our solution

Our Software

DVitalHealth's initial focus is to support diabetes disease management with our Vital for Diabetes solution. Next to that VitalHealth has developed a solution for managing the treatment of COPD and Asthma in the context of integrated care networks. Solutions for other chronic diseases,

such as congestive heart failure (CHF), Coronary Artery Disease (CAD) and Depression are in the pipeline. Next to that we will be addressing the management of lifestyle issues, such as smoking/tobacco use or excessive weight.



fig.3 Patient Self-management screen

kenmerk	IT huidig	Vital Health
gestructureerd data vastleggen	✗ ✓	✓
integratie HIS of ZIS	✗	✓
protocol based	✗	✓
webbased	✗ ✓	✓
beslissing ondersteuning	✗	✓
zelfmanagement	✗	✓
populatie management	✗	✓
rapportage	✗	✓
multidisease	✗	✓
interdisciplinair	✗	✓

fig.4 Characteristics of current IT solutions versus VitalHealth

Patient Focused

Disease management is most effective when the patient is actively involved in the process. With Vital for COPD - Asthma, patients can be given direct access to relevant areas of their electronic

medical record. Patients can actively participate in the treatment process, for instance by entering information about lifestyle and eating habits, glucose levels, blood pressure or weight, all from the comfort of their homes. Patient entered information is validated by the system before being added to the electronic record. Direct patient access can extend to education as well, such as lifestyle issues. Self-management is not only motivating for the patient, it also provides a more complete patient profile to caregivers.

Integrated care networks for COPD and Asthma

In order to provide optimal care to patients with chronic disease, it is imperative that all the disciplines involved in the care process can cooperate smoothly. IT solutions should not only provide maximum support for each individual discipline, but must also provide effective information exchange between the disciplines. To that effect, Vital for Diabetes supports the concept of "roles". For instance, a family practice physician will see a different view of the electronic record than a diabetes specialist. The solution provides role-specific functionality and recommendations, with extensive support for task delegation between the different roles/disciplines.



Vital insights...



...Vital life

Proactive support

Vital for Diabetes is primarily focused on the actual treatment process itself, adhering to published, standardized guidelines. Based on these guidelines the solution generates relevant checkpoints, recommended actions, treatment advice and referral advice. It also alerts caregivers to results that fall outside the norm.

Integration

VitalHealth solutions are inherently open to complex integrations with existing systems. This includes standards based integrations such as EDIFACT, making labs data and free text information accessible to Hospital Information Systems, avoiding the inefficiencies and inaccuracies of double data entry. More extensive integrations are supported as well, virtually a must in the current healthcare IT environment.

Flexibility

Healthcare has transformed itself into a dynamic environment. Family medicine practitioners are establishing care networks based on multi-disciplinary cooperation. Insurance providers are expecting increased cooperation and require extensive process and outcomes reporting.

Guidelines are continuously improved based on higher quality standards and new insights gained through research. Vital for Diabetes was developed based on a new generation of software. By defining the solutions through “modeling” rather than traditional software code, they can easily

and quickly be adjusted without the need for “hard-core programmers”, avoiding lengthy and costly development cycles. This approach allows for quick adoption of changing guidelines, workflows, task delegations and reporting needs.

Web based

VitalHealth solutions are web based, and can be accessed from any location with just a browser and an Internet or network connection. This ensures easy and maximum availability to users, which is important to both care givers as well as patients. The user interface will feel familiar to any user that has browsed the web before.

Generic

Vital for Diabetes is our first product based on our VitalHealth Platform. The modeling capabilities of the platform allow for easy modifications and adjustments of the models, for instance to adjust to the most recent accepted national or international guidelines for chronic diseases management. The generic nature of our platform enables optimal support of the dynamic nature of integrated care networks and disease management.

Vital for Diabetes is a must for:

- **Family medicine practices
with one or more physicians**
- **Transmural diabetes care initiatives**
- **Home care organizations**
- **Hospitals with diabetes specialists**



3. Our functionality

Role based

Every individual discipline involved in the care process - such as physician, endocrinologist, diabetes nurse or nurse practitioner, podiatrist and ophthalmologist - are supported. The information presented in application screens is role-specific.

Data capture

Vital for Diabetes enables caregivers to quickly capture information that is relevant to the treatment of a patient, much like filling out a web based form. This simple, structured manner of data capture forms a basis for extensive reporting on quality and quantity of care.



fig.5 Summary screen for caregiver

Protocol based

VitalHealth solutions are inherently enabled to adhere to the most recent standards and guidelines for managing chronic diseases. Through flexible modeling of rule sets, the system can easily be adjusted or augmented with localized guidelines and treatment protocols. This enables caregivers to provide consistent and proven high quality care.

Decision support

Vital for Diabetes identifies (potential) problems at an early stage. Based on a flexible model of rules that can be changed and adjusted as needed, the system can monitor e.g. glucose levels for out-of-range results and alert caregivers as needed, or send a request to the patient to contact the caregiver.

Referrals

Vital for Diabetes provides full insight into referrals made by caregivers, giving them a good understanding of the frequency and circumstances of referrals to other disciplines in the care network. This information is essential for maintaining efficiency in treatment. Referrals

can be transmitted in digital form, including the exchange of treatment comments, or advice via tele-consults.

Code systems

Vital for Diabetes is fully enabled to use coding systems such as ICPC, ICD-9-cm, ICD-10, ADA, Snomed and Simms.

Compensation

With Vital for Diabetes, caregivers can easily generate cost statements based on established rates and submit these to insurance providers. This capability makes it easier to effectively participate in integrated care networks from an administrative and financial perspective.

Population Management

As a caregiver, Vital for Diabetes enables you to actively manage your patient population, with efficient generation of e.g. quarterly or yearly checkpoints. Active population management will help early detection of potential problems, avoiding unnecessary progression of diseases and symptoms.

Patient self-management

Diabetes patients can be given direct access to their medical record through a web portal. This enables them to actively participate in the care process, with the ability to submit complaints, describe symptoms and enter test results of home based test instruments such as glucose meters. Vital for Diabetes actively monitors this information and generates alerts when necessary.

Result /outcomes management

Vital for Diabetes includes standard reports to both caregivers and management with indicators and outcomes/results of the treatment process. Structured data capturing helps paint a clear and accurate picture of the effectiveness and efficiency of care.

Vital for Diabetes summarized

Treatment process from diagnosis through monitoring

- Intake process
- Patient history
- Screening/Diagnosis
- Risk analysis
- Treatment plan
- Regular checkups
- Patient visits
- Referrals

Relevant treatment data

- Labs data
- Vitals
- Medications
- Foot exam
- Eye exam
- Diet
- Lifestyle
- Education

Support for entire care network

- Physician and Patient
- Physician's assistant
- Diabetes nurse
- Endocrinologist
- Dietician
- Physiotherapist and Podiatrist
- Ophthalmologist
- Cardiologist

Vital for Diabetes
improves diabetes care





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