

Documedis[®] : improved patient safety



Digitisation is enabling new, innovative ways to improve patient safety. The Documedis® eMedication solution from HCI Solutions increases transparency when dispensing medications, improves collaboration between the various service providers and thereby prevents medication errors. With Documedis®, Galenica is making an important contribution to promoting a safer, more efficient healthcare sector in Switzerland.

Currently in Switzerland, medication errors result in between 1,500 and 3,000 deaths every year and entail high additional healthcare costs¹⁾. It is often difficult for medical service providers to have a global view of the potential interactions and side effects of medications being taken. “Although the summaries of product characteristics for the various medications include all of this information, there is no time to read these long texts in detail”, explains Ulrich Schaefer, Head HCI Solutions. He goes on to say: “Patients are increasingly treated by several different service providers. In addition to their general practitioner, patients also have various specialist physicians, nursing staff, the pharmacist

or a physician working in a hospital looking after their well-being. Problems therefore often arise at the points where health services overlap. Due to the number of service providers and medications, entering and completing patient and medication data is taking an increasing amount of time. In light of this, HCI Solutions developed the Documedis® software module.

Life-saving warning symbols

A fictitious example demonstrates the specific benefits of Documedis® for both physician and patient: 54-year-old Petra Müller has been allergic to penicillin since she was a child. When she suddenly develops severe bronchitis, she is admitted to hospital as an emergency. The physician wants to prescribe her an antipyretic and a penicillin antibiotic. He enters both in her electronic patient dossier in the hospital IT system, which activates the Documedis® Clinical Decision Support Check (CDS Check, see image below). The patient characteristics are matched to the medication and violations of limits and other alerts are shown in the form of warning symbols. The treating physician sees immediately that the patient is allergic to penicillin, meaning that the intended antibiotic is contraindicated and harmful to her health. Medication errors and negative consequences for health can therefore be avoided. The Documedis® CDS Check tool should be available on the Swiss healthcare market from 2018 as the first system certified throughout Switzerland.

¹⁾ OECD country comparison of avoidable mortality, Gay, J. G. et al.

Overview of all Documedis® CDS Checks

The Clinical Decision Support Check (CDS Check) is a set of 13 checks which rapidly and efficiently check medication being taken or planned.



Allergy
to active
ingredients



Allergy
to non-active
ingredients



Doping



Dosage



Double
dosage



>65
Old age



Driving



Liver disease



Food interaction



Kidney disease



Reproduction



Drug interaction



Flycicle CH
(only hosp.)

Sustainability coverage

Various service providers – one medication plan

“Documedis® helps physicians obtain a simple, rapid overview of the most significant risks for their patients and helps them to choose the right drug therapy, thereby preventing medication errors such as overdose, intolerance or dangerous interactions”, explains Regina Andenmatten, Head Medical Data at HCI Solutions. Documedis® can be used by hospitals, medical practices, care homes, Spitex organisations, pharmacies and blister packaging centres, and therefore helps to network these players. The software module is targeted at the needs of the healthcare market and can be integrated into existing local IT systems. Documedis® is also available as a web application for electronic tablets.


Moreover, using Documedis®, an electronic medication plan (eMediplan, see image below) can be created, printed and given to the patient. This eMediplan summarises all of the

patient’s medication-relevant data, and can be read using the QR code and added to at each further treatment session, without the data having to be stored centrally.

Ulrich Schaefer notes that, thanks to Documedis®, collaboration between the various service providers can be improved and efficiency increased at points of overlap. He gives the example of an elderly patient in a nursing home: “The patient has a rash and goes to see a specialist who prescribes him a medication. The nursing home staff enter the medication in the facility’s software, which has all the patient’s medications recorded, and forwards the medication plan to the pharmacy. The pharmacist only has to scan in the QR code on the medication plan to gain immediate access to all relevant information to check the medication. The order could also be sent to a blister packaging centre, such as Medifilm, which packages medications in a patient-friendly way.”

eMediplan

The eMediplan clearly summarises all of a patient’s current medications. Patients can see at a glance what medication they need to take in what quantity, at what time and for how long. The QR code enables healthcare professionals to scan in the information from the eMediplan, thereby transferring it to their own IT system without additional effort.




Swiss Medication Plan

Doris Muster
23.03.1950 (F)
Rue Chante, 1200 Genf / +41 79 123 45 67

Size / Weight : 165 cm / 71 kg
Renal insufficiency : Light
Allergy/Allergies : Penicillin-Allergie

Printed by :

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Eflingerstrasse
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Latest state: 04.11.2017 15:11

Medication	Morning	Noon	Evening	Nocte	Quantity (qty)	Type of medication	From Up to and including	Instructions	Reason	Prescribed by
CIPROXIN Lacktabi 500 mg Ciprofloxacin	1	-	1	-	tab	Daily	24.08.2017 02.09.2017	After meals	Infection	Dr. Hans Kauf, Bern
CO-DIOVAN Filmtabl 160/12.5 mg Valsartan, Hydrochlorothiazid	1	-	-	-	tab	Daily			Hypertension	Dr. Eric Dubois, Genf
SORTIS Filmtabl 20 mg Atorvastatin	-	-	1	-	tab	Daily			Cholesterol reduction	Dr. Eric Dubois, Genf
SERESTA Tabl 15 mg Oxazepam	-	-	-	1	tab	Daily			Tranquilizer	Dr. Eric Dubois, Genf
Medications in reserve										
PANADOL S Filmtabl 500 mg Paracetamol	Show instructions							take one tablet max. 4 times a day	Pain	Self medication

Remark :

Fictitious example of an eMediplan

Physicians can also create, send or print out an electronic prescription (ePrescription) directly from Documedis®. The patient and drug information are automatically transferred from the eMediplan. ePrescriptions make it easier to enter medications in the pharmacy, improving patient safety at point of supply. Electronic prescriptions make illegible prescriptions and transfer errors a thing of the past. Documedis® is also integrated in Triapharm®, the Galenica management software solution for pharmacies.

Practitioners give a positive verdict

Med. pract. Alexander von Kameke, Specialist in Pharmaceutical Medicine at the Cantonal Hospital of St. Gallen, took part in the pilot project. He is convinced: “The Documedis® CDS Check will be used in the nine hospitals serving our four regions and in the St. Gallen Geriatric Clinic. It will enable us to check drug prescriptions even as they are being entered. The introduction of standardised drug master data and the Documedis® CDS Check has sustainably increased drug treatment safety, thereby making a considerable contribution to improving patient care.”

A further step towards eHealth

Looking to the future, Regina Andenmatten says: “Over the next few years, we will further expand the functionality of the software module and patient’s health information with additional elements, such as their risk of diabetes.” Documedis® is another step towards the digitisation of the Swiss healthcare industry and supports the vision of eHealth Switzerland 2.0, which aims to improve the quality, safety and efficiency of the healthcare system using digital solutions. “Our simple, intelligent, networked solutions are making a major contribution to achieving this”, summarises Ulrich Schaefer.



Top priority for data protection

Data protection is becoming increasingly important when designing an IT system. Patient data are particularly sensitive in the healthcare industry. Care was therefore taken from the outset to maintain the highest security standards in the Documedis® project. For example, all data traffic uses encrypted connections in accordance with the latest industry standards. Care is also taken to ensure that data are anonymised and are not saved anywhere as far as possible. The IT platform used is the reliable, fully secured Galaxis IT infrastructure at the data centre in Niederbipp (canton of Bern).