



Synchronizing the World of Healthcare

CompuGROUP Holding AG

Synchronizing the World of Healthcare



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Medical data sharing

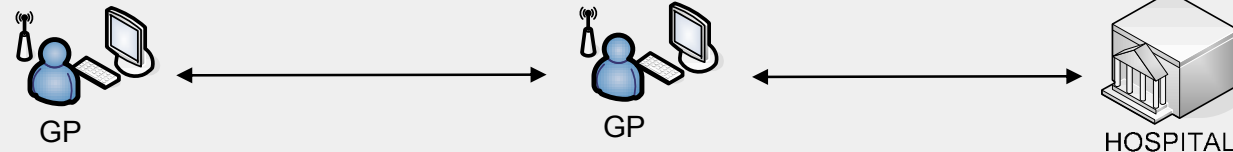
Electronic Health Records



medical data sharing



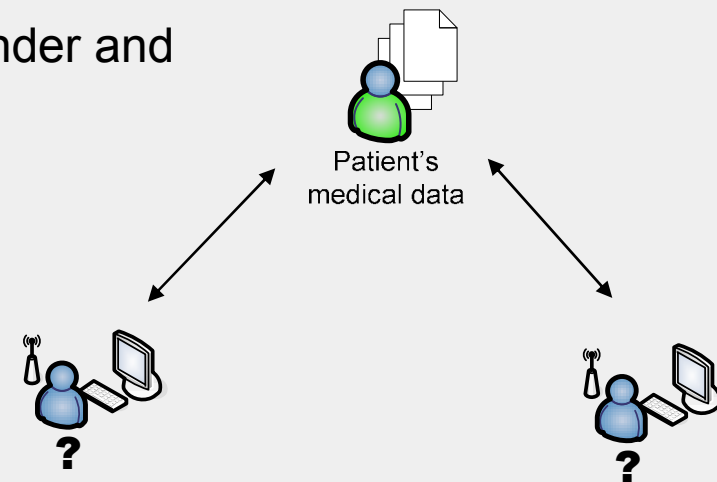
directed:

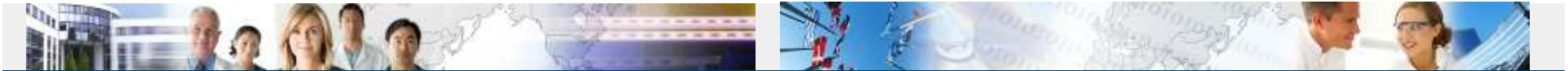


- part of the usual medical treatment process
- transfer of specific medical documents – at a certain point in time
- information-exchange between one sender and receiver

non directional:

- receiver/ time of usage is unknown
- requires a central storage for medical data (or something similar)



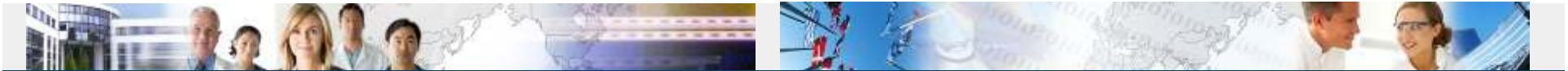


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EHR for patient centered care challenges



- medical data repository
 - inter-connect existing repositories (data from HIS, GP,...)
 - build a new form of medical data repository
- patient identification
 - Master Patient Index / Smart-Card
- access control
 - Health provider registry
 - Role-based access-control
 - Auditing
- data protection
 - strong encryption
 - Unreadable without patient's explicit consent/authorization
- data governance
 - Who owns the data? The patient?
 - content control?



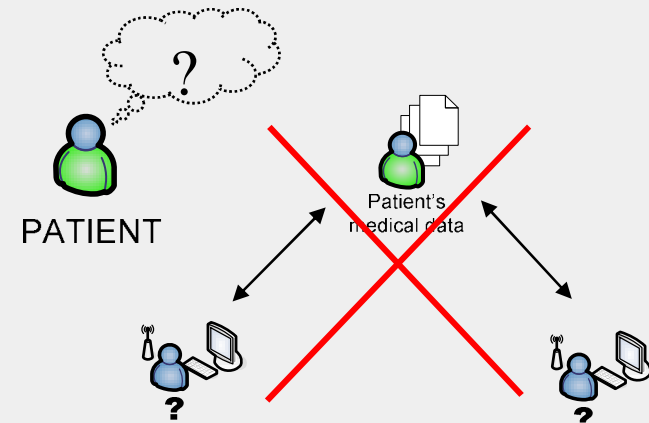
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EHR for patient centered care

- a different approach ...



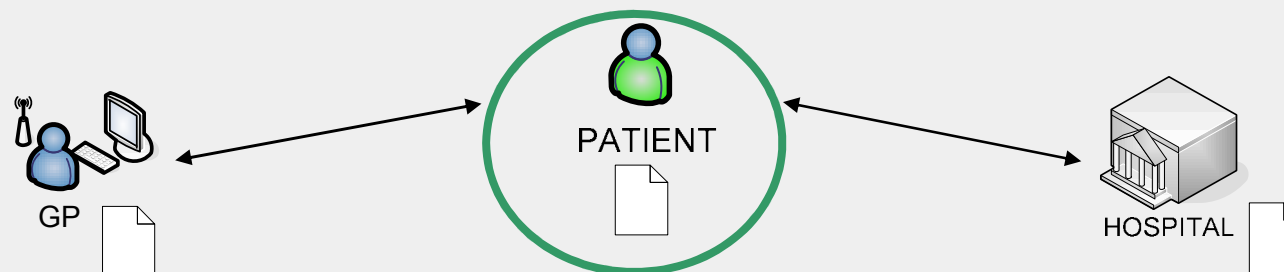
non directional data sharing
does not really put the patient
in the center of the medical treatment
process.

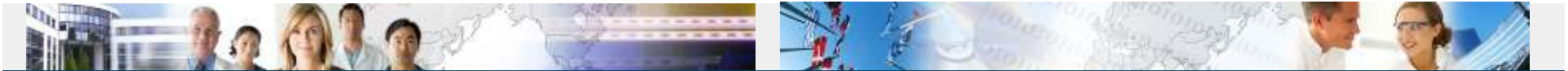


Empowering the patient!

Use directed medical data sharing!

The patient as 'owner' of a medical data repository (his/hers Health-Record) acts as sender/receiver of medical documents – equal to other health providers.





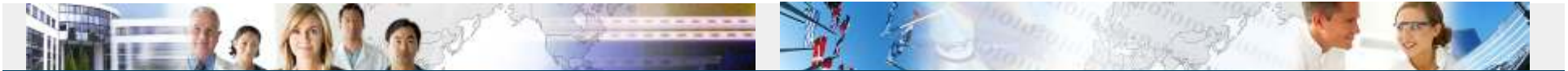
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EHR for patient centered care

- with directed medical data sharing



- Accept the patient's role
 - Active player (receiver and provider of med. information)
 - right for privacy, security
 - self-determination / data governance (opt-in, full control)
- Define the new role of the family doctor
 - 'manager' of his patient's EHR?
 - advisor in terms of 'what to share with whom'
 - content-manager
 - strengthens doctor-patient relationship
 - operational expenses need to be refunded



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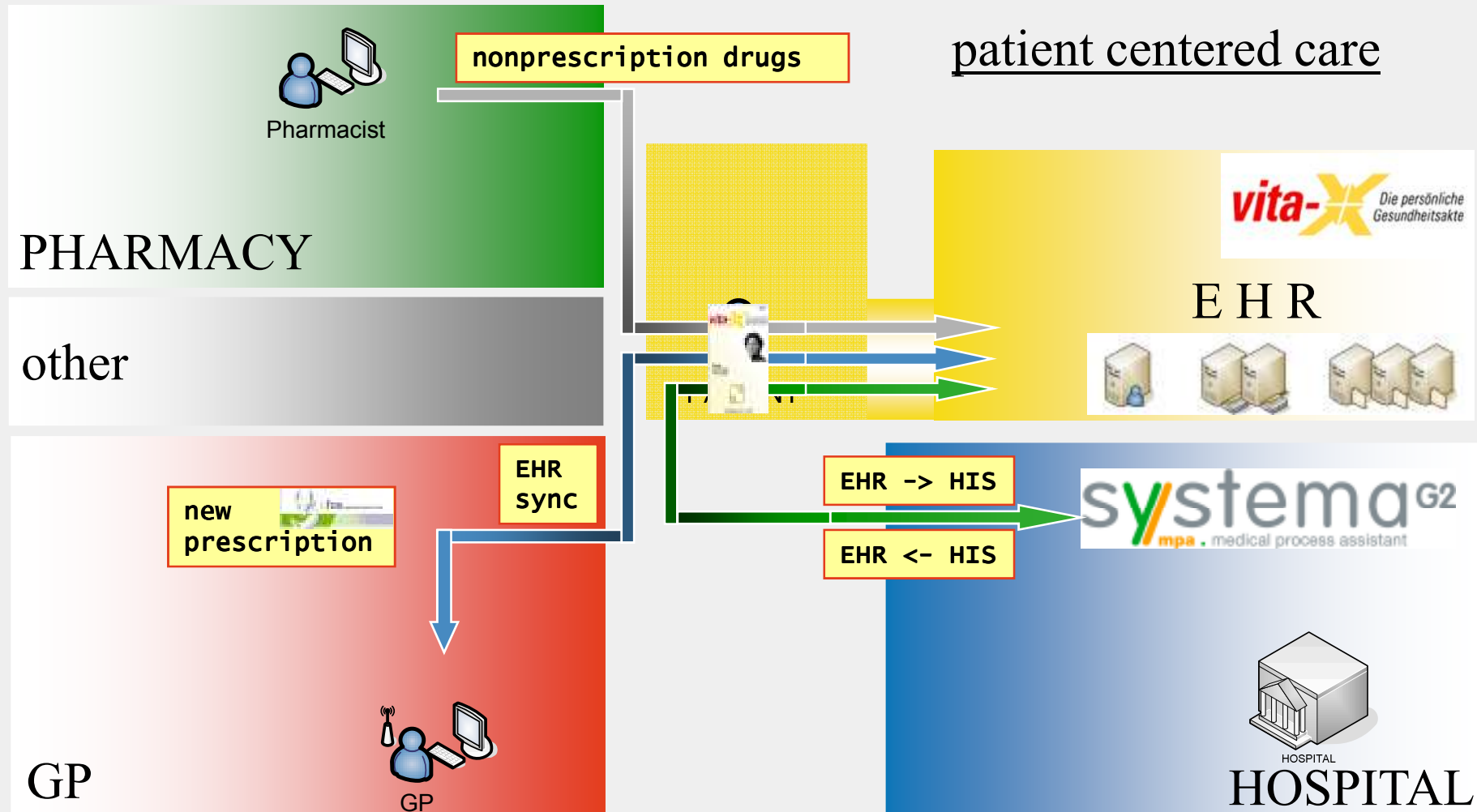
Medical data sharing

CompuGROUP Solution Portfolio

vita-X Health Record



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overview



- Electronic health record (server based)
- Patient-driven and GP-managed
 - The physician records the information
 - The patient holds final authority on the information
- Enables patients to act as an 'active player'
- Secure container for personal medical data





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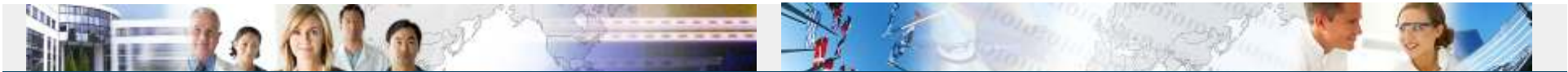
security



Data Protection has the highest priority!

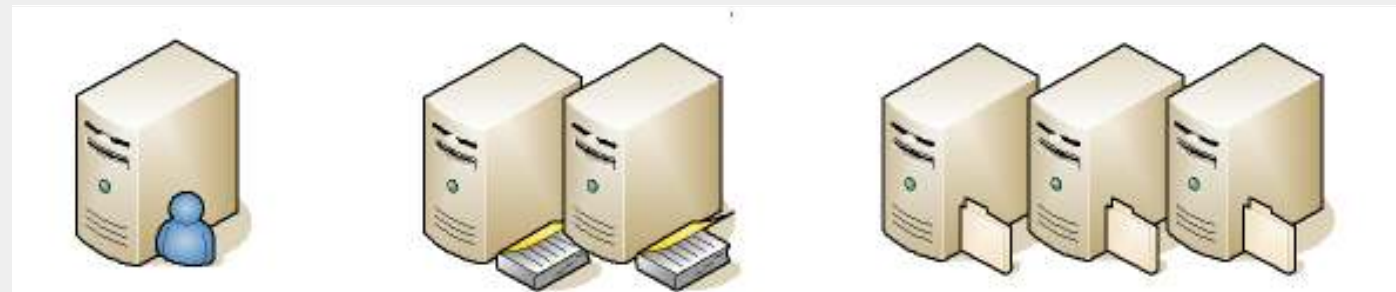
- keys are stored on the smart-card
smart-card & pin-code are needed to access the EHR
- data is always transferred in encrypted form
encryption/decryption performed by client-adaptor
- data is stored 'anonymized'
cannot be associated with a physical person
- data is 'fragmented'
encrypted EHR-objects are spread over different data-servers





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architecture



logon servers

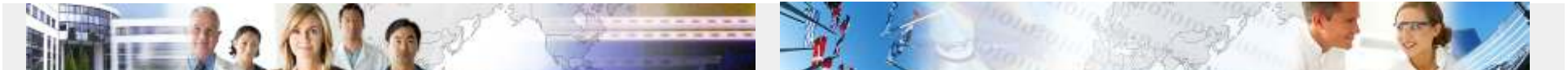
directory of authorized users, provides session-keys

directory servers

stores pointers to data-packets

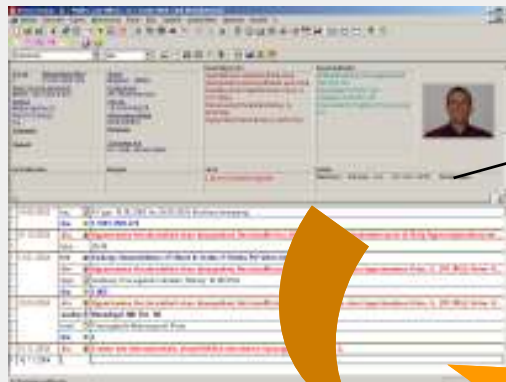
data servers

anonymous data-packets, encrypted with session-key



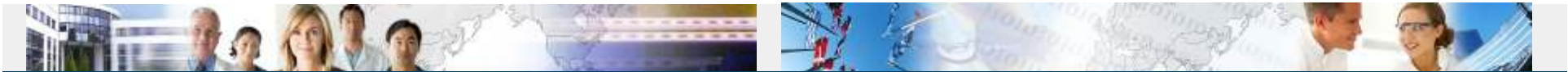
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use-case: GP



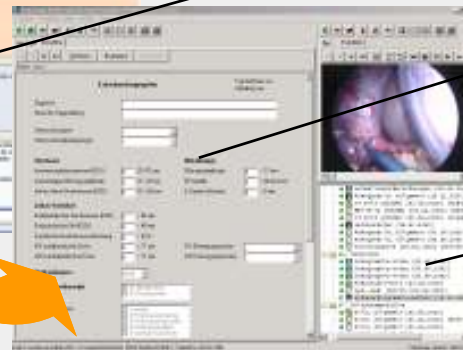
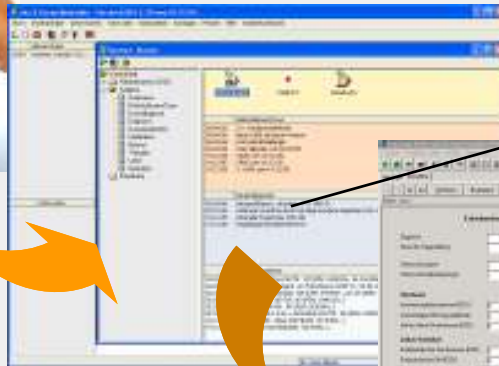
Patient grants GP access.
GP transfers relevant
documents to the
vita-X health record

Result:
patient 'virtually' carries
all relevant medical data



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use-case: Hospital - admission

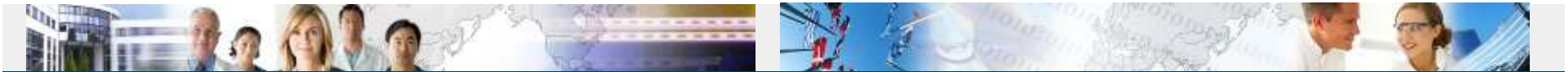


patient grants hospital
access to his
vita-X health record

admitting doctor selects
relevant data.

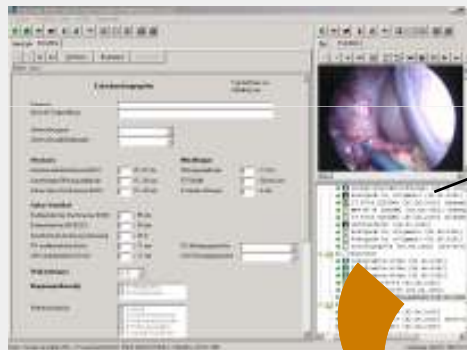
selected data is imported into
the HIS-medical record of the
patient

Result:
patients medical history is
available in HIS-system

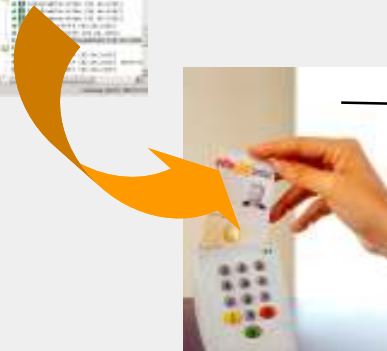


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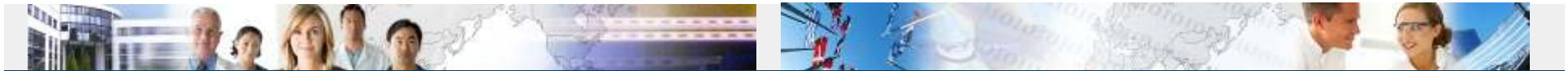
use-case: Hospital - discharge



Hospital transfer's
relevant data to patients
vita-X health record



Result:
relevant documents of patient's
last hospital stay are stored in
the **vita-X** health-record



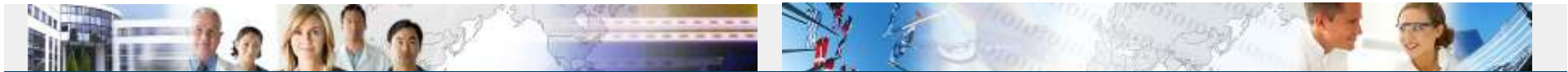
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patient access



- **vita-X** Terminal in Hospitals
- Web browser
(**vita-X** integrated into an eHealth-Portal)





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access control



The family doctor assists the patient.

- occupational category
- medical field
- ...

Zugriffsrechtevorlage erfassen

Vorlage:

Berufsgruppen (Zugriffsrechte)

alle Berufsgruppen alle Ärzte bestimme Fachgruppe(n) gleiche Fachgruppe betreuende Praxis

Apotheken Zahnärzte Krankenhäuser Patient

Autor

Fachgruppen (Zugriffsrechte)

<input type="checkbox"/> Allgemeinmedizin	<input type="checkbox"/> Angiologie	<input type="checkbox"/> Anästhesiologie
<input type="checkbox"/> Arzt - Hausarzt	<input type="checkbox"/> Augenheilkunde	<input type="checkbox"/> Chirurgie
<input type="checkbox"/> Diagnostische Radiologie	<input type="checkbox"/> Endokrinologie	<input type="checkbox"/> Fachwissenschaftler Chemie und Labora...
<input type="checkbox"/> Frauenheilkunde und Geburtshilfe	<input type="checkbox"/> Gastroenterologie	<input type="checkbox"/> Gefäßchirurgie
<input type="checkbox"/> Hals-, Nasen-, Ohrenheilkunde	<input type="checkbox"/> Haut- und Geschlechtskrankheiten	<input type="checkbox"/> Herzchirurgie
<input type="checkbox"/> Humangenetik	<input type="checkbox"/> Hämatologie und internistische Onkologie	<input type="checkbox"/> Innere Medizin
<input type="checkbox"/> Kardiologie	<input type="checkbox"/> Kinder und Jugendlichen Psychotherapeut	<input type="checkbox"/> Kinder und Jugendpsychiatrie und -psy...
<input type="checkbox"/> Kinderchirurgie	<input type="checkbox"/> Kinderheilkunde	<input type="checkbox"/> Laboratoriumsmedizin
<input type="checkbox"/> Mikrobiologie und Infektionsepidemiol...	<input type="checkbox"/> Mund-Kiefer-Gesichts-Chirurgie	<input type="checkbox"/> Nephrologie
<input type="checkbox"/> Nervenheilkunde (Neurologie und Psych...	<input type="checkbox"/> Neurochirurgie	<input type="checkbox"/> Neurologie

Zugriffsrecht für Patient, Autor und ...



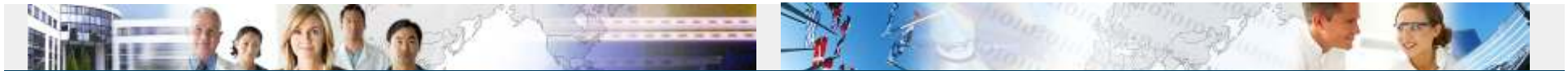
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benefits/conclusions



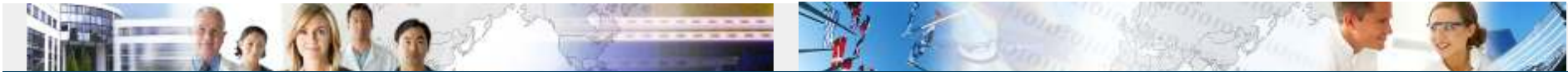


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benefits



- high secure data container under the patient's governance
 - cost-effective solution on regional or nationwide level
 - central storage vs. decentralized approach
 - optimizes the medical treatment process
 - referral, medical therapy / drug safety,...
 - preserves confidentiality (doctor – patient)



Thank you for your attention.

Contact

If you have any questions or need more detailed information on CompuGROUP's software-solutions, do not hesitate to contact us.

Visit our Web-Page at **www.compugroup.com** to request product-specific information.