MONA-SYSTEM HEALTHCAREADVISORY AND CONSULTANCY IT-SYSTEM

Author:
László Zsonda,MD,
consultant

2015

Contents

Introduction. Brief presentation of the main topics of the project 4

Section 1.

Goal and development of the MONA-SYSTEM Health Care Advisory and Consultancy IT System 6

1.1 Goal of the development 6

1.2 Creation of the MONA-SYTEM Health Care Advisory and Consultancy IT System .. 7

1.3 Structural and organizational frame of the health care advisory and consultancy IT system 7

1.4 Users connected to the IT system 7

SectionII.

Integrated Health Care Institution Modell **13**

SectionIII.

Reorganization of primary health care and of central GP attendance **18**

a) Suggestion for a reorganization **18**

b) Cost efficiency significant data **21**

Chapter IV.

Education of population, training of doctors and of skilled healthcareworkers ... **22**

Abstract **23**

Introduction. Brief presentation of the main topics of the project

Nowhere inthe world can one find a country or a region with an own, unitary, IT –based healthcare system, with the help of which an exhaustive health screening of the population, examination of patients picked at the screening actions and, if necessary,nursing of those, could be solved. Presently we can say, thereisno primary health care, emergency or institutional health care which should be based on unitary professional principles. Communication between population, healthcare units, institutions, health services and supervising authorities is presently unsatisfactory.

The'MONA-SYSTEM' - Health Care Advisory and ConsultancyIT System intends to improve this communication (The programme is presently subject of official licencing procedure. Its registration number is: P 13 00 143).

The main aspectsthe programme has been focused are:

- answer medical professional expectations
- training on health care of doctors, skilled healthcare workers and education of population
- nationwide professional, economic analyses of health care activity
- continuous supply of data on illness and death parametres of the population
- providecommunication background to healthcare in case of world epidemies and disasters
- decrease infectional hazards, risks of epidemies caused by migrations, migrational crises
- set up communication between diverse IT systems and the unitary database
- diminish healthcare quality differences caused by lack of personnel in some health care professions
- ensure equality of chances for people living in isolated environment, in the country, for the disadvantaged, for the disabled
- decreaserate of early, avoidable deaths, complacent health damagingandpercentage of those physically disabled

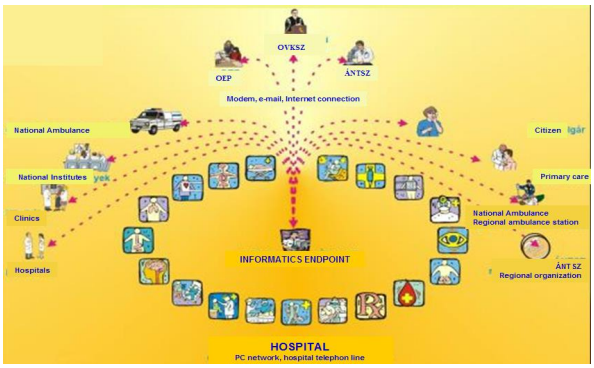
The system is an investment that will return shortly due to the decrease of complacent expenses, as soon as health state of population improves, the percentage of disabilities and mortality decreases, regional/teritorial and institutional healthcare becomes better organized and more efficient.

The aim of the MONA-System Health Care Advisory and Consultancy IT System (unitary IT system of a country or a bigger area)**is**:

- Realization of actual health care policy aims and of those of the healthcare reform
- Provide unitary, high-quality healthcare service
- Ensure healthcare equality in rural areas, for people living in disadvantageous/poor environment
- Decrease health care quality differences caused by lack of personnel in different service areas
- Improve quality of teritorial healthcare and that of medicine supply
- Improve health state of population
- Improve statisticsonmortality and illnesses

Developments connected to MONA-System Health Care Advisory and Consultancy IT System

Section I.(pag.6-12)

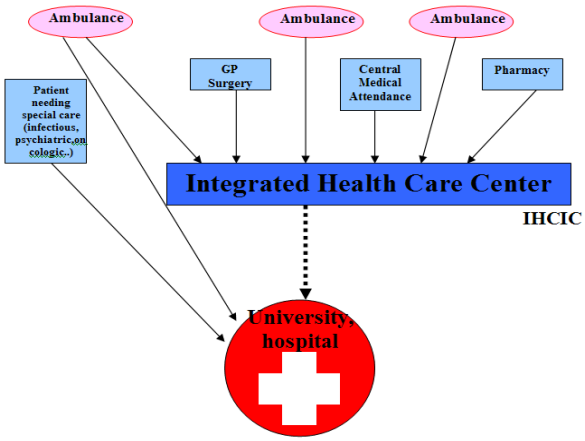


Why creating healthcare programme needs a unitary IT system?

In order to build upa unitary database for a country or a bigger area, a unitary health-care IT and consultancy system is necessary. A high-level healthcare service needs a unitary database. The population, the patients, the healthcare workers and services, all those who provide health care, and are entitled to,will need IT access to that database.

Building up a unitary healthcare advisory and consultancy IT system represents the first condition of the reorganization of the institutional- and teritorial healthcare of the country.

Section II. (pag.13-17)



The Integrated Health Care Institution Model – indispensable for the reorganization of the pre-hospital teritorial healthcare

The indispensable condition of the reorganization of the pre-institutional (pre-hospital) teritorial health-care is basicallythe creation of a model of an Integrated Health Care Institutional Centre (IHCIC).

In the health care teritory the unitary informatics system connects these institutions to primary health-care units, to central medical attendance services, to ambulance services, to pharmacies, toteritory coordinating and supervision services.

The Integrated HealthCare Institution (IHCIC) plays the role of a 'firewall' between the teritorial- and institutional healthcare services. As a result of those abovethe patient will get access to institutional, higher-level healthcare only if justified and, after proper care on the spot.

Section III. (pag.18-20)

Building up a unitary informatics network, necessary to reorganize population health screening, primary healthcare, central medical attendance, ambulatory rehabilitation, nursing, emergency service, ambulance service, medicine supply.

The unitary informatics system will help perform screening ofpopulation, examination of patients picked at screening, continuous control of patients who need nursing. The system will also provide primary, secondary and tertiary prevention,teritorial emergency service and collaboration with ambulatory rehabilitation and medicine supply.

Section IV. (pag.21)

Improving healthcare awareness of population, vocational training of doctors and skilled health care workers

The nationwide healthcare reform will only be succesful if besides realizing strictly professional programmes, at the same time, healthcare awareness of the population is continuously improved (instruction of hygiene, first aid, civic heart accident resque, instruction on hygiene knowledge).
Continuous vocational training of doctors and skilled health care workers is also necessary.

Section I.

Goal and development of the MONA-System Health Care Advisory and Consultancy IT System.

1.1 Goal of development

- Prevent illnesses and decreasemortality, ensure highest-level, most efficient, most economically functioning healthcare service

- Provide preventive, high-level everyday teritorial- and institutional healthcare service, modern emergency service-based health care, professional care of chronic patients.Avoid illnesses that cause long lasting health damages, and prevent spreading/repeating of those as much as possible.

- Create proper and equal health care background for the population in rural areas, which are disadvantageous from healthcare point of view. Reducehealthcare service deficiencies caused by lack of professionals in some fields of healthcare.

- Provide continuous data supply on healthcare,on state of population, onillnesses, on treatment of those, on efficiency of the healthcare service and ofits costs.

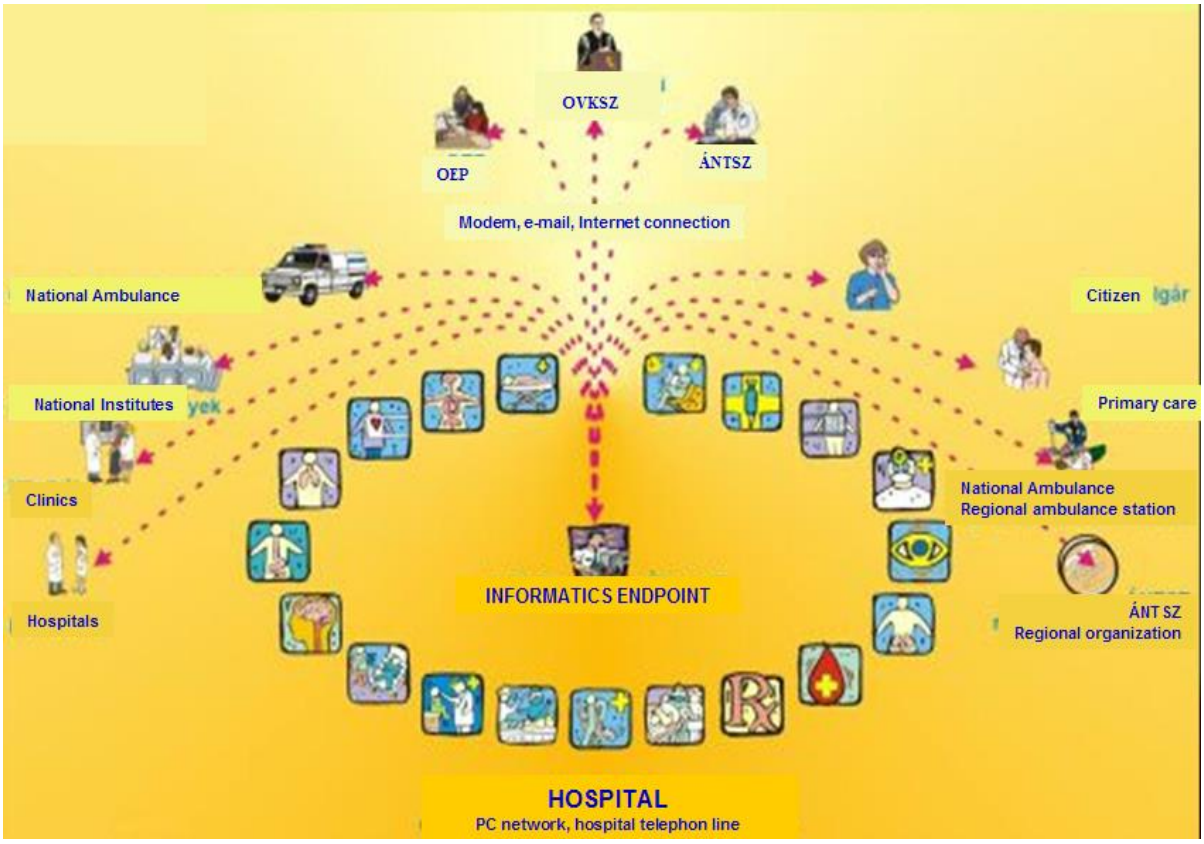
- Ensure high level healthcare service in everyday life and also in situations of disasters.

1.2 Creation of the MONA-System Health Care Advisory and Consultancy IT System

- Creation ofthe complete programme is only possible based on a nationwide unitary healthcare consultancy IT-system.
- The system will provide people, living and working in various locations, and doctors, who provide health-care service,with a high quality healthcare consultancy
- The health care consultancy IT-system provides direct connection between high rank healthcare institutions (universities, nationwide highly ranked institutions, healthcare centres), all healthcare service locations and units, and the population.
- The healthcare consultancy IT system works on an internet and telephone basis. Results of medical investigation and diagnosis obtained by healthcare services will be digitally registered and, if necessary, transmitted for consultancy.
- Protection of personal rights, data protection, reproduction capability, electronic make up of prescriptions and digital signatures, are most important.

The Health Care Advisory and Consultancy IT System will be the background for a highest quality healthcare service, working most efficiently and most economically.

1.3 Structural and organizational frame of the Health Care Advisory and Consultancy IT-System



Structural, organizational chart of the MONA-System Health Care Advisory and Consultancy IT System, considering the needs of progressive healthcare service

The IT structure seen in the chartabove helps participants of institutional and teritorialhealth care services and also of government institutions and authorities deal with organizing, financing, coordinating and controlling the healthcare and - due to building up and having access to the unitary health care database – continuously control professional efficiency, cost-efficiency of everyday healthcare service (also other parametres).

1.4 Users connected to the HealthCare Advisory and Consultancy IT System

1. Doctors and skilled healthcare workers who work in healthcare service
2. Institutions and healthcare service providers
3. Population users
4. Special users (organizations, ambulance service, disaster protection, army, police, tourists, workplaces, drivers of vehicles, passengers etc)
5. Other economic service providers (webshops, pharmac

1. Doctors and skilled health care workers engaged in healthcare service

- The advisory and consultancy IT-system created to operate between in- andoutpatient care institutions and teritorial health care workers is meant to ensure professional support and through this the highest professional level ofeveryday teritorial-healthcare, nursing and emergency services. Also, consultancy will securely control ambulance services and patient transportation and, if necessary, disaster recovery too. Teritorial preventive health care(primary, secondary, tertiary prevention) and nursing can also be performed by this system.

- Professional consultancy is conditioned by the creation of consultation centres (cardiology,stroke,traumatology,toxicology, thromboaembolia, dermatology etc, according to needs) which may function in the national- and university institutions.
  Doctors working in consultancy are thebest specialists of individual areas. If needed, doctors involved in everyday healthcare send their consultancy requests, professional inquiries in order to be able to perform their healthcare service on the spot at the highest professional level possible.
  This way the whole country can have unitary consultancy on diagnostics and therapy (CT, MRI, RTG, US), choronography, neurosurgery, pathologic histology, cardiology, endocrinology, dermatology etc.
- Besides professional trainings, instruction onlegal knowledge of healthcare is also important. That should decrease unjustified risks for doctors and the number of legal actions claiming damages against them, while doing their job in the health care system. It is important, professional and legal knowledge, doctors and skilled health care workers need to be trained about, be published in due time.

2. Government bodies involved in healthcare service

- Government bodies directing and financing healthcare will be able - using the unitary healthcare IT system – to continuously access everyday health care data. Accessing those data they become able to reach decisions adapted to daily/actual health care needs and also, they will provide the healthcare service system with the most efficient and highest quality management.
- Aim: based on individual health-insurance card number (TAJ-number),a united database will be created, stored on a central server and users should have continuous access to it.
- To create that, a healthcare plastic card should be issued, carrying codes, with the approval of the patient, and respecting data protection regulations. The healthcare personnel performing healthcare service will have access to all healthscreening examinations, healthcare services and medical history of the patient.

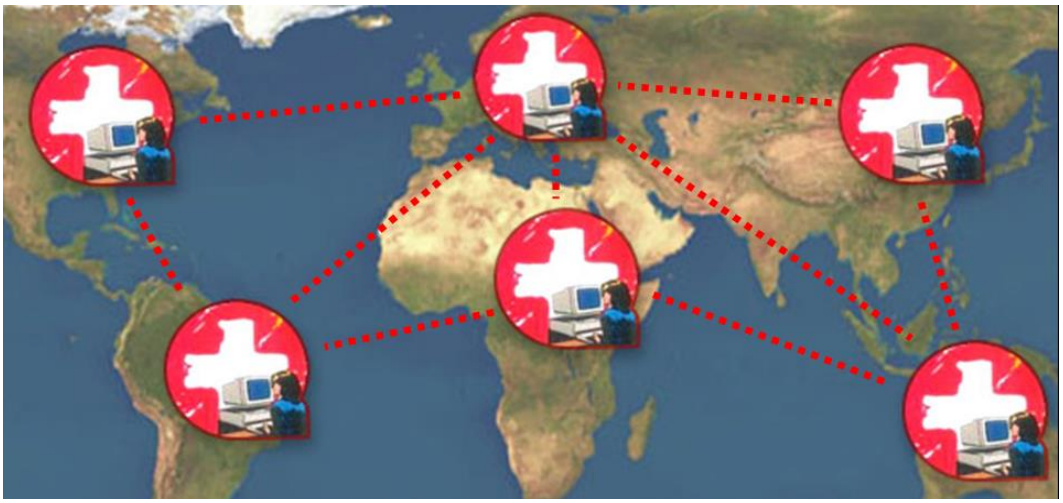
3. Population users

- Aim: Provide population with the highest level healthcare service.
- Create phone- and internet-based screening/filtering, advisory service, nursing, ambulance service (resque)
- Permanent medical care and, if necesaary, emergency careof chronic patients provided with digital gauges (diabetic, high blood pressure, asthmatic, cardiac patients etc)
- Continuous education of population on healthy lifestyle, on life-saving, on healthcare at home etc.
- Develope knowledge of the population on patients' rights andobligations, in order to ensure succesful collaboration on healthcare.

4. Special users (organizations, ambulance service, disaster protection, army, police, tourists, workplaces, drivers and passengers in vehicles etc)

- Create occupational health care documentation, healthcare plastic cards for workers of organizations, workplaces, companies, enterprises. The cards will be used at the oncoming consultations, with the help of the unitary database.
- In Hungary, and abroad too, passengers of vehicles in traffic should have, if needed, access to health care consultancy.
- On isolated locations, without a doctor, emergency assistance locations will be created, withskilled healthcare workers. Those locations will have telemedicine based special medical instruments and internet access as well. This way those living in such places will have permanent screening/filtering service, nursing and, if needed, emergency service at thier disposal.

Life saving consultancy can be provided in any situation



The consultancy centre can be accessed from everywhere in the world

5. Other economic service providers (webshops, pharmacies etc)

- Healthcare workers, healthcare locations and patients will all be able to purchase all the necessary healt care devices and consumables through webshops.
- Between pharmacies and providers of healthcare service can e-prescriptions be transmitted and that will help provide proper medicine supply.
- Purchase of medicine without a prescription can also be solved from medicine vending machines (MVM). Those machines will providemedicine supply without prescription to rural people. The project of MVMs for supply of prescription-based medicine is in progress.

Medicine Vending Machine (MVM)

Medicine vending machines (MVM) are able to contact the consultancy center in order to ask for healthcare help. Their functioning is under the remote supervision of the consultancy center. They can also function as first aid points. Their equipment can be completed with life saving devices, such as semi-automatic defibrillator,gauges used in remote medicine (ECG, blood-sugar, blood pressure meters, pulsoximeters etc) which – besides contacting consultancy center for support - can be used for the care/treatment of patients in life danger.

1.5 Technical devices connectable to the healthcare advisory and consultancy IT-system

Every digitalized device that can be used in healthcare service can be connected to the system (ECG,CT, MR, ultrasonic, Roentgen etc) and the same is true for digital devices used by citizens (blood sugar gauge, blood pressure gauge, pulsoximeter, ECG device etc).
The whole population of the country, the institutions, companies, healthcare service providers can connect to the system with the help of their computers and smartphones.

The most important digitalized gauges that can be used in regional/area, institutional healthcare service

New technical devices and developments connectable to theHealth Care Advisory and Consultancy System

- **New lab gauge for quick, on-the-spotperception anddiagnosis of infectious diseases**
- The prototype of this device has been developed by an American institute. We intend to expand this modern lab diagnostics all over the world. Nowadays this development can be most important for fighting against world epidemics, considering the actual migration process and the higher infection risks that come with it.

The device is part of the unitary Advisory and Consultancy IT-System. By transmitting of measurement results to the center an immediate report on world epidemics can be issued and proper measures can be taken. In a few minutes the device is able to identify 16 kinds of infectious diseases

- **Non-invasive radar-based patient surveillancesystem**

  The device is able to transmit the main parametres (heart beat, breathing) onto the central monitor without attaching any cablesto the body of the patient. The new technology has been developed by a Japanese company and it makes sub-intensive hospital monitoring safer and ensures stronger remote control of patients outside the hospital (social care units, private homes).

Radar based sensors which transmit patients' parametres onto a central monitor. Monitoring does not require any cables attached to patient's body.

- **Ambulance for transportation of infectious patients**

  An American company has developed this ambulance, the manufacturing of which is about to start soon. The body of the ambulance can be dezinfected and its design allows transportation of patients who are most infectious and most dangerous to population. Using proper protective clothing, the protection of the healthcare staff can also be solved.

- **Further developments:**

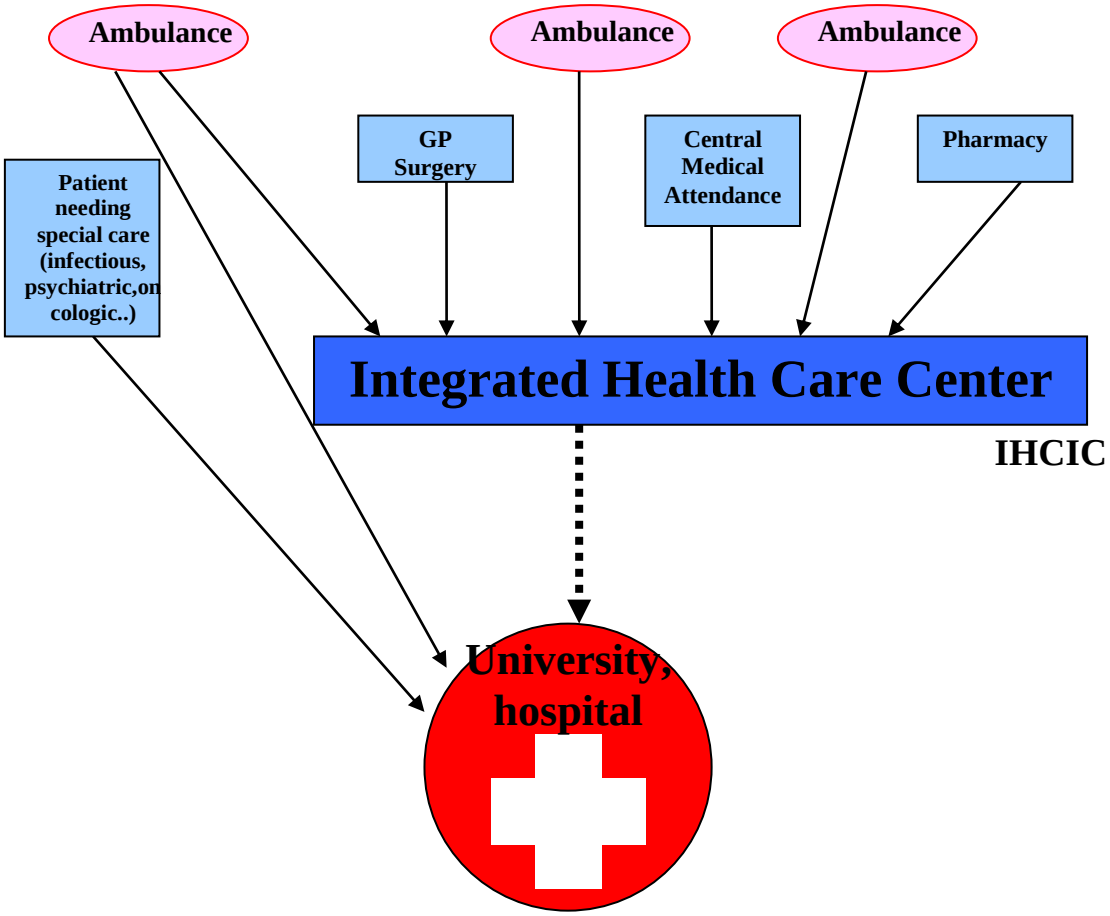
  Similarly to ambulances for transportation and resque of infectious patients, other special ambulances are about to be developed for salvation of radioactive radiation victims, of casualties of the military. Our cooperation in this area involves IT-consultancy solutions as well.

Section II.

Model of an Integrated Health Care Institution

Suggestion for a teritorial reorganization

Our project for a reorganization of the Hungarian health care system is based on a Model of an Integrated Health Care Institution Center (IHCIC). The Integrated Health Care Institution integrates teritorial health care, ambulance service, specialist medical care services and central medical attendance services as well. The IHCIC is able tofilter and treat all those patients whose state does not require any hospital care.



The IHCICs perform specialist care, healthcare diagnozis investigations, one-day surgeries, ambulatory rehabilitation and nursing service.

Aim:

- realize institutional (hospital)-level teritorial healthcare
- build up modern central medical attendance service based on high-level healthcare service
- close collaboration with the ambulance service
- ensure specialist medical care, medical consultation, one-day surgery, ambulatory rehabilitation
- create round-the-clock emergency service locations in every region/teritory

The Model of the Integrated Health Care Institution Centre (IHCIC) should be created in every teritory/region to:

- ensure healthcare equality all over the country and, also reducenumber of professions with lack of personnel, improve life prospects of people in poverty stricken areas, support health care reform
- reduce morbidity and mortality figures, set up an efficient, professionally, organizationally and economically controllable, strictly accountable health care system.
- organize high level healthcare, close to people's living habitat, including secure medicine supply, according to international EU standards.
- set up and secure a unitary IT system that should support the aims above and should be available to healthcare service providers and to the population as well.
- ensure healthcare education of the population – focused on healthy lifestyle, on prevention, on emergency service (life saving, civil resque on heart accidents, resuscitation etc).
- provide up-to-date professional and economic accounting
- analyse morbidity and mortality data, ensure continuous professional consultancy background for healthcare users and for the population.

Scope of the Integrated Health Care Institutional Centers:

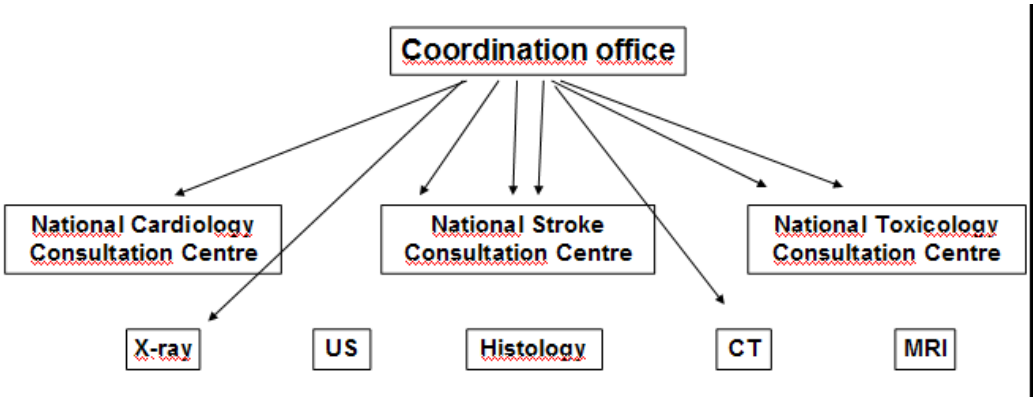
- The **Integrated Health Care Institutional Centers** (IHCICs) which are connected, through the internet, to teritorial hospitals, to national consultancy centers and also can be considered as being remote locations of those, will provide institutional-level health care close to citizens' homes.
- IHCICs containmedical specialist surgeries, high quality central medical attendance, primary service surgeries, one-day surgery, isolating wards, rehabilitation centers, diagnostics units and round-the-clock pharmacy service. The centers are permanently connected to the ambulance service.
- Patients can be transferred from primary health care service surgeries to IHCICs for specialist examinations and treatment, for consultancy. Specialist surgeries provide comprehensive institutional-level healthcare.
- Outpatient surgery (operation) interventions, infusion treatment, pain ambulatory can be done in special locations (cubatories) made up un purpose.

- In every IHCIC photo diagnostics should be available (rtg,cardiology ultrasonic, gynaecology ultrasonic, stomach ultrasonic, angyology ultrasonic) and also specialist medical care in cardiology,gastroenterology, neurology, electrophysiologic laboratories, ophthalmology, nose-ear-throat department,rheumatology, pulmonology, dermatology,psychiatry, urology,paediatrics,oncology, traumatology, surgery, vene-surgery, maternity ward,gynaecology,neurosurgery, anaesthetics, ortopaedia, dentistry.

- A round-the-clock high-level healthcare service will be provided, plus a modern medical attendance service and, if necessary an isolating ward too. There can be infusion treatment available as well (vene enlarging, painkiller infusions, oncologic treatment).

- In high-level healthcare locations and at the belonging isolating wardsone can deal with:
    - acute but not hospital-care demanding internal medicine, pulmonologic,neurologic, urologic, gastroenterologic diseases
    - temporary sicknesses; following outpatient surgery interventions, if needed, patients can be observed there

- High-level healthcare operates round-the-clock and provides continuousbackground forprimary care, specialist medical care and for the ambulance service (OMSZ - National Ambulance Service).



One-day surgery interventions connected to specialist medicine:

- ophthalmology
- nose-ear-throat
- gynaecology
- urology
- vene surgery
- septic surgery
- paediatrics surgery

Specialist surgeries above provide outpatient surgery care

Collaboration of the IHCICs with the National Ambulance Service (OMSZ)

The modern medical attendance central service - based on high-level healthcare - receivesambulance units that carry patients, who are not special (emergency) ''cases'' and not life-endangered.

The HCIC takes those incoming, not life-endangered patients over. Following special medical investigations, patients get proper therapy and then, if necessary, they are placed at the isolating ward. After their state has improved, they can be discharged or sent to HCIC specialist medical services for further investigations.

In case a patient needs further hospital care, the scheduled patient transport service should carry him/her to the hospital (connected transport).

Activity of modern central medical attendance based on high level healthcare

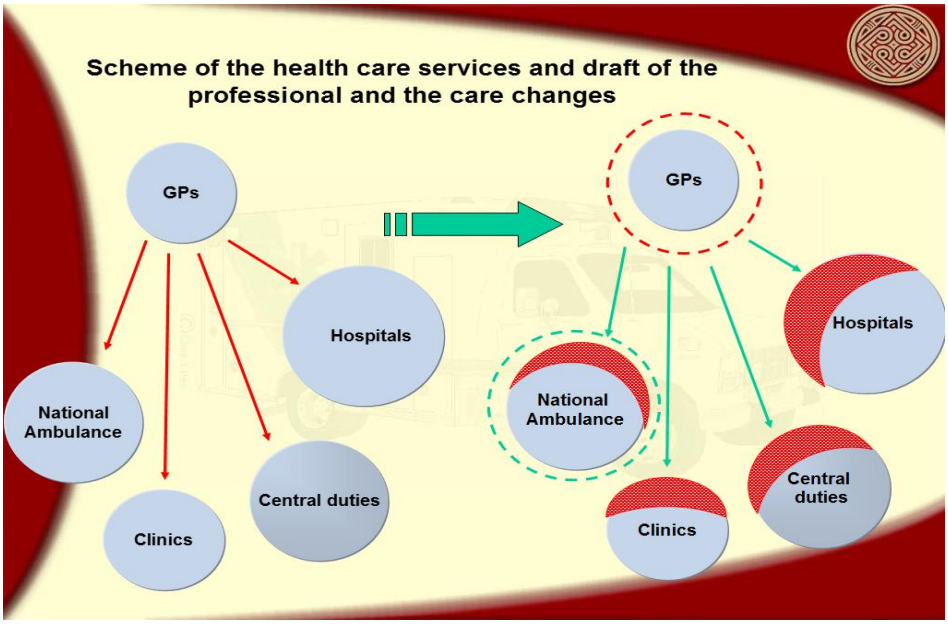
Central medical attendance connected to the HCIC operates economically and according to regulations, if in a 25km radius circle-area attendance is ensured for 40-50000 inhabitants, including adults and children as well.

The central medical attendance and the ambulance service represent a closely cooperating unit. Patients in life-endangered state should be carried first of all by 'case' (emergency) ambulances. Following on-the-spot emergency treatment, if there is a real need for further hospital care, the patient should be carried to a hospital emergency unit.

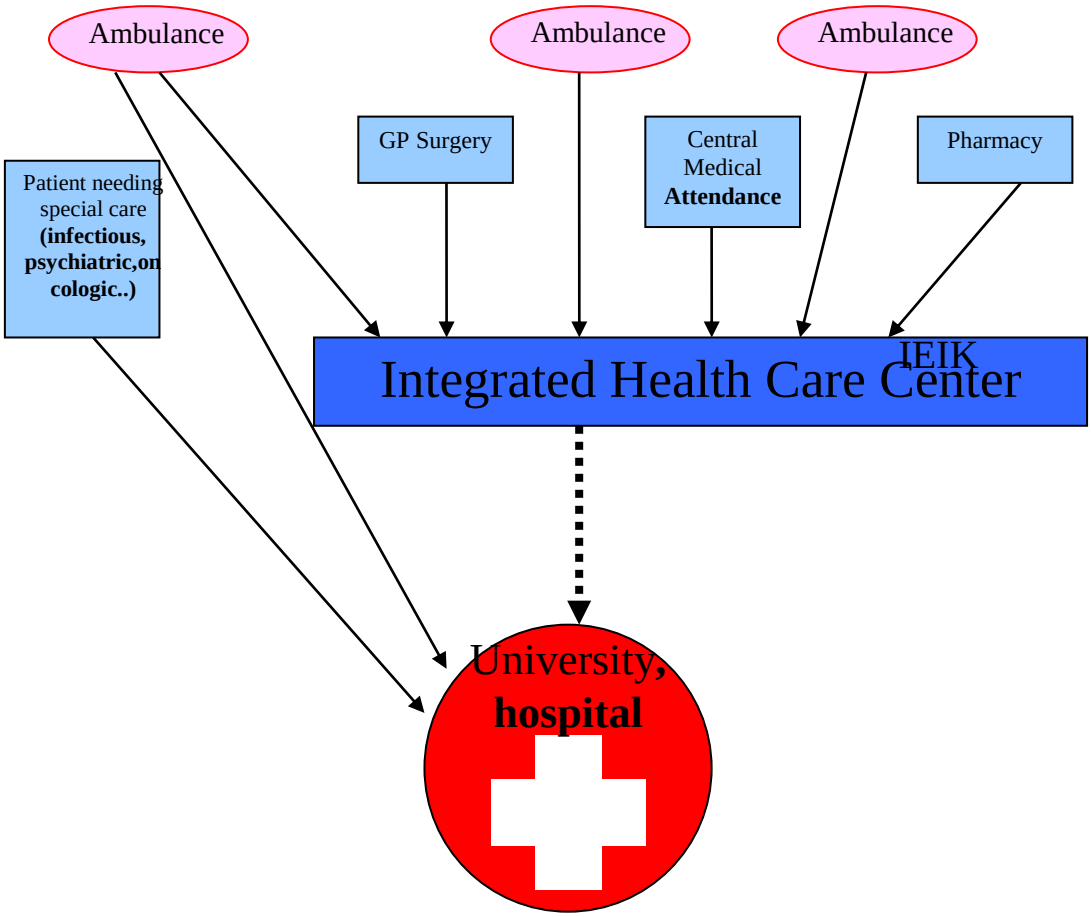
Patients in no endangered state but needing immediate care and salvation, will be carried by ambulancesto the HCICwherediagnosis, state stabilization and medical treatment - if possible on the spot - will be performed. If necessary, further transportation to the institution will be possible.

During attendance time callinga doctor to patient's home is only allowed when there is no life danger or need for immediate intensive care in the surgery on, or if family members cannot take the patient to the medical attendance surgery. In case of life danger,ambulance service should be called. It is also duty of the doctor in attendance to provide medical care besides those above.

The teritorial Integrated Health Care Institutional Centers will ease hospitals, institutions from too big patient burden. As it happens in informatics, inside the healthcare system the HCICs play the role of a 'firewall'. Following first care, stabilization of physical state, only those patients will be allowed to access hospitals whose state will require hospital care. The other patients, following care at the HCIC, can be discharged. Following that, continuous care, if needed,will be performed by the primary healthcare service and the central medical attendance service. If necessary,the HCIC can provide control examination service too. Continuous supply of medicine is provided by pharmacies on duty, connected to theHCICs. Continuous supply of no-prescription medicine can be provided by medicine vendor machines (MVMs) connected to HCICs.



On the left can be seen the primary health care traditional practice; on the right one can see the changes, possible due to the Consulting IT system:number of patients treated in GP surgeries is rising, there are less patients in specialist care surgeries, central medical attendance, inpatient isntitutions; there will be less patients carried to hospital.



Patients not in life danger will be sent, from the primary healthcare surgeries - for further treatment, for examination - to the HCIC. There, treatment and investigations will offer a more accurate diagnosis. Their healthcare is possibly done on the spot and only serious cases get to hospital

Section III.

Reorganization ofprimary healthcare andof central GP attendance

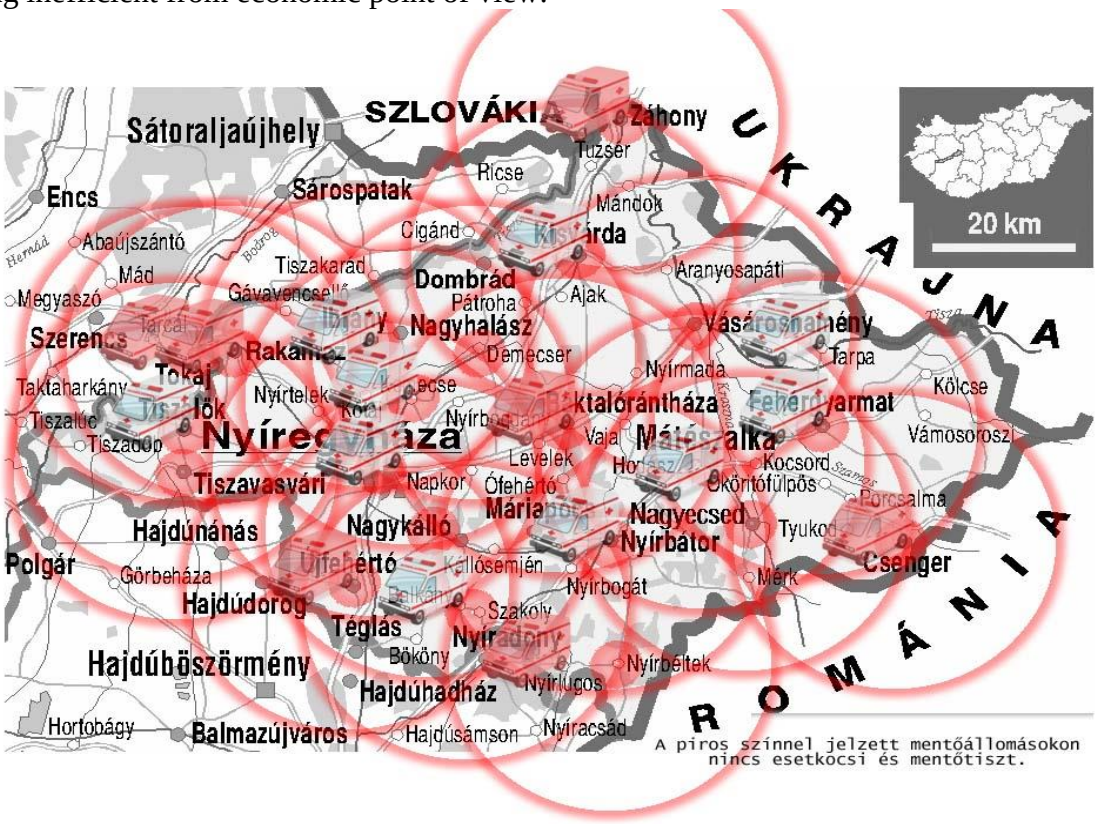
a) Suggestion for a reorganization

The model is a suggestion made up on professional and economic basis. It may contribute to reorganization of a nationwideprimary healthcare system andof other healthcare services con heanected to the otherprimary services

The unitary Health Care Advisory and Consultancy IT system supports up-to-datecosts accounting of all central GP attendance services. Also, patient attendance, and the professional level of health care can be supervised.

Important information can be aquired about efficiency, number of patients, specific costs and profitability of presently functioning central GP attendance. It can be established whether from professional and economical point of viewit is worth keeping on certain central GP attendance service or not.

Please see below a map about presently functioning central medical attendance service in Szabolcs-Szatmár-Bereg county. It can very well be seen that there are too many GP medical attendance units functioning too close to one another, and having too low patient attendance, being inefficient from economic point of view.



Present situation

On the ’Present situation’ map we have, marked with red circles, the presently functioning central GP attendance locations and the EU-conform 25 km radius areas. As seen, there are a lot of overlaps. EU standards demand 25-50.000 people in a central medical attendance area in order to make it economical. We have, however, inefficient central medical attendance locations,working with only few thousand inhabitants each.

Based onthe available information, we have tried, theoretically, to do away with some inefficient medical attendance locations. The following chart is to show this.

Planned medical attendance map of Szabolcs-Szatmár-Bereg county, with four central medical attendance centers done away with/cancelled

Healthcare system after final reorganization. Locations marked with green have hospitals, inpatient institutions and around them, in 20-25km radius circles will the Integrated Health Care Institutions (HCICs marked with red circles)be built.The latter will play the role of a 'firewall'. As seen, these isntitutions are able to select patients who have been wantonly directed towards hospitals. They can provide: filtration of population, healthcare and nursing of those sorted out, ambulatory rehabilitation; and eventually, they will also be able to function as teritorial/regional emergency healthcare locations

On the chart ’Planned medical attendance map of Szabolcs-Szatmár-Bereg county’ (with deletion of four medical attendance locations) can be seen that a minimum of 2-3 other locations could be deleted, so that medical attendance system would stillanswer EU expectations.

As mentioned above, according to recommendations of the EU, a single central medical attendance location should be enough for a 25km radius circle area. Our survey proves that this is a realistic expectation. According to this survey, medical attendance services being too close to one another, have only few patients a day andthe number of calls for a home visit is also minimal. These patients could have turned to healthcare service during working time, if they had been thoughtful enough.

Medical attendance locations without a doctor, or central medical attendance locations also without a doctor,should be tarnsformed intoemergency health care spots, withskilled healthcare workers engaged there. In such places, while a medical examination is on, using telemedicine assistance, a consultancy center can be connected and remote medical advice can be provided, followed by a decision on whether patient’s complaints would need any further investigation and care or not.

b) Data to be considered from cost efficiency point of view:

- we think, in an optimal case, in the Szabolcs-Szatmár-Bereg county, 4-6 central medical attendance locations could be done away with, so that healthcare qualitywould remain the same
- this reorganization would result in a 12-18 million HuF saving for the county.
- nationwide this would mean savings of several millions a month and of billions a year

We dispose of a central medical attendance IT programme that makes reorganization accurate and professionally well-founded.

The funds that result from the reorganization could be used to supply ambulance stations with new ambulances (where those are missing at the moment), we could enlarge ambulance officer service staff, and stabilize teritorial/regional emergency healthcare.

Introduction of the Healthcare Advisory and Consultancy IT System will immediately provide useful information on how to reorganize theteritorial/regional health care service according to realistic needs. Its full implementation in Hungary needs minimal investment and can be done in a few months.

Section IV.

Education of population and instruction of doctors, skilled healthcare workers

- Improvement of mortality and illness parametres and also a most efficient health care service also need the instruction of population and of healthcare workers.
- It is important for the healthcare workers to have professional training and also tuition on healthcare legal knowledge. The training will help doctors and health care workers avoidunjustified risks in their work and also damage claiming trials/legal actions.
- The populationshould have continuous education on healthy lifestyle, healthy nutrition, on saving lives, on health care at home etc.
- Improve knowledge of population on patients' rights and obligations,in order to obtain succesful collaboration in the field of healthcare.
- Schoolchildren, besides their healthcare/hygiene education proper to their age, are also recommended to receive knowledge on emergency health care service and on life saving

Legal education for doctors

Tuition of heart accident saving for population

Abstract

- The MONA-SYSTEM Health Care Advisory and Consultancy IT System satisfies all consultancy requirements of healthcare.
- With the consultancy system, we can create a most efficient, higher level healthcare system, based on equality, on a modern healthcare service, emergency service and preventive medicine too.
- The aim of having an efficient professional system will be achieved through telephone and internet based communication, advisory service from the nationwide consulting centers; with the contribution of the management and control isntitutions of the healthcare, with filtration and educational programmes and active contribution of the population
- The unitary IT system will support the formation of the Integrated Health Care Institution Centers, which are indispensable for the reorganization of the teritorial healthcare. That will ensure each region a primary healthcare service, specialist healthcare, emergency care service, nursing, ambulatory rehabilitation, one-day surgery. Building up the Integrated Healthcare Institution System will support the set up of a 'firewall' system, which is to prevent unjustified access of patients into hospital system.
- The central medical attendance system is an important part of the teritorial healthcare service and its reorganization according to realistic needs can be performed according to the EU principles. This way, in some areas, inefficient or professionally unsatisfactory medical attendance locations can be properly reorganized/unified.
- The Health Care Advisory and Consultancy IT System will help providedoctor missing settlements with continuous filtration service, nursing, emergency service, and skilled health care workers.
- Actual medicine supply difficulties can be diminished by placing MVMs capable of selling no-prescription Hungarian-made medicine in the areas.
  Developing of an MVM capable of selling prescribed medicine as well is on the run.
- Our further development projects in collaboration with foreign partners will solve the problem of immediate laboratory filtration of infectious diseases. A cost efficient investment will ensure a sub-intensive monitoring, without attached cables, for healthcare institutions and private persons as well. Safe remote monitoring of people who need intensive surveillance can also be solved.
- In cooperation with foreign partners, we intend to introduce infectious patient-carrier ambulances into the unitary Health Care Advisory and Consultancy IT-System.
- All these will ensure a secure health care system reorganization, a nationwide filtration, nursing, emergency service and rehabilitation system. Everyday health care and medicine supply will be under permanent professional, economic control.
  We shall be able to prepare ourselves for epidemics and disaster emergencies in due time.
  Nationwide implementation of the Healthcare Advisory and Consultancy IT System is an investment that would return in the shortest time.

During preparation of the project, in 2002, my work was appreciated by the Prime Minister of the country, Mr Viktor Orbán in his New Year's Eve speech. Inthe previous years this project has also been given several prizes and a gold medal at the Patents World Exhibition.

Reference videos and attachments:
Presentation of the consultancy system:
http://www.youtube.com/watch?v=c8bwSnHO890
Tv – programme about population using the project:
http://www.youtube.com/watch?v=wNFBRc8Zf3k
Rural population emergency healthcare service:
http://www.youtube.com/watch?v=hhG0mv2EMr4
Consultancy between institutions:
http://www.youtube.com/watch?v=Nx1tCZNEKWc
Civil heart accident resque tuition and filter:
http://www.youtube.com/watch?v=bp8dLw5OCK8
Healthcare devices sold by usForgalmazott egészségügyi eszközeink:
http://www.monasystem.hu/eszkozok.doc
Medicine vendor machine presentation (English):
https://www.youtube.com/watch?v=WG3aYYFXsrc
Medicine Vendor Machine presentation (Hungarian):
https://www.youtube.com/watch?v=dvNJETahVZs
Medicine Vendor Machine presentation (Russian):
https://www.youtube.com/watch?v=GDUszgyT3io
Lab instrument presentation (English): http://www.monasystem.hu/labor_eng.doc
Legal tuition for doctors: http://www.monasystem.hu/html/budapest.doc
Life saving consultation for sea and air traffic (English):
http://www.monasystem.hu/mona_system_eng.doc
Life saving consultation for sea and air traffic (Hungarian):
http://www.monasystem.hu/mona_system_hun.doc

Zsonda László, MD

Internal medicine, pathologist,
Consultant
Emergency specialist
+36 70 392 4209

Contacts:
Phone: +36 70 606 9076,
+36 70 606 9247, +36 70 631 9726
Internet: www.monasystem.hu
e-mail: info@onlineugyelet.hua