

Comment Various Units

Proposition of new dimensions into the new SHA

Summary

This document has been composed during the Project Round Table for the Future Sustainability of Healthcare Financing in the Czech Republic (www.kulatystul.cz). During the comprehensive assessment of the current state of the Czech healthcare system we used the SHA as the main source of information. We appreciate its existence and the work of all experts. We would like to share our view how to increase its power when using for analytical purposes.

This document contains discussion about new dimensions – Product of care, Purpose of care, Reason of care, Settings of care, Provider of care, Financing of care and about the importance of including expenditures by age, gender and disease and other topics.

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SHA 2.0 – Our analytical view

In our view the SHA should have the following dimensions – Product of care, Purpose of care, Reason of care, Settings of care, Provider of care, Financing of care (this is not the full list, but these are the most important dimensions)

From the analytical point of view the core of the SHA has to be the product of the health care services. After defining this you should be able to attach a value to this product (there are many products in the healthcare, of course). The main feature of the product definition is that it has to be relatively easily measurable in physical terms – a visit, contact, hours of care etc.

The same approach can be seen in the Draft Handbook – Towards Measuring the volume of health and education services (OECD), STD/CSTAT/WPNA(2008)12, where “...the output measures proposed in what follows are best thought of episodes of treatment of particular diseases as provided by a given institutional unit.” ... “For example, a visit to a general practitioner could be a measure of output.”

The dimension – Product¹

- Medical care – supplied by the **physicians** (or under full control of them)
 - Clinical tests – number of contacts
 - Diagnostics and laboratory - number of services
 - Medical treatment – number of treatment (for different medical specialities)
- Other healthcare specialist care – **physician not crucial** for supplying services (not fully long-term nursing care)
 - Rehabilitation – number of visits, séances
 - Logopedics - number of visits
 - Clinical psychology - number of visits
 - Stomatology - number of visits
 - etc.
- Pharmacotherapy – maybe enough one group with defined DDD when there will be good connection with **Diagnoses based on ATC group** (pharmaceuticals sold in pharmacies, problem with pharmaceuticals in hospitals)
 - Pharmacotherapy based on prescription
 - Pharmacotherapy based on self-decision

¹ Inspiration can be the analysis during the work on disease, age and gender extension of SHA. In Hungary they “separate cost unit register to be able to define cost units accurately” and they have “identified 123 cost units”. List of cost units - General practitioners, School health services, Out-patient dental care, In-patient curative care, Kidney dialysis, In-patient rehabilitative care, Pharmaceuticals, Emergency rescue, Hospice home care, ...

- Nursing long term care – special care provided especially by **nurses, specialized personnel** – hours of care
- Nursing long term care – in relation to reduce self-sufficiency (disability) – hours of care (includes also informal care)
 - Services based on ADL assessment
 - Services based on IADL assessment
 - Oversight
 - Residential services without ADL and IADL assessment (and need)
 - Other

Based on this assessment we need to know what was the purpose of why you create the product. Until now it is extremely hard to measure why the medical system produces health care products and the purpose cannot be mixed with any other dimensions, so the purpose dimension is very important to be separate.

The dimension – Purpose

- Primary prevention and public health support
- Secondary prevention and keeping the state of illness (chronic illness “treatment”)
- Acute care treatment – including when saving life in chronic care conditions
- Palliative and care for dying

So this is not product but the purpose why the health care sector creates the products. Whereas currently the healthcare system is focused on acute care treatment, there will be shift in favour of the secondary prevention, chronic illness treatment, and into palliative care and we need to follow the change of the data.

The dimension – reason of care (diseases and disability)

- Diagnosis (ISHMT, “outpatient ISHMT”)
- Degree of disability (based on ADL, IADL assessment)

We also need to know what is the structure of diseases and which diseases cause the main costs. The ICD system is not really much applicable because we need to use more epidemiological approach (and not etiological approach). The International Shortlist of Hospital Morbidity Tabulation (ISHMT) is a very good start in the inpatient care. Unfortunately in the outpatient care is the description (tabulation) of care missing (connected to diagnosis) and it would be very valuable to have similar approach like ISHMT. One of the solutions could be to include ATC groups of pharmaceuticals with some outpatient treatment. Therefore some matrix structure of the ICD and ATC tables is needed to define outpatient diagnosis groups.

The reason for care, particularly for older people, is in fact that they cannot take care of themselves because their illnesses. The problem of multimorbidity can be addressed by creating wide groups of “illnesses” but in the nursing and long term care the people can be assessed

according to the level of their needs – degrees of disability – which stem from many different diseases.

The dimension – Settings

Settings of care are supplying the services in various conditions (settings) and their description. It is also important not to mix with dimensions of product and its providers. The proposed dimension of settings have these items:

- Home care
- In the field
- Outpatient care
- Stationers
- One day surgery
- Acute hospitalization
- Long-term hospitalization
- Nursing care – without presence of physician
- Nursing care in the social services
- Social care in the residential houses
- Other

The dimension – Providers

Dimension of providers is sufficient in the current system and it needs to be maintained, on the other hand it should be completed by ambulatory social care and other forms of social care that are substitutive to some types of long term care nursing in hospitals.

The main problem of describing providers is to include informal suppliers of long term care (the product has to be unified – e.g. provided hours of care based on surveys). Then again we get complete picture of providers of care.

The dimension – Financing

The main difference between financing schemes is whether they are optional or compulsory. Other than that we have no further remarks.

Example: Patient after cerebrovascular disease, stroke

It is important to know what happens to the patient, in which settings he/she has been taken cared for, what are the costs of the care in different settings in the whole spectrum – from inpatient acute care, nursing health care, nursing long-term care, social care, home care and informal care. It means to define products of consumption in different settings which can be hours of care, disease categories and days of stay etc. Afterwards the capacity is important to count in each of the settings and the number and structure of providers. Information about source of the money has also high importance.

Few remarks on the issue of the Expenditure by age, gender and disease under the SHA

Czech Republic is unfortunately not participating in the project of estimating expenditures by age, gender and disease under the SHA. There is also not much experience in our country in doing Cost of Illness studies (COI). Despite it we consider SHA as one of the best sources of information about the financial flows in the healthcare system that is currently available. By our opinion SHA is appropriate tool to create comparative COI studies. In order to do it there needs to be some basic guideline how to do it if some countries have enough data and want to follow it.

We look at the SHA as a tool for our analytical purposes and therefore we see some issues that might be considered when introducing some major changes in the methodology and structure itself. We consider as the main issues:

- No information about the volume of product and its measurement,
- Division of the costs according to age, gender, diseases.
- There is no System of Social Accounts to describe the social system expenditures which would help to make the link between social and health care.

One of the aims and purposes of our effort is to be able to create projections of the future health care expenditures based on the changes in the structure of population, change of the structure of illnesses, changing patterns of dying, changing disabilities, changing roles of the informal sector and other factors. That is why we worked on the change of the SHA system in the Czech republic, so it does not contain only the information about the function (HC), producer (HP), financing source (HF) in the standard age groups (0, 0-4, 5-9, ... 85+) but also more information about the patients, in which regions (NUTS3) they live and which diseases (ICD10, ISHMT) they have. We are currently working on integration of HC.R.6 – the social expenditures caused by medical problem or disability.

There are many reasons why we think that the analysis of the population and its illnesses must be done this way and that this information is essential. It is necessary to describe the whole spectrum of services consumed by patients, because including only a part leads to missing information about full costs for society. There might be some changes in the social sector (or welfare state in general). For example, there can be large demand for inpatient services without any changes in the healthcare sector and we do not know why demand for healthcare services has changed, when just analysing the healthcare sector. The changes can be caused by public policies in the social sector.

Moreover, data from different countries are incomparable because the same services are provided in different parts of the system in regards to cultural, historical, social and political reasons (for example the role of informal carers is incomparable between different countries

which impacts the costs of the formal health and social care system). This means that the whole spectrum of care and its description has to include not only social services, but also the informal sector - unpaid work of families, community etc (even though, it needs not to be included in the SHA, please see further). When the data are currently not available it should not discourage us from creating the framework and the guidelines. Some countries have various data available; we can make estimates based on surveys etc. There is a new trend among countries to introduce some formal payments for this unpaid work which creates new information about this type of services that can be used in many countries (Korea or Czech Republic) too.

The SHA is maybe not the best system to incorporate the social care into, but then we need to create some System of social accounts and based on this we can draw solid line between these two sectors. Both these statistical systems should also include some information about the amount of production of families and communities in care for others (informal care).

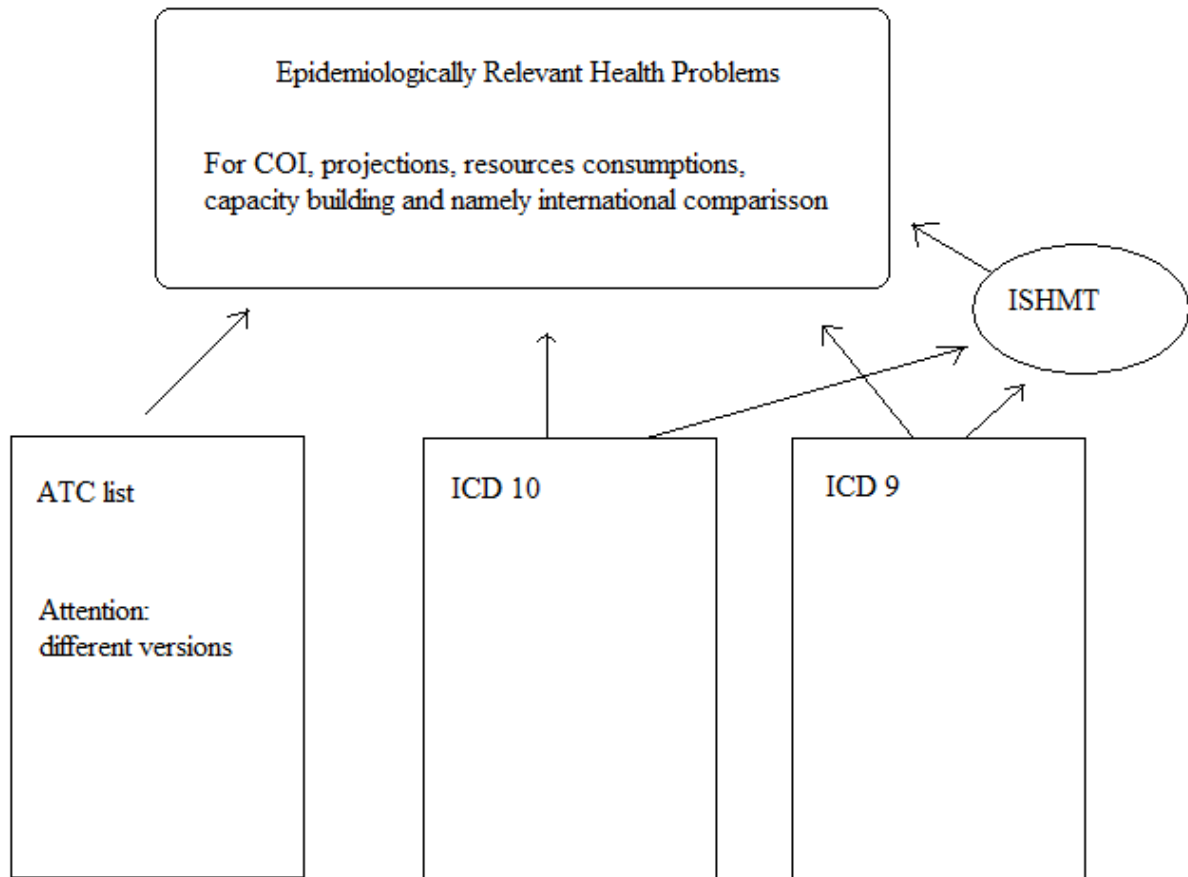
When considering the COI there needs to be a single guideline how to count administrative costs, how to attribute which costs to which diseases. The main information must focus on the diseases. The ICD 10² (or version 9) is only etiological systems that is not suitable for analytical purposes. They divide health problems that are etiologicaly similarly. Thereafter patients with different Diagnosis according to ICD10 have same conditions, problems, complications and same treatment and its costs (e.g. dementia, Alzheimer disease). This problem was partly solved by the ISHMT system³ for the inpatient sector. It combines similar illnesses into groups which can be easily analysed and have more meaning. The only problem is the outpatient sector especially the outpatient drugs and their attribution into diagnosis. Some countries (Korea, Netherlands, Australia and maybe others) have solved this by some computation matrix using ATC codes. We think that there should be only one matrix that will attribute the ATC code into one of the Dg (or maybe divide the costs by % between several Dgs) based on country experiences.

The other problem with attributing costs into different diagnoses is the polymorbidity of older people. The problem is not only the existence of multiple of illnesses and how to attach which costs to each one of them, but more serious problem can be the cultural traditions of the doctors who report the diagnosis (or any other personnel who reports data). If there is no need to describe all different Dg, they can only report some or maybe one of them that the physician is using for everybody. One of the solutions would be to give up dividing the patients according to diseases after they reach some age. After that age the patients could be divided into groups according to their disability (measured by ADLs, IADLs, for example). Otherwise it is very hard to have comparable data among countries.

² <http://www.who.int/classifications/icd/en/>

³ <http://www.who.int/classifications/icd/implementation/morbidity/ishmt/en/>

Exhibit 1: Epidemiologically relevant health problems



Source: Project Round Table for the Future Sustainability of Healthcare Financing in CZE

The future of COI

The development of COI should also develop into what we call Epidemiologically relevant health problems. As shown on the picture this system would be useful not only for COI, but also for projections of future demand and costs, resource consumption, capacity planning and international comparison.

ERHP is necessary to construct in order to really have groups that are epidemiologically relevant, and sufficiently robust to eliminate divergent practices of writing Disease (Dg) codes. For example, cerebrovascular accident (stroke) has several codes (the distinction is important), but in practice the most commonly reported Dg code "unspecified stroke". Each of the ICD code must be assigned into just one ERHP group, as well as into one individual ATC group. In doing so, it must apply that in each ERPH appears at the same time ATC code and ICD code (or their groups). Large group will probably created by "other problems."

Above the ERHP groups should then be created groups of patients (not problems, but the problem holders) – this means a solution to the problem of polymorbidity (patient belonging to

the group has one or more other health problems) - the treatment problem and also the etiological causes can often overlap. This is not a COI but COP (cost of patient) and therefore the classification of patients (not diseases). At this level, it should also include the "dg" of reduced self-sufficiency and dependence on assistance - preferably as a separate dimension, but it will probably difficult to obtain data - it will depend on how it will be successful to do ERHP and COP.

ATC problem

There is still a problem with the changes in ATC groups, new ones are emerging, old are disappearing (usually are divided into several new ones) - this means that it would be appropriate to have a stable (epidemiologically oriented) ATC system - an above structure. It is also a problem with the ATC which contain combined preparations such as statins and statins in combination. Separate problem is finding DDD and using it as the unit of production (consumption) – if no DDD is reported, it is usually the number of packages (this is for all drugs available) and prices. It is, therefore, preferable for comparison (not only between countries but also in time) to have captured a sign of the DDD - preferably two separate files (DDD, package, price).