The effect of financing on the allocation and production efficiency of the Hungarian health care system

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Abstract

The increased supply and demand-driven explosion of global health care costs threaten the sustainability of health care services, mandating optimisation of cost-efficiency via health policy. As of July 01, 2006, preventive-curative health care has been reimbursed using a centralised, closed prospective method; thus Hungarian health care providers operate budgets allocated through macro, mezzo or micro-level allocation mechanisms. Lacking sufficient incentives for patient care on the lowest level of care, production efficiency is the only tool left to increase efficiency. Nonetheless, the challenge of the twenty-first century is managing chronic diseases that mandate continuous complex care encompassing all levels of care and the optimisation of patient referral methods. However, current allocation mechanisms have not yet reflected this paradigm shift. We will discuss how capitation financing, by providing strict budgetary constraints, a framework for local political goals and enhancing allocation efficiency, could be a proper tool for optimising both allocation and production efficiency. Moreover, we propose that given the theoretical and legal framework of gate-keeping and the organisation of patient care by primary care physicians in Hungary, vertical allocation and horizontal production efficiency may be established by strengthening a primary care system that is reimbursed through complete capitation financing.

Keywords: primary care, fund-holding, allocation efficiency, production efficiency
Introduction

At the advent of the twenty-first century, health care costs rose to the extent that the global sustainability of normal health care services was threatened. The global health care market share increased from 8% to 8.6% between 2000 and 2005, exceeding the global GDP rate increase; thus, health care expenditures increased by 35% (WHO, 2008a).

This increase is due to the combination of a number of processes. First, the demand for health care services increased due to favourable changes in social, hygienic and economic conditions that have lead to increased life expectancy at birth and decreased mortality (Österreichisches Statistisches Zentralamt 1995). Second, an epidemiology paradigm shift has occurred as the need for care has shifted from short-term definitive treatment of acute infectious diseases to the long-term treatment and maintenance of chronic, non-communicable diseases (Heimerl-Wagner, P. - Köck, 1999a). Third, well-informed, knowledgeable patients have emerged and further increased demand in the health care system (Heimerl-Wagner - Köck 1999a).

Since no direct costs are incurred at the time of service for those with health insurance plans, patients tend to demand a much more extensive scope of services than they would if they had to pay out-of-pocket at the time of service delivery (Heimerl-Wagner - Köck 1999b). Fourth, due to a more holistic interpretation of health, many social problems were included in the scope of health care services. Fifth, parallel to the increase in demand, considerable changes have also occurred with respect to supply. The medical technology sector has had a major impact on the field of diagnostics and pharmaceuticals. The economic environment has prompted the emergence of product innovation and resulted in the development of new drugs, diagnostics and diagnostic procedures, which has put great financial pressure on health care systems (Hemenway et al., 1993). With the aid of new technologies, treatment options were greatly extended. However, costs have disproportionately increased, creating wider options for medically and economically possible services. Sixth, both traditional medical as well as ethical considerations have generated further demand for services.

In summary, these processes have lead to an increase in prevalence of chronic diseases—the main determinants of the demand for health care services—as well as
decreased age-specific mortality, resulting in significantly increased demand for services.

In Hungary, in addition to the trends stated above, the supply side of health care, as well as the utilisation of health care services, has been further augmented by financing incentives embedded in the reimbursement system of preventive-curative health care services, which consists of a retrospective performance-financed secondary ambulatory and tertiary in-hospital care sitting on a (partially) capitation-financed primary care system. The partial capitation fee used for reimbursing primary care services gives incentives to minimise the direct costs of definitive care, prompting referral of patients into the specialised care system and thereby delegating the expenses. This, in combination with the extensive capacity of secondary and tertiary care motivated to increase performance, simply stresses the available frames (Table 1). In this system, the reimbursing body carries the complete financial risk by having the full commitment to reimburse all services reported by the service providers; thus, it is only used to track expenses.

In summary, it seems that both supply and demand have increased greatly in the health care sector; therefore, limited resources and the need to fulfil health policy goals now mandate the optimisation of cost-efficiency of the health care system like never before.

Efficiency in health care

Using a general definition, resources are used most efficiently if the achieved benefits are maximised at the level of society (Józwiak-Hagymásy, 2006a). According to the Pareto theorem, in a traditional competitive market, prices and competition are able to formulate an optimal balance between supply and demand (Szalai, 2005). The market for health care, however, fails to fulfil the criteria for competing markets on several grounds (Cullis - West, 1979, Donaldson - Gerard 1993, Henderson 2007, Mooney 1986, Musgrove 1996, Musgrove 1999), as derived demand, informational asymmetry, externalities and barriers to exit are all inherent properties of the health care sector (Nagy 2005). These trends unbalance competition and lead to decreased efficiency (Nagy – Dózsa, 2005, Cutler - Zeckenhauser, 2000). Starting with the
considerations given above, efficient functioning of the health care industry mandates external intervention; thus, health care is inevitably a controlled market (Wennberg - Gittelson 1982, Heimerl-Wagner - Köck 1999c).

Generally, two dimensions of efficiency may be defined in the health care sector: production and allocation efficiency (Figure 1) (Józwiak-Hagymásy et al. 2006a). Production efficiency is defined as minimising the cost of producing a unit of health care service or product. With respect to production efficiency, the utility of a product or service for society as a whole is completely irrelevant (Evetovits et al. 2005). Conversely, allocation efficiency is determined by the utility of the product or service for the community (Evetovits et al. 2005).

Production efficiency may be interpreted as a horizontal dimension of efficiency as it denotes the optimisation of production within a specified allocation level while allocation efficiency reflects the efficiency of resource distribution among different levels (Figure 1.). Three characteristic levels of allocation efficiency may be distinguished (Józwiak-Hagymásy et al. 2006b). Macro-level or strategic resource allocation denotes the optimal level of health care expenditures for a certain society (Mossailos - Dixon 2002). One OECD study states that it is impossible to determine the optimal proportion of GDP for health care (OECD 2003). Macro-level resource allocation may be provided using open or closed monetary budgets assigned prospectively or retrospectively (Rice - Smith 2002). Mezzo-level allocation efficiency reflects the distribution of resources among players within the health care sector, executed by formulating an optimal hierarchy of priorities. The reimbursement policy of individual health care service providers is determined on the micro-level (Józwiak-Hagymásy et al. 2006b). It could be stated that health care providers have to manage from resources allocated for them through macro-, mezzo- or micro-level allocation mechanisms; thus, their only tool for increasing efficiency is increasing production efficiency.
Efficiency in the Hungarian health care system

1. Macro-level resource allocation

Prior to 2005 the redistribution of funding for preventive-curative services was performed within soft budgetary constraints in Hungary that were implemented via an open retrospective budget. The National Health Insurance Fund continuously followed the expenses reported by players in the health care system, bearing the complete financial risk of health care financing. Although the capitation-based financing of primary care was simple and consistent, it played a major role in increasing health care expenditures by shifting the definitive care of patients to a higher level of services, which induced a disproportionate cost increase. International data show that primary care financing makes up 20% of health care expenditures while generating 80% of costs (Donelan et al., 1996). Meanwhile, in addition to the fact that ambulatory and hospital care delivers the same health benefit but at a higher cost (Rose et al. 2000, Grunfeld et al. 1999, Grunfeld et al. 2006, Scott et al. 2003, Regueiro et al. 1998, McAlister et al. 2007, Greenfield et al. 1995), these care providers who receive reimbursement based on performance (DRG and German point--ambulatory point--system) had incentives to increase services (e.g., the number of cases and services) (Orosz, 2001). As previously mentioned, financial risks were only manageable by optimising production efficiency on the level of health care service providers, thus burdening the National Health Insurance Fund with the full financial risk. Since allocation efficiency supersedes at the level of individual health care providers, the only means for them to increase efficiency is through increasing production efficiency. These tendencies could be detected in the Hungarian statistics that reflected the optimisation of expenses: the weight assigned to the DRGs/expenses increased by 30% between 1994 and 2000 following the introduction of DRG financing (Gaál, 2004), and there was also an increase in production.

The introduction of the performance volume limit (PVL) in 2004 brought about a significant change (264/2003. Governmental decree, 2003). Accordingly, from 2004 only 98% of the performance reported as weights by active hospital care (points of ambulatory care) in 2003 was to be reimbursed using a full (100%) national basic fee.
In this way, a financing constraint was incorporated into the budget. Reported performance above the PVL was reimbursed according to the following algorithm: 99-103% performance was to be reimbursed at 60% of the fee, 103-108% at 30%, and above 108% at 10%. The National Health Insurance Fund used this scheme in 2005 as well by calculating the financing base using 2003’s performance. By introducing the PVL, the previous strategy of increased performance (reimbursed on a fee-for-service basis) was replaced by optimising the number of cases. Defining the volume of performance financed at 100% of the basic fee was the first important step towards closed prospective financing in the preventive-curative health care services. This process was completed with changes implemented in the third quarter of 2006, when no reimbursement was issued above the previous 98% threshold (132/2006 Governmental decree, 2006). The new PVL was defined as 95% of the base fee reimbursed at 100% intensity in 2005. From that point on, a great change was seen regarding the resource allocation of preventive-curative services, as reimbursement policy changed to closed prospective financing, which was optimal from the standpoint of the National Health Insurance Fund. Nonetheless, throughout these changes, no significant change was undertaken concerning the reimbursement policy of primary care. As of April 01, 2009, a new method of reimbursement referred to as “performance financed in advance based on a predetermined basic fee” did not bring any significant change on a macro-level (58/2009. Governmental decree, 2009). Although the health care service providers no longer faced a lack of financing above a certain threshold, the budget still remained closed. Seventy percent of the performance reimbursed in 2008 was financed at an elevated base fee, while the remaining performance was reimbursed at a floating-point fee computed as the ratio of time-proportionate (monthly) budget and the reported overall national performance. The closed budget, manifested at the level of strategic resource allocation, thus resulted in a strict upper limit of reimbursement in secondary and tertiary care. This made the practice of increasing patient numbers obsolete and resulted in articulation of the need for patients to be managed at the lowest possible progressive level. In summary, these interventions may have led to the reimbursing body gradually handing the financial risks over to the health care providers.
2. Mezzo-level resource allocation

Mezzo-level resource allocation is the distribution of resources for preventive-curative care among different accounts. Prior to the government’s 100 Steps Program, issued in 2005, specialised ambulatory care, active hospital care, chronic care and CT/MRI were reimbursed from different accounts. There was practically no transfer between the accounts, greatly limiting bottom-up initiatives aimed at enhancing allocation efficiency (EüM, 2005). Due to the completely separated accounts, drivers to enhance efficiency only influenced production efficiency; thus, each account had a primary goal to maximise incomes while increasing production efficiency. The 100 Steps Program provided the legal framework for improving allocation efficiency by creating a joint account for reimbursement of specialised care services. As of 2006, the monetary budget issued a joint account for the specialised care with the restriction of converting capacities to active hospital care (Budgetary report of the National Health Fund year 2006. 2006a). Joining accounts was followed by the harmonisation of ambulatory and inpatient reimbursement fees issued by the 9/1993 NM decree of September 01. 2005. The conversion rate between the two specialty fields was 100,000 German point/weight. However, since the legal frame failed to offer proper incentives for health care providers, exchanging inpatient care and ambulatory care services did not occur. The structure of ambulatory specialised care and the patient referrals did not change, and in 2007, there was a surplus of unused PLV for ambulatory care services (Budgetary report of the National Health Fund year 2007. 2007a).

These processes underlie our previous proposition that allocation efficiency may only be enhanced by vertical interventions involving every level that provides care.

3. Micro-level allocation

Micro-level allocation is defined as the financing of individual health care providers and their services. Inclusion of new capacities in the reimbursement scheme was governed by the 50/2002. (III. 26.) Governmental decree. According to this decree, the owner and maintainer of health care facilities may file to have additional capacities reimbursed. However, the aforementioned decree lost its effect as of December 31. 2006, and since then, only high priority areas have been supported
(e.g., emergency care). Prior to the CXXXII law coming into effect on April 1, 2007, the structure of the health care system went practically unaltered for a long time (Table 1). As of April 2007, the number of active hospital beds decreased by 26%, active hospital care was eliminated from 11 hospitals, and 5 hospitals, including 3 state-owned facilities, were closed down (Budgetary report of the National Health Fund year 2007. 2007b). As of 2006 the redistribution of capacities within the regions based on occupancy data was handed over to the newly formed Regional Health Councils (CXXXII. Law on the Development of Health Care Provider System, 2006.).

The current allocation mechanisms fail to carry the proper incentives with respect to providing care for patients on the different levels of health care services (primary care, ambulatory specialised, and hospital care); governance of this is left to the authorities and practice guidelines. The National Public Health Authorities have the responsibility to work out the system of referral methods as well as define the catchment area for health care providers (CLIV Law of Health Care, 1997, CXXXII Law on the Development of Health Care Provider System, 2006). The other currently available tool to guide patients is the collection of clinical practice guidelines specified by the specialised colleges of the Health Care Ministry. The guidelines contain specific recommendations concerning the level of care, the scenarios where specific care should be provided and offer clear guidance concerning the referral methods, scope of responsibility, and patient safety (ESzCsM guideline). It may be supposed that patient referral is still governed by the traditional driver of care providers: production efficiency. This phenomenon may be traced back to basically four reasons: (1) paragraph 8 of the fundamental law of health care (CLIV law of Health Care) declares the patient’s right to access the health care system and the physician to provide care appropriate for the patient’s health care needs; (2) the health care provider may initiate a controlled visit (217/1997. Governmental decree, 1997); (3) control of the patient’s method of referral as well as the compulsory catchment area of health care providers exceeds the capacity of the National Public Health Authorities; (4) the practice of clinical audit is currently missing from the Hungarian quality management system (ESzCsM guideline, about the clinical audit).

In summary, it may be said that as of July 01, 2006, preventive-curative care is reimbursed using a centralised, closed prospective method that is theoretically
appropriate and modern. However, the health care system basically still reflects the infrastructure that evolved during the twentieth century when the emphasis was mainly placed on the management of infectious diseases. Based on the previously discussed considerations, the challenge of the twenty-first century rests in the management of chronic diseases that mandate continuous complex care encompassing all levels of care and the optimisation of patient referral methods. Current allocation mechanisms have not yet been reflected in this paradigm shift, as the reimbursement plan today fails to follow the patient. Rather, it is used to support the current health care capacities via the macro-, mezzo-, and micro-level allocation procedures.

Capitation financing

The most accepted form of patient-linked reimbursement is capitation-fee based financing. As shown previously in Figure 1, health service providers (micro-level allocation) of different levels of progressivity (mezzo-level allocation) are unable to exert any influence on allocation efficiency superseding their own level, and/or they lack proper incentives to do so. The current reimbursement drivers fail to incorporate motivation for providing definitive care at any level. The partial capitation fee implemented in primary care reimbursement, which covers expenses of the practice and not the cost of the patient’s overall health care expenses, motivates the primary care physician to manage the patient using the lowest amount of resources, leading to unwarranted referral to the secondary/tertiary care system (Kornai and Eggelstone 2004). Since outpatient clinics are mostly operated by hospitals, patients entering the fee-for-service reimbursed ambulatory care system typically receive sufficient care at a higher progressivity level. This system, basically designed to finance structures and capacities, is currently unable to influence allocation efficiency and is in great need of immediate intervention.

International practice acknowledges reimbursement mechanisms that enable the maintenance of strict budgetary constraints while providing a framework for local political goals (Sheldon - Smith 2000) and enhancing allocation efficiency. This is the capitation financing system. In centralised redistributing system, capitation may be defined as a fixed fee given for citizen who had specific characteristics for a certain
period of time, provided from the national health insurance fund to the care manager (Smith et al. 2001, Nagy 2005).

Several questions need to be addressed with respect to capitation financing that supersede the scope of financing. First, the method of computing a capitation fee generally encompasses the success or failure of care organisers; as with capitation financing, the care organiser carries the full risk associated with the health services relating to entire population. When defining the capitation fee, this risk may be accounted for by using risk adjustment and risk-sharing techniques (Nagy 2005). If the capitation fee is not appropriately determined, the care organiser may attempt to include less risky populations in their clientele (cream skimming) or decrease the quality of services (Van der Ven 2000). The second theoretical problem concerns the scope of insured clients involved in the capitation financing system. As we will discuss later, some attempts were made previously within Hungary’s Managed Care System (MCS) to insure a certain scope of patients using capitation financing. However, this failed to include the entire population, and the clientele was clearly chosen selectively (GAO report 2005a). The third issue concerns the scope of services included in the capitation fee, that is, to execute complete or incomplete capitation financing. An example in Hungary regarding incomplete capitation financing is the reimbursement of primary care physicians where the capitation fee is only supposed to cover the running costs of the practice. Complete capitation financing was executed within the MCS (see below). However, excluding certain rare, high-cost services should be considered even in the case of complete capitation financing (e.g., for cardiac surgery, neurosurgery, transplantation) since collective risk cannot be interpreted on the level of these small communities. Finally, the fourth issue regards the organiser of care services: this could either be the insurance company of a multiple insurance system, a care organiser independent of the current health care system (see MCS), or the primary care physician similar to the practice of several countries (e.g., fund-holders in the United Kingdom (Smith, 2008).

In the following sections, we will describe the Hungarian initiatives for capitation financing, including the Managed Care System and the primary care system. Based on the WHO’s recommendations, we will investigate what advantages would occur if the primary care physician was empowered to influence the allocation efficiency by strong gate-keeping activity and full capitation financing.
The MCS

The MCS was formulated by synthesising the American and English systems. The American managed care system focuses on guiding the patient. Its goal is to keep expenses low, to minimise unnecessary utilisation of health services while increasing the quality of services. According to the call for proposals of the National Health Insurance Fund, the MCS launched within the frame of the Hungarian model experience aimed at using the available resources cost-efficiently while providing similar or higher quality of health care services for the population. In other words, the MCS functioned as a quasi-resource allocation tool. Attempts were made to establish incentives so that the population served would receive definitive care through the operation of the most cost-efficient system processes, thus minimising the unnecessary utilisation of services by crossing different care levels. The MCS therefore attempted to improve allocation efficiency by decentralising the previous mezzo-level allocation system and by providing incentives for care organisers to do so. This goal, however, was not achieved in practice, which led to the termination of the MCS. The MCS operated between 1999 and 2008, and by 2008, care organisers contracted to provide care for a population of 2.3 million. However, it became clear by 2006 that the system had severe deficiencies, and the care management system based on tracking the patient’s method of referral became impossible (Budgetary report of the National Health Fund year 2006. 2006b). In addition, it became evident that savings were not a result of care-organising activities, as these care organisers typically emerged in areas with more favourable health service-use practices. Therefore, the MCS excluded itself from the national risk community, leaving a less favourable risk community behind and rewarding itself the care organiser for utilising resources that should have been spent on the care of those in less-favourable risk communities. Based on these considerations, the General Accounting Office (GAO) did not find the MCS sustainable, and after making a final statement, the MCS was terminated as of March 31, 2009 (348/2008 Governmental decree, 2008). However, the GAO stated that the advantages of the MCS should indeed be incorporated into the operations of health care service providers without maintaining the formal Managed Care System (GAO opinion, 2007).
Particularities of the current reimbursement system in primary care

Another example of capitation-based financing is the dominantly base-financed capitation given to primary care. Primary care physicians receive approximately 75% of their financing based on a capitation fee calculated from the number of patients registered in their practice, adjusted for demographic characteristics of the population and the qualifications of the physician (Orosz et al., 2000). The particularity of the incomplete capitation fee reimbursement is that the general practitioner receives financing for the patients who register for a practice, and thus the number of patients is the greatest determinant of income. This carries a dual motivation: on one hand the goal is to increase the number of registered patients, which is somewhat limited by financial restraints as financing is decreased above 2400 point/practice, while on the other hand they seek to contain costs and other expenditures (e.g., time spent on a patient). Incomplete capitation allocation fails to provide the foundation of allocation efficiency as it carries incentives to refer patients to the specialised care system (Boncz et al., 2004), leading to disproportional cost increases (Mold et al., 1986). The cost of the same service is double and quadruple in secondary and tertiary care as compared to that of primary care (Forrest et al., 1996a). Based on these considerations, the need to provide preventive and curative care on the lowest but yet still sufficient level of the health care system, including primary care, cannot be stressed enough.

An OECD study published in 2000 stated that regardless of the fact that the Hungarian primary health system was reformed to become a family physician service, the activity of general practitioners is mainly limited to writing prescriptions and referral notes (Orosz et al., 2000). Every activity initiated by a primary care physician burdens the income of the practice (e.g., increased wages due to longer office hours and screenings), thus it is clear that the current financing counteracts the provision of definitive care at the primary care level as well as the implementation of preventive programs. By paying an incomplete capitation fee, incentives to increase allocation efficiency are diminished as it limits reimbursement only to the spectrum of activities performed
within the practice. This fails to offer motivation for the general practitioner to optimise allocation between levels of care.

Nonetheless, the Hungarian primary care system may be suitable for undertaking care organising tasks in a complete capitation-based financing system that optimises both allocation and production efficiency because on one hand the premises for strong gate-keeping activity are given, while on the other their compulsory regional care provision covers Hungary’s entire population. By linking financing to the registered patients, continuity of care is assured (Greß et al., 2006) as the primary care physician is already the one who offers population-based care.

Enhancing the primary care physician’s role

In the World Health Report, released in 2008, the WHO took a clear stand on strengthening the community orientation of primary health care (WHO, 2008). According to the report, the ideal primary care manages a broad scope of problems, guides the patient through the different levels of the health care system, and undertakes continuing interaction with the patients. Secondary, tertiary care provides involvement with the patient and enables prevention, early detection, acute and chronic disease management, and rehabilitation through undertaking health-promoting and preventive activities. Ideally these services are provided by primary care teams that receive proper reimbursement. According to the WHO’s people should be placed in the focus of attention. The cornerstones of this idea include the assessment of health needs, the establishment of rich personal relationships, provision of complex integrated care and taking responsibility for the health of a well-defined population. Overall, in this report, the WHO clearly prompts national decision-makers to place the organisation of care into the hands of primary care teams by formulating an appropriate legal and financial environment.

In a people-centred primary care system, teams explicitly aim to explore diseases and the family relations and life situations of their patients. It can be shown that this enhances the satisfaction of both those working within the system and of patients, enhances the safety of health care services provided, decreases the fragmentation of health care services, decreases the utilisation of emergency room services and the
referal of patients to higher levels of care, and lessens parallel service delivery as well as errors stemming from insufficient communication and the loss of data provided by different health service providers. By linking public health care and health care, the primary care physician becomes the key player within the health care system as he or she is the first physician who encounters patients. This interaction greatly influences the way patients view the health care system as a whole. The experience of the past 30 years shows that by acknowledging the person’s central role, not only is the patient’s anxiety decreased, but caregiver satisfaction increases. It is important not to view the patient’s problem as a technical challenge; rather, patients with health problems should be investigated within their complex life situations. This approach inarguably increases the efficiency of treatment and the quality of life for patients (Ferrer et al., 2005), promotes communication with the patient (Jaturapatporn et al., 2006), and enhances trust and compliance (Fiscella et al., 2004).

1. **Offer complex integrated care**

The health challenges emerging in the twenty-first century demolish the boundaries between different diagnostic categories. Today, complex services are needed that embrace health promotion, prevention, and diagnosis, as well as acute and chronic treatment of diseases, rehabilitation, home care and social services. This may be offered most efficiently on the level of primary health care. By offering complex care, health outcome measures improve (Forrest et al., 1996b, Chande et al., 1996, Starfiels, 1998), utilisation of preventive services increases (Bindman et al., 1996), and complications of chronic diseases decrease (Shea et al., 1992). Naturally, this does not mean that everything must be offered on the level of primary care. Rather, it means that referring the patient to the appropriate level of care, involving the patient in public health screening programs, managing home care and other social problems should be performed by the primary care team. Thus, according to the World Health Report, it is the primary care team’s responsibility to help patients navigate through the complex environment of public health care and other kinds of health care services.
2. Providing continuous care

Acknowledging the patient’s complex life situation is fundamental to providing continuous health care services. Optimally, treatment does not only begin when the patient comes in with a health problem and is not resolved after the first treatment. Rather, the patient should be followed until his or her problem is solved. Continuity of care influences therapeutic efficacy, which goes along with enhanced utilisation of primary care (Weinick et al., 2000, Forrest et al., 1998) and is reflected by decreased mortality (Shi et al., 2003, Franks et al., 1998, Villalbi et al., 1999, Regional core health data initiative, 2005), hospital readmission (Weinberger et al., 1996), use of specialised care (Woodward et al., 2004) and emergency room services (Gill et al., 2000), as well as more successful prevention of complications of chronic diseases (Rothwell et al., 2005, Kravitz et al., 2004).

3. Access to care at the same point

To offer complex, people-centred care, stable long-term personal relationships should be nurtured between patients and care providers at the entry point of health care services. Investigations show that about two to five years are needed to form such trusting relationships. Mutual trust increases the amount of respect patients show the primary care team and vice versa, increasing motivation to understand the patient and enhancing communication. Additionally, as patient satisfaction (Weiss et al., 1996, Rosenblatt et al. 1998, Freeman et al. 1997, Miller et al., 2000) and compliance increases, the number of hospital admissions (Weiss et al., 1996, Rosenblatt et al. 1998, Miller et al., 2000, Manious et al., 1998) and utilisation of specialised and emergency care decreases (Forrest et al., 1996b, Manious et al., 1998, Parchman - Culler, 1994, Hurley et al. 1989, Martin et al., 1989). Resources are used more efficiently (Forrest et al., 1996b, Forrest et al. 1998, Hjortdahl et al. 1991, Roos et al. 1998), and overtreatment decreases (Schoen et al., 2007).

Primary care reform
A primary care system empowered by a strong gate-keeping function offering people-centred, complex, integrated continuous care may be suitable to optimise the vertical (allocation) and horizontal (production) efficiency of health care services.

By reestablishing strong gate-keeping activity, patients would only be able to enter higher level services via the primary care team. Previous data show that by not having patients enter the system directly through the specialised care system, the burden of disease, as well as mortality, decreases and prevention becomes more efficacious. Studies have shown that a primary care physician is able to identify the usual life-threatening conditions (Provenzale et al., 2003, Smetana et al., 2007) and adhere to the professional guidelines (Beck et al., 2001) as well as specialists, although primary care physicians are slower to adapt to new guidelines (Fendrick et al., 1996, Zoorob et al., 1999). At the same time, they order fewer invasive examinations (Abyad & Homsi, 1993) and consider fewer and shorter hospital stays as appropriate as compared to their specialist counterparts. (Parchman et al., 1994, Ryan et al., 2001, Abyad & Homsi, 1993). Furthermore, by paying closer attention to prevention (Ryan et al., 2001, Grunfeld et al., 1999), the same health gains may be attained at lower health care expenditure and with higher patient satisfaction (Miller et al., 2000, Grunfeld et al., 1999, Baicker et al., 2004, Pongsupap et al., 2005). Based on these findings, it may be said that a primary care network offering community-based, complex continuous care for a well-defined population may be suitable for upholding the values stated in the Alma Alta Declaration (Primary health care report of the International Conference 1., 1978).

Responsibility of primary care providers for a well-defined population

Empowering primary health care teams to be responsible for the health of a well-defined population also has great abilities to achieve the above-discussed goals, as primary care teams may be held accountable for providing complex integrated care that embraces the entire health promotion-curing-rehabilitation continuum through reimbursement and other contractual clauses. This may form the foundation of new health promotion and prevention programs and may offer incentives for primary care
teams to assume a greater role in the community and to collaborate with other public groups.

Primary care providers as the organisers of care

If we empower the primary health care team to take responsibility for the health of a defined population and enforce its gate-keeping function by enabling patients to enter the health care system only through primary care, the primary care team will become something of a mediator linking together the individual, the community, the patient, and the care providers. Primary care teams are in an ideal position to act as coordinators (WHO, 2008b). Experience shows that this type of responsibility and scope of competence increases the satisfaction of the team and enhances the prestige of the profession while also decreasing the unwarranted utilisation of specialised care. It also facilitates referral of patients to the most suitable kind of service delivery.

In summary, it may be concluded that the incentives for vertical allocation and horizontal production efficiency may be established by strengthening a primary care system that is reimbursed using complete capitation financing. As previously mentioned, the theoretical and legal frameworks of gate-keeping and organising patients’ care by primary care physicians are given for the Hungarian context. Primary care is already reimbursed by a capitation fee to some extent. Therefore, it would only be one more step to move from incomplete to complete capitation fees that would cover the full cost of health care services for populations that are allocated a primary care physician. As pointed out in the report of the General Accounting Office (GAO report 2007), the Hungarian system lacks a care organiser that would have influence over both allocation and production efficiency by having incentives to provide integrated, complex services spanning different levels of care service.
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