

The importance of Assessment Indicators Concerning Therapeutic Interventions, Operation of Health Services and Population's Health in the Matter of Health Policy Planning.

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ABSTRACT

The need for evaluation in the space of health was created mainly because the disputed effectiveness of many therapeutic interventions and services of health, but also due to the organizational and administrative lacks that lead to loss of resources and to inflation of expenses for the health. With the term "Evaluation", is comprehended the estimate, with systematic way, of the degree of achievement of planned in advance and also predetermined aims and objectives, in concrete time interval, with objective aim the confirmation of the achievement of this objectives, as well as the means and the activities that are used for this achievement. The evaluation is considered as an integral and important piece of planning, organization and administration of each service or system of health. In this article it is attempted:

- A synoptic & systematic examination of the most important indicators of the evaluation of the therapeutic interventions, the operation of the services of the health and the health of the population, in the planning of policies of health.
- The appointment of the social and political dimension of the evaluation and the formulation of certain thoughts and reflections.

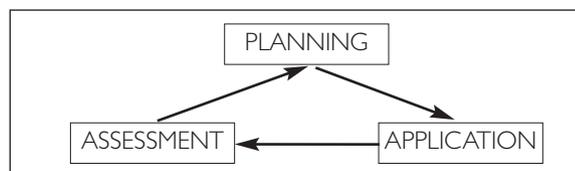
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Assessment in the Field of Health

Assessment is integral and fundamental part of planning, organization and administration of each health service or system. Assessment in the field of health includes two essentials sectors: assessment of medical and nursing intervention, health programs as well as assessment of partial health systems (Tountas G., 1999) (see figure 1). As evaluation of a health system or partial health services operation could be regarded an evaluation of health services and systems on the basis of some factors concerning theoretical or experience standards. These standards could be either absolute either comparative. In the first case, the assessment of health system or health

services and its deriving results is being performed on the basis of predetermined objectives while in the second case it is being performed as per relative health systems or services that are considering as reference points.

FIGURE 1



Assessment Levels of Health Services and Systems

Health services and systems can be analyzed and assessed at various levels. There are diverse classifications as per these levels. According to Donabedian (Donabedian 2004), there are four classification levels in the field of health:

INFLOWS >> PROCEDURE >> INTERMEDIATE

OUTFLOWS >> RESULTS

Inflows assessment values human and material resources of a health service. That is to say that staff, equipment, installations, cost such as other factors, which determine to a considerate extent the structure and

content of a health service, are assessed.

Assessment of service provision procedure is referred to valuation of "intermediate" providing services' organization and quality. The quality assessment constitutes a rapidly developing assessment field that is integrated in procedures of quality assurance and amelioration.

Assessment of intermediate outflows evaluates the use of health services (e.g. hospital beds, private or external consulting rooms) and the volume of directly obtained product (e.g. laboratory examinations, vaccination or surgery operations). Intermediate outflows are in many occasions used as effectiveness measure of a health service which results are difficult and time-consuming to be evaluated. The relation between inflows and outflows is an effectiveness measure of a service.

Standards of Health Services and Systems Performance

The assessment of health services and systems usually combines the views of different parties involving in health such as patients, suppliers, insurance organizations etc. Consequently, the assessment will have to be performed not only through simple inflows, procedures, outflows and result analysis but also a right and a balanced choice of **performance measures or standards** is obligatory. Standards are quantitative determined variables that evaluate sectors of health services and systems operation in accordance with some acceptable standards. The performance standards will have to be referred to inflows, procedures, outflows and final results and to focus on fields that interest more the involving institutions, (Moullin M., 2004). These standards correspond subsequently to proper performance indicators. The **indicators** that contribute to the formation of standards constitute a net number defined as a percentage frequency rate of a specific occasion. Cochrane was the first that showed off the need of evaluation of clinic practice (Cochrane, 1972) under the standards of:

Equality

According to World Health Organization, equality is an equal access and use of health services and similar patients' care, independently of social, financial, sexual, cultural and other factors.

Equality is a basic and principal concern of health policy.

Effectiveness

As effectiveness of a health service or system is defined the grade of aims' achievement set by their planning and programming. However, because of the fact that aims refer to diverse sectors (e.g. quality, equality and accessibility) the term is often referred to clinical effectiveness, in other words it is referred to grade of aims achievement relative to results concerning population's health (morbidity, mortality etc.). Effectiveness is a principal concern of direct producers (Doctors and Nurses).

Productivity

Productivity evaluates the results of a health service or system with respect to used resources – financial, material

Results assessment constitutes the final aim of assessment and is referred to influences in a person's or population's health. The result assessment can be executed during service operation or retroactively after the end of operation term when its influences in health are obvious. The continuous and regular evaluation of health level is possible through the use of morbidity and mortality indicators deriving from compound epidemiological field researches, mortality indicators, survival tables, survival diagrams as well as through the use of modern indicators that measure the dimension of body, soul and social well-being such as questionnaires concerning measurement of life quality related with health. The combination of all four evaluation levels with the use of proper indicators can lead to complete evaluation of a health service or system but also can lead to the extraction of reliable conclusions.

and human. Productivity constitutes a basic claim of people that manage health services in contrast with the basic goal of those that are involved in health care which is productivity. This is due to the fact that the high cost of treatment is heavily associated with absence of health services' productivity. In general, productivity is considered to be maximum when a given product quantity is produced by as less cost as possible and its quality is as good as possible or when given the cost, it is produced the maximum product quantity. Productivity is closely related to effectiveness and calculates results' quotient towards inflows, expressed in working hours and by this way it focus on value of human work as production factor.

Concerning the health service and system, productivity is usually defined by the ratio of inflows/outflows, where outflows are either intermediate either final and inflows are measured in physical units or they are converted in financial units and are referred as cost. For example, during evaluation of a hospital, inflows often include direct operation cost, human resources, and available beds, intermediate outflows include the number of surgery and laboratory acts as well as the number of hospitalized while final outflows include the amelioration of morbidity and mortality indicators.

Quality

The meaning of quality some times is used as a standard that expresses the extent of satisfaction of clients-patients and some times it is used as broader standard of total performance, including effectiveness, productivity, accessibility to health services, satisfaction of patients and scientific integrity and safety of care procedures (Tountas G., Oikonomou N.A, 2007). According to World Health Organization (WHO), quality is the provision of diagnostic and therapeutic acts able to ensure the best result in the field of health in the context of modern medicine capability that has to focus on maximum performance with the minimum iatrogenic danger and on maximum patient's satisfaction in terms of procedures, results, and human

contact. The standard of quality because of particular importance, in our ages, constitutes a separate sector of health services that is studied unilaterally from other dimensions of evaluation.

Secondary evaluation standards

Other secondary standards related to standards mentioned above and that are used for more complete health services evaluation are:

- **Adequacy.** It expresses the rate of quantitative response of health services to health needs and to derived demand of a determined population. It is estimated with bed indicators per population, doctors per population etc.
- **Competence.** It determines the relation of providing services regarding to needs but also to population desires. The indicators of competence are mainly referred to rate of population coverage concerning the quantity and quality.
- **Availability.** It expresses the possibility of health services provision without time or other constraints (e.g. health centre open 74hours).
- **Accessibility.** It presupposes the adequacy and availability of services and expresses the equal possibility of each beneficiary to use the providing health services without geographical, traffic or financial borders. The number of people or the percentage of certain population that are expected to use some health service as well as the time of transfer to service and the waiting time until use determines accessibility.
- **Acceptance.** It evaluates to what degree social and cultural factors influence the acceptance of health services by permitting or preventing the initial contact and service use.
- **Activity.** It expresses the clinical productivity of interventions applied by service under ideal, experimental conditions.
- **Compliance.** It defines to what extent patients apply

the medical and nursing orders systematically.

- **Continuity.** It expresses the ability of complete health services provision to population, in order to be provided continuous and not fragmentary treatment (e.g. connection of primary and nursing treatment).
- **Accountability.** It is the ability of health consumers and buyers to control and influence the directions and policies of health services with different ways. It is calculated by indicators of collection date frequency, data reliability, participation of consumers to decisions etc.
- **Reciprocation.** It is a meaning evaluated by WHO and defined as the rate that health system corresponds to legitimate expectations of people regarding to every no medical aspects of their transaction with it (e.g. dignity, confidentiality, right to choice etc.). It is composed by eight partial sectors that are assessed by citizens and is related with treatment quality.

Other secondary standards are:

There are also other secondary standards (Net portal for Health: www.nosokomia.gr; 2008) such as:

- Scientific and Technical Quality Level
- Adequacy
- Aspect
- Impact
- Economic Proportion

The above standards are parameters that are taken into consideration during process of Health Services assessment. The assessment of one health service usually examines certain goals of service or of its partial programs and the rate of their achievement is evaluated by the use of relevant standards (e.g. adequacy, productivity, effectiveness etc.) that correspond to the proper indicators. The evaluation is performed by the choice and application of proper methods.

Methodology of Assessment

The basic elements that one has to take into consideration concerning the determination of assessment framework include the definition of assessment field that is to say the main object of it, the pre-planned goals of assessment, the determination of methodology that will be applied and

finally the collection and analysis of elements and results. Collection, analysis of elements and the creation of results presupposes that all goals have to be measurable, expressed in numerical form and be observed for a specific time interval.

Assessment Indicators

Indicators that form the assessment standards are usually a net number defined as a percentage rate of a specific event. The Assessment Indicators are being highly used for measurement and analysis of elements and for the extraction of results arising out of assessment. The assessment indicators have to be valid, reliable, sensitive and qualified. There is a large number of Assessment Indicators that according to WHO are classified in five basic categories (Net Portal for Health:

www.nosokomia.gr, 2008):

- Indicators of health policy
- Socio-financial indicators
- Indicators of population health level
- Indicators of health services provision
- Indicators of primary health service coverage

Depending on health services that are under assessment, the type of desirable assessment and the possibilities that are

offered, they are chosen the relevant indicators from a large number of indicators used in the field of health. The most important types of indicators are:

Inflows indicators (simple quantitative indicators, as the number of doctors, nurses, inflows quality indicators as staff education, adequacy indicators as the number of beds per 100.000 citizens (net portal of E.U concerning health, 2008), geographic accessibility as the population rate situated near a health service, the occupied nursing staff (net portal of E.U concerning health (2008), etc.)

Indicators of procedures assessment (e.g. reliability of diagnostic examinations, patients' satisfaction, medical techniques' integrity, waiting time)

Indicators of intermediate outflows (e.g. simple contact indicators or services' use as the number of imports, composed use indicators as the average duration of hospitalization, indicators of laboratory examinations or products as the number of surgeries per specialization each year; result indicators and health population indicators (morbidity, mortality) and modern indicators of well-being, productivity indicators as relevant effectiveness and indicators of undesirable acts. The indicator that is referred to life expectancy without health problems calculates the number of years that is expected to live someone per average without health problems, persons of a certain age (GENERAL SECRETARIAT OF NATIONAL STATISTICAL SERVICE OF GREECE, PRESS RELEASE 2004), while the indicator of life expectancy estimates the number of years that are expected to live persons of a certain age per average, etc.

Performance indicators (e.g. technical productivity, indicators of financial evaluation, the ratio of

cost/productivity etc.)

Composed socio-financial indicators (e.g. income, residence, work conditions)

Indicators of civil health (civil choices, resources distribution, organized framework)

In parallel with establishment of Lisbon Strategy, the European Committee proposed a general approach strategy of health indicators for member-states of European Union (net portal of E.U for health, 2008). The aim of this strategy is the development of a comparative –between member-states-information system relative to health subjects. This information will cover:

- Health-concerning population behavior (e.g. information for life style, smoking, alcohol, exercise etc)
- Diseases (chronic, rare and serious diseases etc.)
- Health systems (e.g. indicators relevant to treatment, quality of provided treatment, human resources, financial sustainability of health systems etc.)

The structural indicators are chosen on basis of under mentioned standards:

- They must be comprehensible
- They must be relevant to plasticized policies
- They must be consistent with other indicators
- They must be inserted timely and be renewed regularly
- They must be accessible to all member-states
- They must be comparative between member-states but also compatible with Countries as USA and Japan
- Data must be derived from valid sources
- They must not impose high volume in statistical institutions and organizations

Prioritization of Basic Assessment Standards

Prioritization between primary assessment standards is the object of scientific interest. For Cochrane, productivity was of essential interest. The choice of an effective medical method also contributes to efficient use of resources and consequently ensures –almost automatically- the productivity. For Cochrane, the subject of equality is resolved by provision of every efficient treatment free of charge, considering that in that way there is equal access to health services. The equalization that Cochrane used is:

Effectiveness>Productivity>Equality

The response is that automatic assurance of effectiveness is not always possible. So, when effectiveness of a medical intervention is established, its cost has to be evaluated and the most beneficial premises must be determined for its application, through application of methods analysis cost-effectiveness. On the basis of effectiveness standards, priorities and needs concerning human, material and financial resources could be determined. Additionally, the equalization downgrades the subject of equality since it presupposes the right of users to exploit chances offered by a health system. Nevertheless, the exploitation of equal chances is not often achievable. So, the reformulation of equalization was necessary in order to underline the

assurance of equality to desirable health results and not only the access possibility under the following form:

Equality>Effectiveness>Productivity

In some cases, the purposes of equality and productivity are simultaneously attained. The displacement of health resources from an area with large health infrastructures and low mortality indicators to an area with insufficient infrastructures and high mortality constitutes an example. Generally, equality and effectiveness are competitive meanings and it is too difficult to be a simultaneous maximization of them both. In these cases, a compromise is obligatory in order to achieve the “integral balance” or the equivalence between effectiveness and equality, namely the point beyond of which, amelioration of one size could be achieved only against another. In some cases, the choice of health program could primarily be on basis of social offering; in specific “weak” parts of population (e.g. poor, elderly, and employee mothers) even if such an action charges productivity.

It is concluded that, independently of scientific interest of basic standards' prioritization, it is also obvious the political framework according to which health services' and systems' assessment will be performed.

Social and Political Dimension of Assessment

The integration of equality in primordial assessment criteria of a health system presupposes that health is a social good. The school of parity is the one which developed this point of view. According to its point of view, production and health services distribution have to be performed on the basis of real patients' needs. So, equality is related to the sense of performance which is a distribution that aims at fair resources' allocation. At the other side, there is the liberal point of view that considers that distribution has to be performed according to conditions that operate every consumer goods, namely by virtue of market operation.

Equality has two dimensions, the horizontal and the vertical one (Tountas G., Oikonomou N. A, 2007). The horizontal one is attained by equivalent resources and services distribution (e.g. similar doctors rate per 1000 citizens) as well as by equivalent access (e.g. same distances from primary health services) and use of health services from the total of population. The final goal is the reduction of inequality in health by convergence of health indicators regarding geographical or population level. The vertical equality recognizes the need of population treatment depending on specific needs, fact that leads to different products and health services consumption according to partial needs. Yet, the vertical equality provides gradual financing based on financial possibility of each citizen.

In every country, depending on historical and political situation, the equivalence in access and in health services consumption is attained by smaller or bigger interventions of state. Interventions are various and different, they depend on the type of health systems, the rate of social policy and on the structure of politico-financial system but they have as common denominator the control of health services' side and the maximization of utility/usefulness of community.

The resources' distribution aiming at increase of effectiveness and performance of maximum utility/usefulness to community constitutes the fundamental goal of health systems but it can not assure that the total utility is distributed according to real health needs. So, it is observed that health systems with market mechanisms (liberal policies) present important inequalities as regards health services inequalities resulting to distribution of greatest number of utility to higher socio-financial classes (Tountas G., Oikonomou N.A, 2007).

It has to be remarked that substantive approach of socio-financial inequalities in the field of health presupposes, beyond

sanitary interventions, and other socio-financial interventions (e.g. better education, unemployment combating).

Another inequality concerning many health systems is that population groups with low income spend more than their gross income in comparison with high income groups, although they assume less health provisions. The mixture of financing sources influences heavily the equality standard and contributes to a discrimination of systems financing the health services in progressive and not progressive. Countries with progressive system are countries with public or socio-assurance character. The national health systems that are financed throughout taxation and where enters into force the progressivity of tax index, ensure that high incomes will be charged aiming at equality and social solidarity. In socio-assurance systems it is attempted, through higher charge of employers' contributions, a redistribution of sources from high to low incomes. On the contrary, in countries, where progressivity in financing of health services (e.g. USA) is not in force, there are major inequalities relating to access and use of health services (Tountas G., Oikonomou N.A, 2007).

These inequalities in health constitute a major challenge for health policy. Therefore, measurement and surveillance of changes concerning inequalities is necessary for evaluation of effectiveness of interventions in health policy.

Lately, technocrats outlined that an individual is also responsible and must not charge with additional expenses the health system by paying no attention to his health. On the basis of this concept, it is probable to be planned health policies that orientate to solve the problem of a population party and not to find a solution of general problems. As a result, the people who decide, many times consider persons as absolutely responsible for their health and they exclude person categories (as obese, smokers, alcoholics and generally persons that depend on chemicals etc.) from health services. This lead to the false impression that people have the force to plan completely their life so as to be able to combat prevented risks and consequently when they are sick, they are considered responsible and are blamed (victim blaming). Such a concept is expressed in the undertaken revision of National Health System of United Kingdom according to which, during this year, it was approved the "Leicester City Primary Care Trust" by government. Its purpose is to exempt smokers from waiting lists as regards surgeries such as ischium replacement and heart surgery (Telegraph.co.uk, 2008).

Conclusions

By the above elements it arises that assessment of Health Services is a very complex and large procedure that presupposes the development of a specific type and model of assessment, a certain methodology as well as a proper choice and use of Assessment index in the framework of a general, social and financial policy. Nevertheless, the assessment procedure is a useful tool for management of health services because it facilitates the financial control,

contributes to evaluation of effect of applied policies, finds some defaults and promotes the application of structural actions and finally leads the planning of future policies and determines new goals.

The exploitation of assessment results and index must not be realized in the strict framework of a grim technocrat approach but in close and direct relation with solid values and society's beliefs.

BIBLIOGRAPHY

GENERAL SECRETARIAT OF NATIONAL STATISTICAL SERVICE OF GREECE, PRESS RELEASE 2004. Survey of Income and Living in Household 1995 - 2003- Life expectancy without health problems, Athens.

Cochrane AI, 1977. Effectiveness and efficiency: Random reflections on health services. Nuffield Provincial Hospitals Trust, London.

Donabedian A., 1996. Evaluating the quality of medical care. Milb Mem Fd Quart 1996.

Moullin M., 2004. Eight essentials of performance measurement. Int. J Health Care Qual Assur.

Tountas G., 1999. Health Services. Educational Notes For; University of Athens, Athens.

Tountas G., Oikonomou N. A., 2007. Economics of the Health, Files of the Greek Medicine 74.

Net portal for Health, "www.nosokomia.gr", (2008): http://www.nosokomia.gr/web/index.php?option=com_content&task=view&id=48&Itemid=70

Net portal of E.U concerning health, (2008): http://ec.europa.eu/health-eu/health_in_the_eu/ec_health_indicators/index_el.htm

Net portal of E.U concerning health, (2008): http://ec.europa.eu/health/ph_information/documents/ev20040705_rd09_en.pdf

Net portal, "telegraph.co.uk" (2008): <http://www.telegraph.co.uk/news/uknews/1574203/%27Patients-to-lose-weight-before-NHS-treatment%27.html>