HEALTHCARE SERVICES CONSUMER’S BEHAVIOUR 
AND SUSTAINABLE DEVELOPMENT∗

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Abstract

Sustainable development has come into prominence in recent years as a 
concept that determines implications in all areas of human activity. Modern 
medical services are distinguished by a special position regarding application 
of the specific principles of sustainable development. This is because they are 
not only a necessary and useful tool to implement the concept of sustainable 
development at the scale of the entire human civilization but also an area of 
activity where sustainability is experiencing a complex application. In this 
context, health care consumer behaviour has also suffered substantial changes 
determined both by the technological evolution from the medical field and the 
large scale which phenomena such as social networks and communication 
technology has in the present. This article proposes a review of the evolution 
of the concept of sustainable development, its application in the medical field, 
with an emphasis on dental health services and final considerations on how 
consumer behaviour is influenced by the implementation, at the level of the 
medical organisations, of the principles of sustainable development.

Keywords: sustainable development, healthcare, green dentistry, 
consumer behaviour, social responsibility

JEL Classification: Q01, Q56, I15, M31

1. Brief history of the evolution of the concept of sustainable development

Sustainable development is one of the concepts that led to the most ample 
debates in the scientific literature over the past 25 years. Although it has been

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widely discussed, for a long time there was no consensus among experts on the
definition of its content or of the methods to measure its degree of implementation.
Due to its complexity as well as to the very general area it refers to, sustainable
development requires a multidisciplinary approach – economic, social, cultural,
political etc.

In a synthetic approach, the evolution of the concept of sustainable
development is marked by a series of specific stages, which is quite common for
most of the key concepts and theories. Both theorists and practitioners form the
 economical field on the one hand, as well as the representatives of the employers
on the other hand, as the forms of organization of the economic activity have
become increasingly complex, have raised the issue of the limited character of the
production factors, of the resources available for any economic activity. The first
voice that distinguishes by a consistent and coherent concern in this regard is that
of the well-known economist Thomas Robert Malthus, who in 1798 in his paper
“An Essay on the Principle of Population” approaches the issue of limiting the food
resources in relation with the growth of the global population. Thus, Malthus
postulated the idea that the growth rate of the food available is smaller than the rate
of population growth, which will inevitably lead, in the future, to general starvation
or, at least, to the living conditions of generalized minimal subsistence. The thesis
advanced by Malthus was invalidated by the evolution of human civilization,
which succeeded with the help of the technical progress to advance the problems
carried by population growth.

However, Malthus’ ideas have survived, being transposed in a new light.
Thus, in 1972, the Club of Rome’s organization launched the book entitled “The
Limits to Growth”, a paper that was warning against the risk of non-renewable
resources depletion and the automatic growth of prices for most consumer goods in
these conditions. The book presents a simulation of a group of technicians from
MIT showing that, in time, population and industrial capital will continue to grow
exponentially leading to a similar increase in demand for food and renewable
resources. (Cole Matthew, 2007, p. 241) The model was thus predicting,
inexorably, the generalized collapse. Another contemporary personality who
promoted the ideas of Malthus is the economist Lester Brown. He focused on
possible scenarios at the level of the global economy after finishing the fossil fuel
reserves. His activity is promoted also through two research institutes (World
Watch Institute and Earth Police Institute) which are preoccupied with the analysis
of the degree of global natural resources usage and the development of viable
alternatives for the global consumer trends. (Brown Lester, 2006, p. 17)

These concerns have been shared by many economists, which have created
the favourable conditions for the emergence and further development of the
concept of sustainability and sustainable development.

Thus, the first time that the concept of sustainable development starts to take
shape is represented by the works of the conference on the environment from
Stockholm, Sweden, in 1972. The conference will explicitly debate for the first
time the relationship between economic, social development and the environment.
Hence, the group of 27 experts who have spoken at the conference concluded that
the economic and environmental priorities are two sides of the same coin. (Vogler John, 2007, p. 430-436) The conference was a real catalyst for further development of things, during which the United Nations Environment Programme being set up. The stated mission of this organization: “to provide leadership and encourage partnership dedicated to protecting the environment by inspiring, informing and supporting nations and individuals to improve their quality of life without compromising that of a future generation,” gives us the first concrete elements that are very similar to the later main content of the sustainable development concept. (http://www.unep.org/regionalseas/globalmeetings/15/GreenEconomyinaBlueWorld%20FullReport.pdf)

At the same time, the conference was meant to promote and subsequently to determine the signing of the first international treaties on ocean pollution, on species, which are disappearing, etc. Also during the conference the “Stockholm Declaration on Environment” will be adopt, statement that will contain a number of essential principles, including the one that states the need to integrate and coordinate the efforts of global planning regarding the protection of the environment.

However, the need to integrate environmental concerns into national and international policies grew because they were sporadic and uncoordinated. In these conditions, in 1983 the United Nations General Assembly created the World Commission on Environment and Development, later known as the Brundtland Commission, named after its chair Gro Harlem Brundtland. In 1987, Brundtland Commission published its report entitled “Our Common Future”. This document can be considered the official birth certificate of the concept of sustainable development as it provides the most complete and consistent definition of the concept at the time: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (Lars Osberg, 1988, p. 37)

The definition highlights two major concepts for the later on development of the theory in field: the concept of needs (seen as a global expression of the needs of the poor, which is thus a priority) and that of limitations imposed by the level of technology and that of social organization on the capacity of the environmental to meet present and future needs.

Although the Brundtland report also had critics, it is undeniable the moment in which professionals, governments and the world became aware of the existence of the concept of sustainable development, its contents and its implications.

The next step in the evolution of the concept of sustainable development is marked by the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in the summer of 1992. Although, during the interval between the two major conferences, the concept and the issue of the sustainable development have been addressed by a variety of specialists, 1992 remains the year in which sustainable development asserts itself also at the level of the international political discourse, gaining the appropriate recognition through the documents signed at the Conference: “Rio Declaration”, “Agenda 21” and through the establishment of the Commission for Sustainable Development.
The document “Agenda 21” draws the attention particularly not only from the perspective of explicitly defining the content of sustainable development, but also its operational modalities. Thus, in the Declaration are addressed, in a structured manner, issues such as the quality of life, the efficient use of natural resources, the protection of global common goods, the management of human settlements and the sustainable economic development.

However, the conference also provoked debates about the ways of implementing the concept by each state. With this occasion, it was highlighted the need for each government to elaborate action plans based on this concept and to adhere to a set of common principles. It became clear the fact that the implementation of the principles of equality and coexistence within the ecological limits can be ensured only if the social, political and economic systems have the flexibility to be redirected towards sustainability and integrated with each other and with the environment. (Prizzia Ross, 2007, p. 19-42)

In the coming years, the evolution of the way in which the concept of sustainable development has been understood and applied is marked by a series of resonant international events – the Conference from Kyoto in 1997, which ratified the “Kyoto Protocol” addressed to reducing the CO₂ emissions into the atmosphere , the Millennium Summit in September 2000, where the “Millennium Development Goals” was signed – a document which provides a series of macro goals addressed to a time horizon until 2020 such as universal primary education and promoting the equality of genders, reducing child mortality and improving maternal health, integrating the sustainable development principles in state policies, reducing by half the proportion of people without access to safe drinking water etc. (Gorbachev Mikhail, 2006, p. 153-160)

In 2002, the World Summit on Sustainable Development, held in Johannesburg, takes place. During this major event, the question of a partnership between the UN, governments, business corporations and NGOs to identify common resources was raised. At the event, the objectives of the summit of the millennium were reconfirmed and completed with a number of new ones. Remarkable is the experts’ opinion according to which, at this summit, a progress has been made to push the concept of sustainable development to a more productive exploration of the relationship between economic development and the quality of the environment. (Asefa Sisay, 2005, p. 4)

In 2012, in Rio de Janeiro, the United Nations Conference on Sustainable Development – “Rio +20” was held. This event marked the 20th anniversary of the first United Nations conference held also in Rio de Janeiro and 10 years from the Summit on sustainable development in Johannesburg. The conference was another milestone for the affirmation of the concept of sustainable development, focusing on the adjacent concepts such as ‘green economy’ and the institutional framework on sustainable development.

The conference also established seven priority axes for sustainable development: decent jobs, energy, sustainable cities, food security and sustainable agriculture, water, oceans and preparation against disasters.
2. The content of the concept of sustainable development – the pillars of sustainable development

During its evolution, the concept of sustainable development has crystallized increasingly better, managing to highlight, currently, the multilateral approach of three key areas for the human civilization: the social, the economic and the ecology. To these true “pillars” for sustainable development we may add a fourth one, essential for defining and implementing the policies and activities related to sustainable development: governance.

Governance will involve the participation of all interested parties (citizens, organizations, associations, electees etc.) in the decisions making process; therefore, it is a form of participatory democracy. Sustainable development is not a static state of harmony, but a perpetual process of change in which the exploitation of natural resources, the direction of investments, the orientation of technological and institutional changes are made consistent with the future and present needs.

Sustainable development implies that system which is made up of three types of actors:

– the actors from the markets’ level which are formed by enterprises;
– the actors of the civil society which are represented by the non-governmental associations and organizations;
– the actor from the nations’ level which are the public authorities.

Modern management orientation has integrated the appropriate principles of the sustainable development into the business strategy of the organizations. Thus, one of the effective ways by which the principles of sustainable development and the integration of the organizations into the circuit of global values are emphasized is that of developing the concept of corporate social responsibility. Currently, this concept is not limited to involving the organizations as social actors, but covers the whole field of action for sustainable development.

Figure no. 1 The diagram of the organisations’ involvement according to the three pillars of sustainable development

Source: http://rse-pro.com/piliers-du-developpement-durable-1066
Hence, the social responsibility of companies or organizations broadly is based on the three pillars of sustainable development and is defined as being the set of obligations assumed (through policies) by organizations to help achieve the specific objectives of sustainable development: economic performance + social responsibility + environmental compliance.

3. Sustainable development and marketing of medical services – interference and connections

The implementation of the principles of sustainable development within the organizations’ activity presupposes as well changes at the level of their marketing optics. Hence, the role of marketing becomes that of identifying opportunities and threats while the consumer awareness degree regarding issues of sustainable development has been increasing. (Pautard Didier, 2004, p. 73)

The marketing department must also convey to the other departments from the company the values required by the market. Marketing is the one who must convey the values to the company, but these must not jeopardize the sustainable development. Organizations are those that, by means of marketing, must have interest to encourage the responsible creation of products and delivery of services, because most of the times, clients ask them to and therefore this will lead to increased profitability.

Postmodern consumers are individuals who exhibit a greater concern towards the environmental, social and societal issues. In their relationship with the economic entities producing goods or providing services they do not hesitate to penalize manufacturers and contractors who do not prove that they are engaged in activities consistent with sustainable development. (Sempels Christophe, Vandercammen Marc, 2009, p. 14-16)

The evolution of the contemporary consumer in the direction of accountability in relation to high environmental needs and social involvement of companies did take place relatively slowly, as evidenced by the results of various researches. Thus, in the years 2003-2004, about 50% of consumers are insensitive to the specific issue of the sustainable development, 30% are inactively sensitive – they thought of the specific implications of sustainable development but have not used these criteria in the decision making process of buying the consumed products and services, 20% are actively sensitive – they are aware of what the sustainable development means and they take consumption decisions based on these principles. (Manole, Epuran, 2008, p. 98).

A responsible marketing strategy presupposes that the management of the organizations treat customers adequately, induce them an ecological behaviour. (Skowron Stanisław, Szymoniuk Barbara, 2014, p. 39-46)

In healthcare, organizations providing healthcare services have adopted more rapidly the specific values and principles of the sustainable development, as healthcare services have a strong social component and represent one of the main levers used in combating many of the problems specific to underdevelopment.
Thus, the relationship that can be created between the medical field and the concept of sustainable development is complex, having a double meaning. On the one hand, the degree of implementation of sustainable development at the socio-economic level will affect the medical performance, the healthcare organizations must anticipate changes in the environment (such as climate change, epidemics, etc.) and develop long-term strategies tailored to the needs of consumers in a dynamic environment. (Ogilvy Public Relations Worldwide, 2011, p. 2)

On the other hand, the healthcare organizations must become themselves exponents of an orientation towards sustainable development, both at the managerial level, the level of organizing the providing processes and at the level of medical products and provided healthcare services rendered.

Hence, the following 8 areas represent opportunities for the organizations providing healthcare services to differentiate themselves from others and to achieve long-term sustainability at the level corresponding to the natural, social and economic environment: (Ogilvy Public Relations Worldwide, 2011, p. 4)

- Reaching beyond compliance
- Social and business opportunities intersect
- Switching from donations to partnership
- Building intellectual capital
- Reconsidering the current business model
- Identifying opportunities with the help of customers
- Re-evaluation and innovation
- Turning sustainability into an objective of the organization

In healthcare services, the dental healthcare services have a special position due to the specific dental medical conditions. These have a high and very high frequency and a significant impact on the general health of the patients. Also, the using of this type of service is influenced as well by social and ethical considerations associated with the self image of the patients. All these specific elements will influence as well the issue of applying the principles of sustainable development in dental healthcare services.

Within the provider – patient – sustainable development equation, dentists occupy a special position. The frequency and severity of some of the dental diseases, as well as the high enough prices of the interventions raises the question of the access to dental care. Sustainable development requires improving the access to healthcare for a greater part of the population. Studies on dentists revealed a delicate and complex situation in terms of their perceptions in relation to the notion of social responsibility applied in the provided dental health services. (Dharamsi Shafik, Pratt D. Daniel, MacEntee I. Michael, 2007, p. 1585)

As a result of the qualitative research conducted on 38 dentists from USA and Canada, the authors of the research have identified four topics and two dimensions that have shaped their perceptions on the issue related to the application of the principles of social responsibility within the benefits from the private and public practices where they were activating in. Figure no. 2 shows the identified topics and dimensions.
Figure no. 2. *The four topics approached in applying the concept of social responsibility in practicing dentistry*


Analysing the figure shows the existing conflict between the views of those who took part in the survey regarding the answer to the questions: who is socially responsible for ensuring an equitable access to dental care, the implications for human rights and whether the current structure of delivering the services meets the needs of the vulnerable populations. In the centre of the figure is the notion of social responsibility defined as the obligation to treat the pain and medical dental emergencies regardless of the costs and / or the consumers’ purchasing power. This was an opinion shared by all the participants in the focus group.

Doctors perceive the tension that exists between providing dental health services seen as commercial services that “sell” and the desire to serve the public good without taking into account the costs. Some the doctors believe that the need for fulfilment in the personal and professional life is more important than any other economic considerations and the professional integrity must be predominant.

Other participants pointed out that it is naive to ignore or subordinate the role of fiscal responsibility, being ready to accept the professional requirements related to ensuring the access as equitable as possible to dental health services for as many
disadvantage patients as possible, but are convinced of the correctness of “the market mechanism” of demand and supply, which adjusts by itself the activity of dental services provision.

Furthermore, for those, the place of social responsibility is to be found in the state institutions and public services from the field, not in the offices of the dentists. Thus, theoretically, the concept of social responsibility applied in the field of dental health services is influenced by a range of perceptions (patient, provider, society) and are the subject of multiple influences (political, professional, economic and philosophical).

4. The application of sustainable development principles in medicine – “green” dentistry

The application of specific principles of sustainable development is customized according to the field of activity taken into account. Thus, in the case of medical services, this meant primarily reconsidering the ways in which medical services take place, by integrating the latest green technologies, the management principles that help respecting the environment, the reuse of consumable raw matters and materials, etc. A whole series of manufacturers and distributors of medical equipment and supplies have redesigned the development of medical product to include specific requirements for sustainable development, communicating at the same time these efforts to end users as well. (The Growing Importance of More Sustainable Products in the Global Health Care Industry, Johnson&Johnson research study, p. 16).

A particularly interesting dimension, which occurred as a direct result of the efforts to implement sustainable development in all spheres of human activity, therefore in medicine too, is the development of the “eco-friendly” dentistry. This includes all medical dental specialties (from general dentistry to dental surgery and other dental care services) providing ecological practices to reduce the impact on the ecosystem, the environment and the procedures for treating patients.

Dr. Ali Farahani and Mitt Suchak, in a study from the University of Waterloo have defined “eco-friendly dentistry” as an “approach for dental medicine which implements sustainable practices by keeping the consumption of resources according to the economy of nature, by protecting the external environment by virtue of eliminating or reducing the wastes, by promoting the welfare of all those in the clinical environment by consciously reducing the chemicals in the breathable air.” (Farahani Ali, Suchak Mittale, 2007)

Similarly, Margot Hiltz will find that dentistry is a profession dedicated to promoting and improving the oral health and well-being of clients. To achieve these objectives dentists use a variety of materials and equipment. Unfortunately, some of the materials that were used before included heavy metals and biomedical wastes that could produce changes in the environment. Hence, a reconsideration of the medical practices in this regard is required. (Hiltz Margot, 2007, p. 59-62)

The Teleosis Institute (2006) finds that “at the level of the green health care, the use of some non-toxic buildings, promoting the notions about local issues
regarding the environment and the use of some safe medical methods, efficient and cautious, are intrinsic elements of the new health care system which is beneficial for people and the environment.” (http://www.teleosis.org/)

Dr. Ali Farahani and Mitt Suchak, following the research undertaken in 2007, made a number of recommendations for dentists that agree to adopt the model of green dental medicine: (Farahani Ali, Suchak Mittale, 2007)

− Implementation of an ecological system of sterilization
− Use of oral cotton towels instead of disposable bibs
− Use of fluorescent bulbs instead of those with halogen
− Use of LCDs instead of CRT screens
− Use of digital radiography instead of traditional X-rays, etc.

After the year 2009, the concept of Eco-friendly dentistry or environmental (eco-friendly dentistry) will be decided. This requires a new way of practicing dentistry, evolving, which simultaneously includes an increased focus given to sustainability, prevention, precautions and minimally invasive patient centeredness, as a philosophy centred on the idea of global treatment. Ecological dentistry through the “green” design of the procedures will protect patients, community’s health, natural resources. At the same time, ecological dentistry will focus on ecological sanitary materials, waste management and appropriate use of these practices. (Eco-Dentists Aim to Clean and Green, 2010)

Conclusions and final considerations – the implications of sustainable development in the healthcare consumer behaviour

The concept of green dentistry described above is the personification of all the principles of sustainable development because it does not require only the adoption of new management guidelines or a new type of communication of the contact staff, but a very substantial change in medical benefits, in the resources used, in procedures and in patients perception.

The deep aspect, which correlates with the influence of the social factors at the level of the dental healthcare services consumption under the conditions of promoting sustainable development, is linked to the substantial modification of the set of values and consumption habits of patients in the spirit of promoting a healthy – sustainable lifestyle. Hence, the green dentistry actually promotes the substantial change of the consumption behaviour for dental healthcare services, the holistic approach of the concept of health and the consumer’s education in the spirit of sustainable development.

The profound implications that sustainability brings to the forefront of the consumption of medical services refers to these changes of substance in the vision the consumers develop in relation to the notion of health. Experts speak of a real “greening” process of the consumer’s behaviour – which consists of reviewing the capacity of awareness and the attitudes of the consumers, a process that involves the whole range of consumers’ activities, and not just their purchasing decisions. (Skowron Stanislaw, Szymoniuk Barbara, 2014, p. 45). These changes of substance are materializing in:
Applying the criteria of maximizing the quality and long-term usability regarding the use of financial resources for purchasing decisions

- Cultivating a healthy lifestyle having at the basis the purchasing and consumption of organic food, the physical exercise and the care concerns for the natural environment

- Stopping or reducing the consumption of products obtained after the exhaustion of non-renewable resources

- The shift from ego-rationality to eco-rationality with the help of an efficient management of goods, sorting the wastes and reusing products instead of buying new ones

- Improving the knowledge on the protection of the natural environment and the involvement in initiatives related to it

On the other hand, there are voices calling into question the future evolution of the behaviour of the healthcare services consumers from the perspective of the role that social networks play in the “de-professionalization” of medical information due to the lack of censorship that the discussions among the patients may have at one time. The misappropriation of certain consumption behaviours as regards the medical treatments undergone until that moment, considering the advice of physicians and medical personnel can be, in the context of the proliferation of the online forms of communication between patients, not covered by any medical authority, a real danger for the sustainable development of the healthcare services.

Therefore, we can say that at the level of local communities, of social groups, substantial changes in the behaviour will take place once the leaders of opinion will assimilate the environmental education and the wellness-oriented lifestyle, doubled by the awareness of the danger represented by the propagation of ideas without scientific basis of the genuine medical practice.

Promoting the idea of sustainable development seen through each individual’s scale of values is the natural answer to the question: is sustainable development capable to preserve the potential of future generations?

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