
Ze współpracy z zagranicą / International cooperation

The scope of environmental disclosure in the European healthcare sector – an empirical study

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Abstract

Purpose: The aim of the paper is to present the scope of environmental information disclosed by organizations from the healthcare services sector in Europe.


Methodology/approach: The aim was achieved by studying the GRI Sustainability Disclosure Database, where non-financial reports are published, and performing a content analysis. The research sample contains 252 reports issued by 65 healthcare organizations between 2001 and 2019.


Findings: The research results indicate that information concerning energy is disclosed most frequently – in 213 reports (95%). In 194 non-financial reports (86%), organizations inform about healthcare waste. The third and fourth main environmental issues are water and effluents (168 reports – 75%), and emissions (166 reports – 74%). Information related to materials is included in 134 sustainability reports (60%) and environmental compliance in 125 reports (56%). Biodiversity (60 reports – 27%) and supplier environmental assessment (51 reports – 23%) are disclosed least frequently.

Research implications/limitations: The paper presents a complete picture of environmental disclosure practices in the European healthcare services sector in the past 20 years and offers interesting insights into non-financial reports, which are the most common instruments used by organizations to provide accountability about their environmental performance. However, there are some limitations – the GRI Sustainability Disclosure Database does not include all reports produced by European healthcare organizations.

Originality/value: This research contributes to the growing literature on sustainability reporting in the healthcare services sector by providing an empirical view of its current state in Europe. It fills a research gap in the field of non-financial reporting practices of healthcare organizations.

Keywords: non-financial reporting, sustainability reporting, environmental disclosure, CSR, healthcare sector.

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Streszczenie

Zakres ujawnień środowiskowych w sektorze opieki zdrowotnej w Europie – badanie empiryczne

Cel: Celem artykułu jest przedstawienie zakresu informacji środowiskowych ujawnianych przez jednostki sektora opieki zdrowotnej w Europie.

Metodologia/podejście badawcze: Cel został osiągnięty poprzez zbadanie bazy danych GRI Sustainability Disclosure Database, zawierającej raporty niefinansowe, oraz przeprowadzenie analizy treści tych raportów. Próba badawcza obejmuje 252 raporty opublikowane przez 65 jednostek sektora opieki zdrowotnej w latach 2001–2019.

Wyniki: Wyniki badań wskazują, że informacje dotyczące energii ujawniane są najczęściej – w 213 raportach (95%). W 194 raportach niefinansowych (86%) jednostki opieki zdrowotnej informują o odpadach. Trzecie i czwarte z kolei kwestie środowiskowe to woda i ścieki (168 raportów – 75%) oraz emisje (166 raportów – 74%). Informacje dotyczące materiałów zawarte są w 134 raportach zrównoważonego rozwoju (60%), a odnoszące się do zgodności z przepisami o ochronie środowiska w 125 raportach (56%). Najrzadziej ujawnia się różnorodność biologiczną (60 raportów – 27%) i ocenę środowiskową dostawców (51 raportów – 23%).

Implikacje/ograniczenia badawcze: W artykule przedstawiono pełny obraz praktyk raportowania informacji środowiskowych w sektorze usług opieki zdrowotnej w Europie w ciągu ostatnich 20 lat i przedstawiono interesujące spostrzeżenia na temat raportów niefinansowych, które są najpowszechniejszymi instrumentami stosowanymi przez jednostki w celu rozliczenia wyników działalności środowiskowej. Ograniczenia badawcze: baza danych GRI Sustainability Disclosure Database nie obejmuje wszystkich raportów opracowanych przez europejskie jednostki opieki zdrowotnej.

Oryginalność/wartość: Badania te wzbogacają literaturę na temat sprawozdawczości niefinansowej sektora usług opieki zdrowotnej, dostarczając empirycznego obrazu jej rzeczywistego stanu w Europie. Artykuł wypełnia lukę badawczą w zakresie praktyk raportowania niefinansowego jednostek opieki zdrowotnej.

Słowa kluczowe: raportowanie niefinansowe, raportowanie zrównoważonego rozwoju, ujawnienia środowiskowe, CSR, sektor opieki zdrowotnej.

Introduction

Sustainability has become a critical area of interest in healthcare systems, and it has also become increasingly important for the academic community and practitioners in recent decades. There are strong external pressures on healthcare organizations to develop a culture of sustainability and to act in sustainable ways (Luu, 2012; Ramirez et al., 2011a, 2011b; 2013). Given the focus on health, safety, and quality, questions have arisen regarding the practical application of sustainability concepts in healthcare facilities and whether such concepts can be compatible with healthcare outcomes (Zadeh et al., 2016). Integrating sustainable health practices into strategic and operational activities and supporting the efforts for transparent and accountable sustainable change inside and outside healthcare organizations have recently proved to be major challenges in the healthcare sector (Block, 2016). Despite its harmful effect on the environment, healthcare is slower than other industries to embrace the sustainable development agenda (Desmond, 2017).

Sustainability balances the environmental, social, and economic impacts of an organization's operations (Boone, 2012). The social and economic elements, but not

the environmental ones, are important to all (Rodriguez et al., 2019). There are many opportunities for healthcare organizations to become sustainable, and the best place to start is with a cohesive plan that will integrate sustainability into the organization's strategy (Jarousse, 2012a, 2012b). The existing researches concerns launching ambitious sustainability programs in the healthcare sector, and it focuses on designing, developing, and implementing sustainable strategies. By contrast, this study extends it to healthcare organizations' sustainability reporting practices of their activities.

Little is known about the scope of non-financial disclosures in the healthcare sector, i.e., corporate social responsibility (CSR) disclosures. Although many healthcare organizations include sustainable practices in their strategic and operational activities, non-financial reporting is still at the nascent stage compared to organizations from other sectors.

The aim of the paper is to present the range and scope of environmental information disclosed by organizations from the healthcare services sector in Europe. This was achieved by studying the GRI (Global Reporting Initiative) Sustainability Disclosure Database, where non-financial reports are published, and performing a content analysis. The research sample contains 252 reports issued by 65 healthcare organizations in the GRI's Sustainability Disclosure Database between 2001 and 2019. The paper presents a complete picture of environmental disclosure practices in the European healthcare services sector over the past 20 years.

1. The impact of healthcare organizations' activities on the environment

Organizations that deliver healthcare services are among the most energy-intensive entities in our economy and society since they never close (operate 24/7/365). Additionally, they utilize expensive and technologically sophisticated equipment (Mello, 2019). According to Block (2016), healthcare organizations do not manage the use of natural resources effectively and efficiently. Water consumption, energy use, and the removal of hazardous waste are not formally accounted for in healthcare delivery. Early adopters of sustainable resource practices have sounded the alarm, recognizing the importance of designing, developing, and implementing policies and procedures for the responsible use of natural resources in healthcare organizations. Block also underlines that the limited natural resources used daily to run the healthcare delivery system must be managed in an environmentally, economically, and socially responsible manner for those in need of healthcare services today and for the generations that follow.

This reasoning is consistent with the Brundtland Commission's concept of sustainability, i.e., a situation that exists when the social, environmental, and economic needs of the present can be met without compromising the developmental needs of future generations (World Commission on Environment and Development, 1987). Fitzpatrick (2010) claims that healthcare systems have a duty to contribute to sustainability and

minimize the impact of their activities, highlighting the need for initiatives that aim to reduce the negative impact of healthcare on the environment and on human health and wellbeing.

Jarousse (2012a, 2012b) emphasizes that there are multiple reasons for organizations from the healthcare sector to embrace environmental sustainability – key among them are fulfilling their mission and commitment to the community's health. The improper management of healthcare waste can pose a significant risk to patients, employees, the community, and the environment. "There are multiple opportunities to enhance organizational sustainability, from water management, energy efficiency, waste management and the build environment" (Jarousse, 2012b, p. 33). "Saving lives and promoting community health are commendable undertakings, but to fully realize those goals, hospitals must be good environmental stewards" (Jarousse, 2012a, p. 22). Once healthcare organization leaders make a commitment to sustainability, it is important to create a culture of change dedicated to pursuing efficiency projects (Martin, 2014). The discussion on sustainability in recent years not only led the healthcare organizations to rethink the mode of interacting with the environment, but it caused a moment to reflect on its internal processes and how to impact less on the environment and contribute more on social and economic aspects (Machado et al., 2015). Healthcare organizations are preparing more and more frequently plans to reduce the environmental damage caused by their activities. Undoubtedly, a holistic in nature sustainability initiatives may significantly impact operations and outcomes in the healthcare sector. Healthcare organizations need to "develop a perceptual makeover to ensure individuals and employees to distinguish between charity, philanthropy and the CSR initiative" (Vedantam, 2014, p. 16) that they take on.

The characteristics of healthcare facilities imply that there must be human resources capable of providing quality services and who are prepared to adopt rapid technological changes and constantly update their knowledge, all of which require dynamic training strategies. There must also be flexible and competitive remuneration systems – all (indicators of both economic and social management) in order to guarantee the effectiveness, efficiency, and productivity of healthcare organizations (Ruff Escobar et al., 2018). Medical personnel are considered the most important aspect to deliver services in the healthcare industry (Lubis et al., 2017). The high level of emotional intelligence among healthcare personnel orientates them towards society, increasing their understanding of the mission to relieve pain as a doctor and the mission of their healthcare facility towards sustainable health for individual patients as well as the entire community (Tuang, Ngoel, 2014).

Undeniably, healthcare sector has a significant impact on the environment. Healthcare facilities use a tremendous amount of water in their operations (Mello, 2019). A healthcare facility's usual points of water consumption are domestic hot water (DHW) and cold water for human consumption (CWHC), irrigating green areas, cooling towers, air conditioning, the laundry, kitchens, therapeutic swimming pools, and dialysis, among others (García-Sanz-Calcedo et al., 2017). European healthcare facilities

generate an average annual water consumption amount of between 182.5 and 365 m³ per bed, while the annual consumption of DHW ranges from 29.2 to 47.45 m³ per bed (García-Sanz-Calcedo, Gómez-Chaparro, 2017). It is crucial to raise the awareness of the importance of saving water in among healthcare personnel because it is directly related to its daily management.

It is advisable to install water meters in certain areas, for example the kitchen, the irrigation system, air conditioning, and fire extinguishing systems, to determine the areas that consume most. When water saving measures are implemented, investment in hot water systems should be prioritized, as they generate greater energy expenditure. It was observed by García-Sanz-Calcedo et al. (2017) that smaller healthcare facilities consume more water per bed and built surface area than larger ones. As the number of beds and/or the built surface area of a healthcare facility increased, the average annual consumption of CWHC per bed decreased. It was also noticed that the average annual consumption of CWHC per built surface area was not altered by the number of hospital beds. A similar relationship was observed with DHW. Simple actions that can reduce hospital water usage and wastewater pollution include insulating hot water systems, closer monitoring of leaks, minimizing the water used for the laundry, and installing low-flow showers and low-flow toilets (Mello, 2019).

Healthcare organizations use significant amounts of energy to maintain their operations, and traditional sources of energy have detrimental effects on both patient outcomes and public health, i.e., the greenhouse gas emissions and fossil fuels are associated with asthma, chronic bronchitis, and other serious respiratory conditions. There is a reciprocal relationship between healthcare and its impact on the environment and public health (Mallo, 2019). Regarding energy usage, healthcare facilities can examine and better manage heating, cooling, and lighting in unoccupied areas as only a few areas are used continuously. Many are used sporadically and at less than full capacity. They can install energy efficient lighting and implement operating room setbacks which reduce air changes per hour when the rooms are not in use. There can also be large-scale changes in the types and sources of energy they utilize, with renewable energy as part of a strategic energy management plan, while they can also build more energy-efficient buildings that cost less to operate thanks to innovation (Kinney, 2010; Mello, 2019).

Mello (2019) points out that waste is a complex issue in the healthcare sector and a challenge in how it is managed results from the fact that waste comes from so many diverse sources and is processed in streams or groups that are managed by different, autonomous areas of operations without a central point of accountability and responsibility. Moreover, as 15% of waste generated by healthcare facilities is infectious, toxic, or radioactive (WHO, 2018), it requires special treatment. According to the World Health Organization (WHO), “waste and by-products cover a diverse range of materials:

(1) infectious waste – waste contaminated with blood and other bodily fluids (e.g., from discarded diagnostic samples), vcultures and stocks of infectious agents

from laboratory work (e.g., waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g., swabs, bandages and disposable medical devices);

(2) pathological waste – human tissues, organs or fluids, body parts and contaminated animal carcasses;

(3) sharps waste – syringes, needles, disposable scalpels and blades, etc.;

(4) chemical waste – for example solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g., mercury in broken thermometers) and batteries;

(5) pharmaceutical waste – expired, unused and contaminated drugs and vaccines;

(6) cytotoxic waste – waste containing substances with genotoxic properties (i.e., highly hazardous substances that are, mutagenic, teratogenic, or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites;

(7) radioactive waste – such as products contaminated by radionuclides including radioactive diagnostic material or radiotherapeutic materials;

(8) non-hazardous or general waste – waste that does not pose any particular biological, chemical, radioactive, or physical hazard” (WHO, 2018).

Sustainable tactics include reducing the production and disposal of hazardous waste and toxins, substituting hazardous materials with non-hazardous alternatives, using green cleaning products, and practicing environmentally preferred purchasing by working with suppliers to reduce packaging and waste (Jarousse, 2012b; Kinney, 2010). Taking into account the nature of healthcare waste, the WHO stresses the following potential environmental impact of their inappropriate treatment and disposal:

(1) “The disposal of untreated health care wastes in landfills can lead to the contamination of drinking, surface, and ground waters if those landfills are not properly constructed.

(2) The treatment of health care wastes with chemical disinfectants can result in the release of chemical substances into the environment if those substances are not handled, stored and disposed in an environmentally sound manner.

(3) Incineration of waste has been widely practiced, but inadequate incineration or the incineration of unsuitable materials results in the release of pollutants into the air and in the generation of ash residue. Incinerated materials containing or treated with chlorine can generate dioxins and furans, which are human carcinogens and have been associated with a range of adverse health effects. Incineration of heavy metals or materials with high metal content (in particular lead, mercury and cadmium) can lead to the spread of toxic metals in the environment.

(4) Only modern incinerators operating at 850-1100 °C and fitted with special gas-cleaning equipment are able to comply with the international emission standards for dioxins and furans.

(5) Alternatives to incineration such as autoclaving, microwaving, steam treatment integrated with internal mixing, which minimize the formation and release of chemicals

or hazardous emissions should be given consideration in settings where there are sufficient resources to operate and maintain such systems and dispose of the treated waste” (WHO, 2018).

One of the most important initiatives aims to reduce the volume of waste sent to the landfill, through recycling, source reduction, reuse, repurposing, and composting (Jarousse, 2012b). It is crucial to promote zero waste policies, make people aware of the health hazards related to healthcare waste, prioritize overall waste management and disposal, train personnel in proper waste management, implement safe and sustainable alternatives to incineration, and reduce the volume of toxic waste.

The first environmental initiatives in the healthcare sector were introduced in Canada at the beginning of the 21st century. It included a comprehensive recycling and reuse program that diverts a total of 54% of a healthcare facility’s waste from landfill. It accounts for 302 tons of glass, cans, plastics, cardboard, chemical recycling, food waste, batteries, computer cartridges, computers and electronic components per year (Arya et al., 2005). However, Vernon (2009) states that “if only we had money” is a common statement among healthcare leaders who want to make their facilities more efficient and sustainable.

Mello (2019) emphasises that when healthcare organizations are faced with the choice of maintaining the efficiency and reliability of existing systems versus implementing new systems, which can achieve sustainability outcomes, decisionmakers often opt to maintain the status quo and stay with what is existing and known. Such actions are usually less expensive in the short-run, whereas the costs and benefits of new technologies, practices, and procedures may be more difficult to quantify and have less-immediate positive financial effects. However, some healthcare organizations focused on environmental resource management, especially energy and waste, as their initial sustainability initiatives, hoping to realize significant financial benefits from their efforts (Block, 2016). The good news is that healthcare organizations that undertake any environmental project can turn to a number of groups that can help prioritize options and then develop and implement its plans (Vernon, 2009). In response to increased environmental concerns, healthcare organizations worldwide, including in Europe, undertake sustainability initiatives more and more frequently. The next step is to communicate their environmental involvement by producing and publishing appropriate reports.

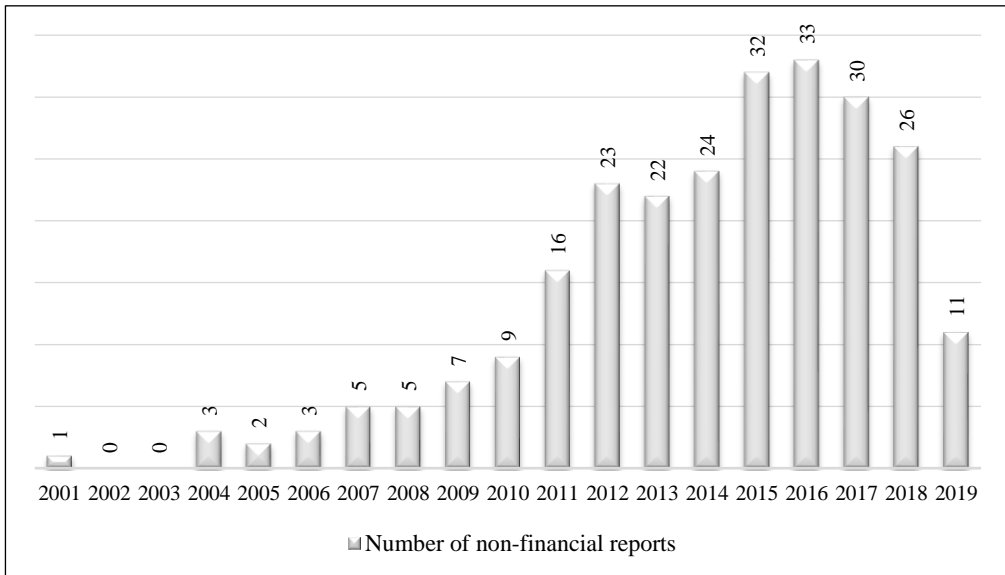
2. Research methods and sample

The GRI Sustainability Disclosure Database comprises 2440 non-financial reports (sustainability reports) published by 632 healthcare organizations from all over the world, including 821 reports issued by 246 organizations that deliver healthcare services and 1619 reports prepared by 386 organizations involved in manufacturing and selling healthcare products. This database contains 252 records concerning reports produced

and published by the 65 healthcare services organizations from European countries that constitute the research sample of this study; however, pdf files are available only for 225 of them. The aim of the paper was achieved by studying the GRI Sustainability Disclosure Database where non-financial reports are issued, and performing content analysis.

The empirical analysis shows an increased interest of European healthcare services organizations in publishing non-financial reports over the last 10 years. The first report related to social, environmental, and economic activities was produced in 2001 by an Austrian healthcare organization. In subsequent years, there has been a slowly growing number of sustainable reports prepared by healthcare organizations in European countries that appear in the GRI Sustainability Disclosure Database (Figure 1).

Figure 1. Annual number of sustainability reports published by healthcare services organizations in Europe between 2001 and 2019



Explanation: The information for the last 2 reporting years (2018–2019) is incomplete due to ongoing data collection and the Standards Report Registration process.

Source: authors' own elaboration based on GRI's Sustainability Disclosure Database.

Over the last decade, the idea of sustainability has become relevant in the European healthcare context, thus the growing interest since 2011 of healthcare organizations to communicate CSR involvement. A noticeable increase occurred in 2012 and 2015. In 2015, the number of non-financial reports amounted to 32, and it has remained at roughly the same level – approximately 30 CRS reports.

cont. tab. 1

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	–	–	–	2	2	3	4	4	7	7	10	10	11	12	14	13	15	14	6
FI	–	–	–	–	–	–	–	–	–	1	1	2	1	1	1	1	–	–	–
FR	–	–	–	–	–	–	–	–	–	–	–	1	1	3	4	6	5	3	–
GR	–	–	–	–	–	–	–	–	–	–	1	1	–	–	1	2	2	2	–
IE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
IT	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–
NL	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	1	–	–
NO	–	–	–	–	–	–	–	1	–	–	1	1	1	2	1	2	2	1	1
PL	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–
PT	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	1	–	–	–
SE	–	–	–	–	–	–	–	–	–	–	–	1	1	–	1	1	1	1	–
UK	–	–	–	–	–	–	–	–	–	1	1	2	2	2	4	4	3	2	2
Total	1	–	–	3	2	3	5	5	7	9	16	23	22	24	32	33	30	26	11

Explanation: The information for the last 2 reporting years (2018–2019) is incomplete due to ongoing data collection and the Standards Report Registration process.

Legend: AT – Austria, BE – Belgium, CH – Switzerland, DK – Denmark, ES – Spain, FI – Finland, FR – France, GR – Greece, IE – Ireland, IT – Italy, NL – Netherlands, NO – Norway, PL – Poland, PT – Portugal, SE – Sweden, UK – United Kingdom.

Source: authors' own elaboration based on GRI's Sustainability Disclosure Database.

Compared to the first ten years, when the earliest non-financial reporting practices were recognized in only five countries in Europe, there has been an increasing number of sustainability reports since 2011. Eighty-seven percent of the non-financial reports appeared in the GRI Sustainability Disclosure Database during the last nine years (Table 1).

3. Reporting of environmental involvement in healthcare services sector in Europe

Table 2 presents the name, size and type of all 65 European healthcare services organizations that disclose non-financial information, the number of sustainability reports issued between 2001 and 2019, the guidelines according to which these reports were prepared, as well as 8 types of environmental disclosure: materials, energy, water and effluents, biodiversity, emissions, waste, environmental compliance, and supplier

environmental assessment. Organizations are classified as to whether or not they are listed on a stock exchange.¹

Forty-two healthcare services organizations are large entities (Large), 11 constitute small and medium-size ones (SME), and 12 are multinational organizations (MNE). The majority of healthcare organizations chose to follow international reporting standards, i.e., the GRI guidelines, which progressively evolved year to year (GRI G2, GRI G3, GRI G3.1, GRI G4, Citing GRI, and GRI Standards), but some of them produce non-GRI reports. A content analysis of 252 non-financial reports published by European healthcare services organizations in the GRI Sustainability Disclosure Database was applied to examine the scope of disclosures regarding environmental issues.

Table 2. Characteristics of healthcare organizations and CSR reports issued in Europe in 2001–2019

Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment
Austria												
Engelbrechtsmüller	SME NPO NL	4	2012	GRI G3	√	√	√	–	√	√	–	–
			2007	GRI G3	√	√	–	–	√	√	–	–
			2004	Citing GRI	√	√	√	–	–	√	–	–
			2001	Non-GRI	√	√	√	–	–	√	–	–
Ordination Dr. WIBGOTT	SME PC NL	1	2011	Non-GRI	√	–	–	–	–	–	–	

¹ For private companies, cooperatives, and subsidiaries, “Non-listed” (NL) means that its stock is not offered on stock exchanges while “Listed” (L) means that its shares are listed on a stock exchange for public trading (no governmental ownership). For state-owned companies, “Non-listed” means it is fully state-owned and “Listed” means that part of the company is listed on a stock exchange for public trading (partial government ownership). By definition of their organization types, public institutions, non-profit organizations, and partnerships cannot be listed on stock exchanges.

cont. tab. 2

Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment
Belgium												
az Sint-Blasius (vzw OLVrouw van Troost)	Large NPO NL	3	2013	GRI G3	-	√	√	-	√	√	√	-
			2012	GRI G3	-	√	√	-	√	√	√	-
			2011	GRI G3	-	√	√	-	√	√	√	-
Initial Benelux	MNE S NL	3	2018	GRI G4	x	x	x	x	x	x	x	x
			2016	GRI G4	√	√	√	-	√	-	-	-
			2015	GRI G4	√	√	√	-	√	-	-	-
Denmark												
William Demant	Large PC L	8	2019	Non-GRI	√	√	-	-	√	√	√	√
			2018	Non-GRI	√	√	-	-	√	√	√	√
			2017	Non-GRI	√	√	-	-	√	√	√	√
			2016	Non-GRI	√	√	-	-	√	√	√	√
			2015	Non-GRI	√	√	-	-	√	√	√	√
			2014	Non-GRI	√	√	-	-	√	-	√	√
			2013	Non-GRI	√	√	-	-	√	√	√	√
			2012	Non-GRI	√	√	-	-	√	√	√	√
Finland												
Diacor	Large PC NL	5	2016	Non-GRI	√	√	√	-	-	√	-	-
			2015	GRI G4	√	√	√	-	-	√	-	-
			2014	GRI G3	√	√	√	-	-	√	-	-
			2013	GRI G3	√	√	√	-	-	√	-	-
			2012	Citing GRI	√	√	√	-	-	√	√	-

cont. tab. 2

Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment	
			2014	Non-GRI	√	√	√	√	√	√	-	-	
			2013	Non-GRI	√	√	√	√	√	√	-	-	
			2012	Non-GRI	-	√	√	-	-	√	-	-	
Greece													
Apivita	Large PC NL	2	2018	GRI Standards	√	√	-	-	√	-	-	-	
			2012	GRI G3	√	√	-	-	-	-	-	-	
Athens Medical Group	Large PC L	3	2018	GRI Standards	-	√	√	-	√	√	-	-	
			2017	GRI G4	-	√	√	-	√	√	-	-	
			2016	GRI G4	-	√	√	-	√	√	√	-	
Hygeia Group	MNE S NL	4	2017	GRI G4	-	√	√	-	√	√	√	-	
			2016	Non-GRI	-	√	√	√	√	√	√	-	
			2015	Non-GRI	-	√	√	√	√	√	√	-	
			2011	GRI G3	√	√	√	-	√	√	-	-	
Ireland													
Alkermes	Large PC L	1	2019	Non-GRI	-	√	√	-	√	√	-	√	
Italy													
Reale Mutua Assicurazioni	Large – NL	1	2018	GRI Standards	-	√	√	-	-	-	-	-	
Netherlands													
CZ Groep	Large PC NL	5	2017	GRI G4	x	x	x	x	x	x	x	x	
			2016	GRI G4	x	x	x	x	x	x	x	x	x
			2015	GRI G4	√	√	-	-	√	√	√	√	√
			2014	GRI G4	√	√	-	-	√	√	√	√	-
			2013	GRI G3	√	√	-	-	√	-	-	-	-

cont. tab. 2

Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment
Norway												
Helse Sør-Øst	MNE PI NL	8	2018	Non-GRI	–	√	√	√	√	√	–	–
			2017	Non-GRI	–	√	√	–	√	√	–	–
			2016	Non-GRI	–	√	√	–	√	√	–	–
			2015	Non-GRI	–	√	√	–	√	√	–	–
			2014	Non-GRI	–	√	√	–	√	√	–	–
			2013	Non-GRI	–	√	√	–	–	√	–	–
			2012	Non-GRI	–	√	√	–	–	√	–	–
			2011	Non-GRI	–	√	√	–	–	√	–	–
Pharmaq	SME S L	1	2008	GRI G3	x	x	x	x	x	x	x	
Vestre Viken HF	Large SOC NL	4	2019	Non-GRI	–	√	√	–	–	√	–	–
			2017	Non-GRI	–	√	√	–	–	√	–	–
			2016	Non-GRI	–	√	√	–	–	√	–	–
			2014	Non-GRI	–	√	√	–	–	√	–	–
Poland												
Scanmed Multimedis	Large PC L	2	2014	GRI G3.1	–	√	√	–	√	√	√	√
			2013	GRI G3.1	–	√	√	–	√	√	√	√
Portugal												
José de Mello Saúde	Large PC NL	5	2016	Citing GRI	–	√	√	–	–	√	–	–
			2015	Citing GRI	–	√	√	–	–	√	–	–
			2014	Citing GRI	–	√	√	–	–	√	–	–
			2013	Citing GRI	–	√	–	–	–	√	–	–
			2012	Non-GRI	–	√	–	–	–	√	–	–

cont. tab. 2

Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment	
Spain													
Activa Mutua	Large PI NL	7	2018	GRI Standards	-	√	√	-	√	√	√	√	
			2017	GRI G4	-	√	√	-	√	√	√	√	
			2016	Citing GRI	x	x	x	x	x	x	x	x	x
			2015	GRI G3.1	-	√	-	-	√	√	√	-	
			2014	GRI G3.1	-	√	-	-	√	√	√	-	
			2013	Non-GRI	-	-	-	-	-	-	-	-	
			2012	Non-GRI	-	-	-	-	-	-	-	-	
ARRIXACA	Large PI NL	1	2012	GRI G3.1	√	√	√	√	√	√	-		
Centro Hospitalario Padre Menni	Large – NL	1	2017	GRI G4	-	-	-	-	-	-	-		
Clínica Sear	Large PI NL	1	2010	GRI G3	x	x	x	x	x	x	x		
Comarca Gipuzkoa – Osakidetza	Large PI L	6	2014	GRI G3.1	√	√	√	-	√	√	-	-	
			2013	GRI G3.1	√	√	√	-	√	√	-	-	
			2012	GRI G3	√	√	√	-	√	√	-	-	
			2011	GRI G3	√	√	√	√	√	√	-	-	
			2009	GRI G3	√	√	√	-	√	√	-	-	
			2006	GRI G3	√	√	√	-	√	√	-	√	
Consejo General de Colegios Oficiales de Farmacéuticos de España	SME NPO NL	10	2019	GRI Standards	√	√	-	-	-	√	-	-	
			2017	GRI G4	√	√	-	-	-	√	-	-	
			2016	GRI G4	√	√	-	-	-	√	-	-	
			2015	GRI G4	√	√	-	-	-	√	-	-	
			2014	GRI G3	√	√	-	-	-	√	√	-	

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Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment	
			2013	GRI G3	√	√	–	–	–	√	√	–	
			2012	GRI G3	√	√	–	–	–	√	√	–	
			2011	GRI G3	√	√	–	–	–	√	√	–	
			2010	GRI G3	√	√	–	–	–	√	√	–	
			2009	GRI G3	–	√	–	–	√	√	√	–	
Consorti Hospitalari De Vic	Large PI NL	7	2018	GRI Standards	√	√	√	–	√	√	√	–	
			2017	GRI G4	√	√	√	√	√	√	√	–	
			2016	GRI G4	√	√	√	√	√	√	√	–	
			2015	GRI G4	√	√	√	–	√	√	–	–	
			2014	GRI G3.1	√	√	√	–	√	√	–	–	
			2013	GRI G3.1	√	√	√	–	√	√	–	–	
			2012	GRI G3.1	–	√	√	–	–	√	–	–	
2004	GRI G2	x	x	x	x	x	x	x	x	x	x		
Consorti MAR Parc de Salut de Barcelona	SME PI –	2	2018	GRI Standards	√	√	–	–	√	√	–	–	
			2017	GRI Standards	√	√	–	–	√	√	–	–	
Consorti Sanitari Integral	Large PC NL	1	2018	GRI Standards	√	√	√	–	–	√	√	–	
Fraternidad Muprespa	Large PC NL	8	2018	GRI G4	√	√	√	–	√	√	√	–	
			2017	GRI G4	√	√	√	–	√	√	√	–	
			2016	GRI G4	√	√	√	–	√	√	√	–	
			2015	GRI G3.1	√	√	√	–	√	√	√	–	
			2014	GRI G3.1	√	√	√	–	√	√	√	–	
			2013	GRI G3.1	x	x	x	x	x	x	x	x	x
			2012	GRI G3.1	x	x	x	x	x	x	x	x	x
2011	GRI G3	√	√	√	–	√	√	√	√	–			

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Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment	
			2014	Non-GRI	–	–	–	–	–	–	–	–	
			2013	GRI G3.1	√	√	√	√	√	√	√	–	
			2012	GRI G3.1	√	√	√	√	√	√	√	–	
			2011	GRI G3	√	√	√	√	√	√	√	–	
			2010	GRI G3	x	x	x	x	x	x	x	x	x
Hospital Universitario Virgen de las Nieves (HUVN)	Large PI NL	6	2011	GRI G3	√	√	√	√	√	√	√	–	
			2010	GRI G3	√	√	√	√	√	√	√	–	
			2009	GRI G3	√	√	√	√	√	√	√	–	
			2008	GRI G3	√	√	√	√	√	√	√	–	
			2006	GRI G2	x	x	x	x	x	x	x	x	x
			2004	GRI G2	x	x	x	x	x	x	x	x	x
Institut Català d'Avaluacions Mèdiques – ICAM	MNE PI NL	1	2011	GRI G3	√	√	√	√	√	√	√		
Institut Català d'Oncologia	Large PI NL	7	2019	GRI Standards	√	√	√	–	√	√	√	√	
			2018	GRI Standards	√	√	√	–	√	√	√	√	
			2017	GRI G4	–	√	√	–	√	√	√	√	
			2016	GRI G4	–	√	√	–	√	√	√	–	
			2015	GRI G4	–	√	√	–	√	√	√	√	
			2014	GRI G4	–	√	√	–	√	√	√	√	
			2013	GRI G3.1	–	√	√	√	√	√	√	–	

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Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment
SARquavitaes	Large PCL	3	2017	GRI G4	–	√	–	–	√	–	–	–
			2015	GRI G4	–	√	√	–	–	–	–	√
			2014	GRI G3.1	–	√	√	–	√	–	–	√
Servicio Andaluz de Salud-Consejería de Salud-Junta de Andalucía	Large PINL	5	2018	Citing GRI	√	√	√	–	√	√	√	–
			2017	GRI G4	x	x	x	x	x	x	x	x
			2016	GRI G4	x	x	x	x	x	x	x	x
			2015	GRI G4	x	x	x	x	x	x	x	x
			2014	GRI G4	–	√	√	–	–	√	√	–
Umivale	SME NPO NL	6	2018	GRI G4	√	√	√	–	–	–	√	–
			2017	GRI G4	x	x	x	x	x	x	x	x
			2016	GRI G4	√	√	√	–	–	–	√	–
			2015	GRI G4	√	√	√	–	–	–	√	–
			2014	GRI G3.1	√	√	√	–	√	√	√	–
			2013	GRI G3.1	√	√	√	–	√	√	√	–
Union de Mutuas	SME PC NL	13	2019	GRI Standards	√	√	√	–	√	√	√	√
			2018	GRI Standards	√	√	√	–	√	√	√	–
			2017	GRI G4	√	√	√	–	√	√	√	√
			2016	GRI G4	√	√	√	–	√	√	√	–
			2015	GRI G3.1	√	√	√	√	√	√	√	–
			2014	GRI G3.1	√	√	√	√	√	√	√	–
			2013	GRI G3.1	√	√	√	√	√	√	√	–
			2012	GRI G3.1	√	√	√	√	√	√	√	–
			2011	GRI G3	√	√	√	√	√	√	√	–
2010	GRI G3	√	√	√	–	√	√	√	–			

cont. tab. 2

Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment	
			2009	GRI G3	√	√	√	-	√	√	√	-	
			2008	GRI G3	√	√	√	-	√	√	√	-	
			2007	GRI G3	√	√	√	-	√	√	√	-	
Sweden													
Apotekens Service AB	SME SOC NL	2	2013	GRI G3	-	√	-	-	-	-	√	-	
			2012	GRI G3	-	√	-	-	-	-	-	-	-
Frösunda Omsorg AB	Large PC NL	4	2018	GRI G4	-	-	-	-	-	-	-	-	
			2017	GRI G4	-	-	-	-	-	-	-	-	-
			2016	GRI G4	-	-	-	-	-	-	-	-	-
			2015	GRI G4	-	-	-	-	-	-	-	-	-
Switzerland													
Institut für natürliche Behandlung Luzia Osterwalder	SME PC NL	1	2015	Non-GRI	-	√	√	-	√	√	-	-	
Schützen Rheinfelden AG	Large PC NL	2	2015	Non-GRI	-	√	√	√	-	√	-	-	
			2012	Citing GRI	-	√	√	-	-	√	-	-	
United Kingdom													
BTG	Large SOCL	6			-	√	√	-	√	√	-	-	
			2016	Non-GRI	-	√	√	-	√	√	-	-	
			2015	Non-GRI	-	√	√	-	√	√	-	-	
			2014	Non-GRI	-	√	√	-	√	√	-	-	
			2013	Non-GRI	-	√	√	-	√	√	-	-	
			2012	Non-GRI	-	√	√	-	√	√	-	-	

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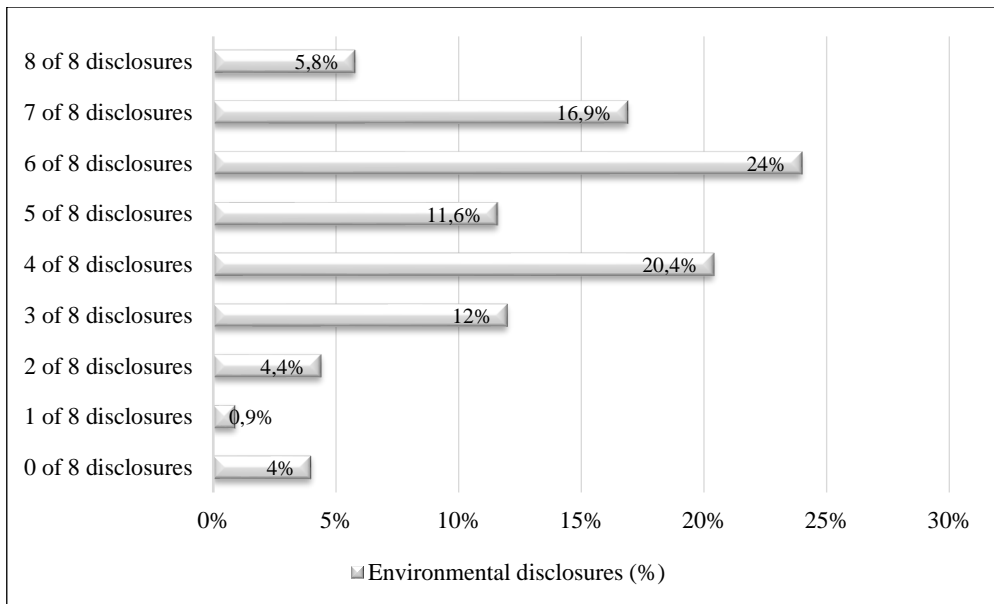
Name	Size /Type	No. of non-financial reports	Year of publication	Guidelines	Materials	Energy	Water and Effluents	Biodiversity	Emissions	Waste	Environmental Compliance	Supplier Environmental Assessment
Mediclinic International plc	Large PC L	10	2019	GRI Standards	–	√	√	√	√	√	√	–
			2018	GRI Standards	–	√	√	√	√	√	√	–
			2017	GRI Standards	–	√	√	√	√	√	√	–
			2016	GRI G4	√	√	√	–	√	√	–	
			2015	GRI G4	–	√	–	–	√	–	√	–
			2014	GRI G4	–	√	–	–	√	–	√	–
			2013	GRI G3.1	–	√	–	–	√	–	√	–
			2012	GRI G3	–	√	√	√	√	√	√	–
			2011	GRI G3	–	√	√	√	√	√	√	–
2010	GRI G3	–	√	√	–	–	√	√	–			
Medix Group	MNE PC NL	1	2019	GRI Standards	–	–	–	–	–	–	–	
Spire Healthcare Group plc	Large PC NL	4	2018	Non-GRI	–	√	–	–	√	–	√	–
			2017	Non-GRI	–	√	–	–	√	–	√	–
			2016	Non-GRI	–	√	–	–	√	√	√	–
			2015	Non-GRI	–	√	–	–	√	√	√	–
Synergy Health PLC	MNE SOCL	2	2016	Non-GRI	–	√	–	–	√	–	–	–
			2015	Non-GRI	–	√	–	–	√	–	–	–

Legend: C – Cooperative – an organization jointly owned and democratically controlled by the employees and/or end-users of the good/services produced to meet their common needs; F – Foundation; NPO – Non-profit organization – an organization run to further an ideal or goal, rather than in the interests of profit; e.g., foundations, NGOs; PC – Private company – a business organization owned either by a non-governmental organization or by a number of stakeholders; PI – Public institution – an administrative unit of government, including the municipal authority of a city; S – Subsidiary – a company controlled by another company through the ownership of 50% or more of the voting stock; SOC – Stated-owned company – a legal entity created by a government to undertake commercial activities on behalf of the owner government; L – Listed; NL – Non-Listed.

Source: authors' own elaboration based on GRI's Sustainability Disclosure Database.

Of the 252 non-financial reports described in the GRI's Sustainability Disclosure Database, 10.7% of the records have no pdf files; hence, it is not possible to conclude what kind of environmental information is disclosed in those 27 sustainability reports. The percentage presented in Figure 3 is calculated for 225 reports (the number of available pdf files in the database). One can see that, predominantly (in 24% of sustainability reports), 6 of the 8 types of environmental disclosure are presented by healthcare services organizations. Accordingly, 4 types are included in 20.4% of the non-financial reports, 7 types of them in 16.9%, 3 of them in 12%, and 7 of them in 11.6%. Only 5.8% of the reports from the research sample contain all 8 types of environmental disclosure, while in 4% of all sustainability reports there is no information related to environmental issues.

Figure 3. Percentage of environmental disclosure in sustainability reports of European healthcare services organizations between 2001 and 2019

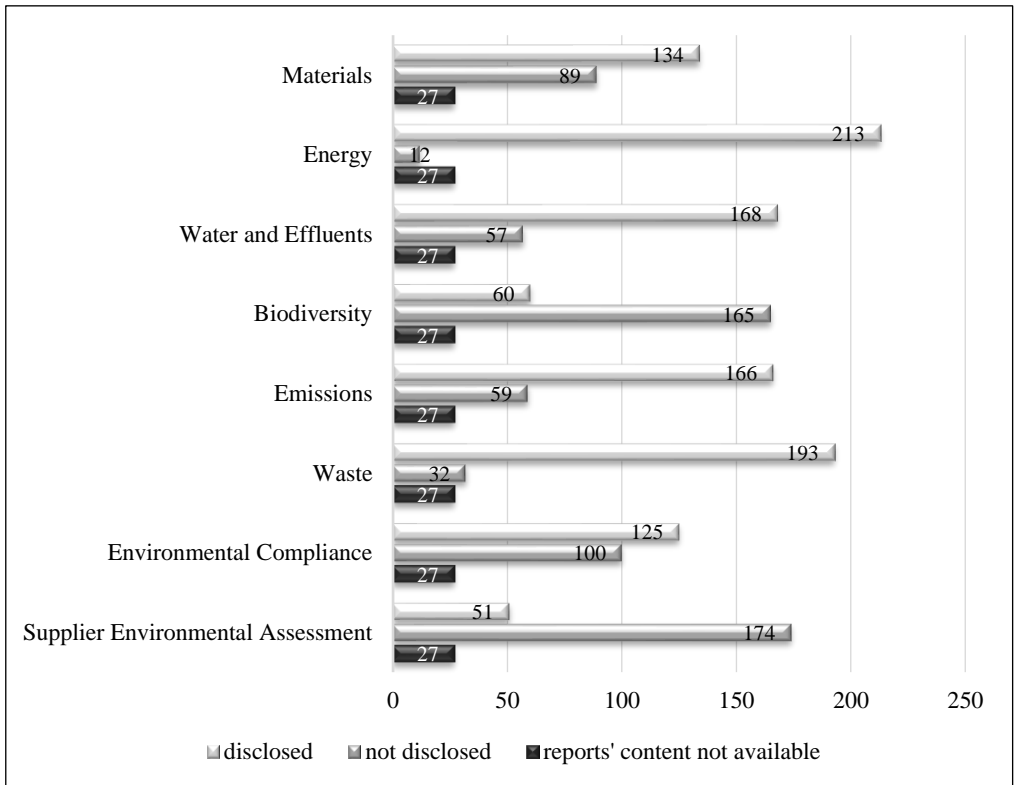


Source: authors' own elaboration based on content analysis of sustainability reports published in the GRI Sustainability Disclosure Database by healthcare services organizations.

What is the area of disclosures in sustainability reports issued by European healthcare services organizations in 2001–2019? The research results indicate (Figure 4) that information concerning energy is disclosed most frequently – in 213 reports of the 225 available in the GRI's Sustainability Disclosure Database (95%). In 194 non-financial reports (86%), organizations provide information about healthcare waste. The third and fourth main environmental issues are water and effluents (168 reports – 75%) and emissions (166 reports – 74%). Information related to materials is included in 134

sustainability reports (60%) and information regarding environmental compliance is in 125 reports (56%). Biodiversity (60 reports – 27%) and supplier environmental assessment (51 reports – 23%) are disclosed least frequently.

Figure 4. Number of particular environmental disclosure in sustainability reports of European healthcare services organizations between 2001 and 2019



Source: authors’ own elaboration based on content analysis of sustainability reports published in the GRI Sustainability Disclosure Database by healthcare services organizations.

The majority of healthcare services organizations communicate their environmental impact without using the expression “negative impact,” as is done by entities from other sectors. It is consistent with the previous studies performed by Boiral (2013), who found 90% of the significant negative events were not reported at all or discussed in an incomplete, non-transparent manner, contrary to the principles of balance, completeness, and transparency of GRI reports. Moreover, these reports paint a picture that is clearly unconnected with the impact of the organizations’ business activities.²

² Content analysis of 23 sustainability reports from enterprises in the energy and mining sectors which had received application levels of A or A+ from the Global Reporting Initiative (GRI).

Conclusion

As Black (2016) already noted, developing a sustainability strategy that is organized around environmental, social and economic issues, but that also develops an effective and efficient information and analysis platform to monitor and measure outcomes, creates an opportunity to improve the healthcare organization's image. It also allows the organization to reduce its environmental footprint and improve its financial results. The use of sustainability accounting, i.e., non-financial reporting, to hold organizations in the healthcare services sector accountable for their responsibility is extremely difficult nowadays. Accountability requires more than just financial information; it includes non-financial information and the evaluation of that information (O'Brien, Tooley, 2013). The biggest conceptual limitation to believing that sustainability accounting can promote organizational change is its lack of formal power (Leong, Hazelton, 2019).

This research demonstrates that sustainability reporting recently appeared as a new trend in the healthcare services sector in Europe. A growing number of healthcare organizations publish non-financial reports, while some also present their environmental certifications to ensure the image of sustainable organization. The research contributes to the growing literature on sustainability reporting in the healthcare sector by providing an empirical view of its current state in Europe. It fills a research gap in the field of non-financial reporting practices of healthcare organizations precisely related to environmental disclosure. The paper offers interesting insights on sustainability reports, which are the most common instruments used by organizations to provide accountability about their environmental performance.

Although there are some limitations to the paper (i.e., the GRI Sustainability Disclosure Database does not include all sustainability reports produced and published by European healthcare services organizations, including the 65 from the research sample), the present study may inspire further efforts to analyze at least the websites of the organizations from the European healthcare services sector that were presented in this paper to verify if there are more non-financial reports issued between 2001 and 2019. Among the different means used by healthcare organizations to publicize their CSR involvement, websites deserve a special attention (Gutiérrez-Ponce et al., 2018). Thus, it is possible that some organizations from the research sample communicate their CSR policy and publish sustainability reports on their websites, and do not issue all reports in the GRI Sustainability Disclosure Database. Other future research might focus on the reasons for the increased interest of European healthcare organizations in publishing non-financial reports over the last 10 years, for example legislative changes.

The healthcare sector's activities also have an impact on the community. Kinney (2010) stresses that healthcare organizations are inherently socially responsible, as they take care of the patients in the community and they form partnerships with the community to improve health and well-being. Societal responsibility means more than serving the community by caring for the patients; it is about becoming role models for sustainability within the community.

As European organizations from the healthcare services sector place increased emphasis on the environmental, social, and economic spheres of their activity, major changes are expected to occur in their sustainability reporting practices. It is inevitable that these organizations will gradually increase the number of non-financial reports they produce and publish in the near future.

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