



Original Research Article

Strategic management for health care organizations in Azerbaijan Republic

Received 16 February, 2021

Revised 15 April, 2021

Accepted 23 April, 2021

Published 11 May, 2021

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To meet persistent challenges in the health care system, an optimal development strategy for both the entire health care system and health care institutions must be adopted, based on strategic planning that takes into account all environmental changes. Health care planning should make it easier to bring rates and levels of health development in line with health promotion objectives. Organizations and individuals will be deprived of a clear way of assessing the purpose and assigning of the corporate enterprise if strategic planning is not used. Different approaches to strategic management of health care organisations in the Azerbaijan Republic were evaluated in this paper. The current situation in the health care management sector was reviewed, as well as the applicability and feasibility of business analysis tools such as Strengths, Weaknesses, Opportunities, and Threats (SWOT) and Balanced Scorecard (BSC). The use of combined SWOT-BSC methodology is a powerful tool for creating a strategic map that allows the organisation to perform a chosen strategy more effectively and serves to define the organization's strategic goals. The SWOT-BSC methodology has the advantage of being able to respond flexibly to ongoing market changes and, if necessary, adjust the management process – ensuring the health care organization's "adaptability."

Keywords: Strategic planning, healthcare management, business analysis, SWOT, BSC, adaptability.

INTRODUCTION

One of the main indicators of the population's living standards is a level of health care. If we compare the statistics of the Commonwealth of Independent States (CIS) countries in terms of provision of the population with medical workers and hospital beds Azerbaijan ranks 6th among 11 countries in terms of the number of doctors per 10000 people (33 doctors by 2019), 8th in terms of provision with paramedical staff (55 medical workers by 2019) and 6th in terms of a number of hospital beds (45 beds by 2019) (State Statistical Committee of the Republic of Azerbaijan, 2020).

To meet persistent challenges in healthcare system, it is necessary to adopt an optimal development strategy for both the entire healthcare system and health care

institutions based on strategic planning that considers all environmental changes. Healthcare planning is the substantiation and development of a certain ratio of the population's needs for medical care with the possibilities of meeting them. One of the most commonly used explanations for health services planning define it as the tool that identifies the overall health needs of a country or community and decides how these needs can be addressed most efficiently by allocating current and expected future resources (Thomas, 2003).

In order to increase efficiency of the functioning of healthcare organizations (as a final providers of healthcare services), as it is seen from of experience of Western companies, comprehensive strategic planning should be

applied (Dennis, 2019). The use of methods of strategic analysis allows the heads of a healthcare institutions to timely adapt to changing environmental factors, and most effectively distribute and use the resources provided.

SWOT analysis

One of the most widely used methods of strategic planning is Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis, which is applied by various health care organizations to improve their performance in the market. SWOT is a strategic tool used by various organizations that plays an important role in harmonizing the internal and external environment of the organization (Kangas et al., 2003). According to Arshad et al. (2017), SWOT analysis is a useful and effective tool, the use of which can lead to improved management of healthcare organizations (Arshad et al., 2017).

The advantage of this technique is its ease of use and ability to adapt to various external conditions (Martin-Collado et al., 2013). This analysis is based on a comprehensive study of the internal and external environment of a healthcare organization. Analysis of the internal environment includes an assessment of strengths and weaknesses of a healthcare organization; external analysis implies the presence of market opportunities for further development, as well as existing risks that could negatively affect the organization's activities (Ida et al., 2015); (Nkubli et al., 2017). As Gürel and Tat, (2017) noted in their research strengths of the healthcare organization and opportunities provided by an external environment contribute to the achievement of strategic goals, while at the same time, the weaknesses of the organization itself and external threats pose a real risk for further activities (Gürel and Tat, 2017). Let's consider how this analysis is carried out in health care organizations.

1. Strengths. Thompson and Strickland (1989) identifies strengths of the organization, as features peculiar to this organization and enhances its competence and competitiveness (Thompson and Strickland, 1989). As an example of the strengths of a health care institution, we can specify the following: availability of qualified medical staff, availability of the latest equipment, appropriate database, and so on.

2. Weaknesses are internal factors that prevent a health care institution from achieving its strategic goals (Hay and Castilla, 2006). Weaknesses of a healthcare organization include the following factors: lack of last equipment, lack of financial resources, high repair and maintenance costs, low motivation of medical personnel, and as a result, low quality of services provided.

3. Opportunities. According to SWOT analysis, abilities are significant environmental factors that create new conditions for further development. Gürel and Tat (2017) believe that abilities are favourable external conditions and the rightfully chosen time to achieve the organization's goals (Gürel and Tat, 2017). Establishing cooperation with other organizations that provide medical services, seek new budget resources, ensuring public

participation in creation of new health care programs, improving quality and efficiency through new clinical methods - all this can be included in market opportunities of analysis conducted.

4. Threats are external factors that negatively affect the activity of a health care organization and prevent it from achieving its strategic goals. For example, threats may include the emergence of new competitors which provide similar medical services, the emergence of more advanced and cheaper technologies, the growth of the population that have no health insurance, etc. (Van Wijngaarden et al., 2012).

Let's consider the construction of SWOT matrix for a private health care institution in Azerbaijan on the basis of researches we have done. The first step of SWOT analysis was collection and assessment of important data based on hospital reports, patient records, patients' and staff satisfaction surveys (questionnaires), interviews with staff members and management, disease registries, funding sources, population's health status, present status of medical technology, the sources of healthcare funding and etc. The following Strength, SWOT analysis has been prepared from data collected (Table 1.)

The task of strategies elaboration using SWOT analysis methodology involves the integration of strengths and opportunities (Strengths + Opportunities), the minimization of threats using forces (Strengths + Threats), and the use of opportunities for levelling of weaknesses (Weaknesses + Opportunities) (Arshad et al., 2017).

The vision "provision of the best possible medical care to our population" can be achieved by increasing the quality of health care services provided, the number of qualified health care staff, the use of more advanced diagnostic technologies, etc. The investigated health care institution has been operating in the local market for more than 13 years and has formed its positive image and has its regular client base. Introduction of innovative computer technologies opens up new areas for the development of health care services in the enterprise under consideration, in particular, the possibility of providing online consulting services, as it is customary in many European countries. The development of the strategy in this direction is supported by the availability of the latest medical equipment and a customer relationship management system at the enterprise (Brown et al., 2001).

Major goal of a health care enterprise is to meet the needs of its patients in getting qualified treatment and to strengthen its market position by gaining a competitive advantage. Therefore, *Strategy* depends on identifying a competitive advantage, developing resources, and manufacturing capabilities that ensure sustainable superiority in an inconstant market. According to Aslan et al. (2014) strategies are developed based on an analysis of the current market situation, the available resources of the medical institution and the available development opportunities in countries (Aslan et al., 2014). Based on results of SWOT analysis possible strategies for the development of a health care institution were considered.

In Azerbaijan, for this period, the number of those

Table 1. SWOT analysis of private hospital in Baku, Azerbaijan

Internal factors	<p>Strengths</p> <ul style="list-style-type: none"> • More than 12 years on the market • Good reputation • Experienced staff • Famous doctors • English speaking personnel • Implementation of information technologies • Good treatment results • Patients satisfaction • Central location • High level emergency and industrial medicine 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Absence of QA program • Lack of motivation of staff • Lack of staff development • Strong mechanistic (military) organizational structure • Poor communication between managerial and executive staff • Absence of marketing plan • Shortage of staff • Chief doctor, heads of departments and services have no managerial education • High prices • Absence of some essential services (CT, MRI etc.) • Nursing personnel turnover • Lack of stationery wards • Lack of space in general • Monotonous dishes • No parking area
External factors	<p>Opportunities</p> <ul style="list-style-type: none"> • Implementation of public medical insurance system • Wider coverage of insurance medicine • Growth of population of the city • Aging of population • High number of international companies in the country • Cooperation with both private and public insurance companies • New treatment and diagnostics areas • A new innovative service • COVID-19 Pandemic 	<p>Threats</p> <ul style="list-style-type: none"> • Competing private hospitals • Construction of new, well equipped public hospitals • Unemployment rate • High cost of medical equipment and supplies • Economic shifts (inflation, devaluation) • Recruitment of qualified personnel • Governmental politics to support private business • Limited financial resources • Loss of key staff or associates (brain drains, enticement of qualified personnel by other hospitals) • Continuous changes in international treatment and diagnostic protocols • Logistics (transportation, custom regulation, taxes etc.) • Unforeseen emergencies • COVID-19 Pandemic

infected with the COVID-19 was 47.418 people, 648 people died of this virus (Worldometers, 2020). The situation in the country is further aggravated due to the presence of a military conflict and conduction of anti-terrorist operations, which also means an additional burden on the health care institution and the need for new investments in development. The solution of identified problems is seen in the availability of qualified personnel and appropriate medical equipment and facilities, but this requires significant state support for the health system.

Application of Balanced Scorecard system

One of the management methods that allow a health care organization to implement its strategy, following which will move to a qualitatively new state, is a system of balanced indicators. Choosing the right strategy, which will be communicated to the performers, will help solve problems of limited financial resources, efficient use of working time and timely provision of medical services. The Balanced Scorecard (BSC) is the most popular, globally recognized concept of strategy implementation management developed by Harvard University professors D. Norton and

R. Kaplan (Kaplan and Norton, 2007). BSC provides targeted monitoring of health care institution's activities, allows you to predict and anticipate problems, organically combines the levels of strategic and operational management, and monitors the most significant financial and non-financial performance indicators. Extent of achievement of strategic goals, effectiveness of business processes and work of the entire medical institution as a whole, each of its divisions and each employee is determined by the values of key performance indicators (KPI), which can be associated with an employee motivation system. Indicators with their target and boundary values are defined in such a way as to cover all critical areas that affect the implementation of the strategy as much as possible. The BSC provides the most important information to the managers of the organization in a concise, structured form. This information, on the one hand, should be compact, on the other-should reflect all main aspects of the organization's activities (Bergeron, 2018).

The BSC extracts the essential data through measuring and evaluating organization's performance based on a set of indicators selected in such a way as to take into account all significant (from the point of view of strategy) aspects of

its activities. Three main ideas of balanced scorecard system are well known:

1. An organization is successful if development is going according to plan, i.e. the company achieves its goals by creating and implementing strategic plans;
2. Actions of the entire organization should be coordinated in such a way as to achieve the goals with the least cost and in the shortest possible time;
3. One can control what one can measure. In other words, a Manager at each level should have a set of key performance indicators (KPI) that they use in their activities.

BSC distinguishes four aspects of the strategic management: financial – financial direction, considering the company's performance in terms of return on investment; customer – success in work with clients; internal processes - optimality of internal business processes; learning and growth/employees - general competence of the staff, focus on continuous improvement. Kaplan and Norton assert that the four components of a balanced scorecard system allow achieving a balance between long-term and short-term goals, between desired results and factors for achieving them, as well as between strict objective criteria and milder subjective indicators (Kaplan and Norton, 2007). At first sight, a multi-aspect balanced scorecard system may seem quite complex and confusing, but in fact, when it is well-drafted, it reflects the commonality of goals, since all parameters are aimed at implementing a single strategy.

Application of the BSC method in evaluation of health care organisation provides such advantages as:

1. BSC - is a tool that allows full alignment of the organisation's strategy with operational activities;
2. BSC considers the most important aspects of the health care institution (components "finance", "clients", "internal business processes" and "training and development");
3. within the framework of this methodology, monetary and non-monetary indicators are used to assess the performance of a health care institution, what allows achieving objectivity of assessments;
4. the analysed categories of indicators allow to take into account the interests of all stakeholders.

The financial category of BSC evaluates the relevant high-level financial ratios of the health care organization like net profit to owner's equity, net profit to net sales, net sales to fixed assets, inventory to working capital, collection period and many others, representing in general spending, sales, return on capital, indicators of cost-effectiveness measurement and regulation of which could improve organization's operating ways.

The BSC financial category assesses the health care organization related high-level financial ratios, such as net profit to the equity of the owner, net profit to net sales, net sales to fixed assets, working capital inventory, collection duration and many others, reflecting general spending, sales, return on capital, cost-effectiveness which monitoring and optimisation could improve organization's operational efficacy. Hospital-specific indicators like average length of stay of patients adjusted for complexity of

the case, complexity-adjusted cost per case, pharmaceutical costs, etc. should be carefully analysed.

Customer perspective assesses the satisfaction levels and efficiency expectations of the customers of the general hospital. Management was asked to evaluate the important basic characteristics of the service required by the customers and which should be delivered promptly and correctly. It was recommended not to limit assessment only to patients' satisfaction degree within the customer perspective for healthcare organizations, but also to review indexes of treatment results, quality of medical services, safety of patients and personnel, accessibility of services (Bisbe and Barrubés, 2012).

Application of the internal business processes analysis assesses how stable and efficiently the business is carried out. The most important issue is effectiveness of organization's work: reducing expenditure and waste, optimization of work processes, mechanisms of quick adaptation to constantly changing or unstable market environment, evaluation and ensuring of systems and tools for maintaining of sustainability of the organization or business. In other words the internal business processes perspective looks the key performance indicators (KPI) of the hospital (Bergeron, 2018). The following KPIs could be evaluated: the number of patients served per shift/week/month/year, average length of stay, patients' waiting time, readmission rates, mortality rate, treatment complications rate, call centre accuracy and response time, patients complaints rate, risk management, operating room utilization, infection rate, occupational injuries, resource utilization ratio, emergency call response time, online consultations rate, etc. (Coskun and Senyigit, 2010). Of course, it's not possible to measure all possible KPIs, one should define which of them are essential for each particular situation.

Considering that any healthcare facility is a typical knowledge-worker organization particular attention should be paid to the learning and growth perspective of BSC, which was not supported at a sufficient level in the hospital we have evaluated. Intention of managers in allocation of resources (finances, time, personnel) for education, training and development of the staff, training and maintaining of trainers within the hospital is key predetermining factor for success in medical business.

As a part of BSC analysis we conducted evaluation of one of the most important KPI's of the internal business processes - patients waiting time (WT), which significantly influences utilization of healthcare services in hospitals. Long waiting periods are seen by patients as an obstacle to accessing proper medical care (Sobechukwu, 2014). According to the Vitals' 9th annual Physician Wait Time Report 84% of patients think that waiting time is either "somewhat important" or "very important" to the overall experience at a doctor's office. Due to long WT, 20% of patients have switched physicians and 30% of patients have left their doctor's appointment (Vitals' 9th annual Physician Wait Time Report, 2018). On the Vitals website, there is a direct correlation between the amount of time a patient waits and a doctor's (which representatives

certain clinic) star rating (Becker's Hospital Review, 2018).

MATERIALS AND METHODS

Data were collected through patient satisfaction questionnaires filled by 218 people during September-October 2020. The WT taken from the registration at the reception until the patients were seen by one of the medical specialists was statistically analysed.

The average WT was 36,4 min (varying from 5 to 120 min) which was significantly higher than reported by the number of health care organisations from Western countries. For example in the UK the average WT for family medicine clinics varied between 5 and 8 min and consisted 10–20 min in Sweden (Al-Harajin et al., 2019). The average WT for a doctor in the USA according to the latest assessment was 18 minutes, 13 seconds for all medical specialties (Becker's Hospital Review, 2018).

Further analysis identified the following problems in different the areas of hospital management, leading to long WT and consequent patients' dissatisfaction: employee commitment and attitude (lack of motivation among employees and cooperation among staff), insufficient work process (lack of clarity in some of internal procedures and work instructions), heavy workload (low number of staff including physicians), management and supervision problems (staff having rest hour at the same time), inadequate facilities (lack of consultation rooms).

This was an illustrative example of the BSC internal business processes perspective assessment for strategic management of the health care organisation based on which appropriate recommendations and action plan were given to the management of the hospital.

DISCUSSION

The success of implementation of a development strategy for health care institutions is largely determined by the possibility of coordinating strategic, operational and tactical management. This task can be achieved if there is a scorecard that allows evaluating and monitoring implementation of a development strategy. A Balanced Scorecard (BSC) is a management tool that determines a current and potential status of an organisation based on specific goals and measurements. BSC goes beyond a typical performance measurement and becomes a popular strategic management tool that is widely used by health care institutions. The number of researches was done to evaluate the main specifics, advantages and disadvantages of the BSC methodology application for health care institutions (Okeji et al., 2014).

Olson and Slater (2002) point out a complex nature of BSC methodology, taking into account both "the patient's point of view, and the internal business processes of organizations, training and staff development opportunities, and, of course, a financial perspective" (Olson and Slater, 2002). The authors note that the main

advantages of the BSC consists of flexible adaptation of the organization's business strategy to external changes, focus on achieving strategic goals, training and development of personnel, and improvement the system of relationships with customers.

On the other hand, BSC could provide transforming the strategic guidelines of an organization into an effective system of specific goals and objectives within a short time (Brown et al., 2001). To achieve this goal two basically different approaches in carrying out the BSC-SWOT can be applied. The first approach involves applying BSC SWOT to the traditional Kaplan / Norton projection system, thereby preparing a strategic framework for managing the organization. The use of this approach involves sequential actions for study the mission and vision of the organization, its strategic goals and the strategies specified to achieve the set goals. It is also necessary to analyse the organization's commitment for market changes, the availability of appropriate human and technological resources necessary for rapid response and adaptation (Reeves and Deimler, 2011). The next approach for applying this methodology consists of creation of a working group that works towards establishing a strategy and the SWOT BSC. Using brainstorming and ocular cluster analysis, the team creates the SWOT BSC in a relatively short time. The main advantage of this approach is operation ability and efficiency in solving existing problems (Brown et al., 2001).

Qingwei F. (2011) has evaluated the applicability of BSC to the development and management of human resources of health care institution. According to his research - BSC is not only the methodology of strategic management, but can also be successfully used in the field of human resources management (Qingwei, 2011). The author notes that in the field of human resource management of a health care institution, the BSC can be used in various aspects, in particular for assessment of staffing, optimisation of recruitment process, measuring the level of staff productivity, and when implementing strategic human resource management. This methodology will be useful in the developing a strategy for the development of staff in a health care institution, will ensure effective distribution of staff, and become a reference point for managers in the field of strategic management and strategic decision-making. We can say that the BSC is aimed at ensuring the sustainable development of a health care organization. The advantage of application of BSC in staff management of the health care institution could increase the efficacy of strategic management of the hospital's human resources, which, ultimately, will contribute to the realization of goals and strategies of the organization.

Recently another perspective of BSC – it's feasibility for evaluation of organizational structure and performance of hospitals was considered (Mohd and Ramli, 2015). Researchers raised several problems faced by health care organizations: on the one hand, it is a purchase of expensive equipment, increasing health care costs, and on the other - the need to meet the needs in high – quality health care at affordable prices. The use of the BSC in the management of a health care organization provided timely information

about internal and external changes, response flexibly, and therefore optimize the management of a health care institution. The results of the survey conducted in a number of private hospitals in Malaysia testify the efficiency of using the BSC in several areas. One of them is to improve the financial performance of private hospitals, reduce their expenses and increase profitability. From the results of the research it is seen that, the use of the BSC methodology has a positive effect on the policy of a health care institution aimed at compliance with the organization's system of values and rules, which ultimately leads to the restriction of unethical actions of employees. The positive effect of the BSC was also observed on the development of the customer relationship system. This fact was due to that the introduction of the Balance Scorecard has significantly reduced a number of patient complaints and increased their satisfaction by the medical services provided (Mohd and Ramli, 2015).

But it is extremely important carefully choose BSC perspectives to apply and properly evaluate analysed business parameters. Gurd, and Gao (2008) found that one of the main tasks in designing the BSC in a health care institution is a correct choice of components which ensure maintaining a balance between long-term and short-term goals, financial and non-financial prospects, internal and external factors in health care institutions (Gurd and Gao, 2008).

Walker and Dunn (2006) in their research also consider the advantages of using the BSC, noting that this methodology is a system for measuring a performance based on a strategy and focused on the implementation of strategic goals. The goal of the BSC is "transformation of management strategy into performance indicators that employees can understand and realize" (Walker and Dunn, 2006). The use of the BSC can give a medical institution a number of advantages, such as:

- focusing a hospital on a patient-oriented strategy;
- control and evaluation of the implementation of the overall strategy of a health care organization;
- monitoring of the performance at all levels of management;
- adaptation of operations to external factors;
- provision of communication links and cooperation.

The authors also highlight a number of components for the BSC and note that cost reduction and cost control are of special significance for a financial component, while it is recommended to use "visual dashboards" for systemization of financial data. The use of the BSC provides a number of advantages also in sector of the level of patient service and increasing their satisfaction. The authors suggest conducting patient surveys and tracking the nature of their complaints in order to develop an effective system of patient relationships. Based on on-going researches, the authors argue that the BSC plays an important role in strategic planning. The BSC methodology optimizes the management of a health care institution, reduces costs without reducing the quality of services provided if health care features and the development of an appropriate performance measurement system account is performed

correctly.

Hatefi and Haeri (2019) study efficiency of the hospital's performance using combined model of BSC and the fuzzy data envelopment analysis (DEA). According to authors the use of these methodologies allows to accurately assess the efficiency of the hospital's operations. The article acknowledges that the use of the BSC increases the management efficiency, allowing managers to evaluate the development of a health care institution according to selected group of indicators. Comprehensive analysis of indicators and flexible response to external and internal processes are the main advantages of the method, application of which allows interpreting strategies and goals of the organization in a clear set of performance indexes. The researches include a survey of experts in 8 hospitals in Iran in order to identify performance indicators of organizations. The authors argue that the BSC is effective for analysing of the current situation, identifying major problems that limit the efficiency of the hospital's operations and ensuring their development strategies. Performance indicators of medical organizations are considered from the aspect of 4 perspectives: financial, internal business processes, client and general staff competence. Integrated use of the BSC and the DEA tools allowed the authors to evaluate the efficiency of the hospital's operations and build their rating based on the fact that the higher the efficiency, the better the hospital works (Hatefi and Haeri, 2019).

Chang et al. (2008) consider possibilities of using the BSC tools in a large hospital settings (4660 employees and 9000 outpatient visits per day), located in Taiwan (Chang et al., 2008). The authors note that the use of the BSC for assessment of the efficiency of the hospital's operations is associated with a number of reasons, such as an increase in the price of medical services provided, an increase in the need to provide better services, the need to find a balance between the cost and quality of medical services, development opportunities and limiting regulatory requirements. The BSC methodology allows applying a strategic approach to the development of health care organizations, simultaneously offering operational improvements in hospital operations. The authors note that health care institutions in Taiwan are complex integrated systems consisting of hospitals, clinics, nursing homes and home health services. As the scale of health facilities increases, the issue of strategic management based on performance measurement becomes more urgent. From this point of view, the use of the BSC in a large, multi-functional hospital appeal to be the optimal solution at the current stage. The authors note that the positive aspects of the applied BSC were:

- comprehensive analysis of the hospital's operations based on various indicators, both financial and non-financial.
- possibility of better coordination between top and middle managers, health staff of various levels and specialties.
- direct relationship between strategic goals, strategies, planning, budget, and costs.

The use of the BSC resulted in the need to create a special BSC executive team in a hospital, which includes both the senior management and 4 subgroups, based on the following 4 perspectives: financial, internal business processes, customer base, staff training and its development. The task of each subgroup is to transform the organization's mission and vision into specific strategic goals.

Analysis of the effectiveness of the methodology used showed that positive results were achieved in refining the hospital's business strategy, increasing the level of consistency at various levels of management, and achieving a balance between short-term financial goals and long-term investments for the development of a health care organization. The level of trust in managers has increased, the pace of staff training has accelerated, and financial indicators and patient satisfaction have improved. These factors testify the effective application of the BSC methodology for a large multi-functional hospital. Inamdar et al. (2002) investigated the use of the BSC in health care institutions, focusing on problems faced by managers (Inamdar et al, 2002). They identified seven types of the most of the encountered problems, which include problems related to obtaining permission from senior management to implement the BSC methodology; problems of time management and adherence to the main purposes; problems of creating a competitive value proposition for patients; problems of using the BSC in a health care institution; problems related to determining the obligations of employees responsible for implementation of this methodology; problems of obtaining and analysing relevant data and problems associated with the assessment of the application of the BSC. The authors reveal the advantages of implementing the BSC in a health care organization related to management optimization and offer basic principles for implementing the BSC methodology.

Conclusion

Application of combined SWOT-BSC methodology is powerful tool for drafting of a strategic map that allows the organization to perform a selected strategy more effectively and serves for definition of the organization's strategic goals. The advantage of the SWOT-BSC methodology is its ability to flexibly respond to on-going market changes and in case of necessity to adjust the management process – to assure “adaptability” of the health care organization.

Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this manuscript.

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