

ORIGINAL ARTICLE

The barriers and challenges that hinder the quality implementation in Tripoli – Lebanon hospitals

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ABSTRACT

Quality in healthcare is achievable through quality management systems and enhances service quality, operations, and management. Health organizations that realize quality implementation have high staff satisfaction, client satisfaction, employee cooperation, and commitment from managerial to subordinate levels. However, health systems must address barriers and challenges to attaining desired quality. This study explores Tripoli hospitals' challenges and obstacles affecting the implementation of quality management systems. It used a quantitative methodology with a semi-structured questionnaire for data collection to interview respondents comprising managerial, directorial, and administrative personnel. The hospital's management staff consisted of nursing medical quality and general directors. Results from the semi-structured interview indicated that hospital directors in Tripoli city's healthcare systems face barriers and challenges related to human resource management and organization structure to achieving quality using quality management systems. A total of 189 participants drawn from directorial capacities in Tripoli city's hospitals participated in the study. Most participants ($I = 115$) asserted that lack of staff involvement and motivation were primary barriers to hospital quality implementation. Hypotheses 1 and 3 were proved using correlation analysis, but hypothesis 2 was statistically insignificant. The findings recommended that human resource management practices such as staff motivation, fair compensation, and involvement in decision-making are necessary for quality improvement. Furthermore, managerial professionalism and specialty are crucial for spearheading quality implementation, while robust quality policies, protocols, and systems are necessary for quality implementation in Tripoli hospitals. Despite these funds, further research was necessary to align findings with previous studies (achieve generalizability), which attributed that time is the primary barrier to quality implementation in hospitals situated in the region.

Key Words: Quality, Quality management systems, Barriers, Tripoli-Lebanon, Staff motivation

1. INTRODUCTION

Quality is achievable in healthcare systems through implementing Quality Management Systems (QMS) which consist of protocols, procedures, and guidelines designed to evaluate and monitor the quality-of-service delivery. Implementing

quality management systems is a recent approach and development in healthcare facilities to achieve quality.^[1] Healthcare facilities oblige to the societal and regulatory desire to realize quality in service delivery by implementing protocols and procedures to enhance employee and patient satisfaction.

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However, some regions and hospitals have deviated from the ISO when implementing quality management systems to improve service delivery.

Hospitals in Tripoli grapple with several challenges and barriers that impede efforts to achieve quality and offer quality services by effective functioning. Previous studies have indicated obstacles and challenges hindering quality implementation in Tripoli city's hospitals as: budgetary constraints, inadequate staff compensation and motivation, inadequate skilled personnel, and inefficient management (insufficient authority delegation).^[2] These obstacles and challenges to implementing QMS require appropriate remedies for hospitals to attain effective functioning and offer improved quality services.

The literature review outlines barriers and challenges to implementing QMS in hospitals and suggests appropriate measures to resolve in different contexts. However, different healthcare organizations in different countries have varying interventions to address challenges and obstacles in implementing QMS since countries and hospitals have unique challenges and solutions.^[3] For example, in Tripoli, barriers to implementing QMS in hospitals are unique to other countries and hospitals. Furthermore, while previous studies have established these barriers, few academic and administrative solutions have been suggested. Therefore, this study explores views from hospitals', employees, and clients on addressing challenges and barriers to implementing QMS and achieving quality.

2. LITERATURE REVIEW

Challenges and obstacles to achieving quality in healthcare organizations are vital in different perspectives of quality (quality improvement, implementation, assurance, and QMS). Obstacles in achieving quality relate to organization staff, inadequate skilled personnel and lack of training, quality improvement protocols and programs, and effective organization supervision and performance.^[1] In addition, obstacles include inadequate equipment and human and financial resources related to the organization's resources. These barriers encompass several operational aspects of personnel and capacity, such as lack of motivation, insufficient training in quality improvement processes, inadequate ICT, and time for implementing quality mechanisms in hospitals.^[2] Additionally, staff motivation challenges include poor working conditions, unsatisfactory employee compensation, inadequate infrastructure, and inferior data management systems in hospitals.

In health domain, Health Information System (HIS) is adopted to assist medical personnel in delivering medical

treatment to those who require medical attention. Technological issues need to be resolved faster to avoid work interruption within the organization. Technical difficulties may lead to major problem to organization if not being identified earlier. Maintenance required high financial support especially when the condition is very critical, however regular service is necessary to reduce the system failure. This paper shows that it is important to identify any technical difficulties as early as possible from the respective users whenever they use the system, where modification or maintenance can only be performed only if the problems are reported.^[4]

Moreover, literature has established inefficiencies in management and operations as barriers manifesting through inadequate managerial skills, lacking organizational strategic plans, weak managerial structures, staff unaccountability, and poor data handling and performance. In addition, language and cultural obstacles occur in healthcare organizations where personnel lack appropriate quality vocabulary and have not integrated quality culture in system operations.^[2] Other underlying obstacles to quality in healthcare facilities are workload intensification against inadequate staff and a mismatch in communication between patients and healthcare providers. Study findings have shown how untrained and overloaded staff contribute to low-quality services. In addition, staff lacking adequate compensation and motivation, particularly insensitive and inattentive leaders, degrades quality implementation efforts.^[3] Inadequate talent and expertise contribute to the unsatisfactory implementation of quality mechanisms, while poor working conditions and compensation lead to job dissatisfaction.

Study findings have shown that remedies to obstacles and challenges in QMS implementation in hospitals include increased staff involvement, motivating staff through adequate compensation and an attractive reward system, and robust leadership and managerial programs. However, failure to implement these remedies culminates in obstacles that impede quality integration in hospital processes.^[5] Quality implementation barriers to staff welfare include lack of motivation, recognition, overloading, and inadequate expertise. A study in Jordanian hospitals revealed similar staff-related obstacles in implementing quality: lack of skilled personnel, budgetary constraints, and lack of staff and training on quality achievement.^[1] Other barriers highlighted in previous studies were budgetary constraints, unsupportive organization culture, change resistance, and lack of business continuity in hospital organizations.

The hypotheses for the current study are as follows:

- Null hypothesis: (H1₀) there is no significant relationship between human resource management and

hospital quality implementation

- Alternative hypothesis (H1_a): There is a significant relationship between human resource management (staff cooperation, involvement, and compensation) and hospital quality implementation
- Null hypothesis (H2₀): There is no significant relationship between organizational capacity and hospital quality implementation
- Alternative hypothesis (H2_a): There is a significant relationship between organizational capacity and hospital quality implementation
- Null hypothesis (H3₀): There is no significant relationship between quality systems and protocols and quality implementation in hospitals
- Alternative hypothesis (H3_a): There is a significant relationship between quality systems and protocols and quality implementation in hospitals

Previous studies

A previous study intended to establish challenges facing accreditation programs in Iranian hospitals established that inadequate time was a critical challenge to accreditation standards. The inadequate time has resulted in structural changes and unsatisfactory documentation. Consequently, the study recommended standardization programs implemented over two to three years to eliminate the time barrier. Besides time, the number of standards (over 8,000) has been the stumbling block in achieving accreditation in hospitals. At the same time, too much attention and documentation have hindered the implementation and continuity of accreditation programs.

Another study aimed to establish clinical pharmacists' perceptions of the barriers impeding pediatric services in Hong Kong. The findings from this study of 32 respondents (clinical pharmacists) identified five primary obstacles hindering service implementation in the pediatric clinical pharmacy.^[6] These barriers included administrative challenges, facility environment constraints, insufficient service penetration into the healthcare system, weak governance and waning professionalism, and lack of partnership with research institutions.^[6] According to the study, remedies for the pediatric service implementation consisted of self-efficacy from clinical pharmacists and pharmacy management team, confidence, and trust from healthcare professionals.

Another study sought to establish nurses' perceptions of barriers facing accreditation programs in Jordanian hospitals. It established that quality monitoring and analysis, leadership support and commitment, and utilizing empirical data are primary. These measures represent remedies to the barriers and challenges impending integration of quality and quality management systems in hospital organizations.^[7] According

to the nurses' perception in the study, these measures enable consistent, safe, and high-quality client services. Furthermore, nurses propose the utilization of hospital data in providing patient care to enhance safety, patient care, and quality of services. Healthcare institutions should gather patient information to evaluate the quality of services through their level of satisfaction. In the study, over 77% of respondents agreed that measurable and steady quality improvements are apparent in Jordan healthcare institutions.^[7] Moreover, over 80% of respondents affirmed the value of accreditation programs in healthcare organizations. They agreed that accreditation is the precursor to evidence-based practices contributing to intra and inter-organizational collaboration among partners.

Other studies have identified organizational factors and technological shortcomings as barriers to implementing quality in healthcare systems. Barriers to implementing quality management systems such as health information systems include managerial staff, hospital directors, and employee resistance.^[4] The failure of hospital organizational systems, such as people processes and technology, to collaborate towards a common objective becomes a barrier to achieving quality. Quality in the healthcare organization is achievable through a collaborative approach from top management to subordinate employees and having adequate budgetary allocations, infrastructural capacity, and creating quality awareness throughout the organization.^[8] Moreover, inadequate technological infrastructure causes significant interruptions in service delivery. Technological issues in a hospital cause persistent system failure, leading to increased downtime, technical difficulties, and increased maintenance costs that jeopardize service delivery quality.

3. RESEARCH METHODOLOGY

This study explores primary barriers and challenges to quality implementation in Tripoli hospitals and compares results from previous study findings. It endeavored to answer the question: what are the primary and secondary barriers and challenges to quality implementation in hospitals in Tripoli? The study was conducted in the summer of 2022, and involved 20 hospitals located in Tripoli, which were selected using a random sampling method. The regions of Tripoli were study locations due to their recent efforts to integrate accreditation programs and to realize the desired quality of health care service.

The study utilized a quantitative research design to establish numerical relationships in participants' responses. A cross-sectional survey was preferable to provide essential and quantifiable data from individuals and organizations in the study. The research tool for the study was a questionnaire containing semi-structured questions distributed to the re-

spondents using online platforms such as social media, email, and face-to-face visits. The online survey focused on barriers to quality elements in hospitals comprising organizational culture, inadequate resources and infrastructure, lack of staff motivation, managerial weaknesses, inadequate employee compensation, and inadequately skilled employees.

3.1 Sampling and data collection methods

The study participants consisted of managerial directorial, medical administrative, and clinical directors of selected hospitals in Tripoli. They received questionnaires using systematic random sampling, providing an equal opportunity for respondents' selection in the study. In addition, the systematic sampling approach made it easy to consider alternative respondents if a particular participant withdrew or declined the opportunity to participate in the research. The research settled on 189 valid out of 250 participants from 20 hospitals in Tripoli. In utilizing the systematic random sampling approach, the research included and excluded participants according to predetermined criteria. Eligible participants should have worked for at least two years in a managerial capacity for healthcare institutions. However, participants serving their leave at the time of the study were ineligible.

After receiving consent from hospitals and participating staff through a voluntary approach, they received the questionnaire through face-to-face visits, social media, and email. The link directed respondents to the Google form containing the questionnaire. Moreover, the questionnaire contained the study's title and the research's identification details for recognition. Respondents answered questionnaires before finishing and submitting by clicking on the "submit" toggle at the end. Participants received no monetary compensation or persuasion when participating in the survey. The questionnaire used during data collection consisted of two main sections sharing 45 itemized equations. The first section of the questionnaire consisted of general information items such as the experience of the participants, professional qualifications, age, and gender. The primary sections covered potential barriers and challenges to quality implementation in hospitals. These included staff involvement and motivation, compensation, managerial weaknesses, the inadequacy of skilled personnel and lack of training, inadequate time, miscommunication between healthcare providers and clients, inferior data management systems, and budgetary constraints. The closed-ended questions of the questionnaire used a 5-point Likert scale starting from strongly disagree (5) to (1) for strongly agree.

The study relied on the services of a field worker recruited and trained by the researcher to conduct the data collection process. Besides assisting the researcher, the fieldworker

enabled the elimination of bias and personal preferences of the researcher.^[9] The field worker underwent training on the research's purpose, target population data collection, the questionnaire, rational sampling method, and legal and ethical considerations. The training was necessary to ensure adherence to legal and ethical requirements such as seeking participants' consent using the consent form and respecting participants' decisions. The field worker utilized platforms consisting of social media, emailing, and face-to-face visits to inform participants of the study and distribute questionnaires in the Google forms format. Participants received orientation for the study and provided a consent form with the assurance of confidentiality throughout the study. Additionally, participants received guidance on answering questions chronologically and submitting them at the end of their responses. After data collection, a Statistical Package for the Social Sciences (SPSS) assisted in calculating standard deviation and percentages of the obstacles that hinder quality implementation in hospitals.

3.2 Pilot test

One month before the actual test, a pilot test evaluated the duration required to complete the questionnaire, questions' clarity, and the tools readability. The test involved 10% of the study sample of the target population.

3.3 Test of validity and reliability

The questionnaire's reliability and validity indicated equivalent reliability and stability for application in different languages, places, and time zones. A panel of quality experts assessed the questionnaire as content validity, similar to the previous studies under consideration.^[9] When evaluated under the Cronbach Alpha scores, the questionnaire scored above 0.8 for the pilot and actual studies in English, Turkish and Arabic. The 0.8 scores indicated excellent reliability of the questionnaire. Moreover, Cronbach scores of 0.85-0.94 when testing for the questionnaire's internal consistency in Tripoli showed high reliability. Face validity and readability tests returned a 0.959 on the Cronbach Alpha score, which assured its validity. Validity is defined as the extent to which a concept is accurately measured in a quantitative study. For example, a survey designed to explore depression, but which actually measures anxiety would not be considered valid. The second measure of quality in a quantitative study is reliability, or the accuracy of an instrument. In other words, the extent to which a research instrument consistently has the same results if it is used in the same situation on repeated occasions.^[10]

4. RESULTS

The data gathered from the study required cleaning to remove data errors before presentation using statistical inferences. As a result, the gathered data was checked for missing data and other errors when entered on a Microsoft Excel spreadsheet.^[9] After the cleaning process, they cleaned data and underwent analysis using the SPSS program. In the SPSS worksheet data entry, the barriers and challenges of quality in hospitals consisted of eight subsections: lack of staff involvement and motivation, compensation, managerial weaknesses, the inadequacy of skilled personnel and lack of training, inadequate time, miscommunication between healthcare providers and clients, inferior data management systems and budgetary constraints.

In Table 1, 189 participants completed the questionnaire and submitted it. Most respondents were male (80%), while half of the participants fell in the 32 to 45 years of age. Participants exhibited excellent mastery of the research topic owing to their high educational levels and shared valid insights and responses to the research questions. Moreover, over half of the participants had managerial working experience of 2 to 4 years.

Table 2 shows items subjected to respondents to obtain views on barriers and challenges affecting quality implementation in hospitals. These items occupied the second section of the questionnaire and provided an opportunity to inquire from participants about the study's objective.

Table 1. Respondent's demographic characteristics

Characteristic	Classification	Percentage (%)
Participants' Gender	Female	37 (19.6%)
	Male	152 (80.4%)
	Total	189 (100%)
Age bracket in years	Below 32	19 (10.1%)
	32-45	105 (50.0%)
	45-60	55 (29.1%)
	More than 60	10 (5.3%)
	Total	189 (100%)
Professional qualification	Advanced Diploma	51 (27.0%)
	Undergraduate	114 (60.3%)
	Masters	7 (3.7%)
	Doctorate	17 (9.0%)
	Total	189 (100%)
Years in Managerial Position	2 to 4 years	115 (60.8%)
	Above years	75 (39.7%)
	Total	189 (100%)
Participants' Positions	Managerial Directorial	110 (58.75%)
	Medical Administrative	47 (24.86%)
	Clinical Directors	32 (16.39%)
	Total	189 (100%)

In Table 3, most respondents (I = 115) agreed that lack of staff involvement and motivation is the obstacle to implementing quality improvement programs and hospital quality systems management. Similarly, (I = 101) thought managerial weaknesses are the second barrier to realizing hospital

quality improvement and systems. Another group of respondents (I = 95) affirmed that inferior data management systems are responsible for challenges hindering the implementation of quality hospital services in Tripoli. Responses from other participants showed that inadequate compensa-

tion, inadequate skilled personnel and lack of training, inadequate time, budgetary constraints, and miscommunication between healthcare providers and clients are other barriers and challenges impacting quality implementation in hospi-

tals. This result shows that barriers and challenges in quality implementation in Tripoli hospitals relate to staff involvement and human resource management, hospital leadership and management, quality policies, programs, and evaluation.

Table 2. Section two for eight responses

Variable	Eight Questions
Challenges and obstacles in the implementation of quality in Tripoli City hospitals	<ul style="list-style-type: none"> • Staff involvement and motivation • Inadequate staff compensation • Managerial weaknesses • Inadequacy of skilled personnel and lack of training, • Inadequate time • Miscommunication between healthcare providers and clients • Inferior data management systems • Budgetary constraints

Table 3. Compiled responses on barriers to quality implementation

Item and Variables	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	Mean Values	STD Deviation
	“T” (%)	“T” (%)	“T” (%)	“T” (%)	“T” (%)	(n)	
Barriers and challenges							
Inadequacy of skilled personnel and lack of training	15 (12.9)	48 (44.6)	22 (23.8)	36 (16.6)	25 (10.2)	3.80	.722
Inadequate time	9 (8.6)	43 (40.7)	29 (26.9)	31 (16.8)	28 (14.2)	3.90	.779
staff involvement and motivation	33 (16.6)	115 (65.4)	20 (7.5)	8 (4.1)	8 (3.5)	4.11	.712
Inadequate staff compensation	21 (18.8)	90 (51.5)	20 (9.6)	22 (10.1)	14 (7.9)	3.99	.784
Managerial weaknesses	25 (12.5)	101 (59.9)	15 (10.8)	15 (10.8)	20 (12.2)	3.76	.662
Miscommunication between healthcare providers and clients	5 (6.3)	31 (30.8)	30 (30.1)	29 (16.6)	30 (18.4)	3.82	.690
Inferior data management systems	10 (21.2)	95 (53.4)	30 (11.2)	25 (10.3)	21 (9.9)	3.91	.689
Budgetary constraints	9 (8.2)	39 (36.4)	30 (25.4)	28 (16.5)	26 (13.7)	3.89	.646

The results obtained from the study findings closely relate to previous study findings. It shows the primary obstacles and challenges impeding quality implementation in hospitals regionally and globally. The present and previous studies agree that issues concerning human resource management, healthcare organization management, and quality improvement policies and protocols represent major domains containing barriers to quality implementation.^[11] However, findings from the present and previous studies differ in the order and uniqueness of challenges and barriers to quality implementation. While previous studies have emphasized inadequate

time and lack of skilled personnel as primary barriers to quality implementation, the present study has identified lack of staff involvement and motivation, managerial weaknesses, and inferior data management systems as the principal barriers to quality management in Tripoli hospitals.

Hypotheses testing

In the correlation analysis, correlation is significant at the 0.05 level (2-tailed).

Table 4 shows the results of variables of three hypotheses extracted from the bivariate correlation analysis. It shows

two correlations returning Sig. (2-tailed) values of less than 0.05. This means the correlations of the two variables, on one hand, and one variable, on the other hand, is significant.

Thus, while hypotheses 1 and 3 are proven, hypothesis 2 cannot be proven since values above 0.05 are not statistically significant.

Table 4. Testing hypotheses using bivariate analysis

		Hypotheses 1	Hypotheses 2	Hypotheses 3
		Observing human resource management requirements such as staff involvement, compensation, and motivation	Having managerial competence and expertise in quality improvement	Having adequate quality protocols and systems for quality implementation
Do you feel Quality implementation is effective	Pearson Correlation	.93	.83	.62
	Sig. (2-tailed)	.0468	0.0654	0.0492
	N	189	189	189

5. DISCUSSION

The primary focus of the study was exploring barriers and challenges hindering the implementation of quality in Tripoli hospital organizations. According to the study findings, staff motivation and compensation is the principal barrier to achieving quality in hospitals. The second challenge to achieving quality in Tripoli hospitals was the managerial system’s weakness. The hospital organization’s leadership is the primary stakeholder that recognizes and initiates quality improvement in hospitals.^[9] The managerial administrative and directorial leadership is responsible for establishing quality improvement efforts and articulating visions to improve quality in healthcare organizations.

The inferior data management systems in hospitals are the 3rd barrier and challenge in implementing quality. Systems that facilitate healthcare professionals’ access and utilization of hospital data enhance the quality of services through improved patient care services and safety. Inadequate employee compensation was the fourth barrier that impeded hospital quality improvement.^[9] Compensating employees is essential to strategic quality planning within particular departments, and hospital working groups. In the 5th position were inadequate skilled personnel and a lack of training. Training healthcare providers is crucial in achieving desired safety and quality improvement standards. The present review demonstrates that their merits may possibly include increased staff engagement and communication, multidisciplinary team building, positive changes in organizational culture, and enhanced leadership and staff awareness.^[5]

The 6th, 7th, and 8th obstacles hindering hospital quality implementation were inadequate time, budgetary constraints, and miscommunication between healthcare providers and clients. These factors influence quality improvement by af-

fecting procedures, programs, and policies to advance quality assurance and support quality implementation among healthcare providers.^[9] Previous studies have identified similar barriers and challenges to quality implementation in Jordanian and Hong Kong hospitals. However, the uniqueness of challenges and barriers to quality implementation in specific hospitals and countries means their order varies from one country and hospital to another.

6. CONCLUSION AND RECOMMENDATIONS

This comparative study established that eight barriers impede quality implementation in Tripoli hospitals. Lack of staff involvement and motivation was the primary barrier and challenge hindering quality implementation by affecting programs and policies aimed at enhancing client satisfaction. Managerial weaknesses became the second barrier due to the hospital’s leadership role in planning and priorities to enhance customer satisfaction. Besides the three challenges, weak data management systems, inadequate employee compensation, inadequate skilled personnel, lack of training, inadequate time, budgetary constraints, and miscommunication between healthcare providers and clients are other obstacles to implementing quality in hospitals.

From the findings and conclusions made in this research study, the following recommendations are:

- Healthcare system and especially hospitals in Lebanon and Tripoli as a city should consider a reformulation of the healthcare regulatory and new operating model with a proper governance framework
- Policy making and healthcare leaders should work on advanced strategy management framework using an advanced framework like the BSC to enhance accountability and efficiency

- Tripoli hospitals should involve and motivate staff in quality implementation and participate in decision-making about quality systems protocols and policies
- Hospitals in Tripoli should reward hard-working disciplined and talented employees through enhanced remuneration and other benefits. These rewards should consist of monetary and non-monetary benefits including extra vacation health insurance and offering daycare friendly staff
- Hospitals in Tripoli should recruit specialized personnel to serve as hospital managers to facilitate future planning and decision-making to help hospitals implement quality programs
- Tripoli hospitals should undertake continuous training programs for existing and newly recruited staff members through funding allocation training programs
- Hospitals in Tripoli should integrate superior data management systems to strengthen staff capacity and capability to accomplish tasks
- Exploring alternative funding sources and allocating adequate funds to quality implementation in hospital processes and systems is critical for Tripoli's hospitals
- Tripoli hospitals should implement and operationalize protocols and guidelines linking interaction between healthcare providers and clients
- Hospital directors and managers in Tripoli should allocate sufficient time to accomplish quality implementation projects within hospitals systems and processes

6.1 Managerial implications

This study's results provide the managerial administrative and directorial personnel and policymakers with an evidence-

based approach to identifying and eliminating barriers and challenges hindering hospital quality through quality management systems and improvement programs. Lebanese healthcare leaders and practitioners should play a significant role to ensure highest level of quality across all Lebanese hospitals to maximize the experience of the patients.

6.2 Limitations and future research

The modesty of the sample size used in the study was a limitation, albeit used in examining a few of the factors. Thus, the selected sample size was adequate based on the number of factors assessed and their moderate factor loadings. Lack of study generalizability was the second limitation due to basing the study in Tripoli hospitals. Therefore, similar studies are necessary for the hospitals of the same region and surrounding regions using expanded sample size and other research methods to increase the generalizability of the study. Among the areas that can be investigated further include the impact of advances in technology on quality systems implementation in Lebanese hospitals, the impact of national and regional regulations on healthcare level of maturity in Lebanon, and the role of employees in easing the quality assurance implementation process in healthcare industry in Lebanon. Giving the fact that this research had several limitations, the researchers recommended that the new studies must carefully consider having solid psychometric properties of the scale and should be explained in detail like (Parallel Forms Reliability, Internal Consistency Reliability, Inter-Rater Reliability and Test-Retest Reliability).

CONFLICTS OF INTEREST DISCLOSURE

The authors declare no conflicts of interest.

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