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Original Article

Analysis of the Health Sector Evolution Plan from the Viewpoint of Out-of-pocket Payment: A Multiple Streams Model

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Abstract

Introduction: Health Sector Evolution Plan (HSEP) is regarded as one of the most dominant reforms in the health system in Iran. This study aimed to review the agenda setting of Out-of-Pocket Payment (OOP) reduction in HSEP plan by using the multiple streams Kingdon's model.

Methods: This is a qualitative study conducted through ten semi-structured interviews. Sampling was purposeful and continued until reaching data saturation based on snowball sampling method. To formulate a theoretical structure and review the potential explanations, we used the framework analysis.

Results: A higher proportion of growth in OOP expenditures and catastrophic health costs among Iranian population in the years 2002-2012 was identified as the *Problem stream*. Emphasis on establishing an equitable financing system to reduce the problems of getting access to health services based on population health needs led to the *Policy stream* which has been considerably supported by the Islamic Consultative Assembly and Iran Ministry of Health and Medical Education. Such supports were made possible by approving the budget in 2014 and allocating appropriate resources (*Political stream*).

Conclusion: By examining the method of setting the policy of OOP reduction as agenda, we can make a precise analysis of the basis of this policy, and by emphasizing these three streams in order to introduce corrective policies, we can improved it, if necessary.

Keywords: Out-of-pocket payments, Agenda setting, Multiple streams model, Healthcare Sector, Iran

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Introduction

Health financing strategies have always been regarded as the main issues with which health policy makers are faced, particularly in developing countries. Prepaid health financing mechanisms such as health insurance plans are the key role players in achieving universal health coverage and protecting people against the financial burden often related to OOP payment. In fact, prepayments not only cause relief from disease uncertainty, but also help considerably in the realization of health equity through distribution of costs between high- and low-income individuals (1). Despite the remarkable benefits of such payment mechanisms, lack of adequate resources and low governmental budgets have led to many health systems toward a significant dependency on people's own pockets. Therefore, in several developing countries, including Iran, OOP payments represent a great proportion of health expenditures. Accordingly, statistics show that the share of OOP expenditure for Iranian population increased from 53% in 2001 to 59% in 2009. Thus, decreasing these payments by replacing them with fair financing systems should be considered as one of the main priorities of the health sector (2).

In the healthcare financing system, OOP cost is a direct payment of money which an individual has to pay to the healthcare provider without expecting to be reimbursed by a third party (insurer or the government) (3-5). Formal and informal OOPs are the two types of such direct imbursements. Informal payments include mechanisms that are out of the formal compensation channels and defined as under table payments in the form of cash, presents, etc. This payment is the most unfair way of funding in the health sector which has dramatically been expanded

across low and middle-income countries (6-9). Due to its undesirable consequences, OOP is regarded as a challenge for many health policy makers which forces them to fight against it in the health sector through setting appropriate policies (3, 10, 11).

Although the fourth and fifth economic, social, and cultural development plan of Iran has highlighted the importance of reducing OOPs to less than 30%, a reverse movement has been recognized in recent years, so that the share of OOPs has increased particularly in terms of medicines and clinical treatment procedures which account for 60 to 70% of the total healthcare expenditures (12). To effectively deal with the issue and increase the equity of health, MOHME started an evolution plan in 2014 to run a series of reforms in the health sector. The main significant interventions with the purpose of remodeling the financing system included developing a basic health insurance, decreasing the share of user fees from the total inpatient expenditures in public hospitals, and preventing the referral of patients to the out-of-hospital centers for purchasing medicines or medical equipment (13, 14). During the plan implementation, the government investment in the health sector was increased, health insurance coverage was extended, and the health financial problems imposed on people decreased significantly. Despite the progress made, minimizing the financial risks of receiving healthcare services is still regarded as a government priority to achieve universal health coverage.

In policy making, there are several ways through which beneficiaries can turn public issues into government priorities as an agenda setting process. In fact, agenda setting is a process of selecting a potential policy problem as a governmental issue among other alternatives. One of the most popular models for setting the agenda of national and international policies is Kingdon's multiple streams framework (15). According to Kingdon, the method of agenda setting is dependent on the interaction between three variables that join each other at a specific point of time and reveal a policy window of opportunity. At this point, solutions are merged to problems and both of them bring about political support for a designated problem. The mentioned variables are problem, policy, and political streams with some specific characteristics.

The problem stream is an awareness about and deep understanding of the problems that is recognized as a public issue demanding the government action to be resolved. Policy makers usually become aware of such problems due to the occurrence of dramatic events or some attractive feedbacks received from the existing programs. The policy stream is the result of the experts' opinion and analysts' assessments of identified problems to propose applicable solutions. Finally, the political stream includes such factors that form the supportive body of politics, such as interest group advocacy movements or legislative requirements that confirm the relevant policy processes (16).

Policy entrepreneurs play an important role in agenda setting through linking policy problems, policy solutions and political opportunities within the multiple stream framework. Such a model is also useful in interpreting policy making in terms of the convergence of key variables at a particular time and giving an all-inclusive view about health system policy setting. Furthermore, making use of a wide range of experts' viewpoints in the field of HSEP and health financing system can provide evidence-based data regarding the reason for focusing on financial protection strategies in the health sector in Iran. Previous studies aimed to investigate the OOP reduction policy descriptively or by analyzing the indicators before and after the implementation of the plan, but in the present study we aimed to examine the policy making and find out the basis of the formation of the mentioned policy; in this way, it would be possible to understand the fields of its formation in a deep way. As a result, it is possible to introduce corrective suggestions for further supplementary reforms. Therefore, the present study was conducted to demonstrate new OOP reduction agenda-setting using the multiple streams model developed by John Kingdon.

Materials and Methods

This qualitative study analyzed the development of agenda setting process of OOP reduction based on the Kingdon's multiple streams model at the national level of the country in 2018. The required data that outlined the problem, policy, and political streams for health financing system and OOP payment were gathered through reviewing general health policies; five-year economic, social and cultural plans of the Islamic Republic of Iran; and reports published by valid scientific databases and electronic portals of the involved institutions. Furthermore, interviews were done among the key informants to provide a comprehensive view toward OOP payment. The study participants included three senior managers from Food and Drug Administration of Iran MoHME, a manager from Health Insurance Organization in Yazd, an expert from Deputy of Management and Resource Development in Shahid Sadoughi University

of Medical Sciences, two experts from MoHME in Tehran University of Medical Sciences, an experienced manager from Health Insurance Organization in Tehran, a senior manager from Children's Medical Center of Imam Khomeini hospital, and a qualified agent from Health and Medicare Committee of Iran Parliament. These key informants were selected through purposeful sampling and the sampling process continued until reaching data saturation by snowballing. In total, 11 persons (3 women and 8 men) participated in the interviews. First, they were given necessary information about the interview topic, and then informed consent for their participation was obtained.

Interviews were semi-structured and performed using a topic guide. The guide covered the concept of health financing system, OOP reduction, key factors related to decreasing OOP, and related strategies. After obtaining the ethics approval from the Research Ethics Committee of MOHME, two researchers started to conduct the interviews. The interviews took about 30 minutes on average and recorded by a voice recorder. To analyze data, we used qualitative thematic framework analysis which included five main steps of familiarizing, developing a thematic framework, indexing, charting, and mapping and interpretation (17). Using this approach, the researchers identified the key themes and subsequently combined the codes to determine the relative subthemes (18). For the purpose of increasing the reliability of data analysis, we applied MAXQDA software through which the coding process was systematically supported. Furthermore, to ensure that the findings were consistent with the interviewees' opinion and increase data validity, we used the member check strategy (19, 20).

Results

The findings showed that the HSEP plan led to an agenda setting for OOP reduction by Iran health policy makers resulting from problem stream (inefficiency regarding financial resources, high costs of treatment, inadequate insurance coverage, and catastrophic payments imposed on population), politics stream (i.e., the government obligation to protect individuals from financial burden resulting from exposure to diseases), with an important support given by the Islamic Consultative Assembly and MOHME to approve a certain amount of budget for HSEP in 2014 and allocate appropriate resources for the purpose (Table 1). To advance our explanations, we define below the agenda setting for OOP reduction into Kingdon's three streams (problem, politics, and policy) and analyze the windows of opportunities.

Problem Stream

The first action in analyzing a public policy issue is to define the problem (21). OOP payment is a financing mechanism which brings about several challenges concerning health care equity (22). The level of OOP payment and its distribution among households with different socioeconomic status have a great impact on the overall performance of the health system. High dependency on such a payment system restricts the population access to healthcare services and imposes heavy burden of costs on them.

According to the statistics given by Iran's National Health Accounts in 2002-2006, more than 50% of the health sector resources were provided by OOP payments by Iranian households during this period of time (23). Data also revealed a considerable increase in informal payments and a decrease in the share of health care expenditures from governmental budget in the years 2003-2012. Along with these amounts which confirm the existence of the problem in the health system of the country, interviewees believed that the way to look at the problem was mainly dependent on the current health expenditures as a percentage of Gross Domestic Product (GDP). On this point, one of the senior managers of MOHME declared that:

"*The higher the national income of the country and*

Table 1: The factors identified for the three streams

Stream	Identified factors
Problems stream	Increase in people's awareness and expectations toward their clinical needs High inflation rate in the health sector compared to other sectors inefficiency regarding financial resources Increasing healthcare costs mainly due to technological advances in the field of health services Inadequate insurance coverage, and catastrophic payments imposed on population
Politics stream	Emphasis of the Supreme Leader of the Islamic Republic of Iran on health insurance development and provision of a sustainable health financing system in the main objectives and principles of the health system in the country The government obligation to protect individuals from financial burden resulting from exposure to diseases Important support given by the Islamic Consultative Assembly and MOHME
Policy stream	Approval of a certain amount of budget for HSEP and allocation of appropriate resources for the purpose

the percentage of GDP are, the more likely it is that the higher amounts of government resources be allocated to the healthcare sector. Such an increase should be sustainable because the need for financial resources is a permanent issue. On the other hand, inflation in the health sector is 10% higher than other areas and the main question is that how much inflation people can tolerate in such a situation?"

Most of the interviewees believed that healthcare costs have been increasing in recent years mainly due to technological advances in the field of health services, an increase in people's awareness and expectations toward their clinical needs, and high inflation rate in the health sector compared to other sectors. One of the study participants emphasized that increase in health care expenditures was inevitable. Thus, in order to protect people from financial burden of diseases, there should be a reliance on health insurance, prepayment, and tax mechanisms.

"Nowadays, OOP payment is a global concern, so that governments try to make a balance between this type of financing method and other mechanisms. In fact, increased government as a share of healthcare costs brings about a considerable decrease in people's direct payments. Despite the importance of the issue, due to the lack of governmental resources and inadequate funding for the health sector, people have faced a lot of financial problems in recent years".

Another issue emphasized by the interviewees was the need for making a balance between health expenditures and people's income. In this respect, one of the senior managers of MOHME stated that:

"There has always been a standard for people's costs. For example, when people's food costs exceed a definite percentage of their income, a crucial problem occurs. The same applies to health costs. This means that when individuals have to pay clinical expenses beyond their financial capacity, financial risks will reveal and cause serious problems for people".

From the experts' viewpoint, OOP concerns were much more significant before the HSEP, in such a way that a senior official in MOHME emphasized the importance of the issue and added that:

"Prior to HSEP, OOP index was 70.6%, reflecting an unpleasant situation of the health financing system in the country during those years".

A number of interviewees also pointed out that the increase in the share of people spending on health services was not an issue with the same importance among people in different income groups.The cost-to-income proportion might be high for some individuals and cause catastrophic payment for them. In fact, lower-income people need closer attention in this regard.

"*With health care costs increasing, some people lack financial capacity to manage their income and afford health expenditures. According to health equity definition, there shouldn't be any discrepancies among different social, economic, demographic, or geographic groups of people in having access to healthcare services. As health is an important human right, reducing health inequities is a significant objective in every health system. Thus, effective and sustainable interventions should be applied with the aim of diminishing inequalities and empowering all socioeconomic groups in receiving health services based on their needs.*"

Exploring the factors that affect catastrophic expenditures helps health policy makers in identifying appropriate strategies to resolve health inequities with respect to financial issues. To identify the main reasons for increasing OOP payment in last decades, the interviewees provided several explanations. Some of them focused on epidemiologic transmission toward non-communicable diseases (NCDs) and declared that:

"Iran has experienced an epidemiologic transition of mortality and morbidities caused by NCDs which was mainly related to lifestyle patterns. In fact, NCDs cause long-term disabilities which directly bring about negative economic concerns at a community level, not only due to significant expenses on the health care system, but also on the levels of income through reduced productivity. Furthermore, the diagnostic and treatment services of these diseases are expensive, and patients with limited financial capacity cannot afford to follow up diagnosis procedures in an effective way. On the other hand, lack of clinical guidelines in managing NCDs multiplies the diagnostic and treatment expenses. Thus, it is necessary to develop treatment pathways for each of the health services and determine an optimal level of service provision for every chronic disease. Each framework must include diagnostic procedures, required laboratory tests, medications, and hospitalization."

Another reason for increasing OOP payment in the health system in Iran was related to the requirement for patients to provide drugs, medical supplies, and equipment from outside of the hospital. One of the interviewees mentioned that:

"*Prior to HSEP, a significant portion of the treatment cost was paid by patients even in the public health sector. Supply of expensive drugs and medical supplies was one of the factors that put heavy pressure on poor people or those with inadequate insurance coverage in the community.*"

Economic sanctions over Islamic Republic of Iran decreased the revenues and financial ability of

Iranian population dramatically.

"It is more than three decades that Iran has been under economic sanctions. With the increasing pressure of sanctions in recent years, rising inflation and lowering national income, the negative outcomes on people's health also appeared. In such situations, people's capacity to afford health services and continue a healthy life has been reduced."

Political Stream

One of the major problems of the health financing system in Iran is rising the OOP expenditure which has always been regarded as a common concern among all of the health ministers. In this respect, one of the interviewees stated that:

"*Despite the awareness of the problem, there was no definite solution for it until the recent ministry. After HSEP was introduced by the recent health minister, a specific amount of budget was allocated to the health sector with the aim of increasing the share of the government of total health expenditure."*

To complete this explanation, an academic staff of a university added that:

"Adopting policies to reduce out-of-pocket costs has been started since the advent of the referral system and family physician plan in the last two decades. However, since the development of HSEP, the issue has been followed more seriously and significant structural changes have been made to systematize the cost reduction process".

In fact, the main starting point of OOP reduction goes back to 11th government in Iran, when protecting people against health expenditures was mentioned as a main priority. The government managed a series of reforms to improve the performance of the health system. The reforms entitled HSEP was designed by MOHME based on the fifth 5-year health development national strategies (2011-2016) to achieve the universal health coverage. The main part of HSEP contained OOP payment reduction for inpatient services at the hospitals affiliated with MOHME. Based on what has been mentioned in Article 34 of the Fifth National Development Plan, people's out-of-pocket payments for health care services should constitute up to 30% of the total expenditures in order to achieve the health equity index (24).

Another important part of HSEP was an official increase in the national tariff units toward more realistic amounts to control informal payments to the providers more seriously.

"The HSEP reform and increase in medical tariffs led to higher satisfaction among medical specialists and reduced their incentives for under-table payments".

Policies to support the physicians to stay in deprived or remote areas, expand health services to peripheral areas, and empower the family physician program and referral system were among the key strategies designed to increase the people's access to healthcare services.

"The main objectives of health sector evolution plan were provision of equal access to inpatient care, reduction of health inequities, and expansion of access to healthcare services in deprived areas. The plan applied some incentives to improve health professionals' retention in remote and underserved areas. Without such motivational factors, most of the physicians do not continue providing services in such areas and seeking anopportunity to leave there in a shortest possible time. HSEP tried to overcome problems in people's access to healthcare services through applying equitable distribution of physicians within a country and improving their retention in the specified workplaces".

Another important issue for successful implementation of HSEP was increasing the coverage of basic health insurance and decreasing OOP payments, especially in deprived population. The solution could be beneficial in reducing the existing disparities in healthcare utilization. HSEP included different policy interventions to attain the universal health coverage, the most important of which was increasing the population coverage of basic health insurance.

Non-efficient insurance schemes should be identified and proper revisions must be made through providing evidence-based information, so that the possible challenges are resolved.

"In spite of some achievements in increasing health insurance coverage, there are still several problems in having adequate access to healthcare services and equity of financing. To overcome the issues, HSEP focused on some important objectives including provision of free basic health insurance to uninsured population, and improvement of health insurance coverage for those living in rural areas and deprived small towns. Success in achieving these goals requires strengthening the internal and external interactions within the health system of the country. Determining an appropriate role for this sector and providing adequate funding for its achievements are essential requirements in resolving financial challenges of the healthcare sector."

Policy Stream

There are several factors that might restrict the sustainability of the reform program. The high cost

of the project, lack of financial resources, financial burden on insurance companies, induced demand, and in some cases conflict of interest among politicians were among the issues mentioned by the interviewees. One of the study participants declared that:

"We are obliged to continue, consolidate, and strengthen the HSEP. Therefore, there is a need to consider the expert opinions of all related stakeholders in the health sector to identify and resolve the weaknesses and challenging points of the program. To this aim, all HSEP packages are evaluated in monthly meetings of treatment deputies."

Quality issues were among the other important factors that the study interviewees mentioned as effective policy interventions leading to people's satisfaction.

"In this policy, quality of healthcare services has also been taken into account. In general, this package not only satisfies people, but also leads to the effectiveness of services and realization of therapeutic goals in the most appropriate manner."

To help the effectiveness and sustainability of HSEP, an efficient referral system can play a significant role. In fact, economic considerations and the necessity for having equal access to healthcare services highlighted the demand for developing and implementing a systematic and efficient referral system. For facilitating the implementation process, there is a need to improve interactions among different levels of health providers, develop information system, improve documentation, support family physician program, and develop clinical guidelines.

"The referral system can act as an opportunity for applying HSEP policies in the health system. Due to an epidemiologic transition and the increasing trend of NCDs in Iran during recent years, the costs imposed on the health system have risen. As a result, a significant portion of the expenditures has fallen on the population and encountered them with catastrophic payments. The system ultimately seeks to contribute to cost-effective use of hospitals and primary healthcare centers. Promotion of sufficient communication between primary health care providers and medical specialist has an important role in helping the process and developing a well-functioning referral system."

Policy Window of Opportunity

The starting point for addressing the OOP reduction issue goes back to the eleventh government in the country when the president put the issue of health and equitable access to health services at the top of priorities in agenda setting and mentioned that:

"The government will continue its efforts to implement the national health system reform plan. He also stated that in order to implement the plan and resolve existing difficulties, there is a need for allocating adequate budget for the plan and receiving sufficient support from the health ministry and executive entities."

Interviewees believed that several issues exist regarding the implementation of HSEP, the most important of which are lack of sustainable funding and ineffective inter-sector relationships within the health system. They mentioned that the insurance and financial institutions of the country began to support the HSEP policy with the government's emphasis on health priorities, allocation of sufficient resources to the plan, and improvement of insurance-provider transaction process. Continuous monitoring of the reform process, evaluating the obtained results, and giving feedback to the stakeholders were also regarded as necessary requirements for this achievement.

Discussion

Gaining support from stakeholders in the early stage of development, implementation, and evaluation of policies is an important factor for achieving a health system reform (25, 26). Identification of the stakeholders' viewpoints, particularly in the early steps of reform execution in which applying modification is still possible, could act as a facilitator for policy development and implementation process (27). In fact, designing any policy or reform plan necessitates some infrastructures, among which a clear policy statement, an established road map, and appropriate processes are important factors for effective implementation of the reform (28).

During the last decades, the health system in Iran has experienced several reforms. The latest reform was introduced by MOHME in 2014 entitled 'Health Sector Evolution Plan'. The plan mainly focuses on reduction of OOP payment and improvement of healthcare quality in governmental hospitals (24). However, some challenges including lack of sustainable financing in the health system, putting financial burden on the government, and disregarding the importance of primary health services and preventive medical care have had negative effects on the reform (29). Unstable financing in the health system was mentioned as one of the main barriers for successful implementation of HSEP. To resolve the challenges, the Supreme Leader of the Islamic Republic of Iran defined the main objectives and principles of the health system in the country with the most emphasis on health insurance development

and provision of a sustainable health financing system (30). In such situations, performing a valid economic analysis including cost effectiveness and determining the priorities for health reforms would help the health planners to deal effectively with financial challenges and achieve the desired objectives (14).

Literature has focused on some strategies to help allocation of adequate budget to cover the health needs of the people. Establishment of an Iranian primary health care (PHC) system was among the policies to improve access to health care in both urban and rural areas. The plan also resulted in the effectiveness of the resources financed in the PHC system and improved the overall health status of the Iranian population. Some of the most important results included reduction in infants and children mortality, decline in major communicable diseases, improvement in maternal health condition, promotion of healthy attitudes and behaviors, and wide-ranging immunization of children. Furthermore, the capacity of the PHC system to provide easy access to necessary drugs, vaccines, oral rehydration therapy, etc. has bridged the gap between knowledge, attitude, and practice of health among population (14). Some of the researchers in the health sector believe that any reform should be started by PHC and special attention should be paid to preventive medical care. Although many efforts have been made to develop PHC as a significant part of HSEP, the plan has not still paid adequate attention to preventive health programs (14, 24, 31, 32).

The family planning (FP) program was the second most important strategy introduced in 1979 to strengthen the health referral system in the country and provide equitable access to healthcare services in different geographic regions. The plan also helped Iran to develop PHC and cost-effective service delivery. The necessity for considering economic problems and equal access to healthcare services emphasizes the need for developing and supporting an effective referral system. Consequently, Iran has made a great endeavor to improve the health referral system through which improvement in inter- and intra- communication at different levels of the health system, reduction of waiting time, information management improvement, and financial savings have been developed (33, 34).

The role of insurance organizations is another crucial factor. These financial organizations should support the referral system, so that healthcare fees should be diminished for those who receive health services within the referral system. This policy encourages people to use public services directed towards the FP. In fact, health insurance coverage would act as a rewarding system associated with the referral system. The system ensures that patients who go through the referral system will pay less and those who receive services out of the referral system will have to pay higher amounts of costs (35). Jamison et al. believe that receiving higher costs from patients out of the referral system as a penalty and a quick admission given to those referred through the referral network as a rewarding factor are two important solutions for strengthening the referral system (36).

Effective management of the information system regarding the health referral system can also play an important role in the reform success. For the purpose, a complete information system responsible for recording and analyzing data on the referral system should be established with an appropriate platform to help health providers in accurate diagnosis and treatment of diseases. Furthermore, using a compulsory Electronic Information System (EIS) and Electronic Health Records (EHRs) would cover most of the deficits existing in the current health information systems in hospitals and medical centers. Designing an integrated data entry system so that all patients' electronic records would be available in a more efficient way can act as a helpful strategy for getting access to Iranian health information all around the country, which ultimately facilitates the implementation of FP program and the referral system as necessary infrastructures for HSEP success (35).

The last but the most important issue in successful implementation of HSEP is the requisite for cost control of the plan and avoidance from the costs imposed on the health system. To gain the purpose, some of the researchers proposed that medical universities should control the costs as a managerial tool to reach the reform goals. They suggested that MOHME should allocate financial resources based on a mean estimation of the funds spent by countrywide hospitals in the last fiscal year (37). Literature added that although significant progress has taken place regarding HSEP, there are still some shortcomings in the reform plan which can be resolved through allocating a definite percentage of the targeted subsidies or resources raised from Value Added Tax (VAT), as the potential financial resources of the plan. In this way, issues concerning unsustainability in financial resources can be resolved more effectively.

Conclusion

The study findings indicated that Iran HSEP demands some requisites and infrastructure to gain sustainable success in the health sector. In conclusion, failure in understanding the existing barriers and considering

appropriate solutions can cause harmful effects on the plan. It would be beneficial to identify the conflicting interests among different stakeholders and respond them by providing clear, comprehensive information, so that the success of the plan is guaranteed. Improving insurance-provider transaction process and continuous monitoring of the reform process are other necessary issues that should be taken into consideration more closely. Generally, to effectively determine the existing challenges and set proper goals and policies to resolve them, we need an accurate policy analysis through which the program elements would be implemented in a continuous manner; consequently, clarification of the required revisions would facilitate the reform process.

Ethical Approve and Consent to Participation

The present study conforms to the Helsinki declaration and has been approved by the Research Ethics Committee of Shahid Sadoughi University of Medical Sciences.

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Authors' Contribution

MR, HJ and RA have made substantial contributions to conception and design, and writing and revising the manuscript. HZ, FG and MN were involved in data gathering and drafting the manuscript and revising it critically for important intellectual content. The authors have read and approved the manuscript.

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