

Agenda setting, Development and Implementation of Pay for Performance Policy in Iran: Analysis of Policy-making Using the Refined Multiple Streams Framework

Serajaddin Gray

Tehran University of Medical Sciences

Alireza Olyaeemanesh (✉ arolyaee@gmail.com)

National Institute for Health Research, Tehran University of Medical Sciences

Iraj Harirchi

Cancer Research Centre of Cancer Institute

Research Article

Keywords: Policy Formation, Analysis of Policy, Pay for Performance, Multiple Streams, Iran

Posted Date: March 16th, 2022

DOI: <https://doi.org/10.21203/rs.3.rs-1212655/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Abstract

Introduction: Linking payments to results is introduced as a mechanism for increasing accountability. To this end, a policy, called IR-PfP, was implemented in Iran in 2014 as one of the components of the country's Health Transformation Plan. Thus, the present study aimed to report on the steps of agenda setting, development and implementation of this policy.

Methodology: The present qualitative study was conducted in 2018 through document analysis and interviews. As for data analysis, the content analysis method with a theory-based approach and MAXQDA10 software were applied.

Findings: The results indicated that the Refined Multiple Streams Framework well described the implementation of the policy. The three streams of law enforcement (Politics), shortcomings of the ongoing program (NPS) (Problem) and Pay for Performance mechanism (Policy) were merged with the opening of the first opportunity window, and the second opportunity window led to the incorporation of the next five streams. Therefore, the policy stream was redefined, and the politics and problem streams were respectively strengthened by some events, which were the dominant streams. The program and process streams became very weak due to executive and time limitations.

Conclusion: The policy stream followed the politics and problem streams. The multiplicity of opportunity windows was verified, and creation of an institution and two policy groups were the main factors in agenda setting. The combination of all these results, stress the importance of dynamic studying of Iran's health policies.

1. Introduction

In low and middle-income countries, many governments are aware of the poor performance of the management systems and service providers and endeavor to test new financial approaches towards high accountability. To this end, one of the options was 'the results-based payment', which was first introduced by the World Bank, and is defined by the health system as 'financial or non-monetary transfer payments at the national or lower levels of government, managers, providers, payers or consumers of health services in exchange for predetermined results to be obtained and verified.'⁽¹⁾

In other words, this type of payment mechanism is an informed program that applies incentives to motivate health producers for specific topics, which may include individuals or their families in addition to health centers and individual health care providers. Nowadays, the logic of this type of program has been tested among the various components of health participants ⁽²⁾, thus demonstrating strong face validity ⁽³⁾.

Thus, the use of performance-based payment structure was expanded in the health system. For instance, this type of payment is found in half of health care organizations and in the contracts of mobile doctors, hospitals and home nurses in the USA ⁽⁴⁾. As another example, approximately 25% of family physicians'

income is paid this way in the UK (5), and in recent decades, Asian countries such as South Korea have applied this type of payment structure (6).

1-1: Pay for Performance in Iran

One of the main uses of the law assigning authority to the Ministry of Health and Medical Education (ministry), as the custodian of the Iranian health system, to distribute the allocated budgets was the implementation of the instructions of the "new system payment for managing hospital affairs" (New Payment System (NPS)) in 1995. According to this instruction, the payment mechanism in Iranian public university hospitals became a combination of two methods of salary and conditional payment.

The instructions sought to provide financial incentives towards a rise in the efficiency of the workforce and productivity of the facilities and the limited hospital medical equipment of the country (7). Research has it that, after the passage of less than two decades from the implementation of NPS and given the development of the health system and hospitals in the country, it practically lost its function and faced many problems (7, 8), thereby proving ineffective in increasing employees' motivation (9).

In 2013, the power was transferred from the tenth government to the eleventh one in Iran, and one the new government's biggest moves was the implementation of the health system reforms towards realization of several goals. One of the main packages of these reforms was to alter the existing hospital payment mechanism and use the PfP mechanisms in public hospitals (10).

To this end, in 2014, the said ministry launched the pay for performance, tailored to the needs of Iran (IR-PfP), in public university hospitals and announced its major goals as follows:

- Improving the team work spirit and creating enthusiasm and motivation in employees with the aim of more activity;
- Including all employees with any type of employment in the incomes of the hospital;
- Increasing organizational commitment and aligning employee motivation with organizational goals;
- Increasing the productivity of human and physical resources of hospitals;
- Raising the quality of services and enhancing patient satisfaction;
- Considering the quantity and quality of staff performance in merit pays according to the type of activity and expanding the motivation and commitment of the hospital management team for the qualitative and quantitative growth of medical services (11).

In Iran, given the existence of 560 public university hospitals, 220,000 non-medical staff and 18,000 specialist and general practitioners, over 80% of the service volume is provided. Besides, according to primary estimates, around 45% of the available financial resources in these hospitals (physicians' fees and staff overtime) are influenced by this policy(almost \$ 2.5 billion in the year when the study was

conducted). Given the scope and impact of the policy, the present study was conducted with the aim of reporting on the performance of government and especially that of the ministry in terms of agenda setting, development and implementation of the policy.

1-2- The Conceptual Model of the Study: A Combined Model

Howlett et al. (2014) (12) endeavored to moderate the criticisms of each of 'policy stages'/'cycles' and 'multiple streams', through combining them. They combined the John Kingdon's Multiple Streams Framework and policy stages (such as Lasswell's policy stages model (1956)) (Figure 1) and claimed more dynamism for their hybrid model by adding 'choice opportunities' and discussing the 'dominant streams'.

According to this model, the triple streams presented in the Kingdon's Multiple Streams Framework converge using the opportunity window. This convergence (confluence point I, Figure 1) denotes the start of policy formulation. This convergence is also the policy formation, where the streams converge into a 'whirlpool' – at times turbulent and hidden from public view – constituting a period of primary strategic appraisal by policy makers. The creation of stillness in this whirlpool continues with the formation of two new streams (the program and process streams).

By converging these five streams (confluence point II, Figure 1), the second created whirlpool ends with the second sub-confluence, which leads to the final stabilization stage, where the dominant stream and all other streams are integrated to move towards the final solution (decision). At each stage, some streams may dominate others, and the remaining streams change towards satisfying them (12).

2. Methodology

2-1-Study approach

The present study was conducted qualitatively at the national level to investigate how to set the agenda, develop and implement the IR-PfP policy in Iran. To collect the required data, documentation analysis and interviews were used.

2-2- The Documentation under Study

In the documentation analysis section, the used documentation is shown in Table 1.

Table 1: The List of Documentation Used to Study Iran's PfP Program	
Title of Documentation	Quantity
Guideline for staff's pay for performance	1
Appendices of Guideline for staff's pay for performance	5
The fact sheet reported by the ministry regarding the PfP	1
Guidance for program implementation offered to hospital HIS authorities	1
Guidance for troubleshooting the programs implemented in the hospital	1
Documents and reports related to the pilot program of the Comprehensive system of dedicated income distribution (CSDID) in Mazandaran Province	4
Circulars related to the topic	34
The document of frequent questions on the program implementation	1
The rules of pay for performance in the country	13

2-3-Participants and the Manner of Conducting the Interview

In the interview section, in-depth interviews were conducted with 32 people at ministry, university and hospital levels (Appendix, Table 1) with the aim of understanding the real experiences of individuals. More to the point, the interviewees' stories and narratives were the main focus of this section (13). Given the clear objectives of the study, a semi-structured questionnaire with pre-determined questions was the interview tool (14) (15).

To observe the proportion between the participants' experiential fit and research question and the characteristics of a good informant (16), the interviewees were purposefully selected (17) from among the most involved, knowledgeable and successful program implementers in the country. First, based on the initially designed questions, several in-depth interviews were conducted with executives and program developers to gain a better understanding of the subject, so that the interview questions could be made more effective. Having met the research ethics requirements of a qualitative study, each interview lasted an average of 35 minutes. Data analysis was performed simultaneously with the interviews, and the interviews continued until the stage of data saturation.

In addition to these interviews, the researcher took notes from nine sessions and conferences (adding up to 100 hours) with the aim of reviewing the issues and problems of the policy at different levels (two national sessions with the presence of policy presenters of 33 universities; six sessions within the ministry with the presence of policy developers; and one meeting with the officials of Imam Hossein (IH) Hospital).

2-4- Data Analysis and Data Reliability and Validity

To analyze the data, content analysis (18) with a theory-based and inductive approach (18, 19) and MAXQDA10 Software were used.

To confirm the validity and acceptability of the data, the prolonged engagement with data and spending enough time to collect and analyze data, integrating the information sources, multiple methods for data collection (interview, observation, and field notes) and data analysis by colleagues were employed. During the analysis, to ensure the reliability of information, data and documents were continuously shared with the policy developers and thoroughly reviewed (20).

3. Findings

3-1-Agenda Setting for Policy Development

This stage, like the Kingdon's multiple streams model, consisted of three streams: problem, policy and politics, which are described Figure 2.

3-1-1- Politics Stream

The examination of the country's laws in the field of payment mechanisms relating to government employees proved that the major longest-standing factor in changing the payment system of Iran's public hospitals was the adoption of 'the rule for the establishment of boards of trustees of universities and higher education and research institutions' in 1988 as follows:

"Article 7-Duties and authorities of the board of trustees: ... D- Approval of the detailed budget of the institution; E- Approval of the accounts and annual balance sheet of the institution; F- Approval of the method of receiving specific revenues and its consumption; G- Appointing an auditor and treasurer for the institute H- Approval of financial and transaction regulations"

According to this law, the ministry and its affiliated institutions were given authority to receive and use exclusive revenues (the distribution of exclusive revenues of the hospital among its employees). Accordingly, in this study, 'upstream law enforcement' was the dominant item related to 'politics stream' (See Figure 2, P4P agenda setting section).

3-1-2- Problem Stream

According to knowledgeable interviewees, most of the people involved in NPS at the macro level came to the conclusion that the system should be changed.

"In the poll we did, no one stated that the previous instruction [NPS] was good, and the various strata all agreed that the instruction should be changed," said one of the developers. (Code 22)

The problems relating to NPS caused a consensus among all stakeholders to change it. Not to mention, the nursing community, as one of the largest clinical groups in the country, also agreed with the interventions promoting this program.

“We have even stressed the need for rules in the field of nursing, in which the hourly payment should be changed into a performance-based one,” said one of the interviewees at the ministry level (Code 9).

Hence, the shortcomings of NPS were the predominant items relating to the problem stream (See Figure 2, agenda setting section).

3-1-3- Policy Stream

As a result of the above mentioned law and problem, various participants in the health system (hospitals, professional groups such as the nursing community) took several measures to address the problems and enforce the law, which can be summarized in the following three groups (See the bottom of Figure 2):

3-1-3-1- The intervention to improve NPS in some hospitals

Reviewing the operational documentation and instructions of NPS demonstrated that this program was developed in such a way that it was possible to change and upgrade in any hospital. For example, a hospital could determine the assessment criteria and the manager's satisfaction score of his staff, but the decision to do it entirely depended on the wishes of the upstream managers and the organizational characteristics of the hospital.

“We could have developed the previous NPS,” said Code 4.

The interviewees' statements were fully confirmed by the existing administrative letters, and the letters showed that in some hospitals of the country, several changes had been made in order to eliminate some shortcomings of NPS.

3-1-3-2- Developing different kinds of mechanisms for PfP in hospitals

Reviewing documents and interviews indicated that, with the authorities resulting from the upstream laws, two of the country's hospitals based in Tehran, namely Hasheminejad Hospital (mid-2001) (21) and IH Hospital (2008), designed and implemented two different types of PfP mechanisms in their hospitals.

“Likewise... similar programs like those implemented in the country were spontaneously carried out in IH Hospital,” said Code 25.

3-1-3-3- Approval of the New National Laws

To eliminate the shortcomings of NPS, the new laws were approved at the macro level. The nursing association, as the main beneficiary of the changes, provided the possibility of passing the two laws of nursing services tariff (2007) and manpower productivity (2009) with multiple follow-ups in the national assembly of the country. According to these rules, the method of paying salaries and benefits to nurses must be a combination of two methods: fixed and performance-based; and nurses' merit pay must be calculated based on the approved tariffs of "nursing staff's diagnostic and treatment service packages".

“Previously, we also proposed a law in the parliament, ..., under the title of tariffing the nursing services, but not in the form of fee for service,” said Code 9.

Despite the implementation of these three important measures, the possible effects of each alone were not sufficient to overcome the problem of NPS in the whole country. Until 2010, there was no opportunity to combine their effects with each other. Therefore, the problem continued to remain unsolved.

3-1-4: The first opportunity window (Confluence Point I)

Given that the ministry was the sole custodian of the program, the major changes and interactions that led to the agenda setting of the program depended on the program-related experts within the ministry of the tenth government, particularly the deputy minister of treatment.

“The design of our performance-based payment system was started immediately after the establishment of this head office,” said Code 22.

The interviewee refers to the "Tariff & Payment system Policy making (TPP) office" in this deputy. The formation of this office brought together a group of experts interested in the topic 'performance-based payment' (the first policy group).

“The performance-based payment program began with the start of a new team, who served as an expert team...,” said Code 13.

As a result, the first opportunity window of beginning the development of the policy was opened by creating an internal institution and an interested policy group.

3-2- Policy Development

3-2-1- The first whirlpool and the first sub-confluence point (IA)

Howlett et al. argue that the whirlpool reflects the policymakers' efforts to validate their understanding of the problem (12). The first whirlpool for the first policy group was a more scientific examination of the shortcomings of NPS, a collection of past work related to this area in the country, and a review of global experiences for understanding PfP programs. One of the main developers of the program describes his first efforts and experiences as follows:

“We did a preliminary study and came to the conclusion that performance-based payment is very hard work. A lot of searches was carried out and things were quite different from what we thought,” said Code 17.

“They sought to see literature and what the world has done to achieve P4P models,” said another developer (Code 25).

Thus, there was the first whirlpool in the present study, and the policy group evaluated their understanding of NPS and its possible solution. In the model of Howlett et al.,(12) the end of this phase is marked by a sub-confluence (IA), which initiates the stabilization phase of policy formation and leads to the creation of other streams. Therefore, following along, we will face five streams, including three Kingdon's streams, with a slight change in the policy stream, and two new streams (program and process streams).

3-2-2- The changes of Kingdon's three streams

The changes of kingdon's three streams at this stage are as follows:

A- politics stream: There was no change in the course of politics (implementation of the upstream law), and it was like the previous stage of the opening of the first opportunity window.

B- The problem stream (shortcomings of NPS) also remained unchanged and the stream was dominant. Therefore, the other streams were formed in line with this stream with the aim of resolving this problem.

C- Policy Stream: According to the operational documentation, this stream was out of a general mode (one of the different types of PfP programs) and was defined as a special program (performance-based program called CSDID^[1]) (See Figure 2, P4P development section).

“Mr. Doctor, the then deputy minister of treatment... said that he was not satisfied with the review process of the instruction of NPS and that he would like it to be replaced by a conditional payment instruction,” said. Code 17.

With regard to this order, a series of joint studies were conducted by the first policy group and four scientific groups from four universities of medical sciences of the country and a PfP model was designed under the title CSDID, which was defined by its developers as follows:

“I don't want to claim that the CSDID Model, developed within the expertise of the Ministry of Health, bore 100% similar to the PfP model, but it enjoyed 80-90% of the characteristics of a PfP mechanism,” said Code 13.

3-2-3- Forming the new stream of program

After determining the solutions to the problems related to NPS, the first emerging stream was policy program (Figure 2, PfP development section). Policy program means creating plans to calibrate new policy tools and integrate them with the current situation (12), for which the first policy group carried out various activities, which were summarized in Table 2.

Table 2 : The set of activities of the first policy group for program programming	
Preparing the documentation of the new Policy	<ul style="list-style-type: none"> • Developing the initial 200-page document with the support of four major medical universities in the country
Approval of laws that support PfP	<ul style="list-style-type: none"> • In the year before the implementation of the policy, several consultations were held to include two paragraphs in the country's strategic purchasing regulations* towards designing a mechanism for quality-based payment.
Establishing the legitimacy for stakeholders and streamline the Policy	<ul style="list-style-type: none"> • Legislative and decision-making levels: Multiple lectures were held to familiarize the environment with the policy, at the Academy of Medical Sciences**; Management and Planning Organization***; General managers of provincial health insurance; Parliamentary Health Commission and upstream managers within the ministry. • The new policy was primarily introduced to physician and non-physician staff as a mechanism to increase pay and create interdisciplinary justice. • The new policy was primarily introduced to basic health insurance organizations as a mechanism to improve the quality of service delivery. • The new policy was primarily introduced to the presidents of medical universities as a mechanism to improve quality, delegate authorities, and reduce the payment gaps for private and public hospital staff.
<p>* https://www.rrk.ir/Laws/ShowLaw.aspx?Code=1795</p> <p>** http://www.ams.ac.ir/</p> <p>*** https://www.mporg.ir/home</p>	

3-2-4- Forming the new stream of process

The second emerging stream is process stream, which is formed to explore options and reinforce valid decisions (See Figure 2, P4P development section) (12). According to operational documentation, the process stream in the agenda setting of this program meant the pilot implementation of the CSDID instruction in the country. Thus, the instruction was implemented, monitored and reviewed on a two-year trial basis in two hospitals.

In short, all these changes and developments in the five streams only led to the development of an indigenous program (CSDID) for the country, but did not lead to its implementation because it required another opportunity window to rejoin these streams.

3-2-5- The second opportunity window (Confluence Point II): joining five streams

The opportunity window for the agenda setting of the implementation of the policy was opened by the transfer of government, which led to a higher priority in the field of health among the national actions and the implementation of the Health Transformation Plan (HTP), whose pursuit apparently required a strong policy group at the ministry level.

“To me, the implementers of the policy at the Ministry really who did that had a lot of courage ... because not anyone or organization can really claim to make the dedicated revenues of a firm like a hospital based on performance,” said Code 4.

Hence, with the new government coming to power, a new policy group (the second policy group) was formed, including ministers and deputies interested in a PfP mechanism. With the start of planning for the implementation of the Health Transformation Plan, the CSDID program also had the opportunity to present itself:

“With the start of the new government and the new discussion of the Health Transformation Plan system and what we want to do in various areas, CSDID was introduced as one of the management programs of the Tariff Policy and Payment System to replace the previous program,” said Code 13.

As a result, following the transfer of government and the start of the health transformation plan, the second policy group decided to implement the proposed solution (CSDID).

3-3- Policy implementation

3-3-1- The second whirlpool and the second sub-confluence point (IIA)

According to the model of Howlett et al., once the policy is formed, the second sub-confluence of streams begins with another evaluation whirlpool. At this stage, policymakers are more likely to examine the progress of events (such as the existing policy options and stakeholders’ feedback) and determine how to move toward a final decision (12).

The second policy group examined the reports obtained from the implementation of various implemented programs towards elimination of the shortcomings of NPS. These programs included the pilot CSDID program and the three groups of actions introduced in section 3-1-3 and Figure 2.

According to Howlett et al. (2014), this potential stage is chaotic and takes place away from the public eye. After these reviews, some changes were made in five streams.

3-3-2- Changes of the existing five streams

The changes of the existing five streams at this stage were as follows:

A. Politics stream: With the transfer of power to the new government calling for reforms in the health system, the politics stream was strengthened at this stage and became the dominant stream and other streams were adjusted under its influence.

B- Problem stream: With the implementation of the health transformation plan, the primary problem stream (shortcomings of NPS) was changed. This change was reinforced by the addition of the problem of how to distribute financial resources to hospitals, which resulted from the implementation of another health transformation plan program and its need to be addressed was felt much greater.

C- Policy stream: In addition to the presence of other people in the second policy group, the presence of a person with a history of implementing a performance-based program in a hospital provided a good strength for decision-making and implementation of the final program (IR-PfP):

“One of the reasons that the CSDID program could claim to be introduced as a new program was that Mr. Dr. ..., the deputy director of treatment, ... was primarily in charge of the program,” said Code 13.

Therefore, the experiences of the pilot CSDID program and the experiences of IH Hospital were summarized, and the final program structure was finalized based on these experiences:

“The CSDID model was different from that in IH Hospital, ... a work group was formed and our experiences were brought up there, thus producing a combination of experiences used in those two models, as well as various opinions which were proposed in the work group,” said Code 29.

In this quote, the interviewee refers to the series of discussions that took place in the second whirlpool and caused the final program to be a combination of the model applied in IH Hospital and CSDID model.

D- Program stream: To implement the program, a combined program was proposed in the Council of Deputies of the Ministry, in which it was proposed that the viewpoints of the eight major universities of medical sciences in the country must be taken into consideration in order for the final model to be approved.

Hence, under the influence of time and executive limitations, the final model was pushed forward for implementation with the consent of these universities. As for the manner of participation at this stage, one of the developers of the policy stated that:

“Just like you cook a food and then put it on the table and say, taste it to see if it is salty or not. In fact, they asked for our opinions about what they intended to do,” said Code 13.

E- Process stream: This stream was not created due to time and executive limitations and the final program, which was the result of combining two programs (CSDID and the model of IH Hospital), was introduced to be implemented without a pilot implementation.

“The final model was not a model that had already been implemented from scratch to completion. It was a combination of different models and opinions of a group of people. ... and these opinions were not examined in the environment ...,” said Code 13.

4. Discussion

The present study aimed to clarify how to set agenda, develop and implement a Pfp policy in Iran (Ir-PfP). It nearly took a decade from agenda setting to the implementation phase of this policy and its implementation coincided with the country's HTP, thus affecting the payment to medical and non-medical

staff of all public university hospitals across the country. It is a policy whose direct effects on the country's other health policies have also been reported (22, 23).

To describe how to set agenda and implement the policy, the model of Howlett et al. (12) was employed. In this model, the policy development and implementation are seen as a series of consecutive actions that implies that it is impossible to completely separate the different parts of a policy from each other (24). In other words, the different parts are inextricably intertwined.

In the present study, although the development and decision-making stages for the implementation of the policy were largely separable based on the time and trustee of the policy, but each stage was always inseparably dependent on previous stages.

There are many policymakers in a system, ranging from individuals to natural and legal groups (24). Regarding the policy of the present study, multiple programs were implemented separately in all parts of the country and at different organizational levels after accurately determining the problem (shortcomings of NPS). However, none of them didn't get to be expanded and implemented throughout the country.

Therefore, it can be concluded that in this policy and other similar policies, opening the opportunity window is essential for implementation, because among all the programs that were developed to solve this problem, only the PfP policy had the opportunity window of national agenda setting and was implemented.

Like other leading countries in this field, the law was the most important stimulus for the implementation of the PfP policy in Iran (25). Explicit laws put a lot of pressure on trustees, thereby lessening the dispersion of their efforts. Tanenbaum (26) also acknowledges the appropriate political, legal and executive support of such policies.

A review of relevant laws demonstrated that laws first gave the ministry the necessary authority to distribute its own sources of revenue and later emphasized its equitable distribution (policy stream). The direct impact of explicit laws and stakeholders' consensus on policy implementation has also been reported in other health policy studies (27-29), and their absence also leads to slower policy implementation (22, 28). Like other policies in the field of health in the country (22, 23, 27, 30), to implement this law, the major solution to the problem was modeled on the experiences of other countries.

Moreover, to set agenda, develop and decide to implement this policy, two opportunity windows were needed. The first and second opportunity windows were opened by institutionalization and government change, respectively, each window individually led to the convergence of streams, which was supported by Zohlnhöfer et al. who expressed that two stages of convergence of streams are required for the development and implementation of any program (31). Both opportunity windows in the policy under study led to the formation of a policy group interested in the matter, and the actions of these groups led

to the agenda setting, development and implementation of the policy. In other policies, grouping has been introduced as a key event for policy implementation (32).

In this study, the role of the first policy group in particular was to gain legitimacy for policy development. The need to implement a specific policy by a trustee in the minds of stakeholders is known as gaining legitimacy (33), which has been introduced as a vital factor in the study of Iranian health policies (28). The effects of the political group have also been pointed to in the development and implementation of the Turkish Health Transformation Plan (34).

Given that there are various ways to gain the legitimacy of a policy (33), the first policy group was able to gain the legitimacy of the policy by documenting the actions and explaining the potential benefits of the policy to stakeholders. The effects of informing stakeholders of the contents of a policy in gaining legitimacy of other health policies of the country (Iran) have also been reported (27).

In the present study, government transition was the main facilitator for the implementation of the policy. The studies conducted on the role of government in Iranian health policy suggest that this factor may (28, 30) or may not have a direct effect on the implementation of a policy (22, 29). In a study done by Esfandiari (23), the transfer of government has been introduced as an effective factor in the primary agenda setting of the country's infection control policies, which was not seriously considered by policy makers in the end. It seems that what makes this policy different from the one in the present study was the formation of an interested policy group that existed in the present study. A similar effect of the transfer of government and the prominent influence of a similar policy group in the study of the policy 'reviewing the relative value of health services' was also reported (27), which were both part of the reforms of HTP.

Accordingly, it may be claimed that the effects of transfer of power between governments on the policies of the country's health sector, emerge because of individuals and groups interested in a particular subject, and the effects of these groups in this field have been similar to the impacts of institutions on policymaking.

Based on the modified model of Howlett et al. (12), some streams can be dominating or weakened in the process of forming three streams up to the decision stage. In this study, this view was confirmed and the problem and policy streams became stronger and the program and process streams became weaker in the decision-making stage. A change in the government's priorities and its new actions, which are in line with the existing streams, strengthened the first two streams, and the political and time limitations to implement the policy led to the weakening of the last two streams.

Conclusion

In this study, when the upstream laws of the country became the politics stream, it led to the multiple policy streams. In addition, the prevailing problem stream made the policy stream stronger. In other words, the policy stream followed the politics and problem streams that are influenced by the change of

government. The multiplicity of opportunity windows was verified, and the creation of an institution and two policy groups were the main factors in agenda setting and implementation of the policy. Moreover, the combination of all these results places an emphasis on the dynamic study of Iran's health policies.

Abbreviations

CSDID: The Comprehensive system of dedicated income distribution program

HTP: Health Transformation Plan

IH Hospital: Imam Hossein Hospital

IR-PfP: The pay for performance program, tailored to the needs of Iran

Ministry: Ministry of Health and Medical Education

NPS: New Payment System

TPP: Tariff & Payment system Policy making office

Declarations

Ethics approval and consent to participate: The study was approved by the Tehran University of Medical Sciences ethics committee (IR.TUMS.REC.1395.2544). The authors confirm that all methods were carried out in accordance with relevant guidelines and regulations. This report did not study the types of tissues associated with living organisms, written informed consent was obtained from all the participants before the interviews and to maintain the confidentiality of the participants' information in the manuscript, a special code has been used for each of them.

Consent for publication: Not Applicable

Availability of data and materials: Some of the datasets generated and/or analysed during the current study are not publicly available due some of them are unpublished and some of them have a large number of pages (hard copies), but are available from the corresponding author on reasonable request.

Competing interests: The author, S.G, have no conflict of interest in this article. Despite the fact that A.O and I.H are involved in organizational positions related to the program at the ministry, they express that their opinions in this article are completely scientific and impartial, and there are no conflicts of interest.

Funding: The present study was conducted under the financial and non-financial supports of the National Institute of Health Research of the IR Iran and Tehran University of Medical Sciences.

Authors' contributions: "I.H analyzed and interpreted the policy data in the ministry level. A.O & S.G gathered, analyzed, interpreted the data and were major contributors in writing the manuscript. All authors

read and approved the final manuscript."

Acknowledgements: The authors would like to thank Saeed Manavi, Mani Yousefvand, Pejman hamouzadeh, Razieh Ronasian, and Seyedeh Hosnieh Shafae Tonekaboni.

References

1. Musgrove P. Financial and other rewards for good performance or results: a guided tour of concepts and terms and a short glossary. Washington, DC: World Bank. 2011;12.
2. Gorter A, Meessen B. Evidence review: Results-based financing of maternal and newborn health care in low-and lower-middle-income countries. study commissioned and funded by the German Federal Ministry for Economic Cooperation and Development through the sector project PROFILE at Deutsche Gesellschaft für Internationale Zusammenarbeit, Bonn & Eschborn, Germany. 2013.
3. Jha AK, Joynt KE, Orav EJ, Epstein AM. The long-term effect of premier pay for performance on patient outcomes. *New England Journal of Medicine*. 2012;366(17):1606–15. DOI: 10.056/NEJMsa1112351.
4. Siva I. Using the lessons of behavioral economics to design more effective pay-for-performance programs. *The American journal of managed care*. 2010;16(7):497. PMID: 20645665.
5. Doran T, Fullwood C, Gravelle H, Reeves D, Kontopantelis E, Hiroeh U, et al. Pay-for-performance programs in family practices in the United Kingdom. *New England Journal of Medicine*. 2006;355(4):375–84. DOI: 10.1056/NEJMsa055505.
6. Jeong H-S. Designing an effective pay-for-performance system in the Korean National Health Insurance. *Journal of Preventive Medicine and Public Health*. 2012;45(3):127. PMID: 22712039.
7. Karimi S. A new managerial approach for hospital administration: weakness and provisions. *Management and medical information*. 2001-2;4:10 – 1 [In persian].
8. Tavakoli MR, Karimi S, Javadi M, Jabbari A. The Survey of Performance Supervision Board New System Hospitals: Administration Alan in Selected Training Hospitals of Isfahan: A Qualitative Study. *Journal of School of Public Health & Institute of Public Health Research*. 2016;14(1):31–44 [In persian].
9. Ebadifard Azar F, Arab m, Badloo M, Rezaei E. Examining the relationship between Payment based on new manegerial approachfor hospital administration, Expectancy theory and job satisfaction in selected hospital staff of Tehran university of medical sciences in 2013. *Hospital*. 2015;13(4):123–32. [In persian].
10. Moradi-Lakeh M, Vosoogh-Moghaddam A. Health sector evolution plan in Iran; equity and sustainability concerns. *International journal of health policy and management*. 2015;4(10):637–40. PMID: 26673172.
11. Gray S, Manesh AO, Harirchi I, Nedjat S. Designing a Framework for “Iranian Pay for Performance” Program for Non-Medical Workforce in Hospitals. *Health Scope*. 2018;7(S):e65472. doi: 10.5812/jhealthscope.65472.

12. Howlett M, McConnell A, Perl A. Streams and stages: Reconciling Kingdon and policy process theory. *European Journal of Political Research*. 2015;54(3):419–34. <https://doi.org/10.1111/475-6765.12064>.
13. Seidman I. *Interviewing as qualitative research: A guide for researchers in education and the social sciences*: Teachers college press; 2013.
14. Fylan F. Semi structured interviewing. *A handbook of research methods for clinical and health psychology*. 2005:65–78.
15. Elliott R, Timulak L. Descriptive and interpretive approaches to qualitative research. *A handbook of research methods for clinical and health psychology*. 2005;1(7):147 – 59.
16. Jalali R. Qualitative research sampling. *Journal of qualitative Research in Health Sciences*. 2013;1(14):310–20 [In persian].
17. Duffy K, Ferguson C, Watson H. Data collecting in grounded theory - some practical issues. *Nurse Researcher*. 2004;11(4):67–78. doi: 10.7748/nr2004.07.11.4.67.c6216.
18. Elo S, Kynga H. The qualitative content analysis process. *Journal of Advanced Nursing* 2008;62(1), 107–115 doi: 10.1111/j.1365-2648.2007.04569.x.
19. Green J. Epistemology, evidence and experience: evidence based health care in the work of Accident Alliances. *Sociology of Health & Illness*. 2000;22(4):453–76. <https://doi.org/10.1111/467-9566.00214>.
20. Polit DF, Beck CT. *Essentials of nursing research: Appraising evidence for nursing practice*: Lippincott Williams & Wilkins; 2013.
21. Raisi P, AliKhani M, Mobinizadeh M. Performance-based payment at Shahid Hasheminejad Hospital in Tehran. *Journal of Healthcare Management (Journal of Health System)*. 2010;2(1):27–36 [In Persian].
22. Mohamadi E. *Policy analysis, problem identification and proposing policy options for Health Insurance Benefit Package in Iran health system*. Tehran-Iran: Teheran University of Medical Sciences; 2017.
23. Esfandiari A. *Policy Analysis of Healthcare-Associated Infections (HAIs) policies in Islamic Republic of Iran and study of compliance with control infection guidelines with Theory of Planned Behavior and providing some solutions*. Tehran-Iran: Teheran University of Medical Sciences; 2016.
24. Herweg N. Explaining European agenda-setting using the multiple streams framework: the case of European natural gas regulation. *Policy Sciences*. 2016;49(1):13–33. DOI: 10.1007/s11077-015-9231-z.
25. Chee TT, Ryan AM, Wasfy JH, Borden WB. Current state of value-based purchasing programs. *Circulation*. 2016;133(22):2197–205. <https://doi.org/10.1161/CIRCULATIONAHA.115.010268>.
26. Tanenbaum SJ. Pay for performance in Medicare: evidentiary irony and the politics of value. *Journal of Health Politics, Policy and Law*. 2009;34(5):717–46. DOI: 10.1215/03616878-2009-023.

27. Yousefvand M. Policy Analysis of the Relative Value of Health Services Policy and Developing Policy Options for Iran. Tehran-Iran: Teheran University of Medical Sciences 2018.
28. Bazyar M. Analysis for policy of merging social health insurance funds in Iran: understanding the challenges and requirements of, and developing an implementation plan for merging health insurance funds. Tehran-Iran: Teheran University of Medical Sciences; 2016.
29. Doshmangir L. Analyzing Health Policies Influencing Equitable Financing in the Iranian Health System. Tehran-Iran: Iran University of Medical Sciences & Healthcare services; 2014.
30. Jafari H. Policy Analysis of TFR Decline Based on Policy Triangle Model in Iran and its Influential Factors Using Panel Data during 2002–2012. Tehran, Iran: Tehran University of Medical Sciences 2016.
31. Zohlnhöfer R, Herweg N, Huß C. Bringing formal political institutions into the multiple streams framework: An analytical proposal for comparative policy analysis. *Journal of Comparative Policy Analysis: Research and Practice*. 2016;18(3):243–56.
<https://doi.org/10.1080/13876988.2015.1095428>.
32. Dembinska M. (Re) framing identity claims: European and state institutions as opportunity windows for group reinforcement. *Nations and Nationalism*. 2012;18(3):417–38.
<https://doi.org/10.1111/j.469-8129.2011.00540.x>.
33. Buse K, Mays N, Walt G. *Making health policy*: McGraw-Hill Education (UK); 2012.
34. Sparkes SP, Bump JB, Reich MR. Political strategies for health reform in Turkey: Extending veto point theory. *Health Systems & Reform*. 2015;1(4):263–75.
<https://doi.org/10.1080/23288604.2015.1093063>.

Figures

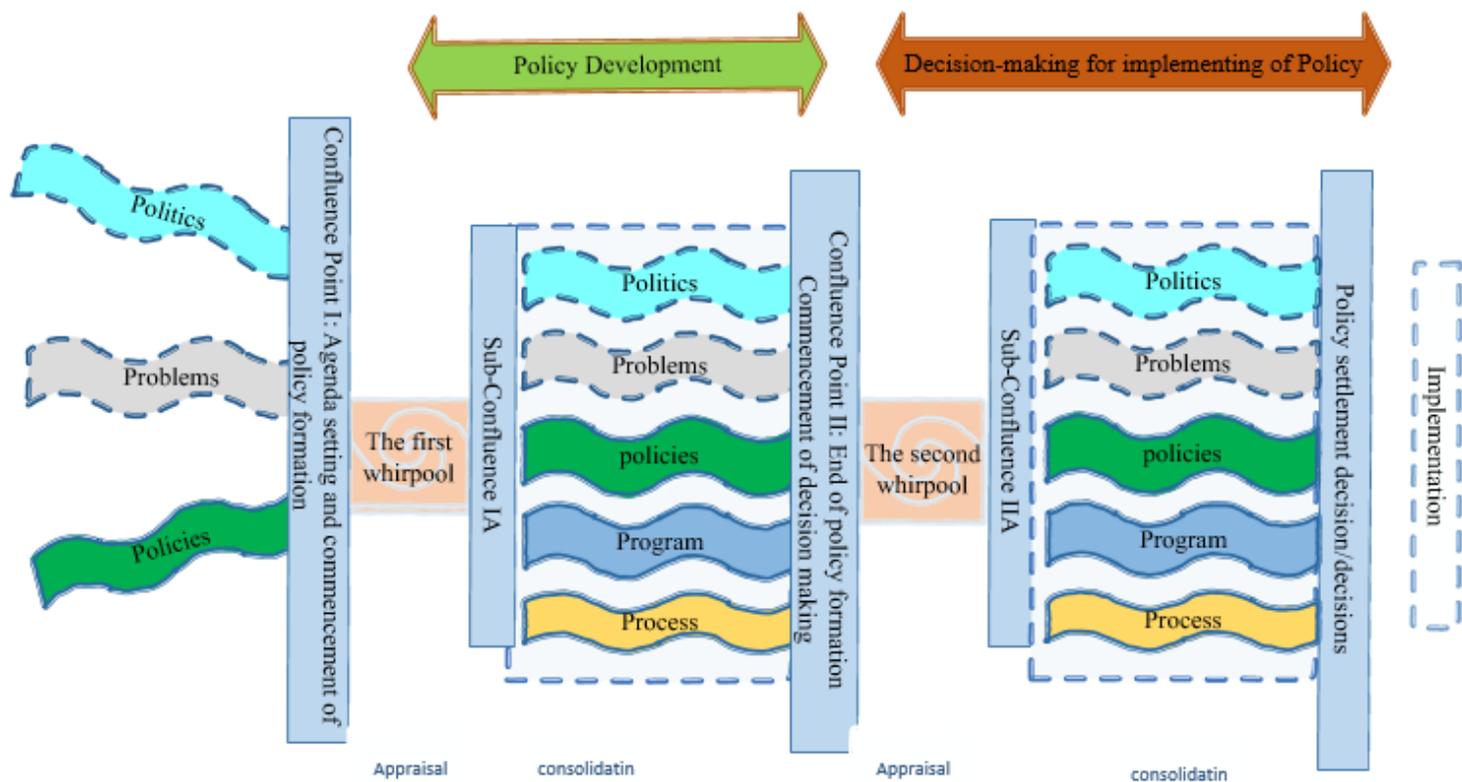


Figure 1

The combined model proposed by Howlett et al. (2014) (12)

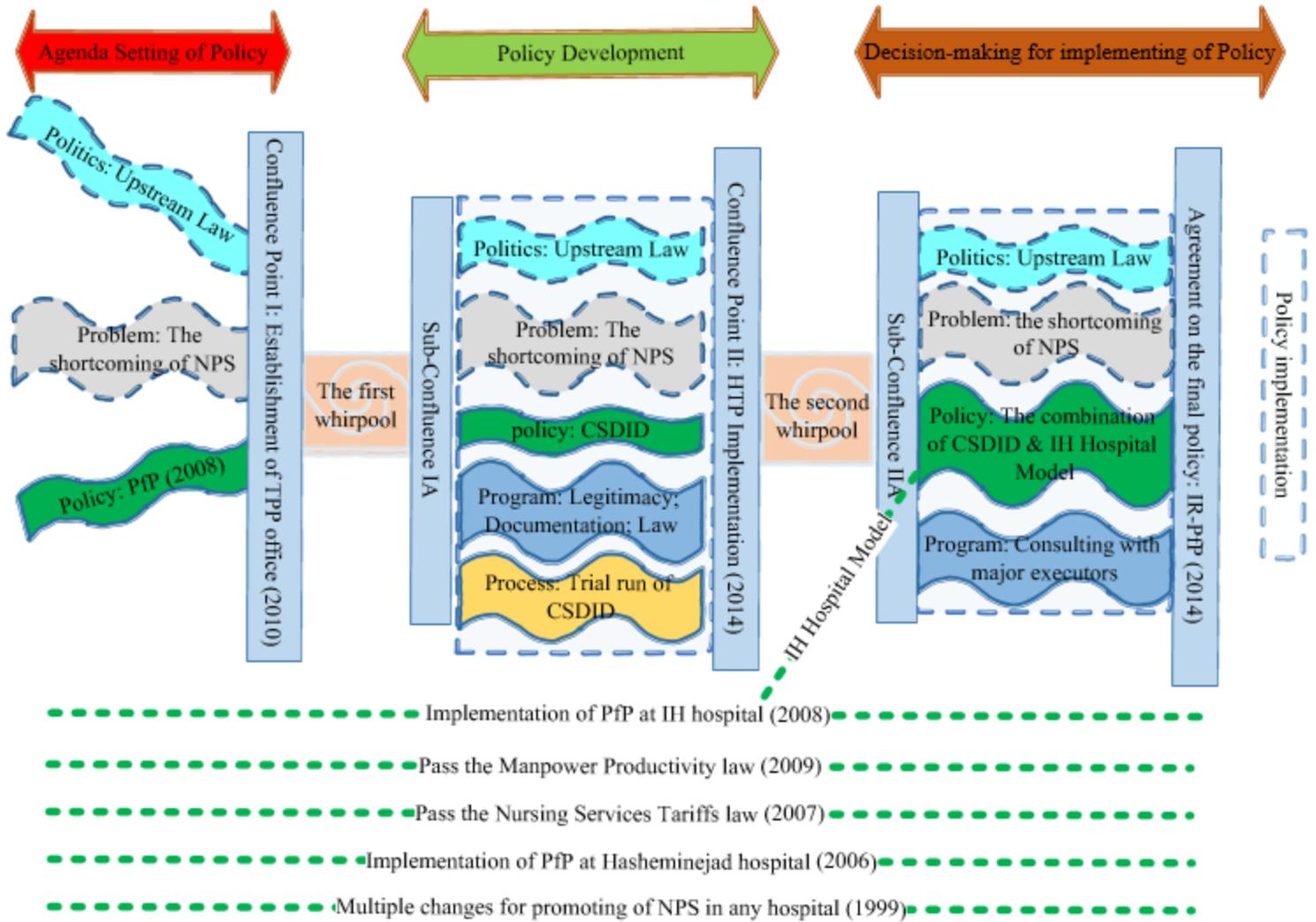


Figure 2

Implementation of IR-PfP policy

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [GrayetalAppendix.docx](#)