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# The comparative study of strategic purchasing of health services in selected countries: A review study



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## ABSTRACT

**Introduction:** strategic purchasing is the constant search for achieving the best method through deciding on what to purchase, how to do it, and choosing service providers in a way that maximizes the health system performance to the desired level. In other words, strategic purchasing is defined as interventions that enhance system's accountability and causes financial balance.

**Methods:** This study is explained as a comparative study with the purpose of strategic purchasing of health services in the world. In this study, 13 databases and search engines with relating keywords have been searched in published papers of national and international journals from 2000 to 2016. CAPS tool is used to ensure the reliability of the paper. The obtained information was then extracted and exploited in the summarized form of data.

**Results:** Findings of the study indicate that countries have considered several factors effective in strategic purchasing of health services. The quality and purchasing with the reasonable price were referred in 7 studies, motivating factors in 6 studies, interventions on the supply side in 7 studies (manufacturers), interventions on the demand side in 8 studies (recipients and purchasers), and transportation and resource allocation in 4 studies.

**Conclusion:** According to the World Health Organization report in 2000 and the results of studies, countries will be required to use strategic purchasing of services for financing and optimal and equitable use of health services that using countries experiences will be very beneficial in this field. Therefore, studying in other areas is recommended.

**Keyword:** comparative Study, strategic purchasing, health services.

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## INTRODUCTION

In 2000, the World Health Organization proposed a new approach to look at the health system in its annual report and enumerated this system as a set of four main functions (custodianship, creating resources, supplying financial resources, and service provision) and three main objectives (health, equity in financial cooperation and meeting the non-medical expectations of people). In this context, the role of the insurance system was considered as one of the most important role-players in the system, and strategic purchasing of health services was introduced with the purpose of protecting people against the financial risk resulting from disease.<sup>1</sup> Strategic purchasing is the constant search for achieving the best method through deciding on what to purchase, how to do it, and choosing service providers in a way that maximizes the health system performance to the desired level.<sup>2</sup> On the other hand, strategic purchasing is one of the main components of promoting health system performance which ideally it can increase the efficiency, efficacy, and accountability. Moreover, it has a significant role in the health care system to achieve public health goals and the broader goals

of social justice.<sup>3</sup> In contrast, passive purchasing means predetermined budgeting or settling presented bills.<sup>4</sup> In active purchasing method (strategic), drawing up a contract provides the most basic interaction part of purchaser and provider.<sup>5</sup> At the same time, the growth of medical technology, population growth and the change of lifestyle towards industrialization, an increase in physical and financial access, individual's awareness level of health services, and the emergence of new diseases have accompanied the health services cost with an increasing growth.<sup>6</sup> On the other hand, evidence suggests that the main weakness of financing in the current health system of countries is purchasing services by governmental organizations from the private sector at several times higher than the approved rate which this can lead to an increase in inequality.<sup>7</sup>

The results of Branson's study indicate that around 30 percent of Medicare expenditures, as one of the biggest purchasers of health services in America, has been unnecessary or is spent on purchasing expensive services. However, with the shift in approach from traditional purchasing to

strategic purchasing models, Medicare and other purchaser institutions will be able to increase access to high-quality services by using competitive tools and cause the improvement of quality and patients' satisfaction.<sup>8</sup> The experiences obtained from purchasing and its successful use in developing countries were considered as a tool for developing and promoting performance. Due to the constant limitation of resources in the area of health and still, the needs are unlimited on the other hand, the necessity of prioritization to cover more important, effective and vital services of health area in the category of services sponsored by the government is considered as an important necessity.<sup>9</sup> One of the ways to deal with this challenge is adopting a strategy that not only can control costs but also guarantees services purchasing with a desirable quality.<sup>10</sup>

According to what is stated about the advantages and the importance of strategic purchasing, it seems that a thorough and comprehensive study of strategic purchasing of health services in other countries and applying their experiences should be addressed before anything done in this field so that the most suitable and effective health service be purchased using this method and better allocation of resources. Although there are different evidence on increasing effectiveness and equality promotion, access, and satisfaction with the establishment of strategic purchasing in the health section,<sup>2,11,12,13</sup> there will be practically no achievement in its implementation without the knowledge about the experiences and factors affecting the strategic purchasing of health services in other countries. Therefore, the present study is carried out with the aim of familiarity with the experiences of other countries in this field and identifying the most important influencing factors.

## METHODE

The current study is a comparative study with the purpose of strategic purchasing of health services. In this study, in order to find published studies electronically from 2000 to 2016, published papers in national and international journals indexed in Google's databases, Google Scholar, PubMed, Proquest, EBSCO, Science Direct, Scopus, Web of Science and Persian keywords through Persian databases such as Magiran, scientific database of information and scientific documents center in Iran, conferences in Iran, and *iranmedex* are entered into studies. Also, studies which were performed in the field of purchasing and strategic purchasing of services in non-health area were excluded from the study because of incompatibility with the aim of the research was used. In order to achieve the full text of related papers or their abstracts, Persian and English keywords by incorporating keywords,

original and sensitive have been used such as: Resource allocation and purchasing OR Resource allocating and purchasing strategic Purchasing OR strategic purchase OR Strategic Purchases Healthcare OR Healthcare system OR Healthcare industry OR Medical service OR Medical care OR hospital.

The reference list of studies was also examined for increasing the sensitivity and choosing a greater number of studies that the researchers couldn't get through the database. Search evaluation was performed by one of the researchers randomly, and it was determined that not a study was removed.

The instrument used in this study was data extraction forms from previous studies (data collection form). These forms were used to preserve the integrity, reduce biases and increase the reliability and validity of the comprehensive review.<sup>11</sup> For this purpose, first the original list of keywords appropriate to the purpose of this study was selected in both English and Persian, and then they were searched in the above databases. Finally, data collection form was filled out based on retrieved data sources.

After a search by using mentioned keywords, 840 papers were obtained from databases and search engines. These topics were first classified, and then unrelated topics were excluded so that at this stage 525 relevant topic were identified and 315 topics were excluded as irrelevant. In the next step, the abstracts of relevant papers to 525 mentioned papers were reread to identify the most relevant papers' abstract on study's goal. At the final stage, the full text of 53 selected papers was investigated so that papers' goals were first examined. If they meet the present comprehensive review study, papers' quality will be studied with CASP tool. Finally, 19 papers were confirmed following this method and their information was recorded on the data forms.

After collecting the considered data from obtained papers, the findings were integrated based on the data extraction forms, and according to it the most important points influencing strategic purchasing of health services were determined and classified.

## RESULT

The results of the current study from reviewing the literature indicate that numerous factors have been effective in the infrastructure of strategic purchasing of countries' health services that can be classified in 6 major and minor infrastructures. Among the major infrastructures are the following: 1. Purchasers and consumers (demand side), 2. Manufacturer (supply side), 3. Interventions in purchasing, 4. Incentives, 5. Price interventions, and 6. Structure. Minor infrastructures include the following items:

**Table 1** Conducted researchers

Research Locations	The Results of the Research	Type of Research	Research Time	Researcher
America	Identifying strategic purchasing of services include: the nature of the services purchased services, reducing uncertainty and purchasing risk mechanisms services to choose the best supplier and service provider	Mixed (quantitative and qualitative)	2004	Yaez
Northern European countries	Health service providers, drawing up contracts, payment mechanisms, hierarchical structure, the supply of financial resources, ownership rules and regulations, the allocation of resources as the most important component of the strategic purchasing	review	2005	Figores
America	The most important strategic purchasing variables of primary and secondary cases suppliers (doctors, hospitals, pharmacies) distributors (wholesalers and retailers), service purchasers (public and private insurance) and incentives for change the behavior of suppliers	Qualitative, case study	2007	Ford and Hagaz
The World Bank	9 effective components of strategic purchasing of health services were introduced: the allocation of resources, organizational structure, users of purchasing services, service providers, the price of paying mechanism, priority, purchasing policy and organizational environment	Data collection form	2007	Perker
Canada	Identifying the supply side interventions, interventions by the demand, the price of strategic thinking, and finally a high-quality and cost-effectiveness of the appropriate services for the elderly as the most important component of purchasing home care services		2008	Williams
Germany	The introduction of 4 components as the important components of the strategic purchasing of health services: health service providers (with the characteristics of the competition, independence, and accountability). Appropriate purchasing organizations (correct purchaser and multiple purchases), appropriate contracts (cost effective, evidence based and volumetric) and the Mechanism of payment	A review and descriptive study	2008	Bos
England	The emphasis on the supply side interventions, price performance, organizational capabilities and financial motives as the most important component of the strategic and value-based purchasing equipment		2008	Robinson
Spain	The introduction of the most important component of the strategic purchasing of health services effective on the two general categories of expansion of suppliers and the purchasing performance (includes variables below cost, quality, transportation, and satisfaction)		2009	Sanchez
France	The common goal of all pharmaceutical reforms, moderating costs spent for medicines and ensuring the existence of a universal cover of services package, meanwhile strategic purchasing medication as the perfect lever for the effectiveness of this reforms		2010	Sarmant
Germany	Identifying four major area, strategic purchasing barriers, the remote care: technology, institutional, economic and human.	qualitative	2011	Riog
Iran	The effect of 12 under the theme of effective variables in the field of price interventions as one of the requirements for the implementation of the strategic purchasing of medicines		2016	Bastani
	Introducing 6 groups of influencing factors in the strategic purchasing of health service include: target group and users of services (demand side); purchased interventions, providers supplier interventions (supply side); the methods and motives (payment methods); the price and the organization structure of all strategic purchasing of all health intervention.	review	2017	Bastani

Minor infrastructures of purchasers and consumers (paying attention to users of health services, paying attention to the interventions of the demand side, paying attention to the number of random interventions for purchaser, creating monetary mechanism following the patient), minor infrastructures of manufacturers or the supply side (interventions on the supply side, paying attention to wholesalers and retailers, paying a special attention to purchasers and insurances, accountability of service providers, paying attention to the number of providers), minor infrastructures of purchasing interventions (payment system to provider, suitable contracts, payment system to insurance, rules and regulations, determining priority, and determining cost of efficacy), minor infrastructures of methods and incentives (incentives of suppliers' change of behavior, payments based on performance, payments based on time, financial protection, risk coverage of providers), minor infrastructures of price interventions (the price being actual, services being payable, endowing the bargaining power, and determining payment system), minor infrastructures of structure and organization (thinking and decision-making of strategic purchasing, environment and organization's capabilities, the hierarchical structure of the organization, identifying rules and regulations, and paying attention to financial structure). 11 papers were referred to the supply side interventions.<sup>14,15,16,17,18,19,20,21,22,23,24</sup> 6 studies paid attention to the demand side interventions.<sup>18,25,26,27,28,29</sup> 2 papers were referred to methods and incentives.<sup>15,22</sup> 7 papers mentioned price interventions.<sup>16,20,24,30,31,32,33</sup> 5 studies were commonly referred to the quality of provided services by manufacturers and providers and the other 7 studies were commonly referred to economical aspect of purchased goods price and effective purchasing system.<sup>16,20,24,30,31,32,33</sup> 4 studies attended to payment based on performance which was from the minor infrastructures of methods and incentives.<sup>15,16,17,19</sup> 3 studies referred to goods transportation and provided services from manufacturers.<sup>15,24,32</sup> 5 studies referred to the structure and organization.<sup>11,16,26,31,34</sup>

The results of the studies show that infrastructures in different countries were not similar and there are some differences in this field based on policies and being developed or developing countries, in other words, being rich or poor.

## DISCUSSION

The results of the current study indicate that other 6 major infrastructures and minor infrastructures

have been effective in strategic purchasing. Among the major infrastructures are the following: 1. Purchasers and consumers (demand side), 2. Manufacturer (supply side), 3. Interventions in purchasing, 4. Incentives, 5. Price interventions, and 6. Structure.

In the study by Nasiripour about effective factors on strategic purchasing in the indirect health section of Iran's social security organization, the importance of nine factors are referred to including organization, price, resource allocation, payment mechanism, priorities, contract, providers, beneficiaries, purchasing model in the strategic purchasing process which is consistent with the present study.<sup>35</sup>

In the study conducted by Preker strategic purchasing components are referred to including resources allocation, accumulation of risk, gathering resources and financial revenues, exploiters of health services, and providers) public, private, competitive (price), and subsidies (payment mechanism) which confirm the identified components of the present study.<sup>11</sup>

In the study conducted by Baeza and Torz, providers' components of contract and payment mechanisms are referred to as influencing components in strategic purchasing which confirm the accuracy of the present study components namely providers and contract and payment mechanism.<sup>36</sup>

In the report by World Health Organization, strategic purchasing components of medical services are referred by topics such as exploiters, priorities, resources allocation, accountability, payment mechanism and organizing purchasers that confirm the results of present study in determining similar components.<sup>2</sup>

Katzin and kafinhal in Estonia believed that strategic purchasing components are payment mechanism, contractual framework, medical care providers, selective and bulk contracts, price, providers' structure and financial ownership which are consistent with the results of the present study.<sup>27</sup>

Figors et al. in their study in Australia introduced strategic purchasing components as medical services providers, contracts, purchasing mechanism, hierarchical structure, supplying financial resources, rules and regulations, ownership, and resource allocation which confirm the current study.<sup>37</sup> Nasiripour et al. in their study that was planned with the aim of identifying influencing variables in price for strategic purchasing of health services by social security organization as the largest institution of purchasing health services and drugs in Iran in 2011 showed that agreeable, payable, and real price and also competitive market, and bargaining power by purchasing institutions

or insurance organizations are among the most important factors influencing price interventions for implementing strategic purchasing in the country's health sector which is consistent with the present study.<sup>28</sup>

The results of study by Cheraqali (2013) indicated that political sanctions against Iran impacted pharmaceutical sector greatly such as banking and transportation sanctions resulted in the reduction timely access to vital drugs in Iran's markets and pharmaceutical industries problems related to drugs import or their raw materials which were not referred to in the present study.<sup>28</sup>

Bastani's study in the field of effective components in implementing strategic purchasing of health services indicates that the presented main models for strategic purchasing of health services namely World Health Organization Model<sup>29</sup> and World Bank Model<sup>38</sup> in all the investigated studies in the present study are somehow subset of World Health Organization's political levers (what to buy, for whom to buy, from whom to buy, how to pay, and at what price), in the mentioned study it is preferred that the 6<sup>th</sup> component of this study (structure and organization), is not included in the proposed strategic purchasing model based on the World Bank's experts. In other words, other organizational structures are a framework that purchasing and resources allocation take place in them and therefore it is not mentioned directly in the proposed framework of the World Bank which is consistent with the present study.

## CONCLUSION

We find out that effective infrastructures in strategic purchasing of health services are different in different countries in the world and applying these countries' experiences can be very helpful in establishing our country's strategic purchasing. Therefore, the future studies in the field of establishing strategic purchasing of different health services are recommended including incurable diseases and different kinds of contagious and non-contagious diseases.

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