

# Challenges of Health Care Reforms (HCRS) in Low and Middle-Income Countries (LMICs): A Qualitative Systematic Review

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## Research

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## Abstract

**Background:** Healthcare reforms (HCRs) are performed by many resource-limited countries to improve the quality of health care. However, reforms do not always lead to the expected benefits and implementation problems are not fully considered due to lack of a systematic analysis of HCRs in these countries. Thus, the present study aimed to review the challenges of health care reforms in low and middle-income countries systematically.

**Method:** A systematic review of qualitative studies was used in the present study. Data were searched in five databases. The references related to the selected articles were searched for any relevant study irrespective of gray literature. The articles were screened based on PRISMA. The duplicates were removed, others were screened based on the title and abstract, and the eligible ones were selected for full-text reading and those matched with inclusion and exclusion criteria were selected for review. Framework analyses were used for data analysis, and the quality of the studies was evaluated by the CASP checklist for qualitative studies.

**Results:** 702 articles were found, among which 149 were duplicated, 553 were selected to primary screening, 390 were excluded, and 163 were selected for full text reading. Finally, 151 articles were excluded, and 12 matched with the inclusion and exclusion criteria were included in the study.

### Conclusion:

Health reforms in low and middle-income countries have faced different challenges in financing, human resources, drugs and medicine, infrastructures, and governance, which can be influenced the delivery of qualified services. Thus, in order to design and implement any health care reforms in these countries, it is recommended for policymakers to take appropriate decisions about agenda setting, regulations and guidelines, sustainability of financing resources, collaborations, accountabilities and responsibilities, as well as the way of providing human resources, infrastructures, needed drugs, and medicine. In addition, the way of accessing services in rural and remote areas should be clarified. Finally, the reforms should be made very intelligently to direct the funds for the right needs and priorities in the countries where the donors' interests may be affected.

## Background

Health care reforms (HCRs) provide a set of political actions for covering the four functions of the health systems including service delivery, stewardship or governance, financing, and resource generation in order to improve the performance of the health system and the health status of the population (1).

HCRs are considered as complex activities, and organizations and stakeholders usually resist against the changes due to the difference in values, benefits, political philosophy, and responsibility. In addition, the behavior of the health systems is not easily controllable because of its intrinsic complexity, and many health reforms fail due to insufficient preparation, lack of pilot studies, and insistence of pressure groups (2).

However, many developing countries have started the HCRs for accessing the broad health care and reduction in costs despite limited resources (3). However, it is very mixed and dispersed in these countries, and achieving the objectives of reforms has often been very disappointing. Regarding the reasons, poor designing and fast implementation of reforms for responding to economic and political changes outside the health system are highlighted (2). For example, the range of HCRs in the developing countries is very different in response to decentralization programs or imposing public sector reforms (4). Further, since there are no systematically analyses of health care reforms in the developing countries, these reform efforts do not always lead to expected benefits and implementation problems are not fully considered (2). Some studies indicated that healthcare reforms, especially in low and middle-income countries (LMICS), have face some challenges in financing and sustainability of financing resources, accessing to remote and rural areas, and providing needed human resources (5–12) Therefore, the present study aimed to review the challenges of health care in LMICs systematically.

## Methods

### Eligibility criteria

The present study aimed to evaluate the perspective of the health system key informants and experts in the LMICs about “HCRs” challenges. Therefore, the qualitative studies, which used the interview as one of the data collection instruments, were selected. To this aim, those studies searched from March to August 2019, and the remainder were considered in some databases such as PubMed for new articles. In addition, those articles published from 2000 onwards were considered for the purpose of this study since the health system functions introduced by WHO in 2000 were selected as the framework for analysis,

thus, those studies written in English language, had at least one interview group, were published in 2000 onwards, and those were conducted in one of the LMICs based on World Bank classification(13) were considered as inclusion criteria. The studies which were conducted in high-income countries, as well as those related to letter to editors, comments, and suggestions and reviews, were excluded in the present study.

### Search:

The studies searched in PubMed (Medline), Web of Knowledge, Cochrane Library, Scopus and WHO websites and used words and mesh terms such as Health Care Reform, Healthcare Reform, national health policy, and health care policy in combination with Healthcare Financing, Health Financing, Delivery of Healthcare, Healthcare Delivery, Resource, Governance, Stewardship, and the names of LMICs as their titles or abstracts were considered for the purpose of this study. The references of the selected articles searched for any relevant studies but gray literature was excluded in this study.

### Data collection method

The articles which were potentially eligible to be included in the present study were imported to Endnote X8, and the duplicates were excluded based on PRISMA (14) checklist. Then, others were screened based on the titles and abstracts. Further, the selected articles were considered for full-text reading, and those matching with inclusion and exclusion criteria were selected for reviewing. Finally, the framework analyses were used for data analysis.

### **Data collection process**

The data were obtained from general and specific information. First, titles, first authors, years of publication and countries were considered. Then, the objectives, data collection method, sample size, and the like were extracted. In order to validate the data, searching strategy was confirmed with one expert in librarianship, and data extraction forms were designed by reviewing several data extraction forms and experts' opinions in systematic review workshops. Regarding the reliability of the collected data, two researchers (Ch A, A A) coded the data independently and disagreements were resolved by consensus (Ch A, A A). Finally, the quality of the studies was evaluated by using the CASP (15) checklist for qualitative studies.

## **Results**

### **Study selection:**

First, 702 articles were extracted after searching in databases and other resources, among which 149 were duplicated, 553 were selected for primary screening in terms of their titles and abstracts, 390 were excluded, and 163 were selected for full-text assessment. Finally, 151 articles were excluded and 12 matching with inclusion and exclusion criteria were considered for the purpose of this study.

### **Study characteristics**

The studies included in the review used the interview as one of the data collection methods. In total, the results of 667 interviews from 12 articles were examined in this review. Interview groups included health system top managers, supervisors, stockholders, health workers, users, policymakers, professionals, etc. The studies entered in the review were related to health system governance, mental health integration in PHC, user fees, maternity health, community-based services, hospital management, health system strengthening, and decentralization and family nurses. Further, qualitative, cross-sectional descriptive, multi-method situation appraisal, and multiple-case study were considered as the methods used in these studies, and data collection methods were the combination of interview, document reviews, questionnaire, focus group discussion, and observation, among which interview was common in all of these studies. Finally, thematic analysis, framework analysis, and estimating the relationship were used for data analysis (Table 1,2)

### **Risk of bias in different studies**

Among the 12 articles, six were conducted in South Africa, Tanzania, and Nepal which can influence the results. In addition, two of the articles were in health system governance which can increase the precision in this area.

### **Synthesis of results**

In order to analyze the data, framework analysis was used. Framework analysis is considered as one of the analysis methods in qualitative studies. In this study, Gale et al.'s method

was utilized for data analysis. First, two researchers (CH A, A A) read the articles for several times in order to be familiarized with the themes. Then, the data were coded independently in order to extract the related codes. Finally, 136 codes were obtained. In the next step, the framework of health system functions introduced by WHO in 2000 was used. In this framework, the functions of the health system were divided into financing, resource generation, stewardship (governance), and service delivery. Furthermore, the data were categorized into 25 subthemes. Finally, the matrix was developed and the data were interpreted (Table 2).

## **Discussion**

LMICs are facing many challenges in designing and implementing the "HCRs". The present study evaluated these challenges in financing, resource generation, and governance (stewardship) which affected the delivery of qualified health services.

### **Health financing challenges**

Based on the results, lack of providing sustainable and adequate funding is considered as one of the most important challenges in HCR financing among LMICs. In fact, HCRs have some challenges in providing adequate budgets such as allocation of a special amount in the budget plan, delay in receiving the budgets, high debts, budget deficit of hospitals, and the problems related to traditional budgeting systems. In addition, some other studies performed in Iran, Peru, Lithuania, Moldavia, and Brazil reported these challenges. Thus, it seems that providing sustainable and continuing fiscal resources can be considered as one of the strategies for succeeding the "HCRs" in these countries (7,13-26,30-32).

Further, inequity in resource allocation among different regions is regarded as another challenge in HCR financing among LMICs, which is increasing due to lack of transparency in guidelines, impact of donor's interests, and existence of competing priorities. However, some studies conducted in Armenia and Moldavia reported an improvement in equity in financing and directing the budgets received from donors (8,33). Thus, the health system policymakers and

managers in LMICs should direct the donor's interests for considering appropriate priorities and setting the clear guidelines and regulations for financial resources management.

### **Challenges in resource generation**

The challenges related to resource generation are divided into human resources, infrastructures, and drug and instrument challenges.

#### **Human resource challenges**

Lack of adequate health workforce (HW) which is exaggerated in rural and remote areas is considered as one of the main challenges in human resources. In this regard, the studies conducted in Lithuania and Moldavia reported the shortage of health HW as a challenge in health system reforms (8, 26).

Other challenges are related to lack of motivation, skills, training HW, and structural and legal problems. In addition, some factors such as lack of understanding the skills and abilities by managers, weakness in career management systems, lack of training and high workload, using staffs in positions other than their organizational posts, poor monitoring, and evaluation systems, lack of compensating the weekend and holidays, low salaries, high staff turnover, and ensuring staff safety during night shifts can influence the motivation of HW, which result in increasing frequent absence, leaving the organization by trained staffs, remaining the inexperienced and low skilled staffs, and making concerns about quality of services. Additionally, structural and legal problems like absence or lack of organizational posts, problems in providing budgets for the existing posts and bureaucracy in the recruitment process can create some problems in HW recruitment. In addition, some studies indicated the challenges in providing needed HW in rural and remote areas, high turnover of HW, limited resources for developing the success experiences, and concerns about training (7, 8, 26, 28, 32, 34-37)

#### **Challenges in infrastructures and drugs**

Based on the results, physical space, equipment, and drugs are considered as other major challenges in resource generation are. Based on the results, the countries coped with some problems and challenges in providing needed physical space for delivering privacy service, lacking drug, delaying in providing drugs, emptying drug stores, increasing service recipients, increasing demands, centralizing drug providing and distribution system, and lacking access to guidelines in some countries. Further, some conflicts were reported between providers and recipients due to lack of medicines and drugs. Finally, Manyazavil et al. enumerated a shortage of drugs, medical equipment, and instrument as one of the major challenges in hospital reforms (1).

#### **Governance challenges**

Based on the results, many governance challenges in HCRs among LMICs based on Siddigi et al.'s(38) framework were divided into the rule of low, strategic direction, responsibilities, collaboration, efficiency, and effectiveness, ethics, equity and comprehensiveness, transparency and information.

In addition, changing the structures based on political motives instead of real needs, lack of enough legal requirement, inappropriate process for decentralization, lack of clarity in roles and tasks, resistance to implementing guidelines with lack of understanding the reform process by managers, as well as lack of clear guidelines and training resulted in confusing executive units and different interpretations by stockholders, blocking the accountability and responsibility due to the creation of levels of double or multiple accountabilities, and accordingly destroying the trust between the provider and recipient, as well as inter-sectorial and multi-sectoral collaborations.

Further, poor monitoring and evaluation systems such as lack of a good mechanism for data monitoring and evaluating human resource performance was regarded as other challenges in HCRs among LMICs.

Furthermore, the disparity between regions in terms of facilities, HR, infrastructure capacity, and budget increased equity and comprehensiveness problems. Additionally, lack of availability of guidelines on time and an increase in informal payments in some countries are considered as ethical challenges.

Other studies highlighted lack of planning and coordination, lack of management capacity for managerial reforms, gaps in technical skills, lack of trusted performance evaluation system and resistance in change (27, 39-40).

In addition, lack of collaboration and rules, transparency and accountability in resource distribution, and social and economic inequality were considered as some of the reform challenges in Lithuania and South Africa (26, 41). In China, equity in outcomes and distribution of public resources in the regions were regarded as some challenges in monitoring and evaluation systems, which influenced the governance of reforming health services (42). Cherry et al. indicated that health care reforms faced many challenges and the main challenge is related to an increase in efficiency and effectiveness of available services (43).

Lawrence outlined three major challenges for "HCRs". Reforms should be conducted in both public and private system agendas. The second challenges are related to the acceptable and appropriate division of work between actors and key organizations. Finally, a reform model, which is very reliable and politically attractive, should be highlighted (44).

Finally, regarding Brazil's health care reform, the sustainability of reform, monitoring, and evaluation, and problems in quality, and effectiveness of healthcare, which caused largely due to deficiencies in guidelines were regarded as some challenges (7).

#### **Health care delivery challenges**

The promotion of the people's health status is the main objective of the health system, which is responsible for delivering health services. However, inadequate resources or poor financing systems can create some weaknesses in this regard (45). Therefore, identifying the related challenges was considered as the main purpose of the present study.

According to WHO, good service delivery should involve comprehensiveness, accessibility, appropriate coverage, continuity, quality, patient-centeredness, coordination, accountability, and efficiency (46). Based on the results, there are challenges in coverage and access, especially in rural and remote areas among LMICs (47, 48). Further, it seems that the continuity of reforms can be influenced by focusing on the unsustainability of financing resources. Furthermore, there are some concerns about the quality of the delivered services regarding the existing lack of skills, training, and motivation in health HW. Additionally, the donor's interests can affect the financing and kind of reforms and services in some countries since these services are not provided based on the needs. In addition, some studies reported the challenges related to inter-sectorial and multi-sectorial collaborations in these countries, as well as accountability and efficiency may influence service delivery. Finally, the studies conducted in Brazil, Armenia, Lithuania, Greece, China, Turkey, Moldavia, Iran, and Peru emphasized these challenges, which are consistent with the findings in the present study (8, 13-14, 29-29, 33-34).

## Conclusion

It seems that health care reforms in LMICs face different challenges in financing, HW, drug and medicine, infrastructure and governance which influence the delivery of appropriate and qualified services. Thus, it is recommended for policymakers to make appropriate decisions about agenda setting, regulations, clear guidelines, sustainability of financial resources, collaborations, detailed roles and tasks of every stakeholder and decision on the way for providing HR, infrastructures, needed drugs, and medicine in order to design and implement any reform. In addition, how access to services in rural and remote areas should be clarified. Further, policymakers should be very alert to sign the funds for the right needs and priorities in the countries in which the interests of donors can affect the reforms. In other words, comprehensive assessments and evidence are required for implementing health reforms in LMICs. Thus, the road map of reform, tasks, and roles of stakeholders, as well as the process of delivering services, and accountabilities, responsibilities and at least executive and political quarantines should be clearly identified.

## Limitations

In the present study, the studies written in English language were only considered for reviewing since limitations in translating skills could create some regional limitations, which may affect the results. Further, there were few studies which considered an interview for data collection. Finally, only electronic articles were considered for the purpose of this study. In fact, gray literature and non-published studies were ignored.

## Abbreviations

“HCRs”: Health Care Reforms

LMICs: Low and Middle-Income Countries

HR: Human Resources

CASP: Critical Appraisal Skills program

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses

HW: Health workforce

## Declarations

**Ethics approval and consent to participate:** Not applicable

**Consent for publication:** Not applicable

**Availability of data and materials:** search strategy, PRISMA checklist, CASP checklist and quality assessment of articles attached in supplementary section.

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**Authors' contributions:**

E F A F: contributed in Determining Research question, Writing search strategy, writing results, writing discussion, revising the article

Ch A: contributed in Determining Research question, Writing search strategy, Searching articles, Coding, Quality assess, Writing results, writing discussion, revising article

A A: contributed in Determining Research question, Writing search strategy, Searching articles, Coding, Quality assess

A S H: contributed in Searching articles, Quality assess, Writing results

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## Tables

Table 1: study characteristics

Year	Country	Firs another	Setting	Study design	Sample size	Sampling method	Data gathering method	Analyzing method	Interview group
2018	(18)Mexico	A. Arredondo	Governance	qualitative	189	purposively	semi-structured interviews-documents	thematic analysis	Senior-level managers planning and evaluation directors, SPS directors, and directors of decentralization.
2017	(12)Iran	Masoud Ferdosi	Inpatient payment	qualitative	20	purposively	semi-structured interview	thematic analyze	Staff in different wards of covered hospitals who are involved in the plan - Chief executives of the HTP at the university level
2016	(11)Uganda	James Mugisha	integration of mental health into PHC	qualitative	18	purposively	Interview	thematic analysis	Professionals and senior managers, with more than 5 years' experience. The senior managers from the Ministry of Health headquarters were from the mental health unit, planning and budgeting departments.  Health program managers, an administrator, and health facility managers.
2015	Kenya(10)	Emmanuel Wekesa Wamalwa	maternity services	cross-sectional descriptive study	100	Purposively	Interview-The questionnaire	Measuring association	Health workers who are involved in the implementation of the policy. Doctors, clinical officers, and nurses.
2015	South Africa(9)	Helen Schneider 1	community based services	multi-method situation appraisal	97	purposively	semi-structured interviews or focus group discussions	thematic analysis	Players providing, managing or receiving CBS.
2015	South Africa(19)	Debra Leigh Marais	integration of mental health into PHC	qualitative	17	Purposive sampling	Semi-structured qualitative interviews.	Framework analysis	Policymakers at the national level in the Department of Health, provincial coordinators and planners in primary health care and in mental health, and district managers of primary health care and mental health care services.

Year	Country	Firs another	Setting	Study design	Sample size	Sampling method	Data gathering method	Analyzing method	Interview group
2015	Nepal(20)	Sato, M.	user-fee	multiple-case study design	51	all managers and technical and administrative officials involved in FHCP implementation	semi-structured, face-to-face interviews and five group interviews	framework analyses	(1) managers at district offices; (2) facility managers or senior-level staff; (3) health workers and (4) members of the HMCs who had been involved in the FHCP
2014	Tanzania (21)	Byera shwekerela	hospital	Qualitative	69	—	in-depth interviews, focus group discussions (FGDs) and document reviews		officials at the national level  (The Regional Administration and Local Government and the Ministry of Health) who were responsible for steering hospital  Reforms, policies, central government structures, and regional restructuring to facilitate the reforms.  Regional secretariat members.  At the. hospital board  members hospital  management team members and heads of departments in the  hospitals who act as managers of regional hospitals on a daily  Basis. structures and
2014	Myanmar(22)	Isabelle Risso-Gill	Health system strengthening	qualitative	19	Purposively	Semi-structured, face-to-face interviews	thematic analysis	senior staff from international agencies in Yangon, both  national and international staff

Year	Country	Firs another	Setting	Study design	Sample size	Sampling method	Data gathering method	Analyzing method	Interview group
2013	Tanzania (23)	Gasto Frumence 1	Decentralization	qualitative	23	purposively	interviews with key informants and a review of key documents	thematic analytical	Key policymakers and planners at the national level and health officials and key local authority officials from the council level. senior management officials the district executive officer (DED), the district planning officer (DPLD), the district treasurer (DT), three CHMT members (district medical officer, district health secretary, and district health officer), the district AIDS control program coordinator, two councilors, and the person in charge of the health center
2009	Nepal(24)	R Dhakal, 1	decentralization policy implementation	qualitative	37		In-depth interviews, focus group discussion, observation literature, and health facilities records reviews.		Theoretical relevance and on their long experience in the health and decentralization process.
2007	Tajikistan (25)	Barbara Ann Parfitt	Family Health Nursing	qualitative	27	Random sampling	interviews-focus groups-Observation	Framework analysis	Family Health Nurses, Family Physicians,

Table 2:Study characteristics

Country	Reform type	Data gathering tools	Study type	Data analyzing method
Mexico	1 Governance	2 Interview- document analysis	3 qualitative	9 Thematic analysis
Iran	1 Inpatient payment	1 Interview	4 multi-method situation appraisal	1 Measuring association
Uganda	1 Integrating mental health in PHC	2 Interview- questionnaire	1 multiple-case study design	1 Framework analysis
Kenya	1 Maternity health	1 Interview- document analysis- focus group discussion	3 cross-sectional descriptive study	1 Not clearly determined
South Africa	2 Community based services	1 Interview- - focus group discussion- observation	1	
Nepal	2 hospitals	1		
Tanzania	2 Health system strengthening	1		
Myanmar	1 Decentralization	2		
Tajikistan	1 Family health nursing	1		

Table 3: themes and subthemes extracted

Main themes	Themes	Subthemes	article no												
			1	2	3	4	5	6	7	8	9	10	11	12	
		sample size	189	20	18	100	97	17	51	69	19	23	37	27	
Challenges in service delivery in HCR	Financing challenges HCR	Inadequate founding	*		*		*	*			*	*		*	
		delay in funding						*				*			
		Unsustainability in financing resources		*	*		*							*	
		Unfair allocation of funding resources		*				*	*					*	
		The impact of donors interest			*										
	Stewardship (governance) challenges in HCR	Centralized responsibility	*					*	*	*				*	
		Lack in strategic direction	*		*			*	*	*				*	
		Weakness in legislations						*	*	*	*			*	
		Weakness in inter-sectorial and multi-sectorial collaborations			*	*	*	*	*				*	*	
		Inequity in resource allocation						*	*					*	
		Ethics issues						*						*	*
		Efficiency and effectiveness lack in							*					*	
		Poor information managemement systems			*				*						
		Weakness in monitoring and evaluation systems	*		*	*	*	*	*				*	*	
		Lack of Health HW (HW)	*	*	*			*	*	*	*	*	*	*	
	Resource generation challenges in HCR	Lacks in HW skills		*	*			*					*		
		Leaving the system by trained HW		*				*						*	
		Lacks in staff motivation			*			*	*			*	*	*	*
		Lacks in the education and training programs of the HW						*	*		*			*	
		Lacks in organizational structures and charts						*	*		*		*	*	
		High workload						*	*					*	
		Shortage of drugs			*			*	*						
		Centralized purchasing and supply of drugs			*			*	*						
		Workload of pharmacies						*	*						
		Lack of physical space and equipment			*			*			*			*	

## Figures

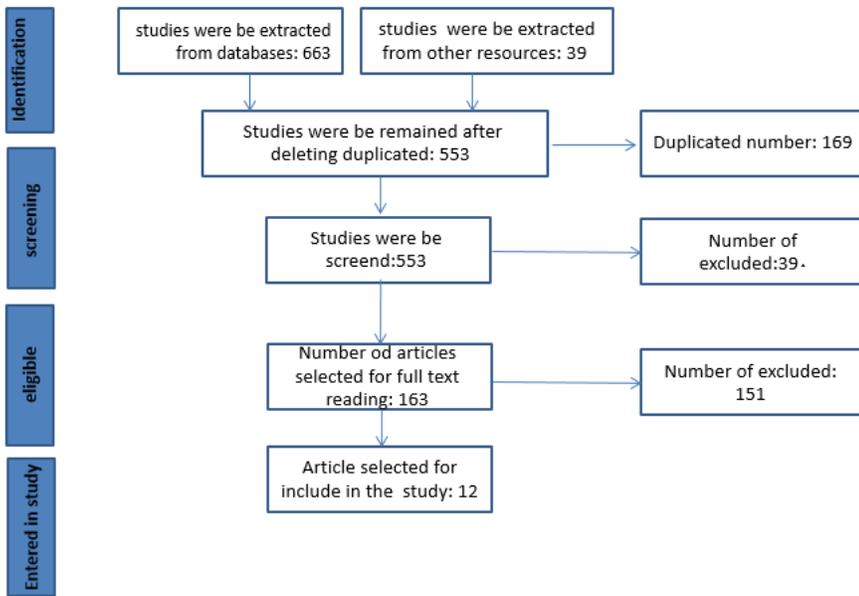


Figure 1

study selection process