

The Evaluation of Pharmacy Strategic Plan in Past 2013-2016 and Forecasting of New Vision 2030 at Ministry of Health in Saudi Arabia

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Abstract

Objective: To explore the outcomes of strategic plan implementations in past 2013-2016 and to update the pharmacy strategic plan based on new Saudi vision 2030. **Method:** It is a cross-sectional follow-up, monitor, and forecasting of General Administration of the pharmaceutical care strategic plan in 2016-2020. The authors review all six strategic plan, seventeen initiatives, and eighty-three projects. The Assessment from the baseline before applying the strategic plan 2013 to 2016 at MOH hospitals and primary care centers. The new updating of a strategic plan based new vision of Ministry of Health and Saudi vision 2030 and correlate with them accordingly. **Results:** The total project of past strategic plan was 84 projects. The total number of fully implemented projects were at hospital 29 (34.5%) projects, and primary care centers were 19 (22.6%) projects. The total number of some implemented programs at the hospital was 28 (33.33%) while at primary care centers were 26 (30.95%) projects. The total number not implemented at hospitals were 25 (29.76%) while at primary care centers were 36 (42.85%). The total number of new projects added to the new plan was seven, and a total number of deleted projects was one. The total number of projects with new strategic plan vision 2030 were ninety projects. **Conclusion:** The last pharmacy strategic plan at Ministry of Health organization was beneficial during 2013-2016. Several programs implemented for the first time. That is including but not limited to stewardship of antimicrobial program, pain management program, and medication safety program. The new updating pharmacy strategic plan compatible and support the Ministry of Health and Kingdom of Saudi Arabia new strategic plan with new vision 2030.

Key words: Pharmacy, Strategic plan, Forecasting, Vision 2030, Ministry of Health, Saudi Arabia.

INTRODUCTION

General administration of Pharmaceutical care started new pharmacy plan 2012-2022 in early 2013.^[1] The plan consisted of six strategic goals, seventeen initiatives, and eighty-three projects. The executive plan for each year initiated for each initiative and projects. Some project divided into several years and others for year applications. The General administration of pharmaceutical care setup strategies for each project. Each project assessed demand and needs based on some patient diseases, geographical area of disease, the meet Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) standard and Joint commission of hospital accreditation standards, available of pharmacy human resources, burden of drug-related problems, and burden of PharmacoEconomic issues. The general manager of pharmaceutical care formulated a central committee of this project headed by him and assisted by clinical pharmacist specializing in the project area. The committee consisted represented of twenty regions if the pharmacist is available. The plan for each project set up by the first meeting. Quality management indicators for each project stated. The represented pharmacist went to the region to implement this project with coordination of pharmaceutical care directorate in the region. The coordinator pharmacist of the committee followed up with all representatives for implementation and sent a monthly report to

the general manager of general administration of pharmaceutical care at Ministry of Health (MOH).^[2-3] All success stories start with a vision, and strong visions based on active initiatives, and projects. A vision statement is an aspirational statement of where want to be in the future. It should set the overall direction for the organizations and teams. Moreover, it needs to be bold and inspirational. The authors used several tools to follow up the implantation of the strategic plan. This plan needs to review annually and forecasting every three to four years. In late 2016, The Kingdom of Saudi Arabia launched the “Saudi Arabia’s Vision for 2030” with a strategic plan in the next upcoming fifteen years.^[4-5] It started delivering the overarching plans and projects that needed to be set out. There are several literatures discussed of follow up and forecasting of pharmacy strategic plan for instant American Society of Health-System Pharmacist (ASHP).^[6-9] They had system to follow up and forecasting their pharmacy strategic plan, for each parameter they measure the real situation and forecasting of the future. The authors not familiar with any publication to discussed pharmacy strategic plan and forecasting in Saudi Arabia or gulf and Middle East counties. The aim of the study to explore the results of implementations of strategic plan in past 2013-2016 and updating the pharmacy strategic plan based on new Saudi vision 2030.

METHOD

It is a cross-sectional follow-up, monitor, and forecasting of General Administration of the pharmaceutical care strategic plan in 2016-2020. The authors review all six strategic plan, seventeen initiatives, and eighty-three projects. The Assessment from the baseline before applying the strategic plan 2013 to 2016 at MOH hospitals and primary care centers. In addition to private sectors. The authors reviewed annual reports from each committee explained the stages of implementation. The new updating of a strategic plan based on new vision of Ministry of Health and Saudi vision 2030 and correlate with them accordingly.

RESULTS

The total project of past strategic plan was eighty-four projects. The total number of fully implemented projects were at hospital 29 (34.5%) projects, and primary care centers were 19 (22.6%) projects. The total number of some implemented programs at the hospital was 28 (33.33%) while at primary care centers were 26 (30.95%) projects. The total number not implemented at hospitals were 25 (29.76%) while at primary care centers were 36 (42.85%). The total number of new projects added to the new plan was seven, and total number of deleted projects was one. The total number of projects with new strategic plan vision 2030 were ninety projects. The total projects of the 1st strategic goal were 35 projects. The number of projected implemented at the hospitals were 18 (51.4%) projects, the number of projects with some implementation were 8 (22.85%) projects, and 9 (25.14%) projects not implemented. While in the primary care centers showed the number of projected implemented were 10 (28.57%) projects, the number of projects with some implementation were 8 (22.85%) projects, and 17 (48.57%) projects not implemented. In the private sectors all of the projects 35 (100%) not implemented. With new vision 2030 all projects suggested to continue expect one project related to network of drug information centers as showed in Table 1. The total of project of the 2nd strategic goal were 24 projects. The number of projected implemented at the hospitals were 4 (17.4%) projects, the number of projects with some implementation were 10 (43.47%) projects, and 8 (34.78%) projects not implemented. While in the primary care centers showed the number of projected implemented were 4 (17.4%) projects, the number of projects with some implementation were 10 (43.47%) projects, and 9 (41.6%) projects not implemented. In the private sectors all of the projects 23 (100%) not implemented. With new vision 2030 all projects suggested continuing with additional one project related to multidisciplinary research of pharmaceutical care as shown in Table 4.

The total of the project of the 3rd Strategic goal was eight projects. The number of projected implemented at the hospitals were 0 (0%) projects, the number of projects with some implementation was 2 (25%) projects, and 6 (75%) projects not implemented. While in the primary care centers showed the number of projected implemented were 2 (33.33%) projects, the number of projects with some implementation were 1 (16.66%) projects, and 3 (50%) projects not implemented as showed in Table 7. In the private sectors all of the projects 8 (100%) not implemented. With new vision 2030, all projects suggested continuing with additional three new projects related to printed patient counseling materials, national formulary connected with health insurance, and tele-pharmacy and telemedicine system as shown in Table 5. The total of the project of the 4th strategic goal was 11 projects. The number of projected implemented at the hospitals were 5 (45.45%) projects, the number of projects with some implementation was 5 (45.45%) projects, and 1 (9.1%) projects not implemented. While in the primary care centers showed the number of projected implemented were 5 (45.45%) projects, the number of projects with some implementation were 5 (45.45%) projects, and 1 (9.1%) projects not implemented. In the private sectors all of the projects 11 (100%) not implemented. With new vision 2030, all projects suggested continuing as shown in Table 6. The total of the project of the 5th strategic goal was seven

projects. The number of projected implemented at the hospitals were 2 (33.33%) projects, the number of projects with some implementation was 3 (50%) projects, and 1 (16.66%) projects not implemented. While in the primary care centers showed the number of projected implemented were 2 (33.33%) projects, the number of projects with some implementation were 1 (16.66%) projects, and 3 (50%) projects not implemented. In the private sectors all of the projects 6 (100%) not implemented. With new vision 2030, all projects suggested continuing with additional three new projects related to exchange system of medications, the business model of pharmacy projects, and clinical trial from pharmaceutical companies as shown in Table 5.

DISCUSSION

In the strategic goal number one with Pharmacy practice programs as follows; the general standard of hospital building with pharmacy equipment's, medical furniture, and nonmedical furniture and according to bed capacities released and distributed overall hospital pharmacies and primary care pharmacists.^[2] A number of TPN services in 24 hospitals in 2012 increase to 52 hospitals 2016.^[10] The Intravenous Admixture design established based on 797 United States standards, and a number of new IV room founded at 28 hospitals. In the clinical pharmacy programs; the Number of drug information services ten hospitals increased to 48 hospitals.^[3,11] The number hospital had Antimicrobial stewardship program in 2013 zero hospitals to 40 hospitals in 2016.^[12] The number of the hospital had pain management program from zero hospitals to 20 hospitals.^[13] The number of hospitals had an Anticoagulation program from none hospital in 2013 to 10 hospitals had this program. One of the famous and comprehensive programs was medication safety program; it covered twenty regions with more than two hundred hospitals. The incident of drug-related mortality decrease from fifteen cases within 2012 to zero cases in 2015.^[14-15] New pharmacy practice program implements at Ministry of Health hospital like Ramadan Pharmaceutical care, Mass gathering of pharmaceutical care.^[16-17] In The strategic goal number two with the Pharmacy human resources goal. The hospital pharmacy recruitment stranded changed from 0.04 pharmacist per bed to 0.2 pharmacists per bed with five fold increases. The number of clinical pharmacists increased tenfold.^[18] The primary care pharmacy recruitment stranded changed from one pharmacist to three pharmacists and one clinical pharmacist based on primary care center type.^[19] Patient satisfaction with pharmacy services is not existed in 2013. The hospital and primary care pharmacies applied this system in 2014 with results of scoring average four for three primary care centers pharmacies as pilot studies published in elsewhere.^[20] In the strategic goal number three with Pharmacy informatics and automation; the number of hospitals had computerized physician order enter ten in 2013 then increase to 45 hospitals in 2016. The pharmacy automation existed in ten hospitals in 2013 then increased to 20 hospitals.^[2] In the strategic goal number four with the Pharmacy culture the Patient medication counseling program not existed in 2013. The complete proposal and system with a memo sent to twenty-one region to apply this program.^[2] In the strategic goal number five, several programs measured the economic impact and cost burden of the pharmacy practice program for instant medication safety and drug information services.^[11,21-22]

CONCLUSION

One-third of the updated pharmacy strategic plan implemented during the past four years at Ministry of Health hospitals and primary care centers. Several new pharmacy administration and pharmacy practice implemented. The new pharmacy strategic plan with vision 2030, will cover all governmental and private sectors with new cost-efficiency and best utilization projects and programs.

Table 1: The 1st strategic goal (SG) follow up and Forecasting of Pharmacy strategic plan 2010-2020 and Pharmacy strategic plan based on 2030.						
1. Provide complete pharmaceutical care with safety and best practice						
Initiative 1.1: Development of pharmaceutical care departments at all Governmental or Privates health care setting.						
Project No.	Project name	MOH hospital	MOH PCC	Privates	Pharmacy 2030 vision	MOH 2030 vision
1.1.1	Make annual national survey to measure the current practice of pharmaceutical care departments.	Implemented	Not done	Not done	Continue	10th SG
1.1.2	Setup performance standards of pharmaceutical care departments.	Some implemented	Some implemented	Not done	Continue	10th SG
1.1.3	Unify the policies and procedures pharmaceutical care departments	Implemented	Implemented	Not done	Continue	10th SG
1.1.4	Update and implement the pharmacy practice law and regulations in all healthcare setting	Not done	Not done	Not done	Continue	10th SG
1.1.5	Setup key pharmacy indicators for the pharmaceutical care departments	Implemented	Implemented	Not done	Continue	10th SG
1.1.6	Implement of national and international pharmacy practice standards at all healthcare setting	Some implemented	Some implemented	Not done	Continue	10th SG
1.1.7	Implement the pharmacy practice setting to get the accreditation at all health care setting	Implemented	Some implemented	Not done	Continue	10 th SG
1.1.8	Collaborate with the national organization and stakeholders for best pharmacy practice in all healthcare setting	Implemented	Implemented	Not done	Continue	10 th SG
1.1.9	Implement patient satisfaction for pharmaceutical care services.	Implemented	Implemented	Not done	Continue	10th SG
Initiative 1.2: Review the equipment and supplies of pharmaceutical care departments at Ministry of Health hospitals care and primary care centers						
1.2.1	Unify the specifications and requirements of pharmaceutical care departments	Implemented	Implemented	Not done	Continue	8th SG
1.2.2	Provision of equipment and supplies pharmaceutical care departments according to the standards.	Implemented	Implemented	Not done	Continue	8th SG
1.2.3	Maintenance and replacement of old devices pharmaceutical care departments with new one	Some implemented	Some implemented	Not done	Continue	8th SG
Initiative 1.3: Implement patients and staff safety in the pharmaceutical care departments at all Governmental or Privates healthcare setting						
1.3.1:	Implement the national medication safety program in all healthcare setting	Implemented	Some implemented	Not done	Continue	4th SG, 15th SG
1.3.2	Implement patients medication education and counseling program in all healthcare setting	Some implemented	Not done	Not done	Continue	4th SG, 15th SG
1.3.3	Establish a network of drug information centers of pharmaceutical care departments in all healthcare setting	Implemented	Not done	Not done	Delete	4th SG, 15th SG
1.3.4	Provide scientific references and electronic library for the departments and sections of the pharmaceutical care departments at all healthcare setting	Implemented	Some implemented	Not done	Continue	4th SG, 15th SG
1.3.5	Implement the national pharmacy practice programs for adults and pediatrics at all healthcare setting with emphasis on community pharmacy as shown in Table 2, and Table 3. In addition to previous specialties in the past pharmacy strategic plan	Implemented	Not done	Not done	Continue	4th SG, 15th SG
1.3.6	Implement the national clinical pharmacy programs for adults and pediatrics at all healthcare setting with emphasis on community pharmacy as shown in Table 2, and Table 3. In addition to previous specialties in the past pharmacy strategic plan	Implemented	Not done	Not done	Continue	4 th SG, 15 th SG

continued....

Table 1: The 1st strategic goal (SG) follow up and Forecasting of Pharmacy strategic plan 2010-2020 and Pharmacy strategic plan based on 2030.

Initiative 1.4: Implement pharmacy public health in all healthcare setting									
1.4.1	Participate in world chronic diseases and pharmacy days exhibitions at all healthcare setting	Implemented	Implemented	Not done	Continue	11th SG, 13th SG, 14th SG			
1.4.2	Participate in public medication education through national and social media in all healthcare setting	Implemented	Implemented	Not done	Continue	11th SG, 13th SG, 14th SG			
1.4.3	Implement drug-related problems program in all healthcare setting	Not done	Not done	Not done	Continue	11th SG, 13th SG, 14th SG			
1.4.4	Implement the pharmacy home care programs for adults and pediatricians at all healthcare setting	Implemented	Not done	Not done	Continue with high properties	11th SG, 13th SG, 14th SG			
1.4.5	Implement the ambulatory care clinics programs for adults and pediatricians at all healthcare setting	Not done	Not done	Not done	Continue with high properties	11th SG, 13th SG, 14th SG			
1.4.6	Implement the national mass gathering pharmacy practice and mass gathering pharmacy practice programs for adults and pediatricians at all healthcare setting	Implemented	Implemented	Not done	Continue	11th SG, 13th SG, 14th SG			
1.4.7	Implement the Ramadan pharmaceutical care programs for adults and pediatricians at all healthcare setting	Implemented	Implemented	Not done	Continue	11th SG, 13th SG, 14th SG			
Initiative 1.5: Develop and implement evidence-based medical and pharmacy guidelines at all healthcare setting									
1.5.1	Implement the national evidence-based medical guidelines for common diseases at all healthcare setting	Some Implemented	Some Implemented	Not done	Continue	4th SG, 15th SG			
1.5.2	Implement the national evidence-based pharmacy guidelines for common diseases at all healthcare setting	Not done	Not done	Not done	Continue	4th SG, 15th SG			
1.5.3	Measure the national evidence-based medical guidelines outcome indicators in all healthcare setting	Some Implemented	Some Implemented	Not done	Continue	4th SG, 15th SG			
1.5.4	Measure the national evidence-based pharmacy guidelines outcome indicators in all healthcare setting	Not done	Not done	Not done	Continue	4th SG, 15th SG			
1.5.5	Measure the national pharmacy practice programs outcomes for adults and pediatricians at all healthcare setting	Some Implemented	Not done	Not done	Continue	4th SG, 15th SG			
1.5.6	Measure the national clinical pharmacy programs outcomes for adults and pediatricians at all healthcare setting	Some Implemented	Not done	Not done	Continue	4th SG, 15th SG			
Initiative 1.6: Develop and implement medications supply system and guidelines at all healthcare setting									
1.6.1	Implement the national inventory management system in all healthcare setting	Not done	Not done	Not done	Continue	10th SG, 15th SG			
1.6.2	Implement the formulary management guidelines at all healthcare setting	Not done	Not done	Not done	Continue	10th SG, 15th SG			
1.6.3	Measure the medications supply monitoring indicators in all healthcare setting	Not done	Not done	Not done	Continue	10th SG, 15th SG			
1.6.4	Apply therapeutic interchange program at all healthcare setting	Not done	Not done	Not done	Continue	10 th SG, 15 th SG			

Table 2: Some examples of national community pharmacy practise and community pharmacy programs for adults and peditrics.

Program	Community Pharmacy Practice	Community Clinical Pharmacy
Adults	Adults MTM Ambulatory Care Pharmacy Adults Clinical compounding Adults Community Pharmacy Informatics Adults Community Pharmacy Human Resources Adults Community Medical and Pharmacy Education Adults Community Pharmacy Public Health	Community Adult General Medicine Community General Pediatrics Community General Psychiatry Community General Family Medicine Community General Dental Therapy and oral medicine Managed Care Community Pharmacy Community Adult General Medicine Community Adults Cardiology Community Adults Nephrology Community Adults Infectious Diseases Community Adults Endocrinology& Metabolism Community Adult Pulmonary Diseases Community Adult Hematology and Anticoagulation Community Adult Oncology Community Adult Drug Utilization Evaluation Community Adult Drug Information Community Adult Medication Safety Community Adults Pharmacoeconomics Community Adults Psychiatry Community Adult Dental Therapy and oral medicine Community Adults Organ Transplant Community Adults Pharmacogenomics Community General Psychiatry Community Child / Adolescent Psychiatry Community Addiction Medicine Community Geriatric Psychiatry Community Adults Psychiatry Community General Family Medicine Community Pharmacy Public Health Community Geriatric Medicine Community Pharmacy Home Health Care Community Mass Gathering Pharmaceutical Care
Pediatrics	Pediatrics MTM Ambulatory Care Pharmacy Community Pediatrics Clinical compounding Community Pediatric Oncology Preparation Community Pediatrics Pharmacy Informatics Community Pediatrics Pharmacy Human Resources Community Pediatrics Medical and Pharmacy Education Community Pediatrics Pharmacy Public Health	Community General Pediatrics: Community Pediatrics Endocrinology Community Pediatrics Nephrology Community Pediatrics Hematology and Anticoagulation Community Pediatrics Oncology Community Pediatrics Infectious Diseases Community Pediatrics Pulmonary Diseases Community Pediatrics Cardiology Community Pediatrics Drug Utilization Evaluation Community Pediatrics Drug Information Community Pediatrics Medication Safety Community Pediatrics Pharmacoeconomics Community Pediatrics Dental Therapy and oral medicine Community Pediatrics Organ Transplant Community Pediatric Pain Management Community Pediatrics Pharmacogenomics

Table 3: Some examples of Community ambulatory care clinics for adults and peditrics.

Program	Community Ambulatory care clinics for adults	Community Ambulatory care clinics for peditrics
Adults	Community Adults Cardiology Clinics Community Adults Nephrology Clinics Community Adults Infectious Diseases Clinics Community Adults Endocrinology & Metabolism Clinics Community Adult Pulmonary Diseases Clinics Community Adult Hematology and Anticoagulation Clinics Community Adult Oncology Clinics Community Adult Patient Medication Education Clinics Community Addiction Medicine Clinics Community Adults Psychiatry Clinics Community Adults Organ Transplant Clinics Community Adults HIV Clinics Community Adults Hepatology Clinics Community Adults Family Medicine Clinics Community Geriatric Psychiatry Clinics Community Adults Pain Management Clinics	Community Pediatrics Endocrinology Clinics Community Pediatrics Nephrology Clinics Community Pediatrics Hematology and Anticoagulation Clinics Community Pediatrics Oncology Clinics Community Pediatrics Infectious Diseases Clinics Community Pediatrics Pharmacy Infection Control Clinics Community Pediatrics Pulmonary Diseases Clinics Community Pediatrics Cardiology Clinics Community Pediatrics Patient Medication Education Clinics Community Pediatrics Organ Transplant Clinics Community Pediatrics Endocrinology& Metabolism Clinics Community Pediatrics Psychiatry Clinics Community Pediatrics Family Medicine Clinics Community Pediatric Pain Management Clinics

Table 4: The 2nd strategic goal (SG) follow up and Forecasting of Pharmacy strategic plan 2010-2020 and Pharmacy strategic plan based on 2030.									
2. Develop and implement pharmaceutical care human resources									
Initiative 2.1: Plan and implement of the workforce in pharmaceutical care departments at all healthcare setting									
Project No.	Project name	MOH hospital	MOH PCC	Privates	Pharmacy 2030 vision	MOH 2030 vision	KSA 2030 vision		
2.1.1	Update of workforce standard of pharmaceutical care departments annually at all healthcare setting	Implemented	Implemented	Not done	Continue	4th SG	Improve the quality of healthcare services (preventive or therapeutic)		
2.1.2	Review of job titles for workers in the field of pharmaceutical care	Not done	Not done	Not done	Continue	4th SG, 10th SG	Provide citizens with knowledge and skills to meet the future needs of the labor market		
2.1.3	Correct functional and places staffs for those working in the field of pharmaceutical care	Some implemented	Some implemented	Not done	Continue	4th SG, 10th SG	Achieve the highest levels of transparency and good governance in all sectors		
2.1.4	Attract talent in the field of pharmaceutical care and conservation.	Some implemented	Some implemented	Not done	Continue	4 th SG, 10 th SG	Improve performance, productivity, and flexibility of public authorities		
2.1.5	Create jobs in the field of pharmaceutical care according to the standards.	Some implemented	Some implemented	Not done	Continue	4 th SG, 10 th SG			
2.1.6	Implement the national pharmacy administration programs at all healthcare setting	Some implemented	Some implemented	Not done	Continue	4 th SG, 10 th SG			
2.1.7	Apply the national clinical pharmacy administration programs at all healthcare setting	Some implemented	Some implemented	Not done	Continue	4 th SG, 6 th SG, 10 th SG			
Initiative 2.2: Start development programs for employees pharmaceutical care departments in all healthcare setting									
2.2.1	Prepare leaders in the pharmaceutical care specialties.	Some implemented	Some implemented	Not done	Continue	4th SG, 15th SG			
2.2.2	Disseminate the quality concept and culture between pharmaceutical care personnel	Implemented	Implemented	Not done	Continue	15th SG			
2.2.3	Prepare for quality and safety leaders in the pharmaceutical care departments	Some implemented	Some implemented	Not done	Continue	15th SG			
2.2.4	Establish the concepts of the mentorship and preceptorship, to learn all newly graduated pharmacists, residents, and internships.	Some implemented	Some implemented	Not done	Continue	4th SG			
2.2.5	Provide specialized training in all fields of pharmaceutical care.	Some implemented	Some implemented	Not done	Continue	4th SG			
2.2.6	Implement an interactive pharmacy education, through electronic distance education in all disciplines of pharmaceutical care with credit hours from Saudi Counsel	Not done	Not done	Not done	Continue	4th SG			
Initiative 2.3: Start development Training programs for workers in pharmaceutical care departments at all health care setting									
2.3.1:	Start Bridging Program for pharmacy technicians to Bsc Pharm or Pharm D.	Implemented	Implemented	Not done	Continue	4th SG			
2.3.2	Provide Graduate Studies (fellowship / Master / Ph.D.) or postgraduate year 1,2,3, and four residencies in the field of clinical pharmacy	Implemented	Implemented	Not done	Continue	4th SG			
2.3.3	Implement board certification specialty to all pharmacy practice discipline at all health care setting.	Some implemented	Not done	Not done	Continue	4th SG			
2.3.4	Build infrastructure career pathway for pharmaceutical care graduate programs.	Some implemented	Some implemented	Not done	Continue	4th SG			
2.3.5	Apply regional and international partners in development programs.	Not done	Not done	Not done	Continue	4th SG			

continued....

Table 4: The 2nd strategic goal (SG) follow up and Forecasting of Pharmacy strategic plan 2010-2020 and Pharmacy strategic plan based on 2030.

2.3.5	Implement national and international accreditation of pharmacy training and education programs	Not done	Not done	Not done	Not done	Continue	4th SG
Initiative 2.4: Implement of scientific research in the disciplines of pharmaceutical care.							
2.4.1	Distribute scientific research culture of at pharmaceutical care departments.	Not done	Not done	Not done	Not done	Continue	4th SG
2.4.2	Build databases for research and studies of pharmaceutical care specialties.	Not done	Not done	Not done	Not done	Continue	4th SG
2.4.3	Provide financial support mechanisms for scientific research in pharmaceutical care.	Not done	Not done	Not done	Not done	Continue	4th SG
2.4.4	Start partnership with national and international universities of excellence in pharmaceutical care research.	Not done	Not done	Not done	Not done	Continue	4th SG
2.4.5	Provide pharmaceutical care publication services through a partnership with national and international biomedical journal	Implemented	Implemented	Implemented	Not done	Continue	4th SG
2.4.6	Start integrated multidisciplinary research within and with other departments related to the pharmaceutical departments	Not done	Not done	Not done	Not done	New	4th SG

Table 5: The 3rd strategic goal (SG) follow up and Forecasting of Pharmacy strategic plan 2010-2020 and Pharmacy strategic plan based on 2030.

3. Provide Complete Pharmacy Electronic Services							
Initiative 3-1: Implement Electronic pharmaceutical care Services at Ministry of Health hospitals and Primary Care Centers.							
Project No.	Project name	MOH hospital	MOH PCC	Privates	Pharmacy 2030 vision	MOH 2030 vision	
3.1.1	Implement electronic prescription or Computerized Physician Order Entry (CPOE) at all healthcare setting	Some implemented	Some implemented	Not done	Continue	3rd SG	KSA 2030 vision
3.1.2	Apply network of hardware and software departments and sections of pharmaceutical care system.	Not done	Not done	Not done	Continue	3rd SG	Improve the quality of healthcare services (preventive or therapeutic) Achieve the highest levels of transparency and good governance in all sectors Improve performance, productivity, and flexibility of public authorities
3.1.3	Implement interactive clinical decision support system through CPOE at all healthcare setting	Not done	Not done	Not done	Continue	3rd SG	
3.1.4	Implement an electronic documentation system in pharmacy practice in all healthcare setting	Some implemented	Some implemented	Not done	Continue	3rd SG	
3.1.5	Provide pharmacy robotic system in pharmaceutical care departments in all healthcare setting	Not done	Not done	Not done	Continue	3rd SG	
3.1.6	Provide pharmacy personal digital assessment system and mobile device applications in pharmaceutical care departments in all healthcare setting	Not done	Not done	Not done	Continue	3rd SG	
3.1.7	Start electronic information systems and archiving at all healthcare setting	Not done	Not done	Not done	Continue	3rd SG	
3.1.8	Start to unify electronic medication patient profile and health record network in all healthcare setting	Not done	Not done	Not done	Continue	3rd SG	
3.1.8	Implement an electronic system for health insurance at all healthcare setting	Not done	Not done	Not done	Continue	3rd SG	
3.1.9	Provide a system, with a quickly printed patient counseling materials for the essential medications in the hospitals in different languages	Not done	Not done	Not done	New	3rd SG	
3.1.10	Provide new work of national formulary connected with all sub-formulary for each health institutions and sectors	Not done	Not done	Not done	New	3rd SG	
3.1.11	Implement the telepharmacy and telemedicine system at all healthcare organization.	Not done	Not done	Not done	New	3rd SG	

Table 6: The 4th strategic goal (SG) follow up and Forecasting of Pharmacy strategic plan 2010-2020 and Pharmacy strategic plan based on 2030.

4. Establish innovation and encouragement culture at all pharmacy setting									
Initiative 4.1: Improved ergonomics administrative departments and sections of pharmaceutical care Services at Ministry of Health hospitals and Primary Care Centers.									
Project No.	Project name	MOH hospital	MOH PCC	Privates	Pharmacy 2030 vision	MOH 2030 vision	KSA 2030 vision		
4.1.1	Effective and best utilization of pharmacy technician in all healthcare setting	Some implemented	Some implemented	Not done	Continue	2 nd SG, 8 th SG	Enhance the livability of Saudi cities		
4.1.2	Setup a culture of pharmacy innovation in all healthcare setting.	Some implemented	Some implemented	Not done	Continue	5 th SG, 8 th SG	Improve the quality of healthcare services (preventive or therapeutic.)		
4.1.3	Provide pharmacy staff promotion program in all healthcare setting.	Implemented	Implemented	Not done	Continue	5 th SG, 8 th SG			
4.1.4	Provide awards of excellence in the performance of the employees of pharmaceutical care departments.	Implemented	Implemented	Not done	Continue	5 th SG, 8 th SG	Improve performance, productivity, and flexibility of public authorities		
4.1.5	Implement of pharmacist job satisfaction program at all healthcare setting	Implemented	Implemented	Not done	Continue	5 th SG, 8 th SG			
4.1.6	Increase pharmacy staff retention at all healthcare setting	Some implemented	Some implemented	Not done	Continue	5 th SG, 8 th SG			
4.1.7	Implement pharmacist team-based delivery with physicians and nurses, with each member has a unique discipline contribution and complementing not competing with at all healthcare setting	Some implemented	Some implemented	Not done	Continue	5 th SG, 8 th SG			
4.1.8	Provide job titles and policies and procedures of the working directory	Not done	Not done	Not done	New	5 th SG, 8 th SG			
Initiative 4.2: Improve the physical work environment departments and sections of pharmaceutical care Department at Ministry of Health hospitals and Primary Care Centers.									
4.2.1	Review of pharmacy building designs at pharmaceutical care Department at Ministry of Health hospitals and Primary Care Centers.	Some implemented	Some implemented	Not done	Continue	8 th SG			
4.2.2	Setup of a Guide Directory to the design standards and descriptions of pharmaceutical care Department at Ministry of Health hospitals and Primary Care Centers.	Implemented	Implemented	Not done	Continue	8 th SG			
4.2.3	Provide Intra and Inter e-communication and social media between departments and personnel departments of	Implemented	Implemented	Not done	Continue	3 rd SG, 8 th SG			

Table 7: The 5th strategic goal (SG) follow up and Forecasting of Pharmacy strategic plan 2010-2020 and Pharmacy strategic plan based on 2030.

5. Best Utilization Resources based on Pharmacoeconomics and Health Economics Strategies									
Initiative 5.1 Monitor costs efficiency and rationalize spending departments and sections of pharmaceutical care Department at Ministry of Health hospitals and Primary Care Centers.									
Ministry of Health hospitals and Primary Care Centers.									
Project No.	Project name	MOH hospital	MOH PCC	Privates	Pharmacy 2030 vision	MOH 2030 vision	KSA 2030 vision		
5.1.1	Start Measurement of pharmacists and pharmacists clinical productivity.	Implemented	Implemented	Not done	Continue	2 nd SG	Improve the quality of healthcare services (preventive or therapeutic.)		
5.1.2	Start measuring the productivity of pharmacy technician.	Implemented	Implemented	Not done	Continue	2 nd SG			
5.1.3	Implement of Measuring the cost of drug therapy for the disease.	Some implemented	Not done	Not done	Continue	2 nd SG			
5.1.4	Implement of Measuring the cost of drugs problems.	Some implemented	Not done	Not done	Continue	2 nd SG	Achieve the highest levels of transparency and good governance in all sectors		
5.1.5	Apply the follow-up to the optimal use of drugs program for all type of patients.	Some implemented	Some implemented	Not done	Continue	2 nd SG			
5.1.6	Implement the interchange system of medication at all healthcare organizations	Not done	Not done	Not done	New	2 nd SG			
5.1.7	Start create the business model for the pharmaceutical care departments	Not done	Not done	Not done	New	2 nd SG, 12 th SG	Achieve budgetary balance		
Initiative 5.2: Development of financial self-resources.									
5.2.1	Provide pharmaceutical care services to the private sector	Not done	Not done	Not done	Continue	2 nd SG			
5.2.2	Implement the clinical trial from pharmaceutical companies at all healthcare organization	Not done	Not done	Not done	New	2 nd SG, 12 th SG			

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None.

CONFLICT OF INTEREST

None.

ABBREVIATIONS

KSA: Kingdom of Saudi Arabia; ASHP: American Society of Health-System Pharmacist; MOH: Ministry of Health; USA: United States of America.

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