National Pharmacist Competency System at Ministry of Health Hospitals in Saudi Arabia

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Abstract

National Pharmacy Competency System is unique program founded at Ministry of Health in Saudi Arabia. The program is a part of the general administration care strategic plan. The program consisted of three categories, including a general core of general pharmacist competency and clinical pharmacist competency. In addition to pharmacy management skills competency, and advance with different specialization of clinical pharmacy competency. The pharmacy competency system should perform at least annually. It is very hard to find a study to examine the extent application of pharmacist competency. Most of the works of literature discussed in single or one section of pharmacy practice. This system improves pharmacy practice, with the emphasis on drug therapy monitoring, prevent a drug related problem, and improve patient outcome therapy.

Keywords: National; Pharmacist Competency; Pharmaceutical Care; Ministry of Health; Saudi Arabia

Abbreviations: MOH: Ministry of Health; GAPC: General Administration of Pharmaceutical Care; ACC: American College of Clinical Pharmacist; IPF: Internal Pharmaceutical Federation; PSI: Pharmaceutical Society of Ireland

Introduction

Ministry of Health (MOH) in Saudi Arabia established general strategic planning for health care system [1]. This plan should apply to more 270 hospitals, and all medical cities [1]. All general administrations at MOH should establish their pharmacy strategic plan based on that. General Administration of Pharmaceutical Care (GAPC) at Ministry of Health established a general strategic planning of pharmaceutical care for all hospitals and primary care centers [2-3]. Also, GAPC founded some measurement indicators to follow the implementation of this plan; pharmacist competencies system was one of them. Pharmacy human resources development is one of the primary objectives of the general pharmacy strategic plan; a pharmacy competency is an excellent indicator used for follow-up pharmacy resources implementation.

In the literature, they defined the competency as “having the requisite ability or qualities” [4]. The statement applies in pharmacy practice and clinical pharmacy specialties [5-6]. Pharmacist competency is one of the methods to improve pharmacy practice and pharmacy total quality management. It needs to require the international standard of Joint Commission of Hospital Accreditation and local standards of Saudi center of health care accreditation.

Benefit of Pharmacy Competency

Pharmacy competencies improve pharmacy practice and clinical pharmacy skills. A study in the United state of America founded 88% of responders pharmacist agreed that the competency program was informative and supportive of their daily patient care activities [7]. Another study in Croatia established that is Competency Development and Evaluation significant differences in the pharmacy practice with emphasis on patient consultation, monitoring drug therapy, medicine information, and patient education [8]. Also, the authors found from the study conducted in the UK; that is competencies improved significantly from baseline; it was aspects of medication history taking; medication management; identification, documentation and resolution of drug-related problems; appraisal of therapeutic options; and communication with doctors and nurses [9].

Pharmacy Competency Implementation in Saudi Arabia

The pharmacist competency consisted of three parts, the first part of basic requirements for all pharmacists hold the
Bachelor of Pharmacy or Doctor of Pharmacy (Pham D), and practice competencies as the general pharmacist. This tool based on American College of Clinical Pharmacist (ACC), The National Association of Pharmacy Regulatory Authorities in Canada, The Pharmacy Council of New Zealand, Internal Pharmaceutical Federation (IPF), and Pharmaceutical Society of Ireland (PSI) [6,10-13]. The second part of administrative pharmacy practice competencies including but not limited to the following; director of the pharmacy, clinical manager, staff pharmacist, compounding sterile preparation, emergency management, fire safety, infection control, information management, medication safety, and patient counseling (Figure 1) [14]. The third part of the specialized requirement based on their type of practice. (Tables 1 & 2) [15-20].

Table 1: Some examples Competencies of national pharmacy practice and clinical pharmacy programs for adults and pediatrics.

| Program            | Competency of Pharmacy Practice                                                                 | Competency of Clinical Pharmacy                                                                 |
|--------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Adults             | Adults MTM Acute Care Pharmacy Competency                                                        | Adult General Medicine                                                                         |
|                    | Adults MTM Ambulatory Care Pharmacy Competency                                                     | Adult Internal Medicine Competency                                                               |
|                    | Adults Clinical compounding Competency                                                            | Adults Cardiology Competency                                                                     |
|                    | Adults IV Therapy Competency                                                                     | Adults Nephrology Competency                                                                     |
|                    | Adults Total Parenteral Nutrition Preparation Competency                                          | Adults Infectious Diseases Competency                                                            |
|                    | Adults Oncology Preparation Competency                                                            | Adults Pharmacy Infection Control Competency                                                     |
|                    | Adults Pharmacy Informatics Competency                                                             | Adults Endocrinology & Metabolism Competency                                                     |
|                    | Adults Pharmacy Human Resources Competency                                                         | Adult Pulmonary Diseases Competency                                                               |
|                    | Adults Medical and Pharmacy Education Competency                                                   | Adult Hematology and Anticoagulation Competency                                                  |
|                    | Adults Pharmacy Public Health Competency                                                           | Adult Oncology Competency                                                                        |
|                    | Adult MTM Ambulatory Care Pharmacy Competency                                                      | Adult Drug Utilization Evaluation Competency                                                      |
|                    | Adult MTM Acute Care Pharmacy Competency                                                           | Adult Drug Information Competency                                                                 |
|                    | Adult MTM Ambulatory Care Pharmacy Competency                                                      | Adult Medication Safety Competency                                                                 |
|                    | Adult MTM Acute Care Pharmacy Competency                                                           | Adults Pharmacoeconomics Competency                                                               |
|                    | Adult MTM Ambulatory Care Pharmacy Competency                                                      | Adult Emergency Competency                                                                       |
|                    | Adult IV Therapy Competency                                                                       | Adult Dental Therapy and Oral Medicine Competency                                                 |
|                    | Adult Total Parenteral Nutrition Preparation Competency                                            | Adult Therapeutic Drug Monitoring and Pharmacokinetics Competency                                |
|                    | Adult Oncology Preparation Competency                                                             | Adults Pharmacy Infection Control Competency                                                      |
|                    | Adult Pharmacy Informatics Competency                                                              | Adults Ambulatory Care and Primary Care Competency                                                |
|                    | Adult Pharmacy Human Resources Competency                                                          | Adults Organ Transplant Competency                                                                |
|                    | Adult Medical and Pharmacy Education Competency                                                    | Adults Pharmacogenomics Competency                                                                |
|                    | Adult Pharmacy Public Health Competency                                                            | General Anesthesia and Surgery                                                                   |
|                    | Adult MTM Acute Care Pharmacy Competency                                                           | Adult Anesthesia and Surgery Competency                                                           |
|                    | Adult MTM Ambulatory Care Pharmacy Competency                                                      | Adult Intensive Care Competency                                                                   |
|                    | Adult MTM Acute Care Pharmacy Competency                                                           | Adults Total Parenteral Nutrition Competency                                                      |
|                    | Adult MTM Ambulatory Care Pharmacy Competency                                                      | Adults Pain Management Competency                                                                 |
|                    | Adult IV Therapy Competency                                                                       | General Psychiatry                                                                                |
|                    | Adult Total Parenteral Nutrition Preparation Competency                                            | Child / Adolescent Psychiatry Competency                                                           |
|                    | Adult Oncology Preparation Competency                                                              | Addiction Medicine Competency                                                                     |
|                    | Adult Pharmacy Informatics Competency                                                              | Geriatric Psychiatry Competency                                                                   |
|                    | Adult Pharmacy Human Resources Competency                                                          | Adults Psychiatry Competency                                                                       |
|                    | Adult Medical and Pharmacy Education Competency                                                    | Addiction Medicine Competency                                                                     |
|                    | Adult Pharmacy Public Health Competency                                                            |                                                                                                   |
| Pediatrics | General Family Medicine |
|------------|------------------------|
|            | Managed Care Pharmacy Competency |
|            | Pharmacy Public Health Competency |
|            | Geriatric Medicine Competency |
|            | Adults Ambulatory Care and Primary Care Competency |
|            | Pediatrics-Ambulatory Care and Primary Care Competency |
|            | Pharmacy Home Health Care Competency |
|            | Mass Gathering Pharmaceutical Care Competency |
|            | Ramadan Pharmaceutical Care Competency |
| Pediatrics | General Pediatrics |
|            | Pediatrics Endocrinology Competency |
|            | Pediatrics Nephrology Competency |
|            | Pediatrics Hematology and Anticoagulation Competency |
|            | Pediatrics Oncology Competency |
|            | Pediatrics Infectious Diseases Competency |
|            | Pediatrics Pharmacy Infection Control Competency |
|            | Pediatrics Pulmonary Diseases Competency |
|            | Pediatrics Cardiology Competency |
|            | Pediatrics Drug Utilization Evaluation Competency |
|            | Pediatrics Drug Information Competency |
|            | Pediatric Medication Safety Competency |
|            | Pediatrics Pharmacoconomics Competency |
|            | Pediatrics Emergency Competency |
|            | Pediatrics and neonate Parenteral Nutrition Competency |
|            | Pediatrics Dental Therapy and oral medicine Competency |
|            | Pediatrics Therapeutic Drug Monitoring and Pharmacokinetics Competency |
|            | Pediatric Organ Transplant Competency |
|            | Pediatrics Anesthesia and Surgery Competency |
|            | Pediatrics Intensive Care Competency |
|            | Neonatal Intensive Care Competency |
|            | Pediatrics Total Parenteral Nutrition Competency |
|            | Pediatric Pain Management Competency |
|            | Pediatrics Pharmacogenomics Competency |
| Pediatrics | Pediatrics MTM Inpatient Pharmacy Competency |
| Pediatrics | Pediatrics MTM Outpatient Pharmacy Competency |
| Pediatrics | Pediatrics Clinical compounding Competency |
| Pediatrics | Pediatrics IV Therapy Competency |
| Pediatrics | Pediatrics Total Parenteral Nutrition Preparation Competency |
| Pediatrics | Pediatric Oncology Preparation Competency |
| Pediatrics | Pediatrics Pharmacy Informatics Competency |
| Pediatrics | Pediatrics Pharmacy Human Resources Competency |
| Pediatrics | Pediatrics Medical and Pharmacy Education Competency |
| Pediatrics | Pediatrics Pharmacy Public Health Competency |
Table 2: Some examples Competency of ambulatory care clinics for adults and pediatrics.

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

Figure 1: The second part of administrative pharmacy practice competencies.

In the international literature; one study conducted in Thailand, the author, found the highest scoring of attitude toward pharmacy competencies was a providing of pharmaceutical care and drug use plans in the community among hospital pharmacists [21]. Another local study conducted in Saudi Arabia about Competency of Metered-Dose Inhaler Use with community pharmacist; the authors found very wide range 5-100% competencies of the elements [22]. The National Pharmacist Competency System is the first apply in Saudi Arabia and second in the Gulf and the Middle East countries [23]. The author is not familiar with any kinds of literature, or published studies measure the extent applications of this system. The system started in 2013 and distributed to overall Ministry of Health hospitals, the measurement of pharmacist competency should do on an annual basis. In 2015, the author and his team at GAPC converted into an electronic form through monkey survey on MOH website [24].

Conclusion

National pharmacist competency system is new system founded at MOH hospitals; the system implementation improves pharmaceutical care delivered to the patients. It prevents drug misadventures, improve patient quality of life and raise patient satisfaction on health care system.

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