Pharmacy Infection Control: Worker's Competency

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ABSTRACT

Objective: In this study, we aimed to declare the competency of the Infection control policy in pharmacy practice as a new initiative in Saudi Arabia. **Methods:** This is a narrative review of pharmacy infection control. A literature search was performed using various databases, including PubMed, Medline, and Google Scholar, about specific pharmacy practice infection control policies and procedures. The search period was from the 1960s until October 2021. The terms were in English and included narrative review, systemic review, meta-analysis, and guidelines across all hospitals and community pharmacy services. Moreover, the National and international guidelines of general research in hospital and pharmacy practice guide the current review. The committee of pharmacy infection control formulated and consisted of various experts, including clinical pharmacists, drug information pharmacists, and clinical infection control specialists. Some authors drafted the policy and procedures, and the other member reviewed and corrected them. The third revision was by the infection control specialist. The study emphasizes the competency of Pharmacy infection control policies and procedures. **Results:** The Pharmacy infection control policy covered a variety of topics. It has included steps toward competency in pharmacy practice. Five models were included in the competency of pharmacy infection control policy. For example, patient care, infection control abilities, communication, professionalism, and ongoing professional development are required. In addition, each model included information about education and training, assessment types, and scores on competency assessments. The infection control competency test is administered to pharmacy staff annually. **Conclusion:** Pharmacy infection control policy competency is a new initiative and an integral part of pharmacy practice. The infection control policy competency requires pharmacists to continuously improve their skills in infection control practice and prevent pharmacy product-related infection in various settings within public and private healthcare institutions. As a result, the pharmacy infection control competencies policy is highly recommended for pharmaceutical care services worldwide.

Keywords: Infection control, Policy, Pharmacy, Competency, Saudi Arabia.

INTRODUCTION

Over the last few years, the national pharmacy competency has been established locally at a hospital or primary care center.[1-2] It included various pharmacist and clinical pharmacist specialties, such as infection control pharmacists. It was based on a pharmacy strategic plan with a new Vision of 2030.[3] Several years ago, pharmacy leaders released national hospital pharmacists and primary care pharmacist competency programs.[1,2] Furthermore, several international pharmacy competencies for distributive, clinical, and community pharmacy have been released.[4,5] Pharmacist competency is required to provide patients with efficient and cost-effective pharmacy services. Furthermore, assess the pharmacist's activities in each job description.[4] Various infection control guidelines competencies have been associated with infection control coordinators and healthcare workers.[6-15] On the other hand, the authors were unfamiliar with any publications on infection control pharmacist competency.[14] The current review seeks to establish infection control competency in pharmacy practice, emphasizing infection control among clinical pharmacists and pharmacy staff.

MATERIALS AND METHODS

It was a narrative review of pharmacy infection control. A literature search was performed from various databases, including PubMed, Medline, and Google Scholar, about specific subject related to infection control in pharmacy practice. The search period was from the 1960s to October 2021. The terms were in English and conianted the narrative review, systemic review, meta-analysis, and guidelines. The terms of Policies and procedures from the last 10 years were searched across all hospitals or community pharmacies. The pharmacy services in the search included inpatient, outpatient, and ambulatory care pharmacy, satellite pharmacy, extemporaneous preparation unit, repackaging unit, pharmacy store, drug information center, and clinical pharmacy services. Furthermore, the national and international infection control guidelines in pharmacy and hospital practice guided the writing of the current review.[15-16] That includes the Centers for Disease Control and Prevention (CDC) of the United States of America, the Saudi Center for Diseases Control (SCDC), the American Society of Health-System Pharmacist (ASHP), the World Health Organization (WHO), and the United States Pharmacopeia (USP) guidelines and regulations.[17-28] The pharmacy infection control committee formulated and consisted of various members, including clinical pharmacists, community pharmacists, and infection control specialists. Some authors drafted the policy, and the other authors reviewed

and corrected it. The additional author, who is an infection control specialist, revised it. The policy included topics such as environmental and workplace, staff immunization and occupational safety, pharmacy basic hygiene, quality of pharmacy infection control, pharmacy infection control competency, and pharmacy infection control education and training. The current topic emphasized on the competency of pharmacy infection control. The Appraisal of Guidelines, Research, and Evaluation (AGREE) guided the reporting of the results of this review.[29]

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RESULTS AND DISCUSSION

When first implementing the pharmacy infection competency elements (Table 1), any pharmacist was advised to follow the policy and procedures outlined below as explored in Figure 1.[1,4,17-28,30-31]

1. Every new pharmacy workforce must take pharmacy infection control education competency courses annually.
2. Every 12 months, the pharmacy infection control unit at pharmaceutical care selects enrolled pharmacists for infection control capabilities competency. All nominations must go through the supervisor of the units.
3. All nominated candidates apply for pharmacy infection control training and coaching.
4. If the pharmacy worker was new, the pharmacy infection control section to be a part of general orientation at the opening of the employment
5. After completing the lookup capabilities training, the preceptor evaluates each candidate's expertise.
6. The comprehension results in a written examination of multiple-choice questions and an overall performance evaluation.
7. The preceptor chose setup up the level of evaluation rating from one to five whole scores and make candidate assessment of the educational courses.
8. The evaluation rankings are divided into five categories. Five scores illustrated the candidates are equally or fully competent, four people are primarily incompetent, three are partially competent, two are equally partial incompetent, and one is entirely completely incompetent.
9. All evaluation ratings must not be no less than 4 for each competency objective.
10. If the pharmacist's competency intention is less than four, the lookup capabilities will not be skipped, and the pharmacist will be deemed incompetent.
11. If the candidates were rated incompetent, they will be evaluated every quarter until they achieve a rating of four or equal to five.
12. Each year, the lookup abilities competency evaluation must be performed.
13. Any pharmacist who got lower than four scores for the duration of the annual assessment of pharmacy infection control competency. The pharmacist will repeat the pharmacy infection control course for five weeks.

CONCLUSION

The pharmacy infection control competency policy and procedures, an entire section on infection control, and overall performance and activities. It included five items: patient care, contamination management skills, communication, professionalism, and continued professional development. As a result, sustainable competencies improve contamination management abilities in pharmacy practice. Furthermore, it takes an approach to evaluate the infection control skills of a pharmacy group of workers and the contamination associated with the pharmacy setting. As a result, pharmacy infection control competency policy and procedures are highly recommended for national and worldwide pharmaceutical care implementation.

Table 1: Pharmacy infection control Competency.

No	Topic	Activity	Education and training		Type of Assessment		Assessment scores				
			Pre-training test	Post-training test	Exam	Preceptor	1	2	3	4	5
1.	Patients care	• Protect the patients from diseases transmissions. • Test the pharmaceutical product for infection control. • Contribute to staff adults and pediatrics immunization program. • Prevent the patients from pharmacy infection control-related problems. • Maintain vaccine stock at all hospital sections as required for patients and Heath workers.	✓	✓	✓	✓					
2.	Infection control skills	• Make pharmacy surveillance of bugs. • Demonstrate Hand hygiene during pharmacy activities. • Apply Personal protective equipment at the pharmacy section. • Implementation of infection control at the pharmacy department. • Control infection environmental and workplaces at pharmacy sections. • Monitor staff immunization and occupational safety protocols. • Implement the infection control competency for pharmacy staff. • Monitor quality management measures of pharmacy infection control. • Contribute to risk management of pharmacy infection control. • Implementation of pharmacy infection control education and training. • Apply pharmaceutical wastage and spill kit. • Choose the appropriate sanitizer, disinfectant, and related products for the pharmacy section. • Monitor and prevent infection control material adverse effects and related problems. • Monitor and document the outcome of pharmacy infection control. • Identify, investigate, and manage the outbreak in pharmacy practice in association with Infection Prevention and Control (IPC) Department and the Outbreak Management Team(OMT).	✓	✓	✓	✓					
3.	Communication	• Participate in infection control committee and the team at healthcare organizations. • Educate the healthcare professionals about pharmacy infection control. • Set strategies to prevent infection and control for public and pharmacy visitor. • Report pharmacy infection control to the infection control department at healthcare organizations.	✓	✓	✓	✓					
4.	Professionalism	Respect and share with the healthcare worker on infection control Cooperate with all healthcare organizations to implement pharmacy infection control guidelines.	✓	✓	✓	✓					
5.	Continuous professional development	• Update the pharmacy infection control guidelines regularly based on recent infection control recommendations. • Setup annual plan of infection control for each pharmacy services unit • Distribution of educational materials on pharmacy infection control for pharmacy and healthcare workers. • Make posters and stands for pharmacy infection prevention at each service as required. • Available the pharmacy infection control references and guidelines for pharmacy staff and healthcare workers.	✓	✓	✓	✓					

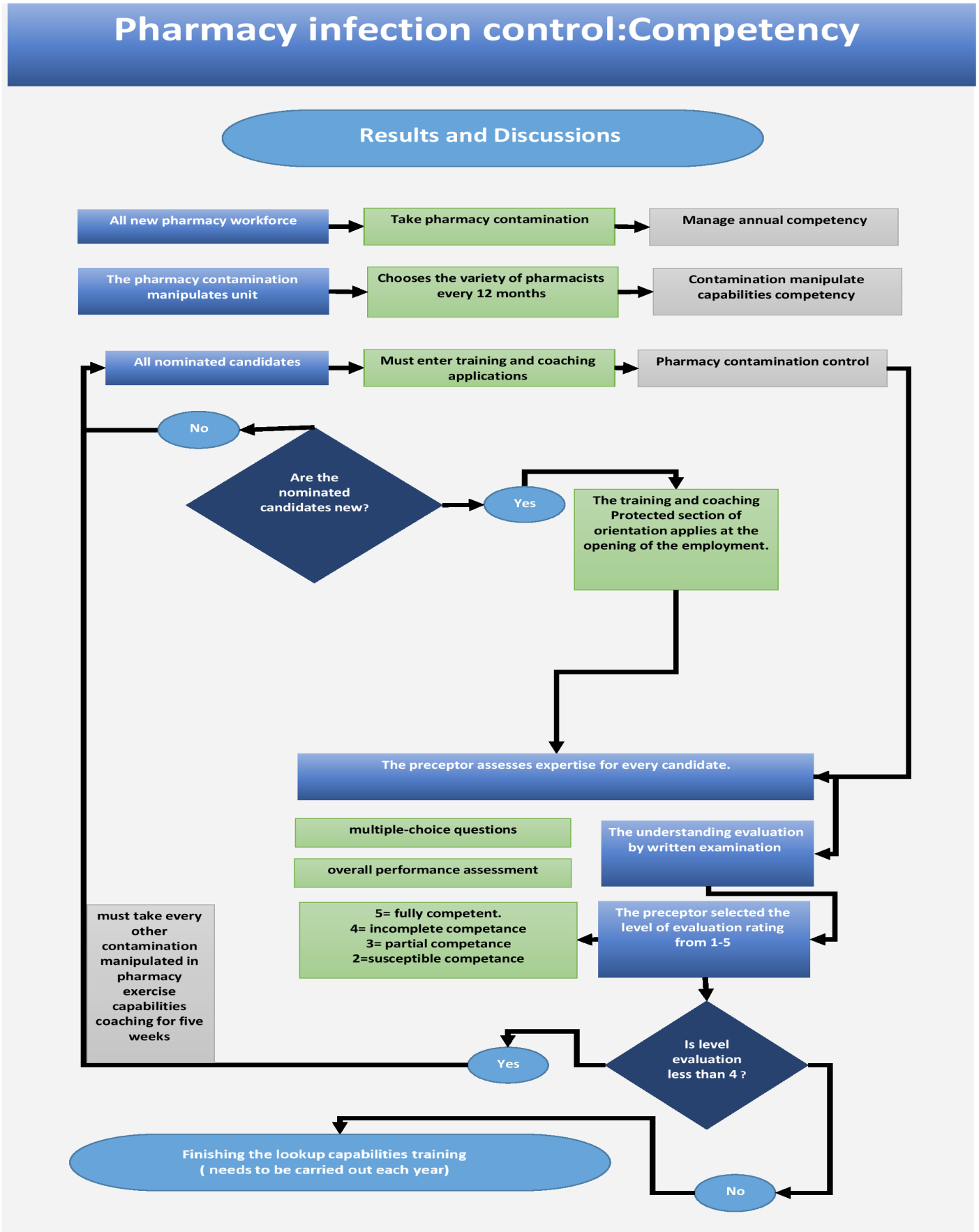

Figure 1: Infection Control Pharmacist Competnay Steps follow chart.

ACKNOWLEDGEMENT

None.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ABBREVIATIONS

CDC: Centers for Disease Control; and Prevention; **SCDC:** Saudi Center for Diseases Control; **WHO:** World Health Organization; **ASHP:** American Society of Health-System Pharmacist; **USP:** United States Pharmacopeia (USP); **AGREE:** Appraisal of Guidelines for Disease Control and Prevention; **OMT:** Outbreak Management Team; **IPC:** Infection Prevention and Control; **KSA:** Kingdom of Saudi Arabia; **MOH:** Ministry of Health.

Funding

None

Consent for Publications

It is not applicable in this review

Ethical Approval

This research is exempted from research and ethical committee or an institutional review board (IRB) approval.
https://www.hhs.gov/ohrp/regulations-and-policy/decision-charts-2018/index.html

ABBREVIATIONS

MOH: Ministry of Health; **KSA:** Kingdom of Saudi Arabia; **ASHP:** American Society of Health-System Pharmacists; **SWOT:** Strengths, Weaknesses, Opportunities, and Threats; **IV:** Intravenous; **BSC:** Balance Scored Cards. **SARS:** Acute Respiratory Syndrome; **H_1N_1:** influenza A; **MERS-CoV:** Middle East respiratory syndrome coronavirus; **COVID-19:** Coronavirus Disease 2019.

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