

# **Occupational Health Hazards Related to Chemotherapy among Healthcare Providers**

**Thesis**

*Submitted for Partial Fulfillment of  
Master Degree in Nursing Science  
Community Health Nursing*

**By**

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**Al-Zhraa Moustafa**





*I would like to dedicate this thesis to  
my family to whom I will never  
Find adequate words  
to express my  
gratitude*

*Al-Zhrraa Moustafa*

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## **List of Abbreviation**

<b>Abbreviation</b>	<b>Mean of abbreviation</b>
<b>AHFS</b>	American Hospital Formulary Service
<b>CBC</b>	Complete Blood Count
<b>CFR</b>	Code of Federal Regulations
<b>CDC</b>	Centers for Disease Control.
<b>CDs</b>	Chemotherapy Drugs
<b>CM</b>	Centimeter
<b>CNS</b>	Central Nervous System
<b>DNA</b>	Deoxyribonucleice Acid
<b>DOSH</b>	Drug Organization Safety and Health.
<b>EPA</b>	Environmental Protection Agency
<b>HCPs</b>	Health Care Providers
<b>HCWs</b>	Health Care Workers

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<b>HD</b>	Hazard Drugs
<b>IV</b>	Intra Venous
<b>MRSA</b>	Methicillin and Aminoglycoside Resistant Staphylococcus Aureus.
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>OH</b>	Occupational Health
<b>OHN</b>	Occupational Health Nurse
<b>OSHA</b>	Occupational Safety and Health Agency
<b>PPE</b>	Personal Protective Equipment
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RNA</b>	Ribonucleic Acid
<b>USA</b>	United states of America
<b>WHO</b>	World Health



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## **Occupational Health Hazards Related to Chemotherapy among Healthcare Providers**

### **ABSTRACT**

*By*

**Al-Zhrraa MoustafaAbd El-Aziz**

Many antineoplastic drugs are known to be carcinogenic, teratogenic and mutagenic to humans. There is thus a potential occupational exposure risk to cytotoxic drugs (CDs). Health care workers are exposed to these drugs in patient care settings. **Aim:** Assess occupational health hazards related to chemotherapy among health care providers. **Sample:** purposive sample composed of 70 health care providers from ambulatory settings in oncology center at Nasser Institute Hospital for research and treatment. **Tools:** *First tool*, interviewing questionnaire to assess a) socio-demographic data, b) health care providers' knowledge, c) health care providers' practices. *Second tool*, Auditing medical records and assessing health status. *Third tool*, checklist to detect health care provider's compliance towards safety measures according to chemotherapy hazards. **Results:** 71.4 % of the studied subjects were females. Concerning age, 47.1% of subjects were 25 - < 35 years. More than two thirds of health care providers were had weak knowledge regarding chemotherapy& health hazards. Moreover, the majority of health care providers were had not done practice regarding safety measures of protection from health hazards related to chemotherapy. **Conclusion:** there is more than two thirds of health care providers were had weak knowledge regarding chemotherapy& health hazards, the majority of health care providers were non- compliance toward safety measures of protection of health hazards related to chemotherapy.

**Recommendations:** Further research studies are needed for ongoing assessment of effects of chemotherapy drugs on health care providers and methods of hazards prevention including large sample for generalization of results.

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**Key words:** Occupational Health Hazards- Chemotherapy drugs- Healthcare Providers- Safety measures- Role of the occupational nurse.

## Introduction

Worldwide, the healthcare workforce represents 12% of the working population. Healthcare workers operate in an environment that is considered to be one of the most hazardous occupational settings. Healthcare workers encounter diverse hazards due to their work related activities. In spite of this knowledge, the healthcare work environment continues to be neglected by governments and organizations (*Rawlance et al., 2015*).

Health care workers (HCWs) define as all people engaged in actions whose primary intent to enhance health. They make important contributions and are critical to the functioning of most health systems. Health care workers face a wide range of hazards on the job; including needle stick injuries, back injuries, latex allergy, chemotherapy, violence, and stress. HCWs need protection from these workplace hazards just as much as do mining or construction workers (*Ghosh, 2013*).

Occupational health hazards put HCWs at risk of increased morbidity and mortality. Loss of skilled health personnel will adversely affect health care services which are already suboptimal in developing countries. The multiplying effects of occupational injuries and diseases