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**Current Status of the Implication of the Clinical  
Practice Patterns in Hemodialysis Prescription in  
Regular Hemodialysis Patients in  
Port-Said Governorate (Sector A)**

**Thesis**

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in Nephrology

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الوضع الحالى لأشكال الممارسه الاكلينيكيه المتبعه لوصفات  
الاستصفاء الدموى لدى مرضى الاستصفاء الدموى فى  
محافظة بورسعيد ( قسم أ )

رسالة

توطئة للحصول على درجة الماجستير  
فى أمراض الكلى

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*Amr Mohammed Sami EL-Basiouny*

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## **Abstract**

This descriptive analytic study is a part of a nation-wide project aiming at assessment the pattern of current clinical practice in hemodialysis prescription in regular hemodialysis patients in Port Said Governorate (sector A) and to compare this pattern with standard international guidelines in hemodialysis prescription (K/DIGO 2010), stressing on anemia, bone disease management and adequacy of dialysis. The study included 260 clinically stable patients with ESRD on regular hemodialysis in Port Said Governorate (Sector A). Data was collected between May and August 2014. We concluded that further work is needed to optimize care of hemodialysis patients according to evidence-based clinical practice guidelines.

### **Keywords:**

Hemodialysis, guidelines, History, adequacy, end-stage renal disease.

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## LIST OF ABBREVIATIONS

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ACR	Albumin: creatinine ratio
ACTIVE	Advanced Cognitive Training for Independent and Vital Elderly
AKI	Acute Kidney Injury
AVF	arteriovenous fistulas
BP	Blood pressure
BUN	blood urea nitrogen
CKD	Chronic kidney disease
CVD	Cardiovascular disease
DDS	Dialysis Disequilibrium Syndrome
DOPPS	Dialysis Outcomes and Practice Patterns Study
DRIP	Dry Weight Reduction Intervention
ECV	Extracellular volume
ESAs	erythropoiesis-stimulating agents
ESRD	End stage renal disease
GFR	Glomerular filtration rate

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HD	Hemodialysis
HIV	Human Immunodeficiency Syndrome
IDEAL	Initiating Dialysis Early and Late
KDIGO	Kidney Disease: Improving Global Outcomes
KDOQI	Kidney Disease Outcome Quality Initiative
KRT	kidney replacement therapy
Kru	residual kidney function
LVH	Left ventricular hypertrophy
MDRD	Modification of Diet in Renal Disease
MOH	Ministry of Health
NHANES III	Third National Health and Nutrition Examination Survey
NKF	National Kidney Foundation
PAD	Peripheral arterial disease
PD	peritoneal dialysis
RAAS	renin-angiotensin-aldosterone system
RCTs	Randomized controlled trials

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REGARDS	REasons for geographic and racial differences in stroke
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UF	Ultrafiltration
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UKM	Urea Kinetic Modeling
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URR	Urea reduction ratio
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## INTRODUCTION

Studies examining the link between research evidence and clinical practice have consistently shown gaps between the evidence and current practice. Some studies in the United States suggest that 30%–40% of patients do not receive evidence-based care, while in 20% of patients care may be not needed or potentially harmful. However, relatively little information exists about how to apply evidence in clinical practice, and data on the effect of evidence-based guidelines on knowledge uptake, process of care or patient outcomes is limited (*Locatelli et al., 2004*).

In recent years, specific clinical guidelines have been developed to optimize the quality of anemia management secondary to chronic kidney diseases (CKD). As a result, the National Kidney Foundation Kidney Disease Outcome Quality Initiative (K\DOQ) guidelines and the Renal-European Dialysis and Transplantation Association best practice guidelines have been published in USA & Europe. Therefore; clinical practice guidance help individual physician and physicians as group to improve their clinical performance and thus raise standard of patient care towards optimum levels, They may also help to

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insure that all institution provide an equally good base line standard of care (*Cameron,1999*).

Guidelines practiced on anemia and actual practices are much different with different places and patients according to treatment. Moreover, in individual countries and individual units within countries local circumstances relating to economic conditions; organization of health care delivery or even legal constraints may render the immediate implementation of best practice guidelines difficult or impossible. Nevertheless, they provide a goal against which progress can be measured (*Locatelli et al., 2004*).

Dialysis Outcomes and Practice Patterns Study (DOPPS) has observed a large variation in anemia management among different countries. The main hemoglobin concentration in hemodialysis patient varied widely across the studied countries ranging between 8g/dl to 11g/dl. The percentage of prevalent hemodialysis patient receiving erythropoietin stimulating agent 'ESA' has increased from 75% to 83%. The percentage of HD patient

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receiving iron varies greatly among DOPPS countries range from 38% to 89%, (*Locatelli et al., 2004*).

There are challenges in implanting clinical guidelines in medical practice. Overall DOPPS data which show that, despite the availability of practice guidelines for treatment of renal anemia, wider variation in anemia management exists as gap between what is recommended by the guidelines and is accomplished in every day clinical practice. Compliance with clinical guidelines is an importance indicator of quality and efficacy of patient care at the same time their adaptation in clinical practice may be initiated by numerous factors including; clinical experts, patient performance, constrains of public health policies, community standard, budgetary limitation and methods of feeding back information concerning current practice (*Cameron, 1999*).

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## **AIM OF THE WORK**

To study the patterns of current clinical practice in hemodialysis prescription in regular hemodialysis patients in Port Said Governorate (Sector A) and to compare these patterns with standard international guidelines in hemodialysis prescription, stressing on anemia, bone disease management and adequacy of dialysis.