# Current Status of the Implication of the Clinical Practice Pattern in Hemodialysis Prescription in regular Hemodialysis Patients in Cairo Governate

*Thesis*

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*By*

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وأنزل الله عليك
الكتاب والحكمة
وعلّمك ما لم تكن
تعلم وكان فضل
الله عليك عظيما
صدق الله العظيم
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Zeinab Ahmed Mohamed


To
My Family

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# *List of Abbreviations*

**ABD** : Adynamic bone disease
**ACEIs** : Angiotensin-converting enzyme inhibitors
**ADPKD** : Autosomal dominant polycystic kidney disease
**AGE** : Advanced glycation endproduct
**AHA** : American Heart Association
**AJKD** : American Journal of Kidney Diseases
**ANZSN** : Australian and New Zealand Society of Nephrology
**ARBs** : Angiotensin receptor blockers
**AV fistula** : Arterio venous fistula
**BAP** : Bone alkaline phosphatase
**BNP** : B-type natriuretic peptides
**BP** : Blood pressure
**BUN** : Blood urea nitrogen
**CAPN** : Canadian Association of Pediatric Nephrologists
**CARI** : Caring for Australian with Renal Impairment
**CDC** : Centers for Disease Control and prevention
**CHF** : Congestive heart failure
**CHOIR** : Correction of Hemoglobin and Outcomes in Renal Insufficiency
**CHr** : Reticulocyte Hb content
**CKD 5D** : Chronic kidney disease stage 5 on dialysis
**CKD** : Chronic kidney diseases
**CKD–MBD** : Chronic Kidney Disease-Mineral and Bone Disorder
**CMB** : Calcium mass balance
**CPG** : Clinical guidelines
**CREATE** : Cardiovascular Risk Reduction by Early Anemia Treatment with Epoetin Beta
**CSN** : Canadian Society of Nephrology
**cTns** : Cardiac troponins
**CUA** : Calcific uremic arteriolopathy
**CVD** : Cardiovascular disease
**DCa** : Dialysate calcium concentration
**DFO** : Desfirroxamine
**DOPPS** : Dialysis Outcomes and Practice Patterns Study

# *List of Abbreviations (Cont…)*

**EBPG** : European Best Practice Guidelines
**eKt**/V : The Equilibrated Kt/V
**EPO** : Erythropoietin
**ERA–EDTA** : European Renal Association - European Dialysis and Transplant Association
**ERBP** : European Renal Best Practice
**ERT** : Evidence review team
**ESA** : Erythropoietin stimulating agent
**ESRD** : End stage renal disease
**FBC** : Full blood count
**FDA** : US Food and Drug Administration
**FGF** : Fibroblast growth factor
**GFR** : Glomerular filtration rate
**GN** : Glomerulo nephritis
**GRADE** : Grades of Recommendation, Assessment, Development, and Evaluation
**Hb** : Hemoglobin
**HBV** : Hepatitis-B virus
**HCV** : Hepatitis C virus
**HD** : Hemodialysis
**HDF** : Hemodiafiltration
**HDP** : Hemodialysis Product
**HEMO study** : The Hemodialysis study
**HIV** : Human immunodficiency virus
**IL-1** : interleukin-1
**iPTH** : Intact parathyroid hormone
**K/DOQI** : National Kidney Foundation Kidney Disease Outcome Quality Initiative
**KDIGO** : Kidney Disease Global Outcomes Improvement initiative
**KHA** : Board of Kidney Health Australia
**LVH** : Left ventricle hypetrophy
**MOH** : Egyptian Ministry of Health
**nPCR** : Normalized Protein Catabolic rate

# *List of Abbreviations (Cont…)*

**NT-proBNP** : N-terminal prohormone of brain natriuretic peptide
**PAD** : Peripheral arterial disease
**PCI** : Percutaneous coronary intervention
**PRCA** : Pure red cell aplasia
**RA** : Renal Association
**RCTs** : Randomised control trials
**ROD** : Renal osteodystrophy
**SCD** : Sudden Cardiac Death
**SHPT** : Secondary hyperparathyroidism
**SLE** : Systemic lupus erythematosus
**spKt**/V : Single-pool Kt/V
**SRI** : The solute removal index
**stdKt**/V : standard Kt/V
**t-PA** : Tissue plasminogen activator
**TREAT** : Trial to Reduce Cardiovascular Events with Aranesp® Therapy
**TSAT** : Transferrin saturation
**URR** : Urea reduction ratio
**USRDS** : United States Renal Data System
**VC** : Vascular calcification
**VDR** : Vitamin D receptor
**VDRA** : Vitamin D receptor activators
**WGs** : Work groups
**β2m** : Beta 2-microglobulin

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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\DOQI) 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 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