



What Do Specialist Nurses Want to be Able to Do, and What Do They Need to Know To Do It?

Designing Education Programmes for Expert Clinical Practice

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Director of Education Training and Development SEHA Renal Services

That's a very long title !

- Background to this topic
- Why its so important
- Share our experience and journey of developing expert renal nursing practice
- Share our experience of developing education programmes
- Demonstrate the impact of expert practice on clinical and other patient outcomes
- Demonstrate the impact of expert practice on service development
- Demonstrate the impact of expert practice on nurse confidence, engagement and satisfaction

Nephrology nursing

- Roles
 - Long term conditions
 - A continuum of care
 - Complex patient needs
 - Leadership
 - Change
 - Development of services
 - Influencing Policy
- Nursing is at the forefront of all of these activities

Why is this important

- Data on global burden of CKD
- Increasing prevalence of AKI
- Need to develop services to manage the burden
- Complexity of the demands of the roles
 - Management of patients on RRT (all modalities)
 - E.g. nurse practitioners in early detection
 - Home therapies
 - Critical care etc etc

Why This is Important

THE LANCET

Global kidney health 2017 and beyond: a roadmap for closing gaps in care, research, and policy

- Theme 1 Strengthen CKD Surveillance
- Theme 2 Tackle major risk factors
- Theme 3 Reduce AKI A special risk factor for CKD
- Theme 4 Improve understanding of the genetic causes of CKD
- Theme 5 Establish better diagnostic methods in CKD
- Theme 6 Improve understanding of the natural course of CKD
- Theme 7 Assess, implement established treatment option for CKD
- Theme 8 Improve management and complications of CKD
- Theme 9 Develop novel therapeutic interventions to slow CKD progression and reduce CKD complications
- Theme 10 Increase quantity and quality of clinical trials in CKD

“Our proposed activities include education, research, policy creation, and implementation of these recommendations.

Partners in these endeavours include academic institutions, health-care institutions, governmental agencies, industry partners, research funding agencies, clinicians, researchers, policymakers, and patients.

Targeted, culturally appropriate educational activities for patients, policy-makers, and clinicians in all areas of the world are crucial for progress.

Education about risk factors, the importance of genetics, and the need to be involved in clinical studies will enhance the community's capacity to close many of the gaps identified

(Levin et al, 2017)

Nursing?

- Florence Nightingale
- Highly educated
- Expert nurse practitioner
- Administrator
- Statistician
- Meticulous data collection and analysis
- Breakthroughs in clinical practice infection and mortality
- Knowledge, skill and application to practice
- Formidable force for change
- Continuous pursuit of excellence in nursing

World Nursing 2017 - Education and Training of Nurses

- Move towards all graduate profession
- And back again.....
- But some providers dissatisfied that nurses not fit for purpose
- Erosion of nursing role
 - Extended to absorb Doctors task related activities
 - Rise of technician type roles for nurses (minor surgical procedures etc)
 - Delegation of nursing roles to technicians
- Dialysis under threat – but renal nursing isn't about dialysis
- Nurses need to prove why they are necessary and their unique contribution
 - Empowerment
 - Autonomy
 - Confidence
 - Nursing Leadership

World Nursing 2017- Education, Training, Development

Education – **Learning by critical thinking**. Focused on knowledge and understanding. Enabling someone to learn how to learn, how to think, how to problem solve. Facilitating learning of the theory behind different practical or clinical skills. Becoming knowledgeable, applying knowledge to practice

Training – **Learning by doing**. Focused on skills and competencies. Teaching someone how to do something. Facts and information. Skills, repetition, observe, copy, practise, practise, practise,

Development – **Learning by growing**. Applying Education and Training principles to enable individuals to perform at a higher level than necessarily required for their current position. To move from competency to proficiency to expert practice.

What's the difference?

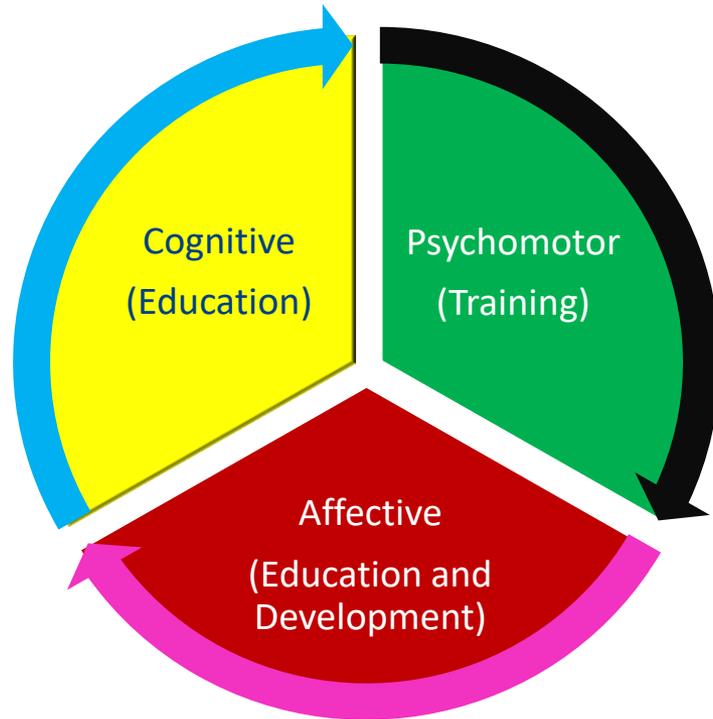
- If your teenage daughter came home from school and told you she had had sex education you would be happy?
- But what if she came home and told you she'd had sex training?

Specialist

- Dedicated area of focus – renal, oncology, diabetes etc. etc.
- Great knowledge
- Highly skilled specific (restricted?) field

The essential 3 domains of Expert Practice

(after Bloom)



- Nursing has traditionally focused on the 'doing' and neglected the underpinning knowledge and development of behaviors that support best practice

As our circle of knowledge expands, so does the
circumference of darkness surrounding it.

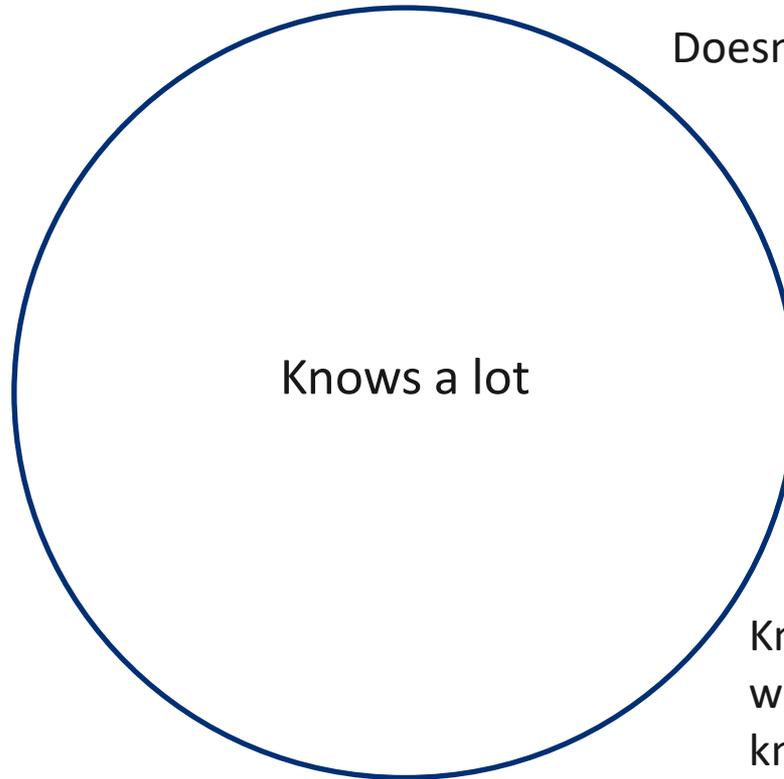
Albert Einstein

Knowledge vs ignorance

Doesn't know a little



Doesn't know a lot



Doesn't know,
what they don't
know

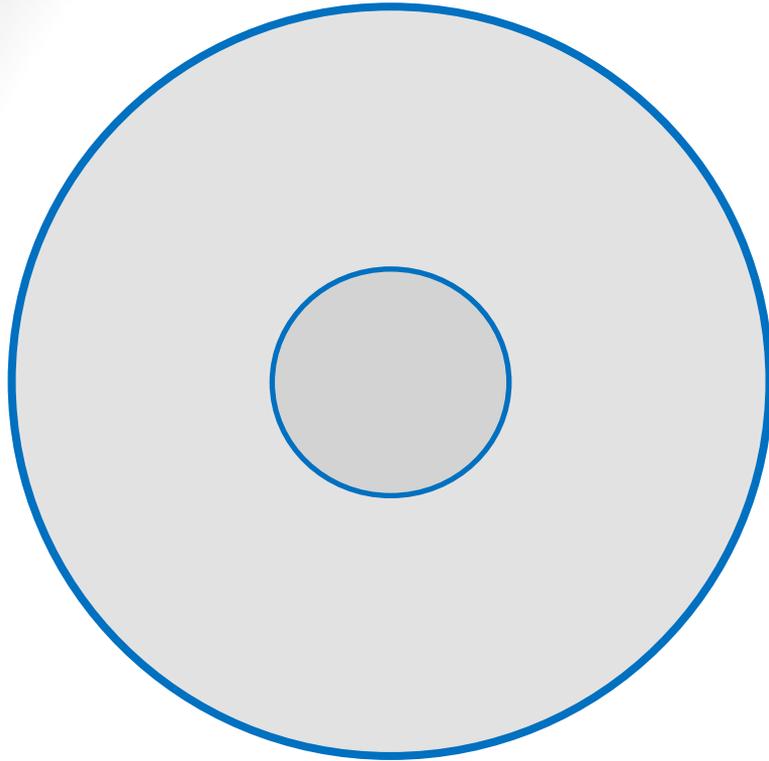
Knows
what they don't
know

Everything you Know is the **area** of the circle

Everything you don't know is the **circumference**

Therefore the more you know, the more you don't know

Expert Practice

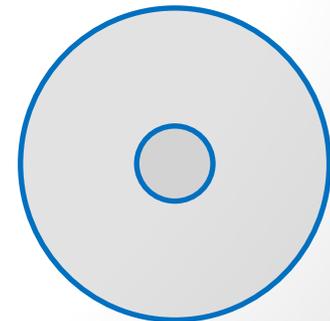


Specialist Nurse

Specific Education, training and knowledge
Education, inquiry and critical thinking based
Required Qualifications
Ability to assess important work situations
Capability to improve self
Intuition
Repetition of skills with education builds mastery and expertise
Confidence in knowledge
Problem solver and finder of solutions

Specific Training with some education
Skills and task based
Education facts based
Repetition of skills builds competency
Middle grade of understanding
Employed to assist experts

Technician





Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study

Linda H Aiken, Douglas M Sloane, Luk Bruyneel, Koen Van den Heede, Peter Griffiths, Reinhard Busse, Marianna Diomidous, Juha Kinnunen, Maria Kózka, Emmanuel Lesaffre, Matthew D McHugh, M T Moreno-Casbas, Anne Marie Rafferty, Rene Schwendimann, P Anne Scott, Carol Tishelman, Theo van Achterberg, Walter Sermeus, for the RN4CAST consortium*

Summary

Lancet 2014; 383: 1824-30

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S0140-6736(13)62631-8

See [Comment](#) page 1789

Background Austerity measures and health-system redesign to minimise hospital expenditures risk adversely affecting patient outcomes. The RN4CAST study was designed to inform decision making about nursing, one of the largest components of hospital operating expenses. We aimed to assess whether differences in patient to nurse ratios and nurses' educational qualifications in nine of the 12 RN4CAST countries with similar patient discharge data were associated with variation in hospital mortality after common surgical procedures.

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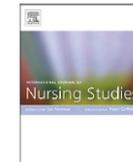


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Post-operative mortality, missed care and nurse staffing in nine countries: A cross-sectional study

Jane E. Ball^{a,b,*,1}, Luk Bruyneel^{c,1}, Linda H. Aiken^d, Walter Sermeus^c, Douglas M. Sloane^d, Anne Marie Rafferty^e, Rikard Lindqvist^f, Carol Tishelman^g, Peter Griffiths^h, RN4Cast Consortium²

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Nursing Care and Mortality



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- Ball et al Int J Nursing Studies Aug 2017 (UK, USA, Europe)
 - 422,000 post operative patients, 300 hospitals, 9 countries, 26,500 nurses
 - Increase in workload by 1 patient associated with 7% increase in 30 day mortality
 - 10% increase in missed care associated with 16% increase in 30 day mortality
 - Reduction in nurse staffing is associated with missed care
 - Bachelors level education is associated with 8% reduction in 30 day mortality

Nurse Staffing and Outcomes

Hospital Nurse Staffing and Patient Mortality, Nurse Burnout, and Job Dissatisfaction

Linda H. Aiken, PhD, RN

Sean P. Clarke, PhD, RN

Douglas M. Sloane, PhD

Julie Sochalski, PhD, RN

Jeffrey H. Silber, MD, PhD

Context The worsening hospital nurse shortage and recent California legislation mandating minimum hospital patient-to-nurse ratios demand an understanding of how nurse staffing levels affect patient outcomes and nurse retention in hospital practice.

Objective To determine the association between the patient-to-nurse ratio and patient mortality, failure-to-rescue (deaths following complications) among surgical patients and factors related to nurse retention

- Aitken et al 2002 JAMA (USA)
 - 232,000 patients 10,000 nurses, 168 hospitals
 - **Each** additional patient per nurse associated with a 7% increase in 30 day mortality, 7% increase in failure to rescue (mortality following a complication)
 - 23% increase in nurse burnout,
 - 15% reduction in job satisfaction

Nursing Care, Education and Mortality

Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study

*Linda H Aiken, Douglas M Sloane, Luk Bruyneel, Koen Van den Heede, Peter Griffiths, Reinhard Busse, Marianna Diomidous, Juha Kinnunen, Maria Kózka, Emmanuel Lesaffre, Matthew D McHugh, M T Moreno-Casbas, Anne Marie Rafferty, Rene Schwendimann, P Anne Scott, Carol Tishelman, Theo van Achterberg, Walter Sermeus, for the RN4CAST consortium**

- Aitken et al Lancet 2014 (UK, Europe)
 - 422,000 post operative patients, 300 hospitals, 9 countries, 26,500 nurses
 - Increase in workload by 1 patient associated with 7% increase in 30 day mortality
 - **Every** 10% increase in Bachelors nurses decreased mortality by 7%
 - A hospital with 60% of bachelors nurses caring for 6 patients would have a 30% lower mortality than a hospital with 30% of bachelors nurses.

SEHA Renal Services

- **Commenced operation in March 2011**
 - **Provides for SEHA all:**
 - **CKD management and Early Detection of CKD**
 - **Advanced CKD and Pre Dialysis**
 - **Vascular Access Service**
 - **Outpatient dialysis**
 - **Peritoneal dialysis**
 - **Acute inpatient dialysis including ICU**
 - **Kidney Transplantation**
 - **In house HAAD accredited education**
 - **MSc in Renal Nursing**
 - **Patient education**

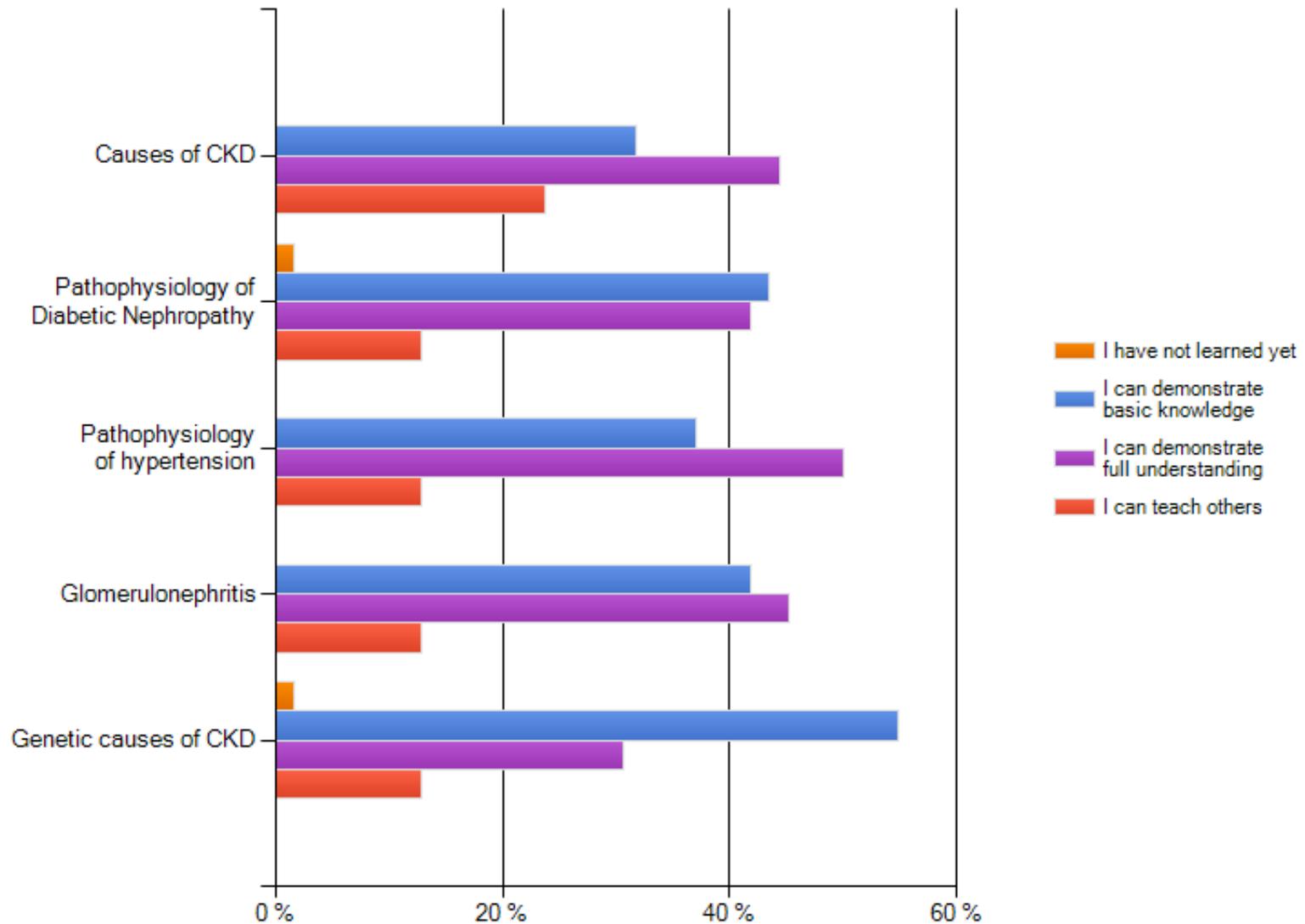
Learning Needs Analysis – Why?

- SDS commenced operation in 2011
 - Formed from all existing dialysis programmes
 - 150 nurses (now 300)
 - Wedded to previous hospitals
 - No uniform policies/procedures
 - Major variability in clinical practice
 - Clinical outcomes poor against international standards
 - No information regarding experience/knowledge /competencies
 - No structured education programmes

LNA - Results

- Average of ten years in dialysis
- High technical competency
- No uniform policies or procedures
- Poor underpinning knowledge
- Unwillingness to challenge decisions

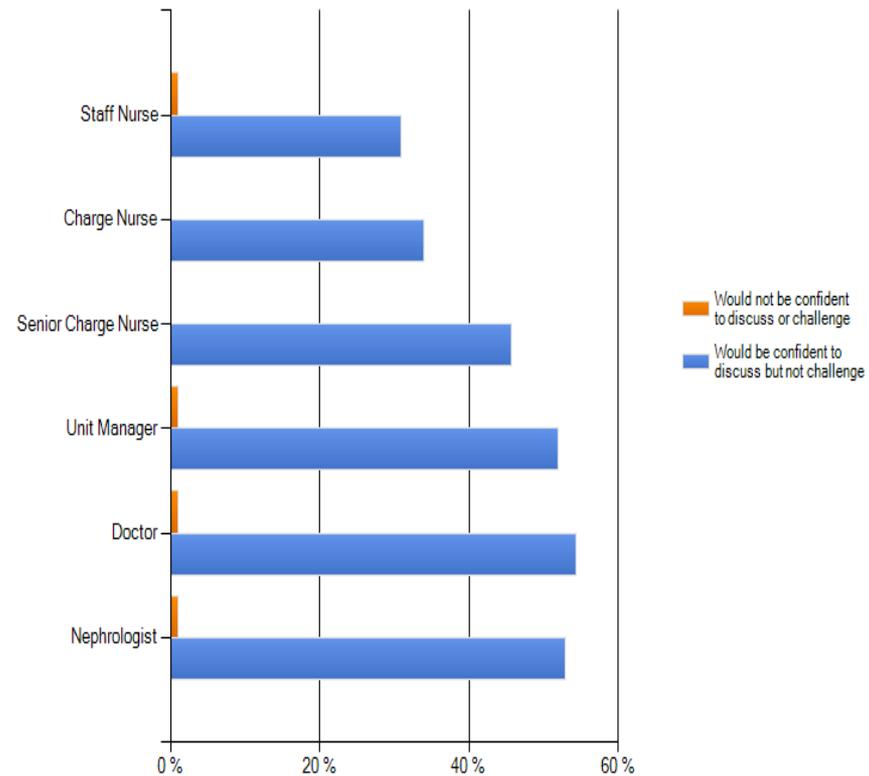
I am confident that I fully understand the following



Lack of confidence to discuss/challenge

- Nurses asked to rate confidence in discussing and challenging clinical care and decisions.
- 49% did not feel confident to challenge clinical decisions made by any member of staff senior to themselves

I am confident to discuss my patients with the following staff including challenging their decisions in relation to patient care (Please answer all sections)



HAAD Accredited, In-service Education

- Following from LNA it was clear that a structured education programme was required. But:
 - No evidence based practice
 - No uniform policies or procedures
 - Not possible to monitor or assess practice due to lack of uniformity
- Development of clinical practice guidelines
 - First educational activity to develop critical review
 - Evidence based using international best practice
 - Uniform across all SDS
 - Development of criteria based assessment tools to monitor conformity with guidelines

HAAD Accredited, In-service, Education

- Protected time 3 days, per nurse, per year
- Compulsory
- All aspects of specialist renal nursing
 - Assessment
 - Decision making
 - Critical thinking
 - Knowledge of evidence base
 - Putting **the patient** first
- Commenced 2013, now delivers > 4000 hours per year
- Now open to all MDT - a professional approach to sharing knowledge and expertise.

Creation of Standardised, Evidence Based, Clinical Instructions


SEHA Dialysis Services
SDS
Pediatric
HEMODIALYSIS
INSTRUCTIONS

4. Instruction – Cannulation of AVF/AVG

Task Assessment, preparation and needle placement for AV fistula and AV graft.

Preparation Follow the preparation procedures as described in chapter C. PREPARATION.

NOTE: New AVF should be assessed by a proficient nurse and follow SDS AVF Cannulation Worksheet of the Vascular Access Pathway.

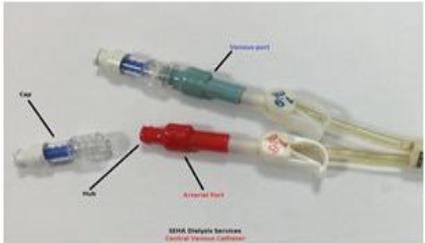
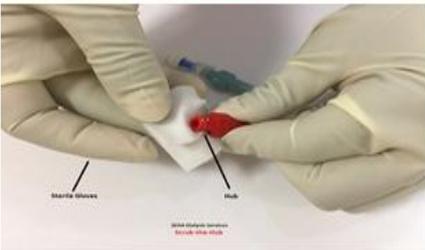
Workflow

#	PROCESS	RATIONALE
1.	Perform hand hygiene procedure according to policy SDS-COR-IC-005 , encourage patient to wash AVF/AVG prior to dialysis and wear PPE.	To prevent/reduce contamination risks.
2.	Complete comprehensive assessment of vascular access as described below.	
3.	Carefully palpate vascular access at the anastomosis and other sites. You should feel a thrill. If you cannot feel a thrill, use stethoscope and listen for the bruit. If you still do not hear or palpate a pulse, inform the physician. DO NOT attempt to cannulate the vascular access. Remember: LOOK, LISTEN, and FEEL.	Prevent the complications, check for patency of the vascular access. The absence of a pulse may indicate a clotted vascular access which needs to be evaluated by the patient's nephrologists.
4.	Inspect the vascular access for areas and signs of infection (swelling, redness, unhealed punctures, drainage, etc.). Ask the patient if they have any fistula pain or pain, numbness or cold extremities on the fistula limb. Note anything unusual and report it to the physician/nephrologist.	Using an infected vascular access can cause potential harm to the patient and will require medical attention. Steal syndrome can lead to serious complications. Careful assessment and technique assures quality care and safety.
5.	Perform hand hygiene procedure according to policy SDS-COR-IC-005 .	To prevent/reduce contamination risks.
6.	Open the AVF Pack as described in C.3 .	To prevent/reduce contamination risks.


SEHA Dialysis Services
Member of Fresenius Medical Care

Policy Number	SDS-COR-CLS-
Effective Date	July 2016
Page	Page 9 of 79
Version	1.0

TITLE: PEDIATRIC HEMODIALYSIS INSTRUCTIONS

C.10. Organisation

- Using a team approach
- Identify patient correctly as per HAAD/ IPSC as per policy [patient identification SDS-COR-CLS-002](#)
- Check the patient's prescription/general condition/variances
- Patients' appointment time

Subject	Topics Covered
Renal A and P	Advanced anatomy and Physiology and pathophysiology
Preceptorship	Orientation, Communication, Competency, Clinical Teaching, Assessment Skills, reflective Practice
Peritoneal Dialysis	Physiological Principles of PD; Modalities; Dialysis Adequacy; Patient Education; Complications
Haemodialysis	Physiological principles; Access; Dialysis Adequacy. Complications
Paediatrics	Dialysis Modalities, Child Development, Caring for children and families.
Leadership	Critical thinking; Influencing; change; Organisational culture;
Public Health	Epidemiology; CKD Incidence and Prevalence. Assessing Needs; Health Promotion Strategies;
Diabetes	Diabetes management; Challenges in medical and renal Nursing Care
Research	Critiquing research; research methods; ethics; Evidence based practice
Renal genetics	Identifying patients with or at risk of genetic disease; Single gene disorders; Patterns of inheritance; Consanguinity; Genetic testing; Genetic counselling
Customer Care	Defining Quality Customer Care; Role and responsibilities Communication;

The LNA Again!

- Repeated in 2014, following introduction of education programme
- Marked improvement in every category
 - Confidence to teach others
 - Confidence to challenge decisions (even doctors)
 - Major impact on policy/procedure awareness
 - Major impact on both technical and clinical competencies
 - Improved Patient Satisfaction

**Educated empowered nurses deliver the best care
Better care improves patient satisfaction**

MSC in Specialist Renal Nursing

- Commenced 2014
- Only such course in Middle East
- First nursing Masters in UAE
- Tripartite agreement between SDS, Fatima College, De Montfort University, UK
- Programme based on clinical expertise and leadership not administration
- All Learning embedded in clinical practice
- First cohort graduated 2016
- Now enrolling 4th cohort
- Aims to grow the nurse leaders of the future for sustainable kidney care

MSc in Renal Nursing

Module
1-2

- Renal Disease Principles of Management
- Research Methods

60 Credits

Post Graduate Certificate

Module
3-4-5

- Specialist Renal Nursing
- Advance Health Assessment
- Leadership in Renal Nursing

120 Credits

Post Graduate Diploma

Module 6

- Dissertation/Service Development Project

180 Credits

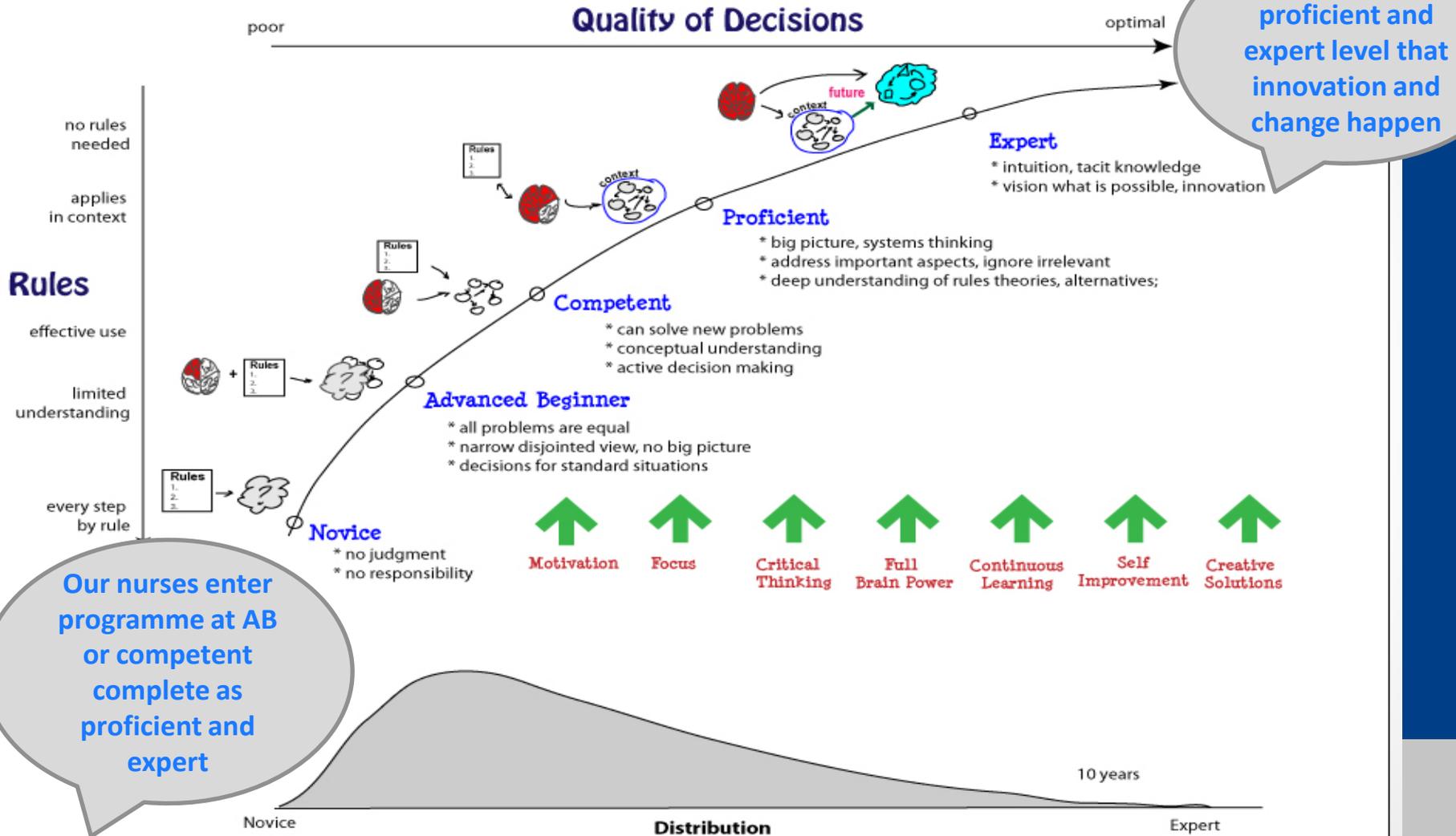
MSc Renal Nursing

Application of Learning into Clinical Practice *Develops* Expertise

- Renal Community Clinic
- Pre Dialysis & Nephrology Clinics
- Outpatients Haemodialysis
- Acute & Inpatient Haemodialysis
- Peritoneal Dialysis
- Transplant
- General Medicine
- Critical Care Unit
- Paediatrics
- Vascular Access Surgery

Assessing Expert Clinical Practice (after Benner)

Genesis of The Expert



Our nurses enter programme at AB or competent complete as proficient and expert

Accredited By:

- European Dialysis and Transplant Nurses Association (Highly Commended)



- De Montfort University (DMU)



- International Society of Nephrology (ISN) applied



- Fatima College, Abu Dhabi



Impact?

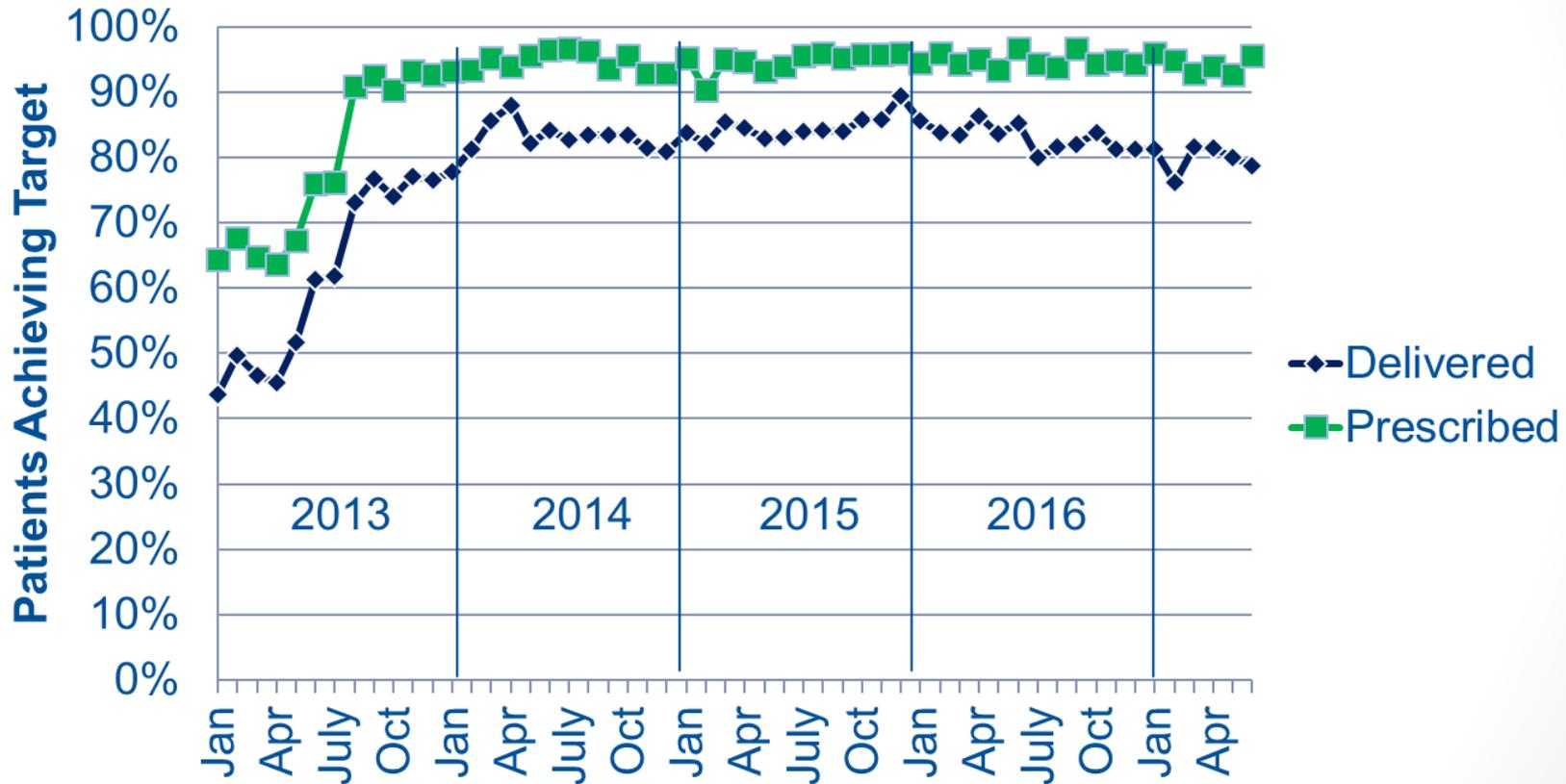
- Clinical Outcomes
- SDS have a series of clinical KPIs based on international standards
- Developed in conjunction with The Renal Council
- Agreed with SEHA
- Principles:
 - Within our control to a greater or lesser extent
 - Dependent on agreement and standardized practice
 - Some evidence of a relationship with outcomes
 - Morbidity
 - Mortality

SDS Clinical KPIs

- Vascular access - fistula or graft in $\geq 80\%$
- Thrice weekly dialysis in $\geq 95\%$
- Prescribed ≥ 240 minutes in $\geq 90\%$
- Single pool Kt/V ≥ 1.4 in $\geq 90\%$
- Haemoglobin 100-120 g/l in $\geq 65\%$
- Phosphate 1.2 – 1.8 mmol/l in $\geq 50\%$
- Albumin ≥ 30 g/dl in $\geq 85\%$

Adequate Dialysis (4 hours 3 times weekly & Kt/v ≥ 1.4)

Prescription and Delivery of Adequate Dialysis



KPI improvement over time

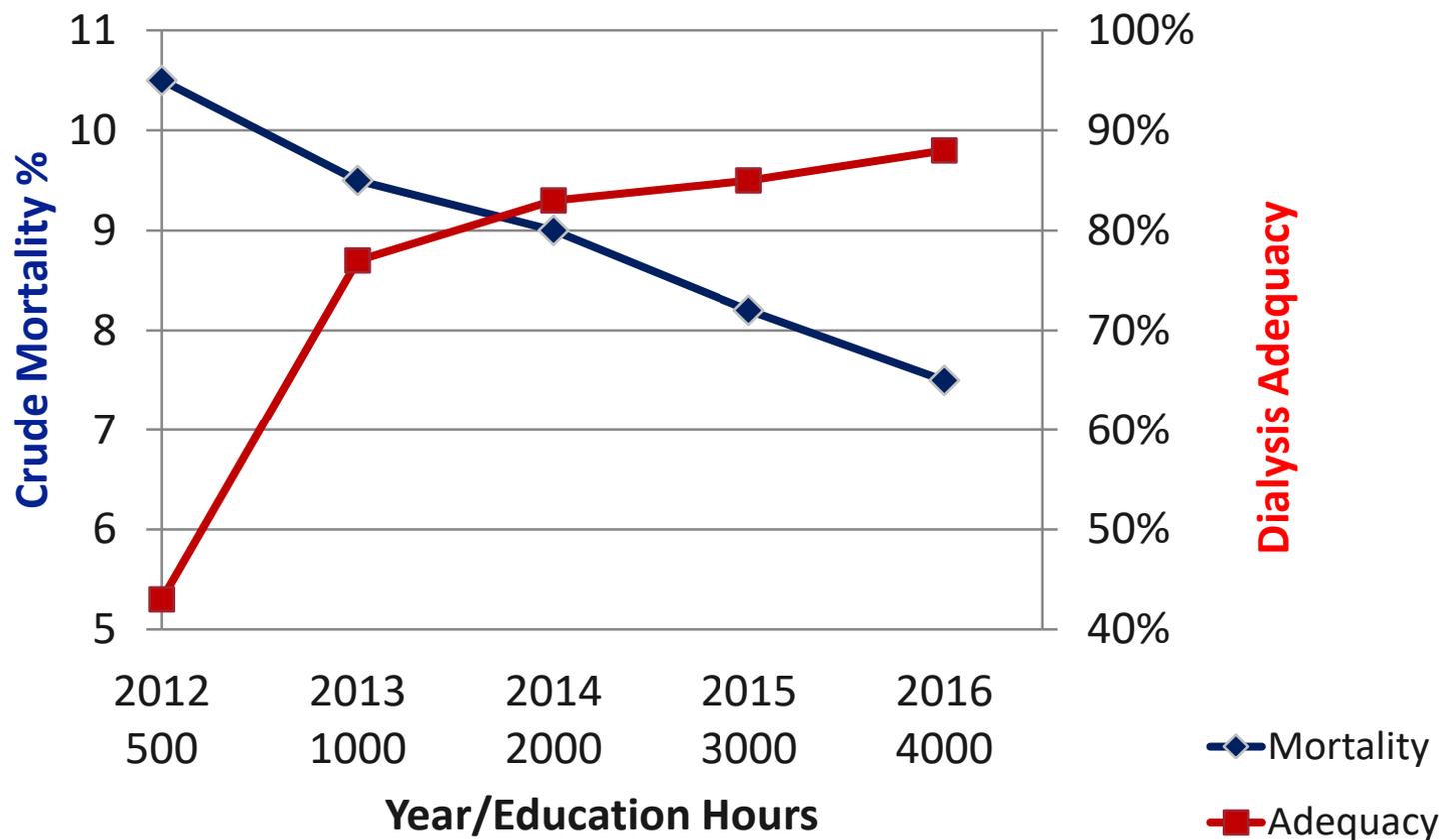
Metric	Q1 2013	Q4 2016	% Change	KPI Target	US DOPPS
Fistula or Graft	59%	79%	34	≥ 80%	84.9%
3x week Dialysis	95%	98%	3	≥ 90%	98%
Time	60%	97%	65	≥ 90%	80%
spKt/v	72%	90%	26	≥ 90%	80%
Blood Pump	300 ml/min	390 ml/min	30	N/A	418 ml/min
Albumin (≥ 30gm/l)	93	99%	6	≥ 85%	86%
PO4 1.2 – 1.8 mmol/l	44%	54%	23	≥ 55%	59.3%
Hb 100-120 g/l	51%	67%	31	≥ 65%	75.3%

Red = not achieving Target

Green = Achieving Target

**Green now Exceeding
USA DOPPS**

Education and Outcomes



Value Added Health Care 2012 - 2016

What changed?

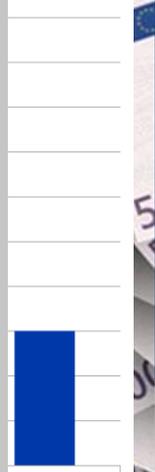
+4000 hours of in service education delivered per year.

MSc in Renal Nursing developing expert clinical leaders with confidence to influence change.

Team Learning and Development

USA
Euro

12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%



2016

Impact - 1st Cohort

- *“I thought I knew a lot about renal nursing, but actually I didn’t. I knew a bit about dialysis”*
- *“Before the programme I felt invisible. Now I feel really important, as if people (patients and staff) are depending on me to make things better”*
- *“I understand now that leadership is not a choice...it is a responsibility and an obligation”*
- *“I am a totally different person than I was a year ago...I see the world through different eyes... and always with a question”*

Impact - 2nd Cohort

- *“The most important part for me has been the opportunity to experience different clinical areas of nephrology. In my country we only work in dialysis . Now I want to go back and set up CKD care and early detection”*
- *“Working in the ICU made me understand how many patients end up with CKD because AKI and early CKD is not always managed appropriately”*
- *“The skills to do our own research, even at a very basic level means that we are more focused on trying to measure and improve what we do”*
- *“I now want to research and improve everything”*

Impact - Cohort 3

- *“The programme has Improved my self- esteem as I now feel I can make a contribution”*
- *“I am much more confident to work with the doctors and critically discuss the management of our patients”*
- *“I feel so much more abale to teach patients effectively and help them decide on what they need to do”*
- *Leish leish leish ...*

Conclusions

- Education is the fundamental foundation of all clinical practice
- Education is a team activity – all must be included
- Robust data collection is essential to measure progress
 - If you cannot measure it you cannot manage it
- It takes time to improve
- There are great benefits to be realised
- Essential to generate value

Education, Education, Education

- “He who does not know his past cannot make the best of his present and future, for it is from the past that we learn.” Sheikh Zayed bin Sultan Al Nahyan

