THE SHORTAGE OF EXPERT NEPHROLOGY NURSES AND PATIENT QUALITY CARE INDICATORS
A QUANTITATIVE CROSS-SECTIONAL STUDY
Karen Gaietto, PhD, RN, CNN¹; Mirella V. Brooks, PhD, APRN, FNP-BC
¹DaVita Inc; Denver Co ²University of Phoenix; Arizona

Introduction
What is the relationship between the shortage of expert nephrology nurses and patient quality care indicators?
- Quantitative cross-sectional study examined the problem regarding the shortage of expert nephrology nurses and potential consequences on patient quality care indicators in the dialysis setting. Three areas of statistical significance:
  - Units with higher levels of experience had fewer hemodialysis patients with lower percentage of anemia and a higher percentage of patients meeting dialysis adequacy levels.
  - Units with higher level of education had a lower facility mortality rate.

Methods
- Simple linear regression analysis was conducted on the patient quality care indicators and was used to predict outcomes on the shortage of nursing experts on the collected convenience sample:
  - Units were divided into two groups based on experience:
    - Experienced units contained nurses equal to or more than 14.945 years of nursing experience and equal to or more than 9.968 years of nephrology nursing experience.
    - Inexperienced units had nurses with less than 14.945 years of nursing experience and less than 9.968 years of nephrology nursing experience.
  - Units were divided into two groups based on education:
    - Higher level of education units contained at least one registered nurse with a bachelor or masters degree
    - Lower level of education units employed nurses with either an associate degree or diploma degree
  - Patient quality indicators data obtained from the CMS QIP publically reported data were compared to the experience level and educational level within the unit

Objective
- Identify the relationship between the expert nephrology nurse and the patient quality care indicators.

Results

<table>
<thead>
<tr>
<th>Years of Registered Nurses Experience within Participating Chronic Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>128</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years of Nephrology Experience of Nurses within Participating Chronic Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>128</td>
</tr>
</tbody>
</table>

Conclusions
There was a noted relationship on three patient quality care indicators of anemia (hemoglobin less than 10.2 g/dl), adequacy (Kt/V 1.2 or greater) and facility mortality rate. In each of these metrics units with more experienced registered nurses, anemia and adequacy, or higher level of education, mortality rate, was statistically significant.

Recommendations for research, practice, and policy round the need for greater understanding of the expert nephrology nurses. Identification on initial recruitment, retention of current nurses, and promotion of this specialty nursing practice all require further investigation. Continued analysis of patient quality care metrics, satisfaction surveys, and facility ratings could all help align the relationship to expert nephrology nurses within the chronic dialysis units.

References

Acknowledgements
Dr. Mirella Brooks University of Phoenix
Faculty and staff of University of Phoenix
Participants of Survey