

International Practice Patterns and Factors Associated with Non-Conventional Hemodialysis Utilization

Nathan Allen*, Daniel Schwartz, Paul Komenda, Robert P Pauly, Deborah Zimmerman, Gemini Tanna, Jeffrey Schiff, Claudio Rigatto & Manish M Sood

Department of Medicine, Section of Nephrology, St Boniface Hospital, University of Manitoba, 409 Tache Avenue, Winnipeg, R2H 2A6, Canada

Abstract

Background

The purpose of our study was to determine characteristics that influence the utilization of non-conventional hemodialysis (NCHD) therapies and its subtypes (nocturnal (NHD), short daily (SDHD), long conventional (LCHD) and conventional hemodialysis (CHD) as well as provider attitudes regarding the evidence for NCHD use.

Methods

An international cohort of subscribers of a nephrology education website <http://www.nephrologynow.com> was invited to participate in an online survey. Non-conventional hemodialysis was defined as any forms of hemodialysis delivered > 3 treatments per week and/or > 4 hours per session. NHD and SDHD included both home and in-centre. Respondents were categorized as CHD if their centre only offered conventional thrice weekly hemodialysis. Variables associated with NCHD and its subtypes were determined using multivariate logistic regression analysis. The survey assessed multiple domains regarding NCHD including reasons for initiating and discontinuing, for not offering and attitudes regarding evidence.

Results

544 surveys were completed leading to a 15.6%

response rate. The final cohort was limited to 311 physicians. Dialysis modalities utilized among the respondents were as follows: NCHD194 (62.4%), NHD 83 (26.7%), SDHD 107 (34.4%), LCHD 81 (26%) and CHD 117 (37.6%). The geographic regions of participants were as follows: 11.9% Canada, 26.7% USA, 21.5% Europe, 6.1% Australia/New Zealand, 10% Africa/Middle East, 10.9% Asia and 12.9% South America. Variables associated with NCHD utilization included NCHD training (OR 2.47 CI 1.25-4.16), government physician reimbursement (OR 2.66, CI 1.11-6.40), practicing at an academic centre (OR 2.28 CI 1.25-4.16), higher national health care expenditure and number of ESRD patients per centre. Hemodialysis providers with patients on NCHD were significantly more likely to agree with the statements that NCHD improves quality of life, improves nutritional status, reduces EPO requirements and is cost effective. The most common reasons to initiate NCHD were driven by patient preference and the desire to improve volume control and global health outcomes.

Conclusion

Physician attitudes toward the evidence for NCHD differ significantly between NCHD providers and conventional HD providers. Interventions and health policy targeting these areas along with increased physician education and training in NCHD modalities may be effective in increasing its utilization.