

Henry Ford Health

## Henry Ford Health Scholarly Commons

---

Nephrology Articles

Nephrology

---

5-1-2009

### There's No Place Like Home

Jerry Yee

*Henry Ford Health*, JYEE1@hfhs.org

Follow this and additional works at: [https://scholarlycommons.henryford.com/nephrology\\_articles](https://scholarlycommons.henryford.com/nephrology_articles)

---

#### Recommended Citation

Yee J. There's No Place Like Home. *Advances in Chronic Kidney Disease* 2009; 16(3):156-157.

This Article is brought to you for free and open access by the Nephrology at Henry Ford Health Scholarly Commons. It has been accepted for inclusion in Nephrology Articles by an authorized administrator of Henry Ford Health Scholarly Commons.

## There's No Place Like Home

Admission of failure is difficult for any of us, but it is more acutely felt when we fail our patients, despite our best and sometimes heroic efforts. Failure to thrive may occur in end-stage renal disease patients undergoing conventional hemodialysis therapy and not infrequently. Missed treatments, repeatedly shortened therapies attributed to intradialytic hypotension, and myriad other reasons prevent attainment of dialysis adequacy and eventuate in quantitatively and qualitatively poor outcomes for patients. For those who fail to thrive with conventional hemodialysis, there remain options. Transitioning to peritoneal dialysis is rarely considered in such circumstances, but it represents a feasible alternative. Indeed, home hemodialysis may constitute the optimal solution for such patients. Importantly, a patient does not need to be doing poorly to opt for this solution.

In this issue of *Advances in Chronic Kidney Disease*, the success of model programs that have implemented home-based therapies is featured. Guest Editors Lok and Chan have collated a series of articles by authors with international renown in the field of home dialytic therapies, as either home hemodialysis or peritoneal dialysis. This collection articulates the state-of-the-art of these important chronic kidney replacement therapies. Regarding peritoneal dialysis, the challenges of modality selection and maintaining a prevalent perito-

neal dialysis population are outlined. As well, the importance of provider education in this modality is stressed. Insofar as home hemodialysis is concerned, it is critical to realize that this modality is not new.

Essentially, home-based dialytic therapy in many countries came to a point of near extinction beginning in the late 1970s. In many countries, where hemodialysis was conducted on a large-scale basis, the availability of home hemodialysis was expediently reduced to a minimum. Enforced attrition of home hemodialysis became the natural consequence of facility-based implementations of in-center hemodialysis. Notably, controlling the environment in which dialytic care was rendered exerted a degree of patient adherence, paternalism aside. In addition, significant advancements in peritoneal dialysis had the unanticipated effect of further reducing any impetus to extend the future of home hemodialysis. However, in Australia and New Zealand, this devolution of home-based therapy did not take place because of the sufficient foresight and funding to continue this form of kidney failure therapy in these countries. There, home hemodialysis continued and was refined during the next 2 decades.

Coincident with these events, the implementation and revival of home-based hemodialysis occurred in other sectors of the world, particularly Canada. The excellent clinical outcomes attributed to home hemodialysis promulgated its own resurgence. Whether the superior clinical endpoints achieved by this modality obtained solely from its intrinsically longer treatment times and, correspondingly,

enhanced dialytic adequacy, is conjectural but difficult to dispute. Moreover, patient self-determination, collaboration in the care process, and adherence were enhanced by home hemodialysis, all “win-win” situations for the patient and provider. Furthermore, home hemodialysis appears to confer a survival benefit.

Intensive home hemodialysis in Canada, as either nocturnal hemodialysis or daily short hemodialysis, has been associated with superior clinical outcomes. Improvements in blood pressure control and cardiac function have accrued from intensified therapy, and similar results are achievable in home hemodialysis patients elsewhere. However, is such a practice financially reconcilable in health care systems that are entrenched in facility-based hemodialysis management schemes? Maybe, and the economic realities of home hemodialysis, viewed from the “10,000-foot level,” are juxtaposed against the importance of patient self-determination and patient-centered care in this review. In addition, the technological advances that may spur the growth of home dialytic treatment are also compiled, along with the health benefits derived from home-based dialytic therapies.

Lastly, sleep, an oft-ignored, soft endpoint, is improved by home dialytic treatment. Although Sir William Shakespeare wrote, “To sleep perchance to dream,” this is far from what we offer patients undergoing conventional hemodialytic therapy. Sleep impairment characterizes this end-stage renal disease population. Sleep disturbances occur during

the progression of uremia and improve after the initiation of kidney replacement therapy but incompletely. In addition, sleep apnea, obstructive and nonobstructive; symptoms of heart failure; and discontinuities in personal schedules all contribute to abnormal sleep patterns, in particular truncation of total rapid eye movement sleep. Consequently, the quality of sleep is reduced, aggravating sleep deprivation and its attendant complications.

Three times a week, maintenance hemodialysis patients incur a time burden of 15 to 20 hours per week devoted to traveling to and from dialysis centers and undergoing dialytic procedures. The time commitment is rigidly defined by the center’s schedule, and, consequently, patient sleep patterns become a function of the dialysis schedule rather than natural biorhythms. This is easily confirmed when one observes fully a quarter of in-center patients sleeping during their treatments. Intensive home hemodialysis can substantially improve sleep, and sleep improvement should be considered one criterion for transitioning patients to this modality.

Like voters, patients vote with their feet. Perhaps, after appraising this compendium, in this age of patient centeredness, we will encourage more of our end-stage kidney patients to “stay home” for their peritoneal dialysis or hemodialysis treatments. We may all sleep the better for it.

Jerry Yee, MD  
*Editor*