



# IU Health Physicians

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HEALTH FACILITIES &  
SERVICES REVIEW BOARD

November 25, 2013

Ms. Courtney Avery  
Administrator  
Illinois Health Facilities and  
Services Review Board  
525 West Jefferson  
Springfield, IL 62761

RE: Project 13-054, NxStage Oak Brook (the "NxStage Oak Brook Application")

Dear Ms. Avery:

I write this letter in strong support of the above-referenced NxStage Oak Brook Application. I am Professor of Clinical Medicine, Clinical Director of Nephrology, Department of Medicine, Division of Nephrology at Indiana University School of Medicine. As a long time medical director of a highly successful home dialysis program and as an early participant in clinical studies into the benefits of frequent dialysis, I know there is a great need for programs such as the one NxStage is proposing, and am confident that such programs can succeed.

Daily hemodialysis, particularly at home (HHD), is an important treatment option that offers significant clinical benefits because it allows for more frequent and/or longer lasting dialysis sessions. For instance, studies have demonstrated that more frequent hemodialysis results in faster recovery time after treatment with fewer side effects,<sup>1,2</sup> improved cardiac status<sup>3,4</sup> and survival rates,<sup>5,6</sup> and increased likelihood for transplantation<sup>7</sup> and opportunity for rehabilitation.<sup>8</sup> Additional clinical data support superior patient outcomes with more frequent HHD, with

<sup>1</sup> Heidenhelm AP, Mulhead N, Molst L, et al. Patient Quality of Life on Quotidian Hemodialysis. *AM J Kidney Dis.* 2003 Jul, 42 (1 Suppl):36-41.

<sup>2</sup> Jaber BL, Lee Y, Collins AJ, et al. Effect of daily hemodialysis on depressive symptoms and postdialysis recovery time: Interim report from the FREEDOM (Following Rehabilitation, Economics and Everyday-Dialysis Outcome Measurements) Study. *Am J Kidney Dis.* 2010;56(3):531-539.

<sup>3</sup> Cullerton, B et al. Effect of Frequent NHD vs. CHD on Left Ventricular Mass and Quality of Life. *JAMA* 2007;11

<sup>4</sup> FHN Trial Group. In-center hemodialysis six times per week versus three times per week. *N Engl J Med.* 2010;363(24):2287-2300.

<sup>5</sup> Pauley, R.P. Survival comparison between intensive hemodialysis and transplantation in the context of the existing literature surrounding nocturnal and short-daily hemodialysis. *Nephrol Dial Transplant.* 2013 28: 44-47.

<sup>6</sup> Weinhandl ED, Lio J, Gilbertson DT, Arneson TJ, Collins AJ. Survival in daily home hemodialysis and matched thrice-weekly in-center hemodialysis patients. *J Am Soc Nephrol.* 2012;23(5):895-904.

<sup>7</sup> Weinhandl E, Liu J, Gilbertson D, Arneson T, Collins A. Transplant incidence in frequent hemodialysis and matched thrice-weekly hemodialysis patients. Poster presented at National Kidney Foundation Spring Clinical Meeting, 2012.

<sup>8</sup> Blagg, Christopher, "It's Time to Look at Home Hemodialysis in a New Light." *Hemodialysis Horizons: Patient Safety & Approaches to Reducing Errors.* (2006): 22-28. Web. 12 Apr 2012. [http://www.oaflm.org/publications/HH/Home\\_Blagg.pdf](http://www.oaflm.org/publications/HH/Home_Blagg.pdf).

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benefits including reduced hypertension with fewer medications,<sup>9</sup> reduced depression,<sup>2</sup> improved quality of life,<sup>10</sup> improved sleep,<sup>11</sup> and reduced restless leg syndrome.<sup>11</sup>

Not surprisingly, multiple independently published studies have found that 9 of 10 physicians and nurses would choose a home modality for themselves, and most would choose HHD.<sup>12,13</sup> Nevertheless, access to frequent hemodialysis, and HHD in particular, remains limited. While studies show that U.S. nephrologists believe that 11-14% of patients would represent an ideal utilization of HHD<sup>14</sup>, less than 2% of patients perform HHD today.

For the above reasons, I encourage the Board to approve the NxStage Oak Brook Application.

Sincerely,



Michael A. Kraus, M.D.  
Professor of Clinical Medicine  
Clinical Chief of Nephrology  
Indiana University School of Medicine

CMO Adult Dialysis Services  
Medical Director Acute Dialysis  
Indiana University Health

<sup>9</sup> Jaber BL, Collins AJ, Finkelstein FO, et al. Daily hemodialysis (DHD) reduces the need for antihypertensive medications. Abstract presented at American Society of Nephrology Conference, October 29, 2009.

<sup>10</sup> Finkelstein FO, Schiller B, Daoul R, et al. At-home short daily hemodialysis improves the long-term health-related quality of life. *Kidney Int.* 2012;82(5):561-569.

<sup>11</sup> Jaber BL, Schiller B, Burkart JM, et al. Impact of short daily hemodialysis on restless legs symptoms and sleep disturbances. *Clin J Am Soc Nephrol.* 2011;6(5):1049-1056.

<sup>12</sup> Meringhi J, et al. Insights into nephrologist training, clinical practice and dialysis choice. *Hemodialysis International* 2011.

<sup>13</sup> Schiller B, et al. Perceptions about renal replacement therapy among nephrology professionals. *Nephrology News and Issues*, September 2010

<sup>14</sup> Mendelssohn D, et al. What Do American Nephrologists Think About Dialysis Modality Selection?: *American Journal of Kidney Disease* 37:22-29, 2001