

Attitudes towards Peritoneal Dialysis among Peritoneal Dialysis and Hemodialysis

Medical Directors: Are we preaching to the right choir?

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To the Editor:

Worldwide, only 10% of the approximately 1.7 million dialysis patients are treated with home-based peritoneal dialysis (PD); the majority receive facility-based hemodialysis (HD) even though most patients prefer PD when educated about their options.(1) There is substantial geographic variation in PD utilization. Between-country variation may result from cost of treatments, cultural, educational, and healthcare system differences, or reimbursement policies that incentivize the use of one therapy. Within-country variation may reflect regional differences in facility infrastructure, expertise, resources, and home dialysis education.

Physician education, training, and experience with home PD remains limited. A recent survey identified home dialysis training as the leading educational gap among United States nephrologists in training.(2) Although few absolute contraindications to PD exist, recommendations to more challenging patients can vary. This may stem from a lack of comfort with PD as a therapy or an inherent negative perception regarding its suitability.

We compared differences in attitudes of the medical directors of both PD and in-center HD units towards patient eligibility and the barriers to PD utilization. We hypothesized that regardless of country, by virtue of limited exposure, the leaders of HD facilities may employ more restrictive and varied eligibility criteria and perceive different barriers to PD use compared to their PD counterparts.

We examined 2014-2018 data from the Dialysis Outcomes and Practice Patterns Study (DOPPS) Phases 5-6 and Peritoneal DOPPS (PDOPPS) Phase 1. The DOPPS and PDOPPS are ongoing, international prospective cohort studies of dialysis facility practices and patient outcomes for adult in-center HD and PD participants. Study participants are ≥ 18 years and selected randomly from a national sample of dialysis facilities patients

(<http://www.dopps.org>). (3, 4) A central IRB approved each study phase; we obtained additional approvals and informed patient consents as required by national and local regulations.

The DOPPS asked medical directors of PD and HD facilities in Canada, Japan, the United Kingdom (UK), and the US: 1) to rate the level of PD training and support in their units, 2) whether certain patient factors would influence PD recommendations, and 3) potential reasons why PD was not more widely used in their program.

One hundred eighty-five (73% response rate) HD and 116 (66% response rate) PD directors responded. PD directors perceived greater PD training and enthusiasm among their nephrologists and nursing staff (72%-97% vs. 69%-84%). HD directors were much less likely to recommend PD for patients across a host of conditions and patient characteristics (**Figure 1A**).

HD and PD directors held different opinions about the reasons for low PD use in their programs (**Figure 1B**). Most PD directors believed that closely locating PD units impedes growth, and that the perception of HD's superior quality contributed to low PD use. Fewer than half of HD directors agreed with those statements; they were more likely to cite patient preferences such as comfort with, and fears about PD as the cause of lower use. The only major inter-country variation we noted was in Japan—staff in these HD units were generally the least enthusiastic about PD (35-40% vs. 61-100% in other countries).

It is troubling that these beliefs translate into strikingly wide gaps in recommending PD for incident patients with common co-morbid conditions. Half of US patients starting dialysis have diabetes, a quarter are aged 75 or older, and a third are obese. Choosing not to consider PD for these patients will restrict their choice of modality, a decision more appropriately based on broader clinical and patient-centered outcomes such as quality of life.

HD medical directors' responses also indicated misconceptions about PD eligibility. They may have been unfamiliar with the option of assisted PD for patients traditionally viewed as poor

candidates, or less current with literature that has refuted the myths that minor surgeries, polycystic kidney disease, or impending transplant are contraindications to PD. Physicians may also steer patients with a functioning fistula or graft towards HD.

HD medical directors were more likely to cite patient preferences as a barrier to PD use, a view potentially influenced by interaction with patients who have chosen HD over PD. Physicians' belief that patients prefer HD may consciously or unconsciously alter their approach to presenting PD as a treatment option.

Improved personnel education has the potential to reduce bias against home dialysis in HD units. A three-hour education initiative improved the attitudes of in-center HD nurses towards home dialysis.(5) Similar interventions for HD-focused physicians may catalyze PD growth.

Another solution involves creation of dedicated transitional care units that provide incident dialysis patients with the comprehensive support and unbiased education they need to make an informed modality choice.(6) This is especially salient among patients urgently starting dialysis. Many "crash start" patients initiate HD by default without the opportunity to be adequately informed. In the US, 18% of PD medical directors cited the high number of acute, in-hospital dialysis starts as a top barrier to PD growth. Once patients are established in traditional HD centers, education about treatment options may be limited and delivered by personnel who may strongly favor HD.(5)

Study limitations include that physician opinions may not reflect actual practice, and results may not be generalizable to the excluded directors who practice in units with less than either 20 PD or HD patients and to countries not included in the survey. We also did not quantify PD exposure and expertise among respondents and surveyed on select barriers, which did not include physician reimbursement policies.

Notwithstanding these limitations, HD medical directors had staff with less training in and enthusiasm for PD, were less likely to recommend PD, and more likely to cite patient preference as a barrier to PD growth. Educating physicians and staff, particularly about PD feasibility among various patients, may lead to greater utilization. The addition of transitional care units to ensure complete and unbiased patient education would help support informed modality decision making, particularly for those unexpectedly starting dialysis. Only through a multi-pronged solution that engages a range of practitioners can we expect to see major gains in PD use.

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Figure Legend

Figure 1. Patient conditions and other reasons for PD underutilization.

The survey question was:

A) “How likely are you to discourage the use of peritoneal dialysis based on the following conditions alone?”

Footnote: 116 MD in PD facilities (Canada 15, Japan 25, UK 34, and US 42), and 185 MD in HD facilities responded (Canada 25, Japan 61, UK 20, and US 79). Answer choices for HD MDs were: Much more likely to recommend, Somewhat more likely to recommend, Remain neutral, Somewhat less likely to recommend, and Much less likely to recommend; while for PD MDs were: Strongly encourage, Encourage, Remain neutral, Discourage, and Strongly discourage.

B) “The following questions refer to the reasons PD is not more widely used at your program.

Answer your level of agreement with the following.”

Footnote: 116 MD in PD facilities (Canada 15, Japan 25, UK 34, and US 42), and 185 MD in HD facilities responded (Canada 25, Japan 61, UK 20, and US 79). Answer choices were the same for both groups were: Strongly disagree, Disagree, Neither agree nor disagree, Agree, and Strongly agree.

Figure 1A

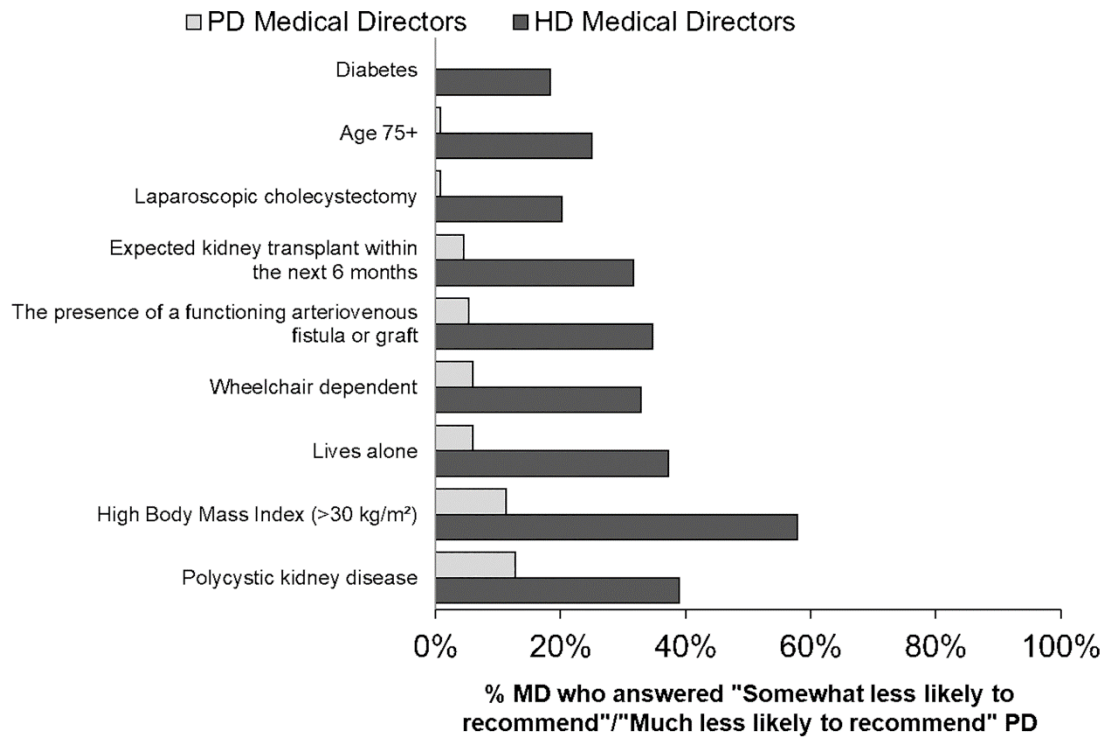


Figure 1B

