



## **Ontario Renal Network (ORN) Home Dialysis Research Group-- Home Dialysis Attrition Executive Summary**

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Promoting the appropriate use of home dialysis is a major strategic direction in Ontario that is supported by a number of initiatives collectively known as the 'Home First' Strategy. Compared with in-center hemodialysis, quality of life and treatment flexibility have consistently been superior with home-based renal replacement modalities (peritoneal dialysis and home hemodialysis). The overall prevalence of home dialysis use is the net balance between uptake, including successful completion of home dialysis training, and exit or 'attrition' events such as death, transplantation, and technique failure.

However, both uptake and attrition have varied provincially, with some variability due to potentially modifiable factors. A better understanding of factors associated with successful home dialysis use is needed to inform funding, policy, and improvement efforts for Ontario's 26 CKD programs. The Ontario Renal Network Home Dialysis Research Group was tasked with this mandate, and undertook three studies describing provincial performance, between-program variability, and factors associated with: 1) home dialysis training failure, 2) attrition from home dialysis, and 3) home-to-home modality transitions.

All analyses were based on data captured in the Ontario Renal Reporting System (ORRS) between April 2009 and March 2015 describing all consecutive patients registered in a chronic dialysis modality. In all cases, the fullest possible data set in the last five years was obtained. What follows is a summary of the findings and recommendations of the Home Dialysis Research Group.

The key findings of the report are as follows: 1. HHD training failure rates were relatively high and were heterogeneous across programs, with larger programs and those with longer training periods generally having lower training failure rates. 2. PD training failure rates were relatively low. 3. PD technique failure rates at 1 year were decreasing over the study period despite growth in overall PD prevalence rates. 4. There is a wide variation in PD and HHD technique failure rates across programs, with smaller and rapidly growing programs generally having higher technique failure rates. 5. Utilization of home-to-home transitions, e.g., failing PD patient transitions to HHD, was low in most programs.



The recommendations of the report are the following:

1. Initiate patient level tracking of PD catheter insertion in ORRS as PD catheter failure is unlikely to be fully captured in training and technique survival analyses. The rates of primary PD catheter malfunction and PD catheter non-use should also be formally studied.
2. Considerations for mentorship and funding to allow for overall increase in home dialysis training success. The task force recognizes that home dialysis training success ought not to be 100% as marginal candidates should be considered to increase the overall uptake of home dialysis in the province.
3. More granular collection of reason codes for home dialysis attrition in ORRS, with updated classification systems for both HHD and PD attrition events.
4. Ongoing monitoring of technique failure on a recurring basis e.g. quarterly or continuously through ORRS score card extract reports.
5. Consideration for increased resources and support for programs at increased risk for attrition, such as small programs and those with high growth rates.
6. Increase awareness and incentives to facilitate home-to-home dialysis transition. Conduct studies evaluating facilitators and outcomes of home-to-home transitions in Ontario.