

CADTH Optimal Use Report:

Dialysis Modalities for the Treatment of End-Stage Kidney Disease

A Health Technology Assessment

This CADTH HTA on End-Stage Kidney Disease

Its Aim: To inform policy questions on the optimal treatment of eligible patients through the assessment of the clinical effectiveness, cost-effectiveness, patient experiences and perspectives, ethical issues, and implementation issues of dialysis modalities for the treatment of end-stage kidney disease (ESKD).

The Clinical Outcomes of Interest: Patient quality of life (primary outcome), mortality, hospitalization, adverse events, and technique failure (secondary outcomes). In total, six systematic reviews and 34 primary studies were synthesized.

Primary outcome of interest

The overall findings of this review suggest that there is no consistent difference in quality of life outcomes between home hemodialysis (HHD) or peritoneal dialysis (PD) compared with in-centre hemodialysis (ICHD), although studies may not have been large enough to reliably detect a difference. Both home-based dialysis modalities (HHD or PD) may offer a greater survival benefit among younger, motivated patients in supportive settings compared with ICHD. However, there is insufficient high-quality evidence to clearly support that either is clinically superior to ICHD.

Recommendation

For patients diagnosed with ESKD who have been deemed eligible for home therapies by their care providers, self-care home-based dialysis – either with HHD or PD – is recommended.

To read the full CADTH report on this topic, please visit cadth.ca/dialysis.

Clinical Evidence

 Home-based modalities appear to offer clinical benefits similar to those offered by ICHD.

 Overall, the risk for hospitalization does not differ between HHD, PD, and ICHD (although some evidence suggests PD may be associated with fewer hospitalizations compared with ICHD).

Patient Perspectives and Experiences Evidence

 Patients want to be informed about all available options and want their treatment conditions to be least disruptive to their lives and day-to-day activities, as well as to their caregivers' lives.

 Having information about all treatment options and being involved in the decision regarding their treatment helps patients feel more empowered to make choices and be more comfortable with their treatment.

 Patients desire a sense of freedom over their lives and control over their treatment, and they do not want to be a burden to their families and caregivers. For some patients, their life situation, beliefs, and perceptions lead them to prefer home-based modalities. For others, even in similar situations, in-centre modalities are preferred.

Economic Considerations and Evidence

 Home-based therapies, including PD (non-assisted) and all HHD modalities, are less costly than ICHD, with conventional HHD being the least costly from the health system's perspective.

Home-based therapies are associated with:

-  Lower patient travel costs
-  Higher home utility costs (for HHD only)
-  Potential benefits in home and workforce productivity for employed patients.

 Home-based dialysis modalities may reduce the need for centralized facilities and travel, or relocation, for patients who live outside of urban centres, and may also offer cost savings, compared with ICHD, for patients and the health care system.

What is a Health Technology Assessment? An HTA, or health technology assessment, offers synthesized and critically appraised evidence on drugs, medical devices, diagnostics, and procedures that is both reliable and timely. An HTA provides the evidence piece to the clinical decision-making puzzle.

CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs and medical devices in our health care system.

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