

Working from home today

There was a time when patients with kidney failure had just two options: kidney transplantation or visiting a clinic for dialysis several times per week. Even for those eligible for transplantation, the dialysis clinic becomes part of their life while they wait for a suitable organ to become available. This is changing as more patients choose to undergo dialysis at home at a time that is convenient for them.

Chronic kidney diseases are typically caused by diabetes, high blood pressure or inflammatory diseases of the kidney. Left undiagnosed or untreated, these conditions can cause total kidney failure – the kidneys no longer clean the blood and thus can lead to death.

In 2013, there were around 3.2 million patients being treated for kidney failure worldwide and this number increases by approximately 6% each year¹. For 2.5 million of these people, dialysis is essential to their survival. Around 678,000 were living with kidney transplants.

Every year European healthcare systems spend between €40,000 and €80,000 per patient on dialysis (depending on country and strategy)¹. According to the European Renal Care Provider Association, out of 552,000 kidney failure patients in Europe in 2013, 62% were treated with dialysis and 38% were living with kidney transplants². It is estimated that the number of patients receiving dialysis or living with a kidney transplant will increase to about 650,000 by the year 2020. This puts significant pressure on hospital services and budgets.

For patients, making several trips per week to a dialysis clinic is a considerable inconvenience and impacts greatly on their quality-of-life. But there is an alternative. Home dialysis cleans the blood in the way that kidneys would but gives patients greater flexibility about when to undergo dialysis. For patients, this is more convenient while also being more efficient for the health system.

There are two main types of home dialysis: haemodialysis machines filter the blood and return it to the body; peritoneal dialysis uses a catheter to fill the abdomen with cleansing liquid which is then drained to remove waste.

Dialysis may sound complex but, with proper training and family support, both types of dialysis can be done at home by people of any age. Not all patients are eligible for home dialysis but for those who are, it reduces the need to travel to the clinic and offers them the freedom to pursue work, study, and family life.

There may also be savings for the health system. In the UK, where between 20% and 30% of dialysis patients are treated at home, a study found that increasing the use of home dialysis by 2% per year over a five-year period would generate cumulative savings of GBP£343 million³.

As the number of people with diabetes and high blood pressure increases⁴, leading to higher demand for treatment, this patient-centred approach is likely to expand to other such diseases.

Medtech: value for people

- Convenient for patients, allowing them to choose when to undergo dialysis in their home
- Enables patients to take control of their health and self-manage their illness
- Home dialysis is preferred by a number of patients⁵
- Reduces number of hospital appointments
- Improve quality-of-life by enabling patients to get on with their lives and engage in work, study and family life

Medtech: value for governments

- Offers a patient-centric approach to dialysis provision
- Reduces pressure on clinics by providing care in the community
- Can be less expensive than hospital dialysis^{3,6}
- Delivers value through innovation and supports high-quality jobs in Europe

Medtech: value for regulators

- Facilitates home dialysis which is an established practice in many countries such as the UK where 20%-30% of kidney failure patients undergo home dialysis³
- Offers a safe alternative to hospital-based care: UK National Institute for Health and Clinical Excellence recommends that patients considered suitable for home dialysis be given the choice⁷

Medtech: value for payers

- Can deliver savings by shifting care from clinics to patients' homes due to less need for staff surveillance and more patient self-management⁶
- NICE in the UK recommends suitable patients with chronic kidney disease be offered the choice of having dialysis in the home or in hospital⁷



NOTES

- 1) European Renal Care Provider Association : <http://www.ercpa.eu/facts-figures/> (accessed 10.03.2015).
- 2) European Kidney Health Alliance. The Alarming Rise in Chronic Kidney Disease in Europe: How to deal with a costly problem. http://www.era-ed-ta.org/images/2013_EKHA_Call_to_Action_ANNEX_2%20.pdf.
- 3) Joble J, Laplante S. Impact of home dialysis on UK healthcare budget. 2010 Annual meeting of the European Renal Association – European Dialysis and Transplant Association. Munich, Germany, June 2010 (poster).
- 4) Kearney P et al. Global burden of hypertension: analysis of worldwide data. *Lancet* 2005;365(9455):217–23.
- 5) Jager KJ, Korevaar JC, Dekker FW et al. The effect of contraindications and patient preference on dialysis modality selection in ESRD patients in The Netherlands. *Am J Kidney Dis* 2004; 43: 891-899.
- 6) Just PM et al., *Health Policy* 2008; 86:163-180.
- 7) National Institute for Health and Clinical Excellence: Guidance on home compared with hospital haemodialysis for patients with end-stage renal failure 2012. <https://www.nice.org.uk/guidance/ta48> (accessed 10.03.2015).