

## Improving dialysis for patients and health systems in community and home care

### Chronic kidney disease and healthcare expenditure

Chronic kidney diseases (CKD) are typically caused by diabetes, hypertension and inflammatory diseases of the kidney (especially glomerulonephritis). Left undiagnosed or untreated, CKD can cause total kidney failure (End-stage Renal Disease – ESRD) which is treatable only by dialysis or transplantation, i.e. Renal Replacement Therapy (RRT).

For medical reasons, most dialysis patients are not suitable for transplantation and due to the limited availability of donor kidneys, the majority of patients with ESRD require dialysis therapy for the remainder of their lives. Thanks to innovation and supportive care systems, there are now different methods to perform dialysis, and even the opportunity to receive treatment at home (e.g. during night or continuously during day), contributing to quality of life and well-being of patients.

Hemodialysis (HD) is a treatment method where patient's blood flows outside of the body through disposable bloodlines into a special filter, the dialyzer. Peritoneal dialysis (PD), is a blood purification method using the patient's peritoneum, i.e. the tissue that forms the lining of the abdominal cavity. Most patients selected for PD stay on this therapy for 3 to 5 years before being transferred to HD. In 2013, there were around 3.2 million patients being treated for ESRD worldwide. This number increases by approximately 6% each year. Out of those 3.2 million patients, around 2.5 million were undergoing dialysis treatment (either hemodialysis or peritoneal dialysis), and around 700,000 were living with kidney transplants.<sup>i</sup>

<sup>ii</sup>

In Europe, in 2013 out of ~ 500,000 ESRD patients, ~ 60% were treated with hemodialysis, ~5% with peritoneal dialysis, and ~35% were living with kidney transplants.<sup>ii,iii</sup> Every year, approximately 0.01% of the total European population newly develop ESRD requiring RRT. For these new cases, there is a wide variation amongst countries offering treatment of which dialysis at home (mainly peritoneal) represents (4 - 40%).<sup>ii</sup> Every year European healthcare systems spend between €40,000 – €80,000 per patient on dialysis (depending on country and strategy).<sup>iii</sup>

### Making dialysis therapies effective for patients and health systems

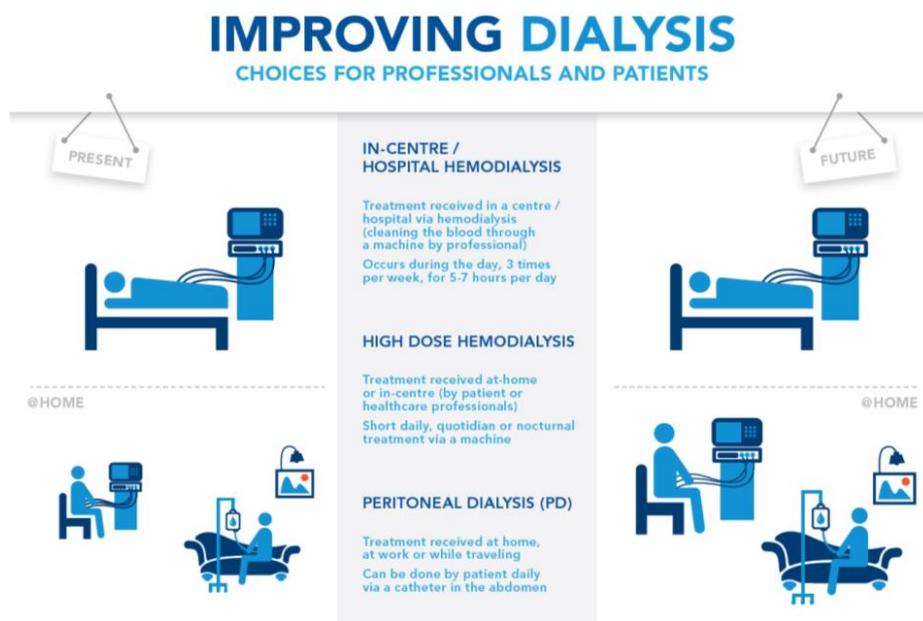
A study from the Netherlands has shown that when dialysis patients are offered a choice between in-centre and home care for dialysis, 35 – 55% of patients would prefer to be treated at home<sup>iv</sup>. When patients are eligible for at-home dialysis, savings for the health care system seem possible. A 10% increase of at-home dialysis for a period of 5 years would generate savings of ~ € 1 billion in Europe,<sup>v,xi</sup> reducing healthcare systems increase in cost of the renal replacement therapy due to higher incidence of diabetes and hypertension in the next years, risk factors for kidney failure<sup>viii</sup>.

### Fostering reimbursement strategies that make sense for patients and health systems

To support patients' choice reimbursement strategies must be developed to create incentives for clinicians to prescribe the most effective dialysis therapy to meet patients' needs – whether that be in-centre or at home.<sup>viii</sup> Not every patient is suitable for, or prefers, at-home

dialysis therapy.<sup>ix</sup> However, those particular patients that can benefit from home dialysis should be able to, particularly if such therapy is not only preferred, but also cost-effective.

These factors increase the responsibility of governments and payers to design and promote health policies that provide for the most optimal, patient-centred treatment while balancing the need for cost-effectiveness within the health systems.<sup>x</sup> Dialysis is an area where this balance can be achieved.



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- XI The financial impact of increasing home-based high dose haemodialysis and peritoneal dialysis. Frank Xiaoqing Liu, Catrin Treharne, Bruce Culleton, et al Abstract ID# 45546 | ISPOR 16th Annual European Congress.

