



## In Denmark kidney transplantation is more cost-effective than dialysis

Cathrine Elgaard Jensen<sup>1</sup>, Preben Sørensen<sup>2,3</sup> & Karin Dam Petersen<sup>1</sup>

### INTRODUCTION

Approximately 5,000 Danish patients are being treated for end-stage renal disease, for which the two treatment options are dialysis and transplantation. The objective of this study was to estimate the cost-effectiveness of kidney transplantation versus dialysis from a public health-care perspective.

### MATERIAL AND METHODS

A cost-utility analysis was conducted using a decision analytic model. The model was designed as a Markov model in which all relevant costs and effects of the two alternative treatments were included. Deterministic data were used alongside the best available evidence from the literature. To estimate the overall uncertainty concerning the incremental cost-effectiveness ratio (ICER), a probabilistic sensitivity analysis with second-order Monte Carlo simulations was carried out on a hypothetical cohort of 10,000 patients.

### RESULTS

The cost per quality-adjusted life year (QALY) was 1,032,934 DKK for dialysis compared with 810,516 DKK for transplantation. When comparing kidney transplantation with dialysis, kidney transplantation was cost-saving and resulted in additional QALYs. When taking the overall uncertainty associated with the ICER into account, an incremental cost-effectiveness scatter plot supported that transplantation was dominating and that the results were robust. In addition, a cost-effectiveness acceptability curve showed that transplantation had a 99.93% likelihood of being cost-effective at a willingness-to-pay value of 0 DKK.

### CONCLUSION

The cost-effectiveness ratio was favourable for kidney transplantation when compared with dialysis. In view of this, it was concluded that transplantation is preferable to dialysis when treating patients with end-stage renal disease.

**FUNDING:** not relevant.

**TRIAL REGISTRATION:** not relevant.

**CORRESPONDENCE:** Cathrine Elgaard Jensen. E-mail: celga@business.aau.dk

**CONFLICTS OF INTEREST:** Disclosure forms provided by the authors are available with the full text of this article at [www.danmedj.dk](http://www.danmedj.dk).

**REFERENCE:** Dan Med J 2014;61(3):A4796

**FROM:** 1) Danish Center for Health Care Improvements, Faculties of Health Science and Social Sciences, Aalborg University 2) Department of Neurosurgery, Aalborg University Hospital 3) Dansk Center for Organdonation



## Clinical information on admission is insufficient to determine the appropriate isolation regimen for acute gastroenteritis

Florence Skyum, Osama Karim Abed & Christian Backer Mogensen

### INTRODUCTION

The number of admissions for acute gastroenteritis (GE) is increasing. The majority of patients pass through a single high-flow emergency department (ED) area which increases the risk of spreading GE. The aim of this study was to determine the frequency and aetiology of GE for acutely admitted patients and to analyse their clinical information focusing on risk indicators of contagious aetiology and on the chosen isolation regime to determine if the GE required a contact precaution isolation regime.

### MATERIAL AND METHODS

This study included patients above 16 years of age who were admitted acutely within a one-year study period to a Danish hospital with a catchment population of 231,000 persons. The following items were analysed: information from the referring doctor, diarrhoea, nausea and vomiting and fever history, abdominal pain, prior antibiotics, co-morbidity, drugs, travel history, contagious contacts, general condition, vital values, isolation regime, final diagnosis and results of stool examination.

### RESULTS

Among 17,531 acute admissions, 1.6% had acute GE and 60% of these had stool examinations performed. Only 35% of the patients with GE had information about possible GE at referral. Short duration and vomiting may help to identify norovirus and antibiotic treatment within the last month to identify *Clostridium difficile* infections. All patients with highly infective GE were isolated under a contact precaution regime, but only one in four of the isolated patients were actually highly contagious.

### CONCLUSION

Acute GE is a prevalent condition in the ED; a number of patients are isolated unnecessarily, but it is difficult to assess correctly who should be isolated and who should not. We recommend that further studies be undertaken to define isolation criteria and to assess the usefulness of new rapid analysis modalities with a view to reducing the isolation period.

**FUNDING:** not relevant.

**TRIAL REGISTRATION:** not relevant.

**CORRESPONDENCE:** Christian Backer Mogensen. E-mail: christian.backer.mogensen@rsyd.dk

**REFERENCE:** Dan Med J 2014;61(6):A4850

**CONFLICTS OF INTEREST:** See [www.danmedj.dk](http://www.danmedj.dk).

**FROM:** Emergency Department, Hospital Sønderjylland