

# Productivity Losses and Its Associated Factors Among End Stage Renal Disease Patients Receiving Dialysis Treatment in Kuantan, Pahang

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## Introduction:

In Malaysia, the economic burden of end stage renal disease (ESRD) patients receiving haemodialysis (HD) and peritoneal dialysis (PD) treatment, in terms of productivity loss from the societal perspectives, is unknown. Thus, this study intended to investigate the extent of productivity losses of these patients and factors associated with productivity losses.

## Methodology:

A multi-centre, cross-sectional study was conducted between September 2019 and February 2020 in Kuantan, Pahang. Time loss due to dialysis treatment was measured among working-age ESRD patients and was multiplied with the gross national income for the year 2020 to estimate productivity losses. Factors associated with productivity loss was determined using multivariate regression analyses.

## Results:

Among 284 working-age ESRD patients receiving dialysis treatment, 27.8% (n=79) were in paid employment while 48.9% (n=139) were on unpaid work. The productivity loss of HD patients was significantly higher than that of PD patients (MYR 11,968.93 versus MYR 7,214.92 per patient-year,  $p < 0.05$ ). The annual productivity losses at the local level were MYR2.34 million, and the estimated annual productivity losses at the state and national level were MYR12 million and MYR 234 million, respectively. HD treatment, post-dialysis side effects, post-dialysis recovery period and iron administration were significantly associated with a higher productivity loss ( $p < 0.05$ ).

## Conclusion:

This study applauds the national strategic policy to increase PD uptake for eligible ESRD patients because PD led to a lower productivity loss compared to HD. Additionally, a proper clinical management policy for anaemic patients and patients suffering from post-dialysis side effects requiring post-dialysis recovery may improve productivity for ESRD patients.