

# SHORT DAILY HEMODIALYSIS AND ACTIVE TRANSPLANTATION ASSESSMENT: A SYNERGISTIC APPROACH TOWARD AN OPTIMAL TREATMENT.

BELLO, Vilber; SIMON, Adolfo; XAVIER, Kélia; LAUAR, Juliane; PASCOAL, Istênio

*Centro Brasiliense de Nefrologia - Brasília, DF, Brazil*

## INTRODUCTION and OBJECTIVES

Hemodialysis is the most frequent Renal Replacement Therapy.

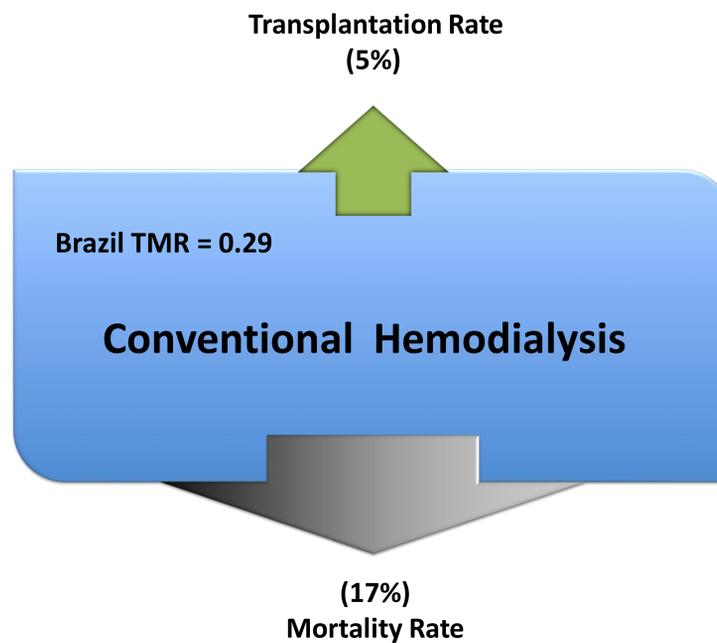
Conventional hemodialysis (4 hours, 3xWeek) has been associated with high mortality rate (15-20%) and low transplantation rate (3-5%).

Intensive hemodialysis modalities have improved survival and quality of life, but to the extent of our knowledge there have been no studies of transplantation rate in the quotidian hemodialysis regimens.

This study examines transplantation rate in our in-center short daily hemodialysis program and suggests a new *index* for better qualifying dialysis program: TPM (Transplantation to Mortality Rate)

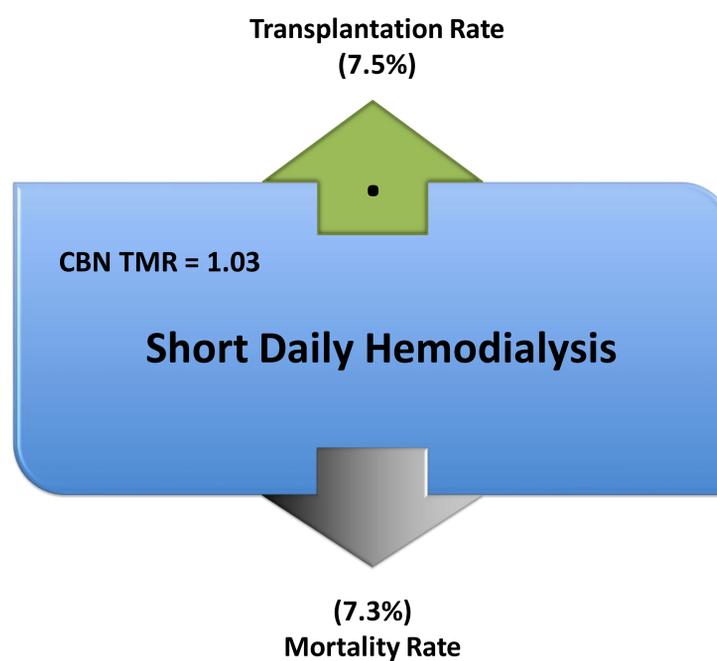
## MÉTODOS

- **Population:** 119 consecutive, unselected, privately insured patients (mean age 55.6±7.1 yrs, 66% male, 36% diabetics) admitted and underwent chronic short daily hemodialysis treatment
- **Intervention:** hemodialysis (6-7 times week, 90-150 min/session, 300 ml/min blood flow, 500 ml/min ultrapure dialysate flow and single-use high flux dialyzer). All patients commencing dialysis were timely assessed for kidney transplantation
- **Observation period:** Jun/2006 to Mai/2014
- **Analysis:** Eight-year average kidney transplantation rate (ATR), average dialysis mortality rate (AMR), global transplantation rate (TR), global mortality rate (MR) and transplantation to mortality ratio (TMR)



## RESULTS

- **49/119** dialysis patients (41%) were waitlisted for kidney transplantation (KT) (mean age 39.0±15.4y)
  - 70/119(59%) not eligible for KT (41 >70y, 27 clinical conditions, 2 declined) (mean age 68.0±12.7y)
- **30/119** patients (TR 25.2%) were transplanted and 19 remain on list
  - Average Annual Transplantation Rate (ATR): 7.5% (mean age 38.0±15.7y) - 80% deceased donor
- **29/119** patients (24,5%) died in dialysis
  - Average Annual Mortality Rate (AMR): 7.3% (mean age at death 38.0±15.7y)
- Transplantation to Mortality Rate (TMR): 1.03%  
(Brazilian National Data: Dialysis patients waitlisted: 20%, Transplantation Rate: 5%, Mortality Rate: 17%, TMR: 0.29)



## CONCLUSIONS

*Our experience combining short daily hemodialysis with a proactive transplantation assessment decreases mortality and increases transplantation rates. It is an effective model toward an optimal treatment for end stage renal disease patients.*

## PROPOSAL

Mortality rate has been used as a standard tool to evaluate dialysis program quality (*negative dropout*).

Before dying, however, an important fraction of dialysis patients has a preferential treatment option represented by kidney transplantation.

Thus, transplantation rate should also be considered as a standard tool to evaluate dialysis program quality (*positive dropout*).

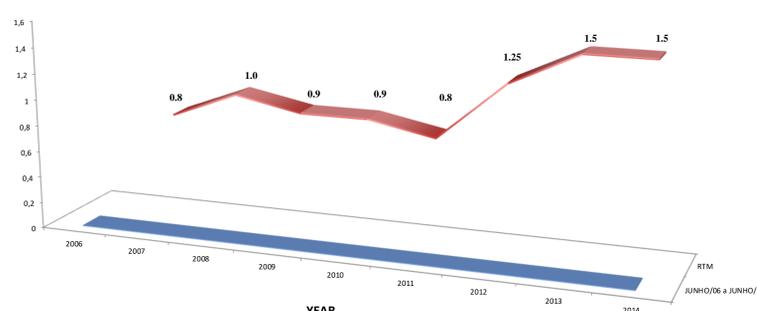
As transplantation rate and mortality rate are opponent and concurrent measures, we propose a *novel index* to better reflect the global quality of dialysis treatment:

*Transplantation to Mortality Ratio (TMR)*

## TRANSPLANTATION TO MORTALITY RATIO

*Yearly Follow-Up Analysis - CBN SDHD Program*

$$\text{TMR} = \frac{\text{T}}{\text{M}}$$



## Transplantation/Mortality Ratio (TMR)

*A Novel Index for Qualifying Dialysis Programs*

TMR is a simple and direct index for qualitatively evaluating any dialysis program.

While kidney transplantation should actively be promoted, death in dialysis should be avoided.

TMR (T/M) is the ratio between transplantation rate and mortality rate observed in any given dialysis program over time.

Enhancement of transplantation rate or reduction of mortality rate, or both, by any means at any time, reflect improvements of the global dialysis quality and may be easily assessed by TMR.