

BACKGROUND

Conventional hemodialysis (CHD: 4h3x/wk) has been associated with poor quality of life and high morbidity, hospitalization and mortality rates. An ideal hemodialysis prescription requires ultrapure dialysate, single-use biocompatible membranes, on-line blood monitoring and more frequent and/or longer treatments. Hospitalization represents a significant financial burden, accounting for 40% of total dialysis expenditures. We have successfully run an in-center short daily hemodialysis program (SDHD: 2h6-7x/wk) complying with all requirements for an ideal prescription in the last 13 years.

OBJECTIVES

This study aims to demonstrate how we have configured dialysis delivery, improved outcomes and managed resources to achieve an optimal sustainable dialysis practice.

METHODS

Operational (productive efficiency, patient compliance and payers coverage), clinical (hospitalization, kidney transplantation and survival rates) and economic (supply dialysis cost, cost-savings and net savings) landscapes were assessed in 176 consecutive unselected private-insured patients (108M/68F; mean age 57.6 ± 19.0 yrs, range 8-97) receiving in-center SDHD treatments (6-7x/wk; lasting 117.2 ± 8.8 min, range 105-150; ultrapure dialysate and single-use high-flux dialyzer) from Jun/05 to May/18. Reimbursement has been largely based on patient outcomes and hospitalization rates.

RESULTS

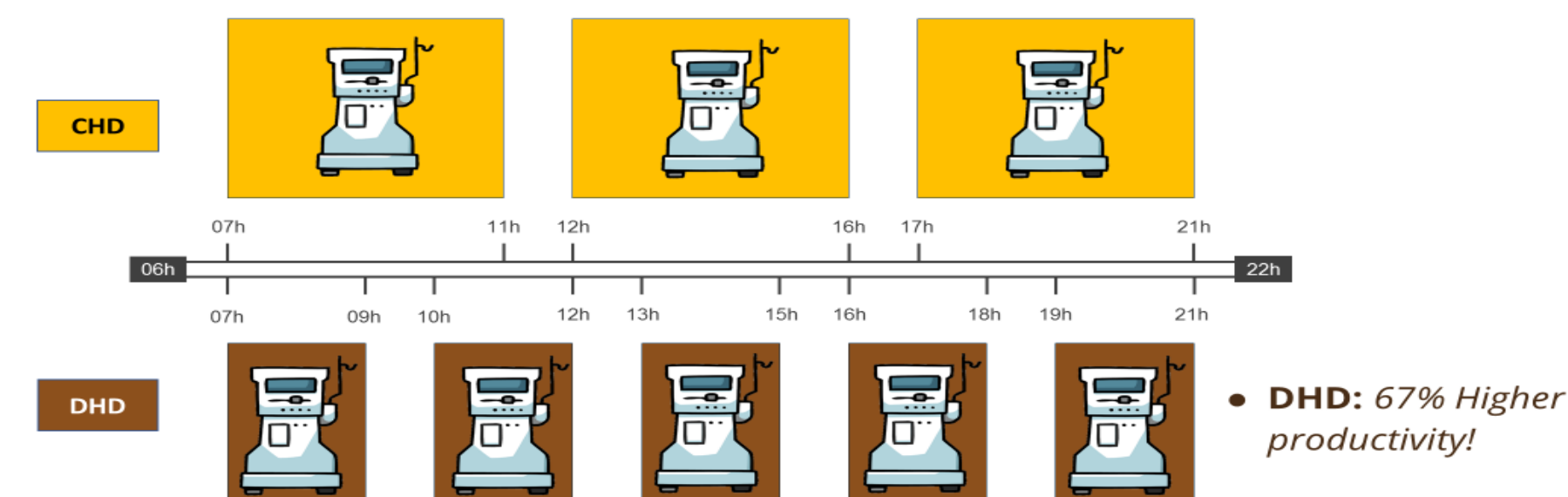
Our in-center SDHD program operates five 2-hour shifts a day (67% higher productivity without increasing fixed costs), the average missed treatment rate was 1.47% and an incremental negotiated approach reached universal insurance coverage for daily regimen. Average hospital stay (2.97 days per patient-year), kidney transplantation rate (7.5%) and mortality rate (7.3%) were better than reported for CHD hospital stay (12 days per patient-year), kidney transplantation rate (4.6%) and mortality rate (19.9%). Daily hemodialysis consumables costs doubled, adding 25% for patient overall cost. Conversely, hospital total length of stay was 75% lower, reducing overall costs by 30% and offsetting the additional supply cost.

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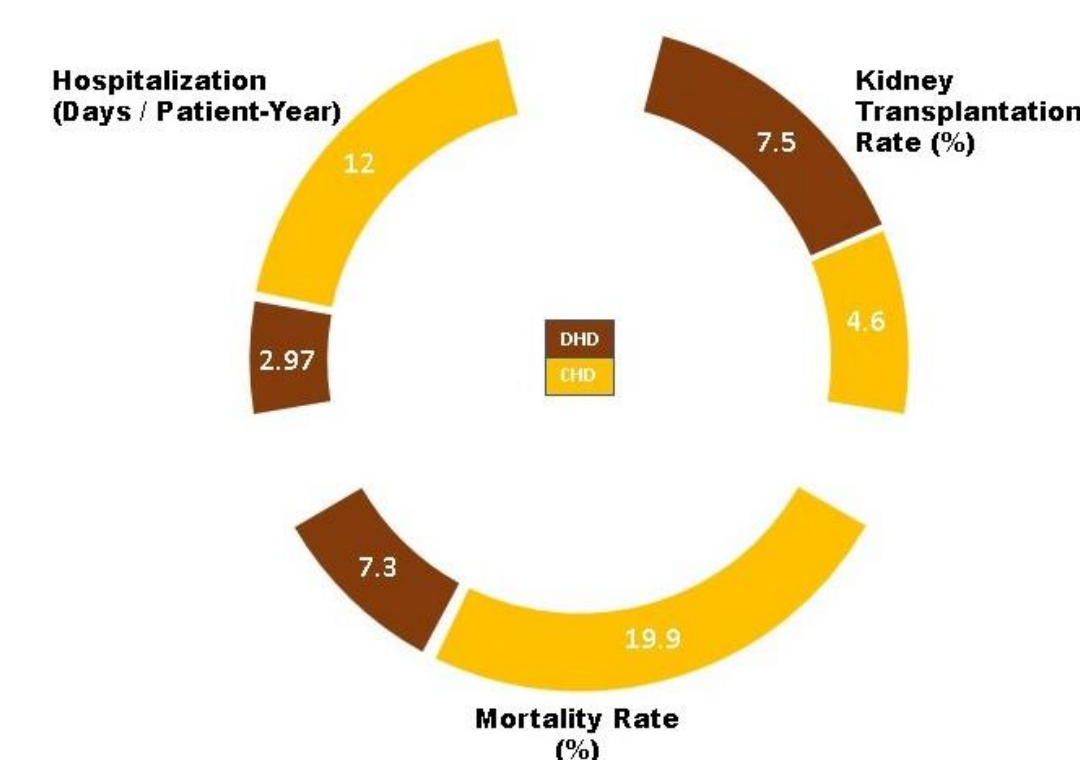


176 PATIENTS ON IN-CENTER SHORT DAILY HEMODIALYSIS

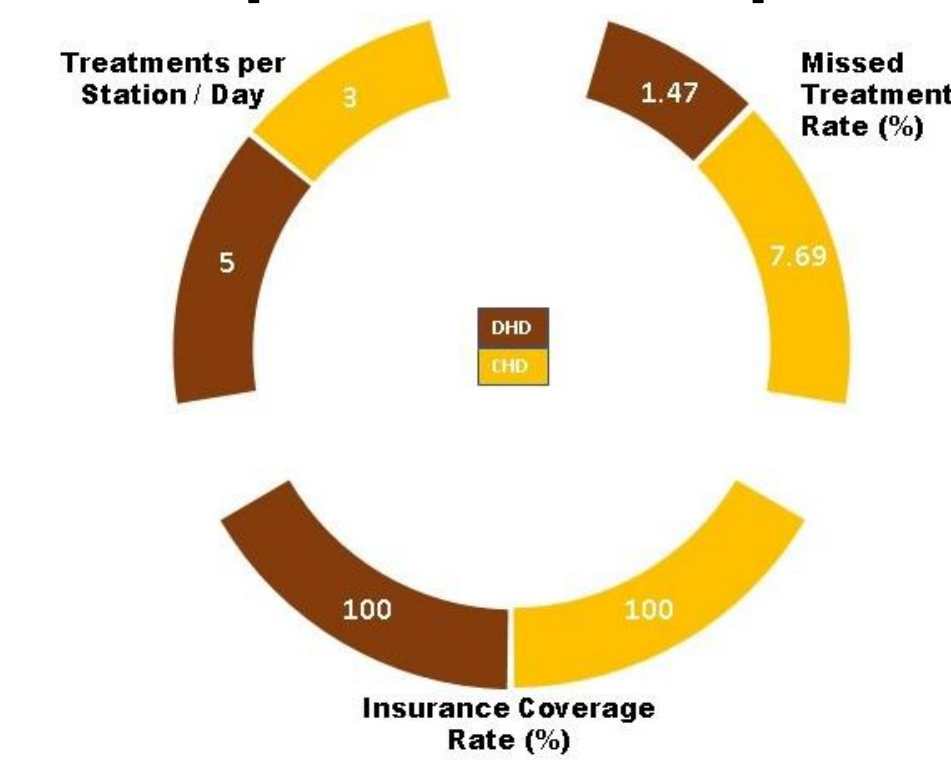
Dialysis Care Redesign



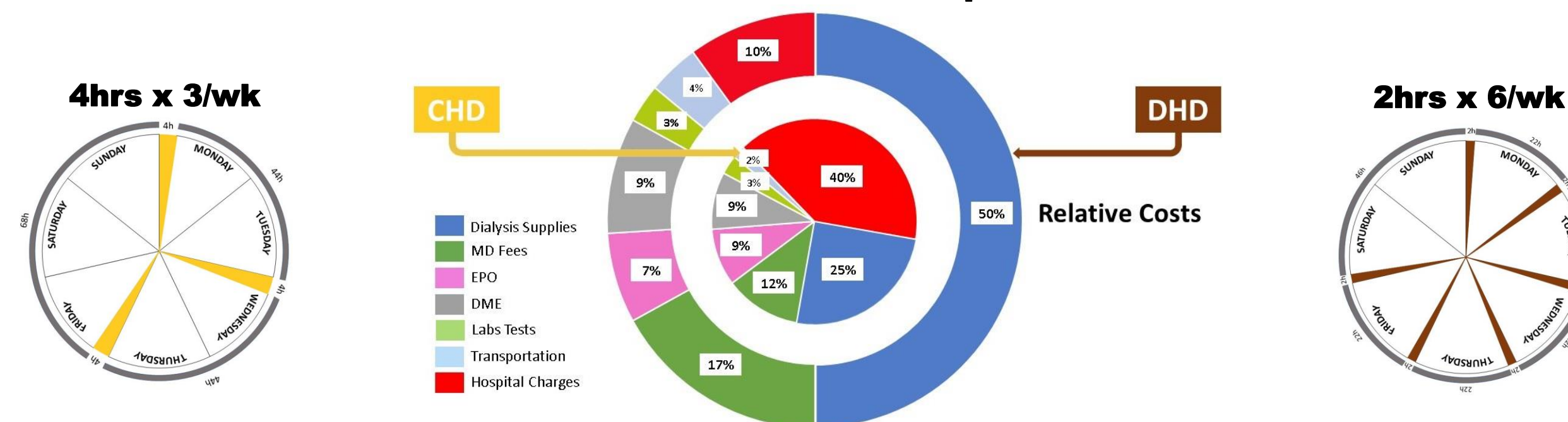
Clinical Landscape



Operational Landscape



Economic Landscape



CONCLUSIONS

Our dialysis care redesign has markedly improved patient outcomes and dramatically reduced hospital stays and expenses.

With clinical and economic variables combined, it has been possible to sustain a distinctive yet affordable maintenance hemodialysis program.

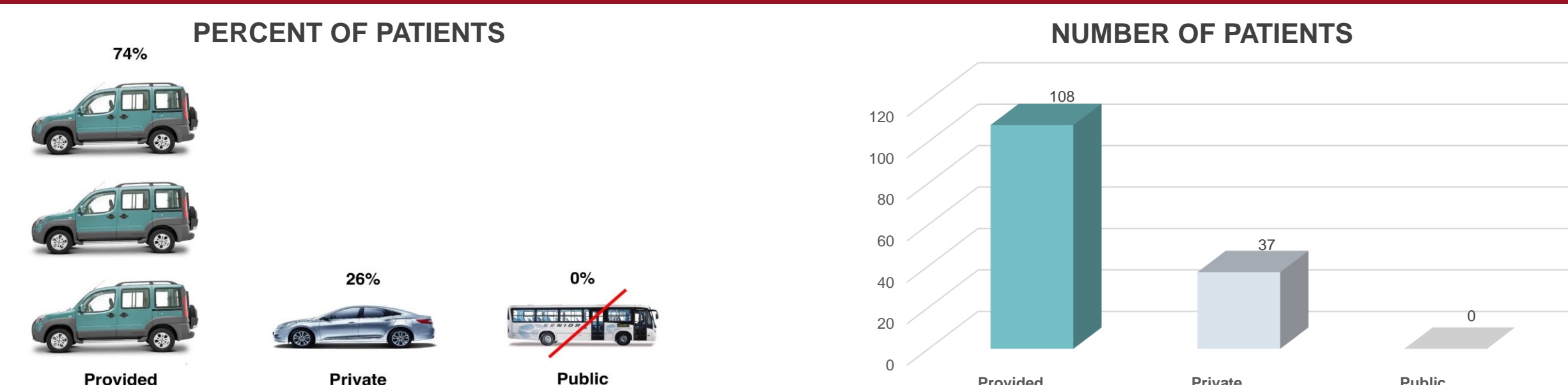
DISCUSSION

By increasing dialysis frequency, a well recognized but costly way to better health-related quality of life and survival rate of dialysis patients, we targeted to decrease their expensive hospitalization costs in order to turn frequent dialysis schedule a financially viable reality. Hospitalization accounts for up 40% of all dialysis patients expenditures, leaving no more than 60% for the remained procedures related to chronic dialysis. It is a vicious circle, where an underpaid suboptimal dialysis prescription leads to more hospitalizations, whose costs prevent a better dialysis schedule when patients are discharged from hospital back to the maintenance dialysis. Our findings reveal a superior clinical performance of daily dialysis patients, including lower length of hospital stay, higher kidney transplantation rate and very low mortality rate - all the desirable outcomes for patients under renal replacement therapy. Dialysis redesign, combining clinical and economic variables in the right way, leads to the much needed improvement in dialysis outcomes

REFERENCES

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ASN 2016: CBN&D DIALYSIS TRANSPORTATION



ASN 2017: CBN&D SEVEN DAYS A WEEK DIALYSIS SERVICE

