

## Background

Peritoneal dialysis is the renal replacement therapy (RRT) more widely used in Mexico. It is safe, cheap, easy to perform, and it also gives the patient autonomy. Its clinical results are comparable to those of hemodialysis.

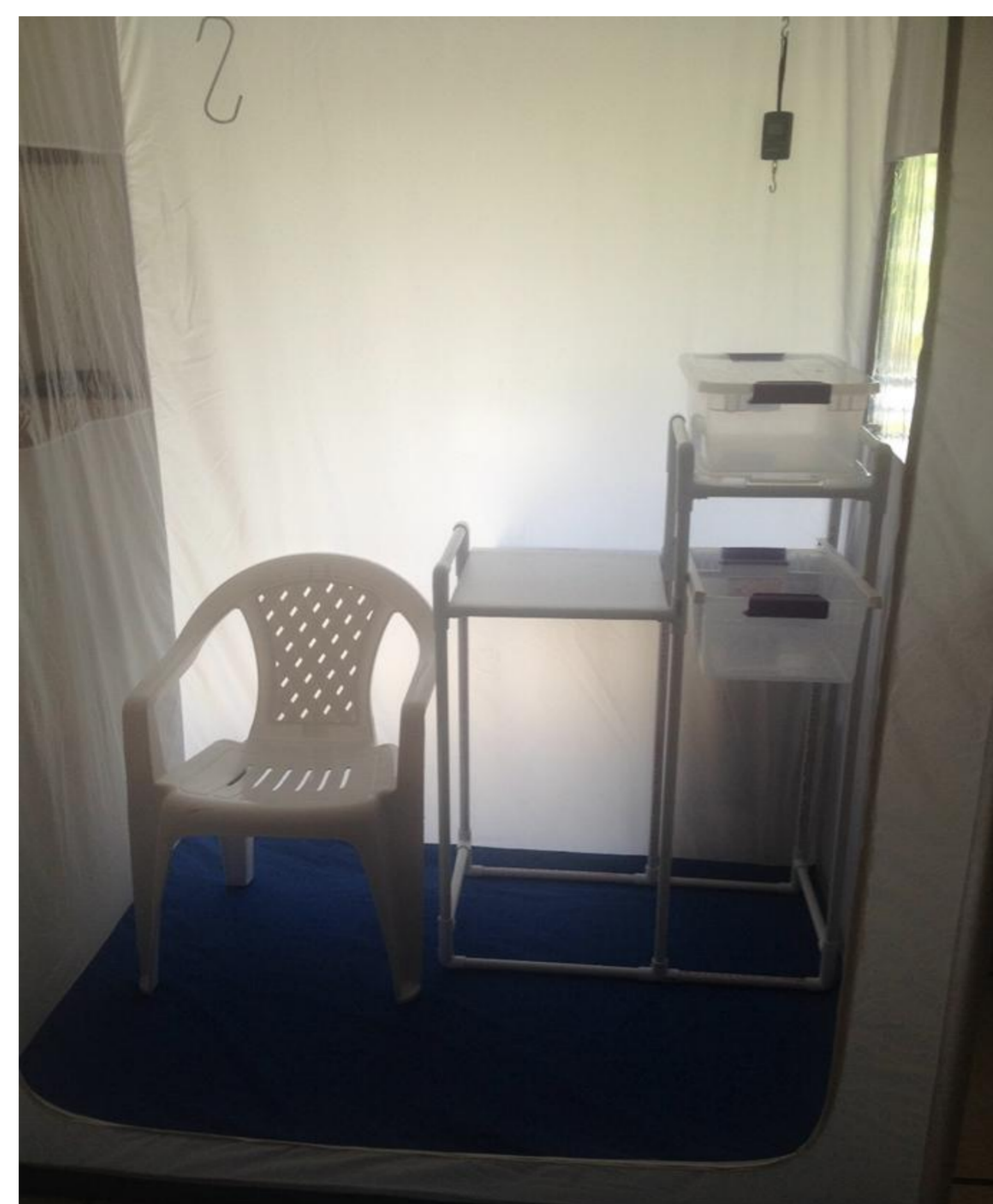
The Hospital Civil de Guadalajara, Mexico (HCG) is a tertiary-care hospital located in the West of the country. 52% of the Mexican population does not have medical insurance, except for partial coverage provided by “Seguro Popular”, which does not cover RRT expenses. The HCG provides nephrology care to these population. Du to economical constraints, patients that require RRT are first offered peritoneal dialysis (PD) (average monthly cost HD vs PD \$860 vs \$166 USD).

Most patients at HCG “crash into dialysis”. In order to be integrated to CAPD, patients have to meet specific requirements regarding the physical space at home where the treatment is performed (PD adapted room –AR-). See figure 1 and 2. Patients are then trained and evaluated by a multidisciplinary team. This process takes and **average of 90 days**. During this time, patients are admitted to hospital every 2-3 weeks to perform “Intermittent PD”, which consist of 30-45 PD exchanges with 2000 ml per exchange over a period of 24-48 hrs, in order to provide a form of RRT. This process continues until the patient has adapted his room (pictures) and approves the practical evaluation. This increases hospital and patient cost as well as infectious and inpatient complications.

Figure 1: PD adapted room



Figure 2: PD cabin



## Objective

To provide an alternative option to the PD adapted room, with the use of **portable cabins**, to provide a safe and proper ambient for CAPD and with a shorter integration time to the program.

## Methods

Quasi-experimental prospective study from June to November 2015. PD cabins vs adapted room were offered to the first time PD pts aged 18 or older.

Socio-demographic, clinical, laboratory values and integration time to CAPD were recorded.

PD failure, peritonitis, death, catheter dysfunction, re-hospitalization, transfer to hemodialysis, loss of follow up and were recorded.

## Results

Twenty-two patients with cabin and 26 patients with adapted room were included. A decrease in integration time and in average costs were observed in the group that used the cabin compared to patients that preferred the adapted room.

Peritonitis episodes, catheter placement re-hospitalizations, PD failure and transfer to HD and death did not differ between the 2 groups (see tables 1 and 2).

Table 1: patients characteristics and outcome

	All	Cabin	AR	p
	n= 48	n= 22	n=26	
Female, (%)	23 (47.9%)	11 (50%)	12 (46.2%)	0.79
Age (years)	35.31 (±15.90)	34.63 (±16.94)	35.88 (±15.28)	0.79
Diabetes, (%)	18 (37.5%)	6 (27.3%)	12 (46.2%)	1.81
HTN, (%)	31 (64.6%)	11 (50%)	20 (76.9%)	3.76
Dislipidemia, (%)	1 (2.1%)	0 (0%)	1 (3.8%)	1
Educational level				
Illiterate, (%)	7 (14.6%)	1 (4.5%)	6 (23.1%)	0.1
Elementary school, (%)	26 (54.2%)	12 (54.5%)	14 (53.8%)	0.96
High-school, (%)	15 (31.3%)	9 (49.9%)	6 (23.1%)	0.18
Re-hospitalization, (%)	47 (97.9%)	21 (95.5%)	26 (100%)	0.27
Peritonitis, (%)	6 (12.5%)	0 (0%)	6 (23.1%)	0.25*
Kidney Transplant, (%)	2 (4.2%)	0 (0%)	2 (7.7%)	0.49
Transfer to HD, (%)	2 (4.2%)	1(4.5%)	1(3.8%)	1
Death, (%)	2 (4.2%)	1(4.5%)	1(3.8%)	1
Lost of follow up	0	0	0	N/A
Average Cost (USD)	\$273.3 (±\$117.5)	\$182.7 (±\$25.8)	\$350 (±\$109.8)	<0.01*

Table 2: Comparison among the AR and cabin pts

	All	Cabin	AR	p
	n= 48	n= 22	n=26	
Elapsed time from PD catheter insertion to cabin or AR	41.04	4.04 (±1.64)	72.3 (±72.6)	<0.01
Elapsed time from cabin or AR to training	24.08 (±10.91)	26.72 (±14.29)	21.84 (±6.41)	0.15
Elapsed time from training to CAPD integration	29.43 (±10.63)	28.31 (±14.14)	30.38 (±6.53)	0.53
Overall elapsed time to CAPD integration	79.35 (±35.36)	61.45 (±24)	94.5 (±36.7)	<0.01

\* Elapsed time expressed in days

Figure 3 : Comparison of elapsed time between AR and cabin pts

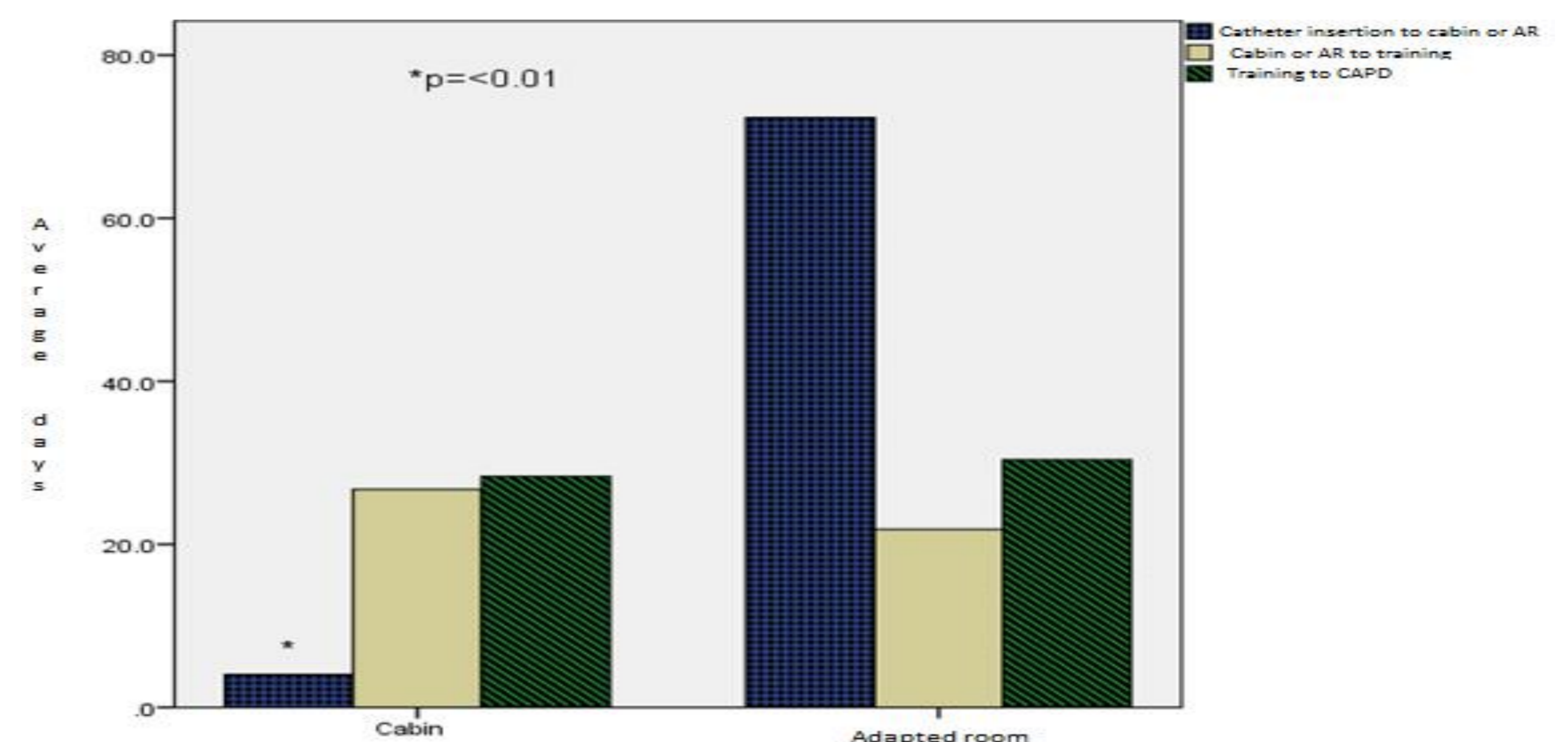
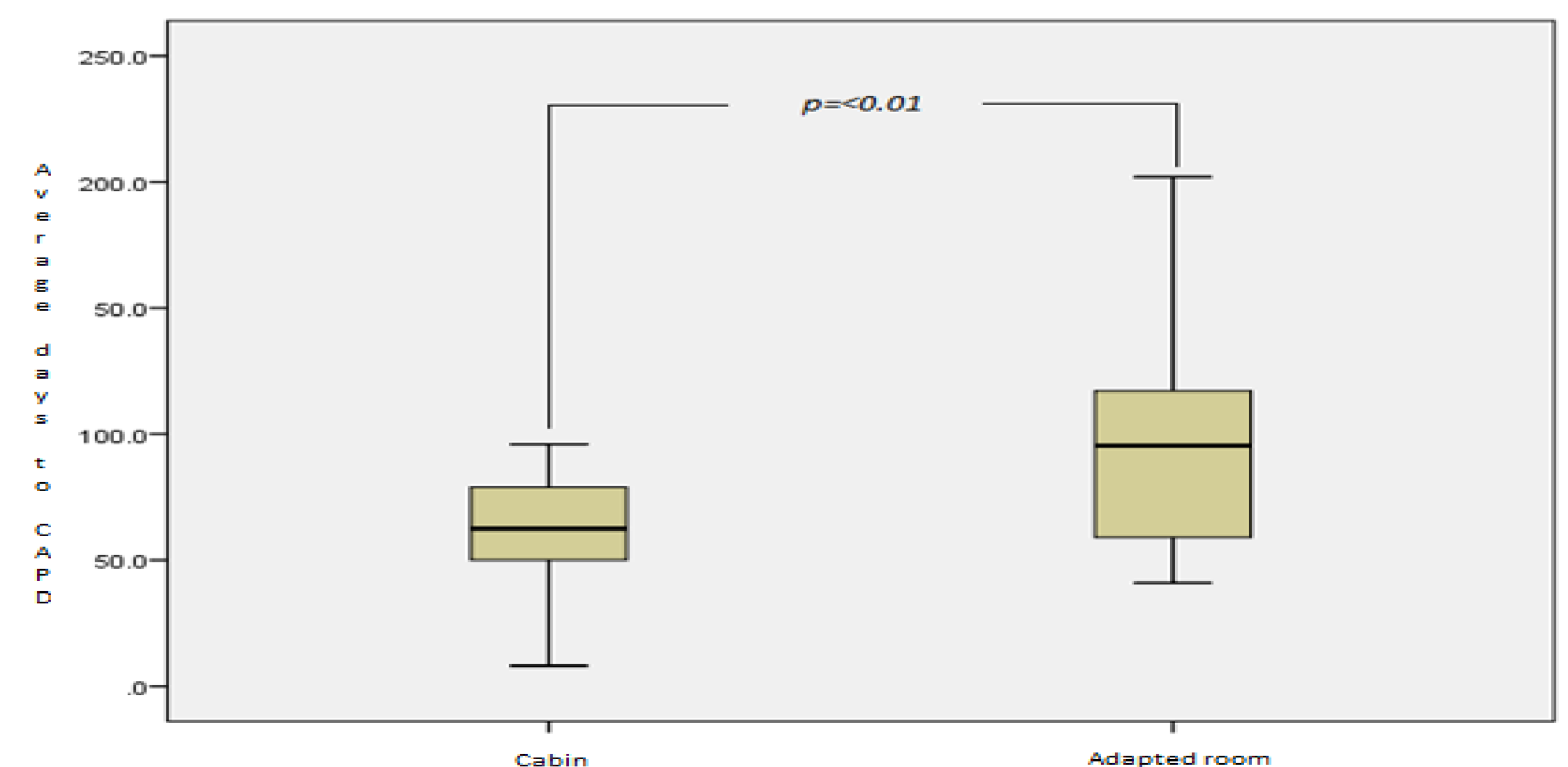


Figure 4 : Comparison of overall integration time to CAPD



## Conclusions

The use of PD cabins allowed a **reduction of 30 days in the average elapsed time to integration to the CAPD program** when compared with the adapted room, without increasing adverse events such as peritonitis.

A 50% cost reduction in the cabin group was also observed.

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