

WCN2011

**8th Conference on Kidney
Disease in Disadvantaged
Populations**

**Latin American Dialysis and
Transplantation Registry**

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**Latin American Society of Nephrology and
Hypertension (SLANH)**



Latin-America 2008

Population: 563 294 000 inhab. (includes PR)

Population growth: 1.1%

Older than 65 yrs old: 6.6% (4.2-13.7)

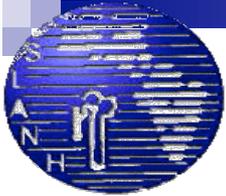
Health expenditure per capita: \$ 717,5 (range 218-1322)

% urban population: 73 (range 61-98)

Improvement in socio-economic indexes 2000-2008:

- **GNI per capita: 3300 to 7012**
- **Life expectancy at birth: 71.6 to 73.4.**
- **% poor people (1999-2007) 43,8 to 34,1%**
- **% indigent population: 18,5 to 13,3%**

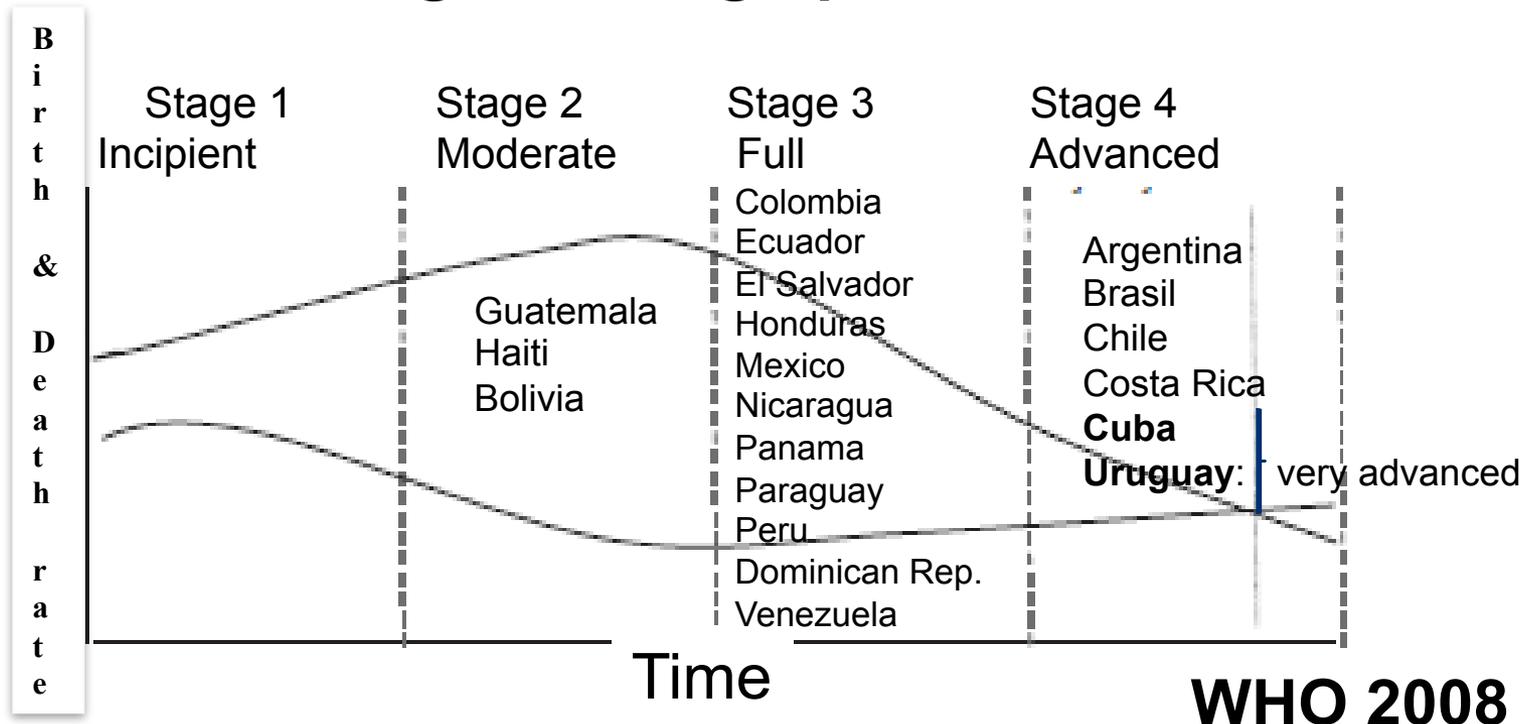
SLANH: 20 countries: 557488 000 inhab. (99 % LA)



Latin american countries

- All classified, according to GNI, among low middle income and high middle income, except Puerto Rico (high income)
- Epidemiological & Demographic transition on-going:

Stages demographic transition





Pros and Cons of the LADTR

■ Cons:

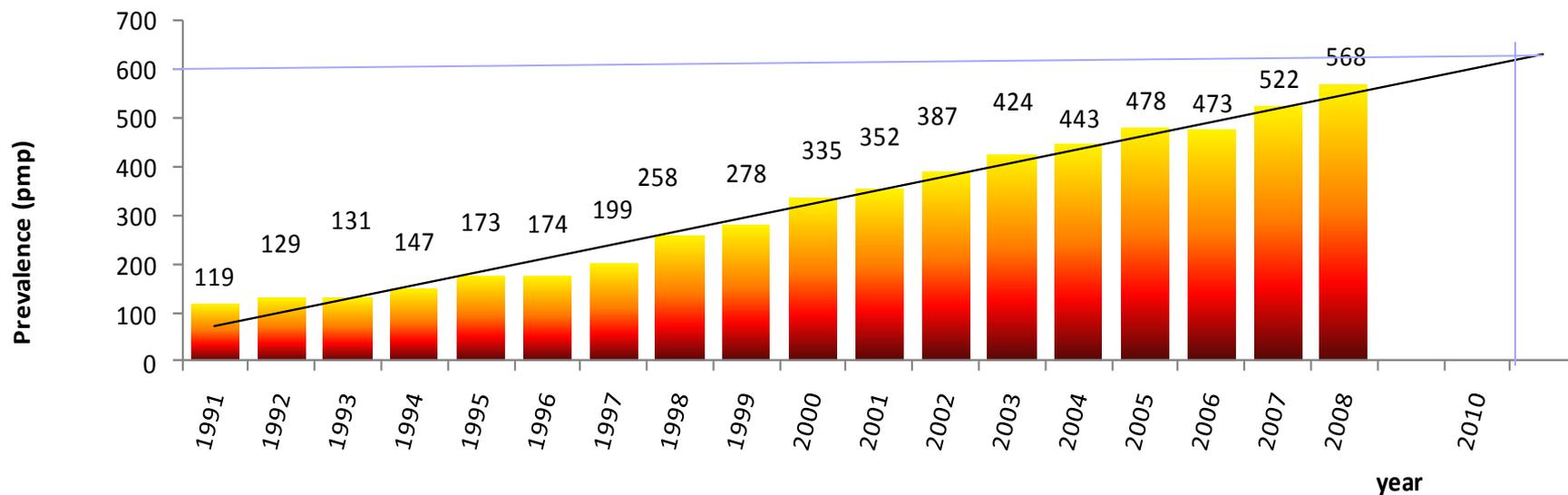
- Voluntary reporting.
- Not all countries reported each year, not always with the same data
- In the case of México, country data are extrapolated from the Jalisco and, since 2007, Morelos Registry (8,61 million inhabitants)
- The number of patients living with a functioning kidney graft many times is an estimation

■ Pros:

- Continuity along the time since 1991
- It has
 - Contributed to the knowledge of RRT epidemiology in LA
 - Helped to the development of National Registries.
 - Let comparisons among countries and with other registries,
 - Establish the trends in the treatment of extreme CKD in LA.
- Today, Latin American data can be consulted in international publications data base.



LADTR 1992-2008. Renal Replament treatment Prevalence, all modalities

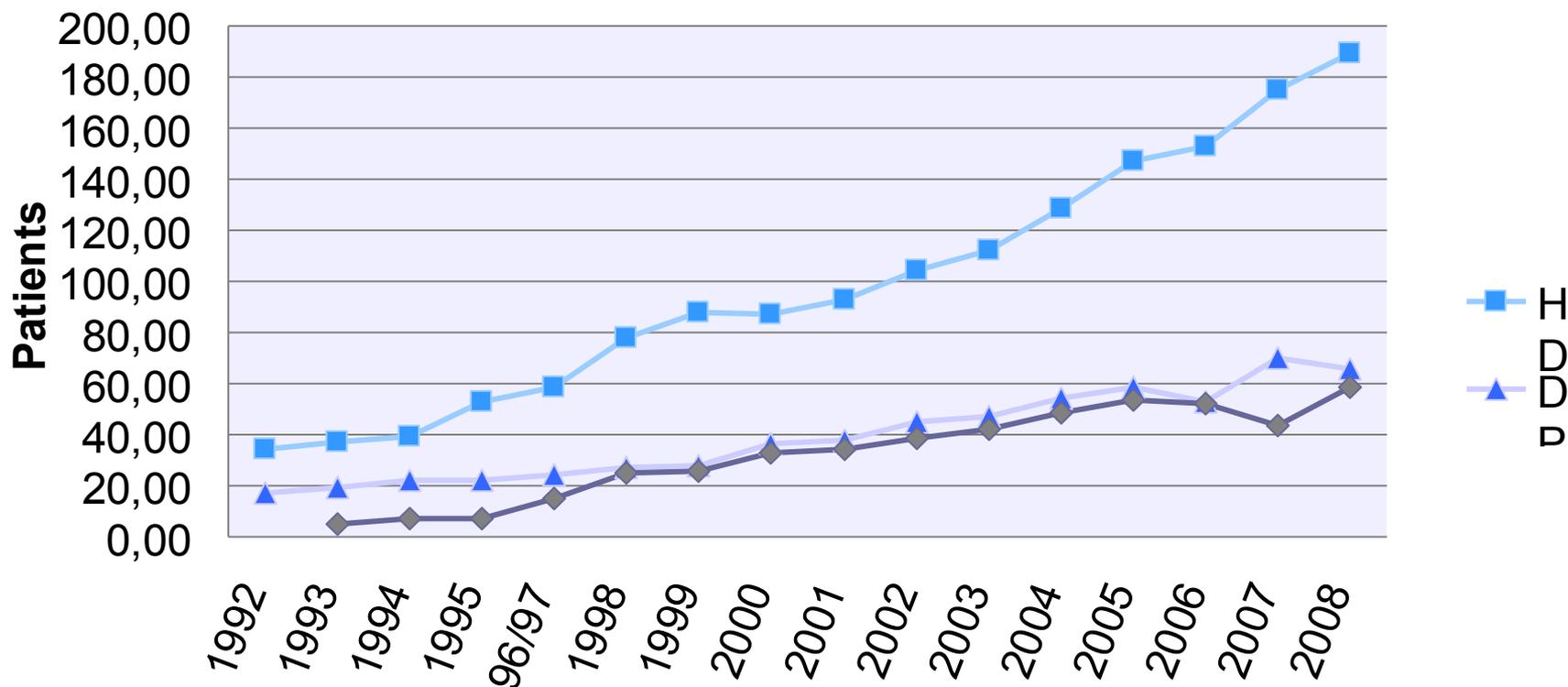


Prevalence RRT rates IRCT: Puerto Rico 1170, Uruguay 1079, Chile 1034 (in pmp)

Prevalence rates: dialysis 455 pmp (HD: 337 PD 118); functioning kidney graft: 105 pmp



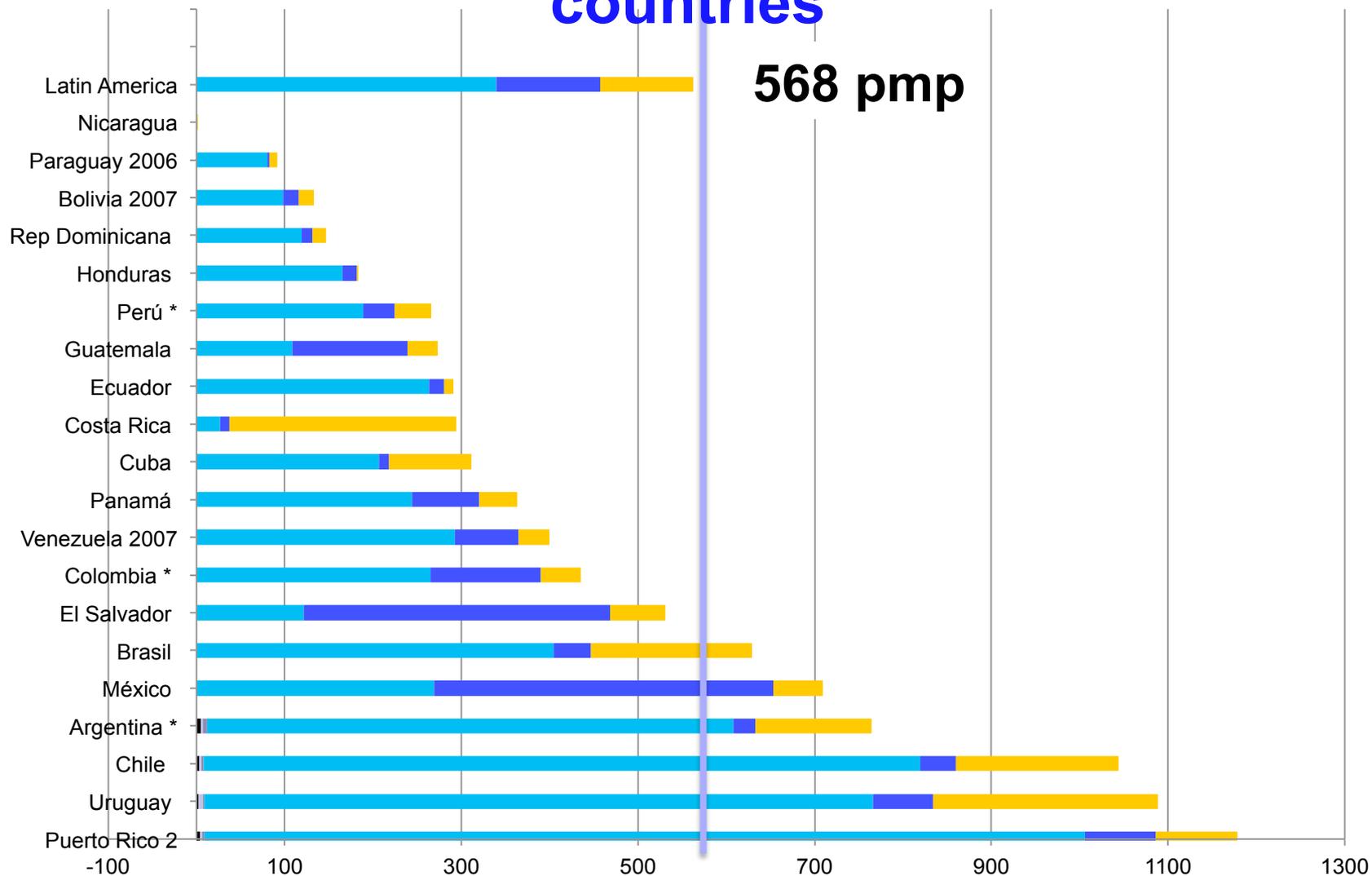
Prevalent Patients number (in miles), by year



Total number of patients: 313,525
HD: 189,137 ptes (59%)
PD: 65,824 ptes (21%)
Functioning graft: 58,564 ptes (19%)

HD Centers : 2155, 1/118 dialysis pts
1/258,695 inhabitantes
Tx Centers 502: 1c/508 dialysis patients
1 c/ 1,110,534 inhabitantes

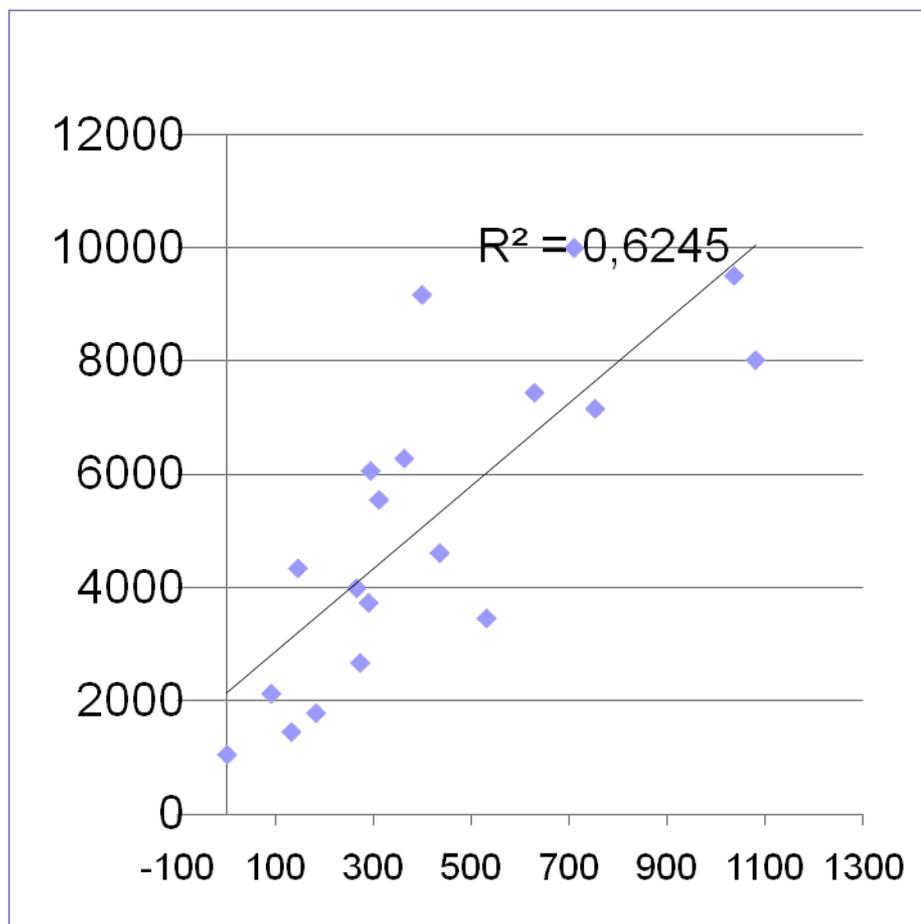
Broad variability in RRT prevalence rate among countries



Income	Countries	Prev. Rates pmp	
Low income ≤ \$ 995			
Lower Middle income \$996-3945	Ecuador	RRT	251
	El Salvador	HD	160
	Guatemala	DP	91
	Honduras	FG	23
	Nicaragua Paraguay		
Upper Middle income \$ 3946-12195	Argentina	RRT	560
	Brazil-Chile	HD	360
	Colombia	DP	124
	Costa Rica	FG	116
	Cuba- Mexico		
	Panama-Peru		
	Dominican Rep		
	Uruguay Venezuela		
High income > \$12195	Puerto Rico	RRT	1170
		HD	997
		DP	80
		FG	92

Epidemiologic transition stage	Countries		Prev. Rates pmp
Stage 1 Incipient			
Stage 2 Moderate	Guatemala	RRT	215
	Bolivia	HD	104
		DP	84
		FG	27
Stage 3 Full	Colombia	RRT	495
	Ecuador	HD	244
	El Salvador	DP	207
	Honduras	FG	43
	Mexico		
	Nicaragua		
	Panama Paraguay-Peru Dominican Rep. Venezuela		
Stage 4 Advanced & very advanced	Argentina	RRT	676.5
	Brazil-Chile	HD	463
	Costa Rica	DP	39
	Cuba-Uruguay	FG	175
	P.Rico		

GNI vs Prevalence rate (excluded PR) 2008



Prevalence rate & age (Argentina, Brazil, Chile, Cuba, Ecuador, Panamá, Perú, Puerto Rico, Uruguay, 56% LA Population)

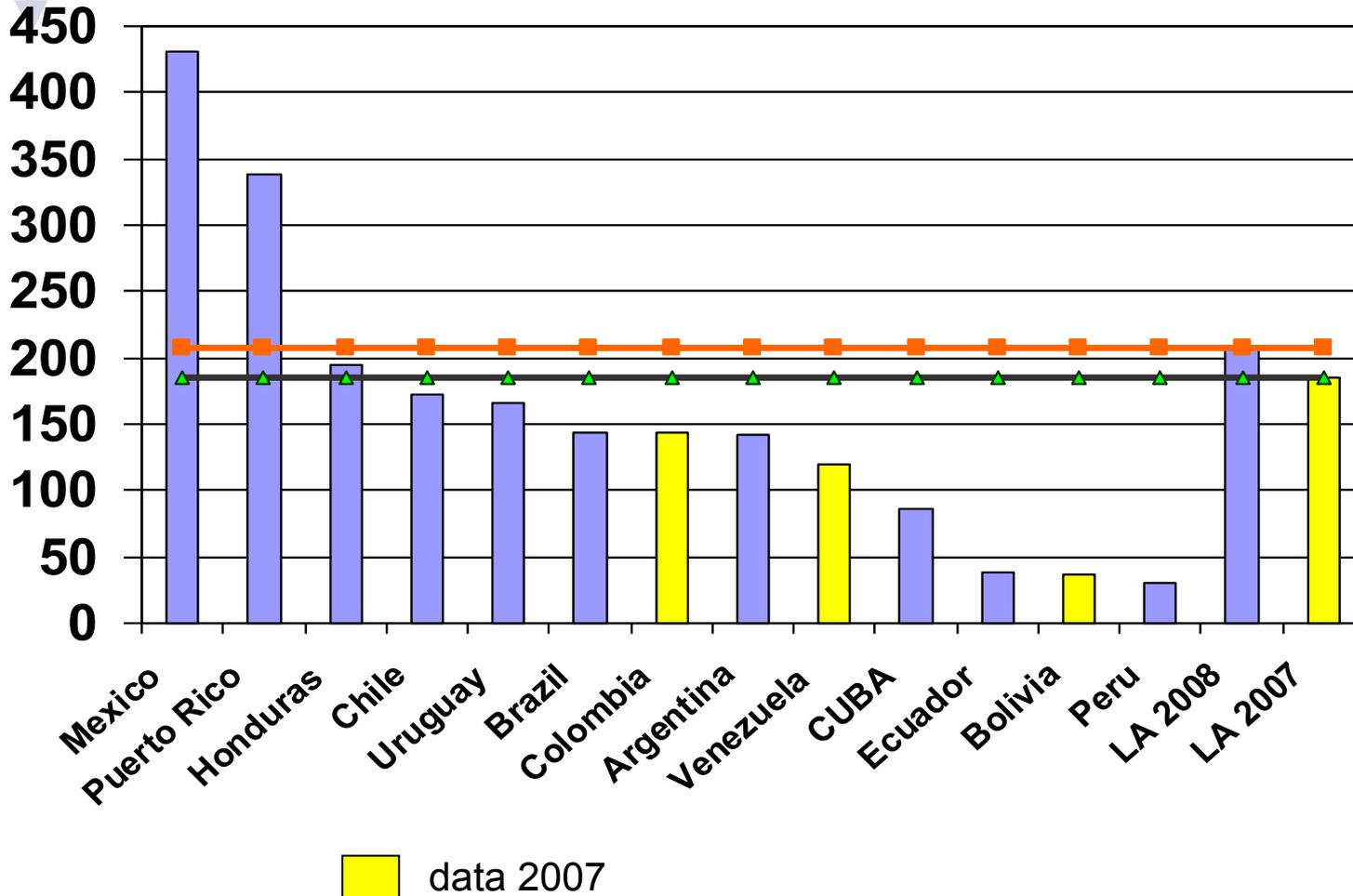
	2007	
	Rate	# Patients
<20	20.4	2299
20-59	473.8	79785
>60	1787.4	56856
		138940

Correlations (2008)

	p value
GNI	0.000
Health expenditure in \$	0.001
% habitantes > 65 years	0.000
Life expectancy	0.017
% urban population	0.000

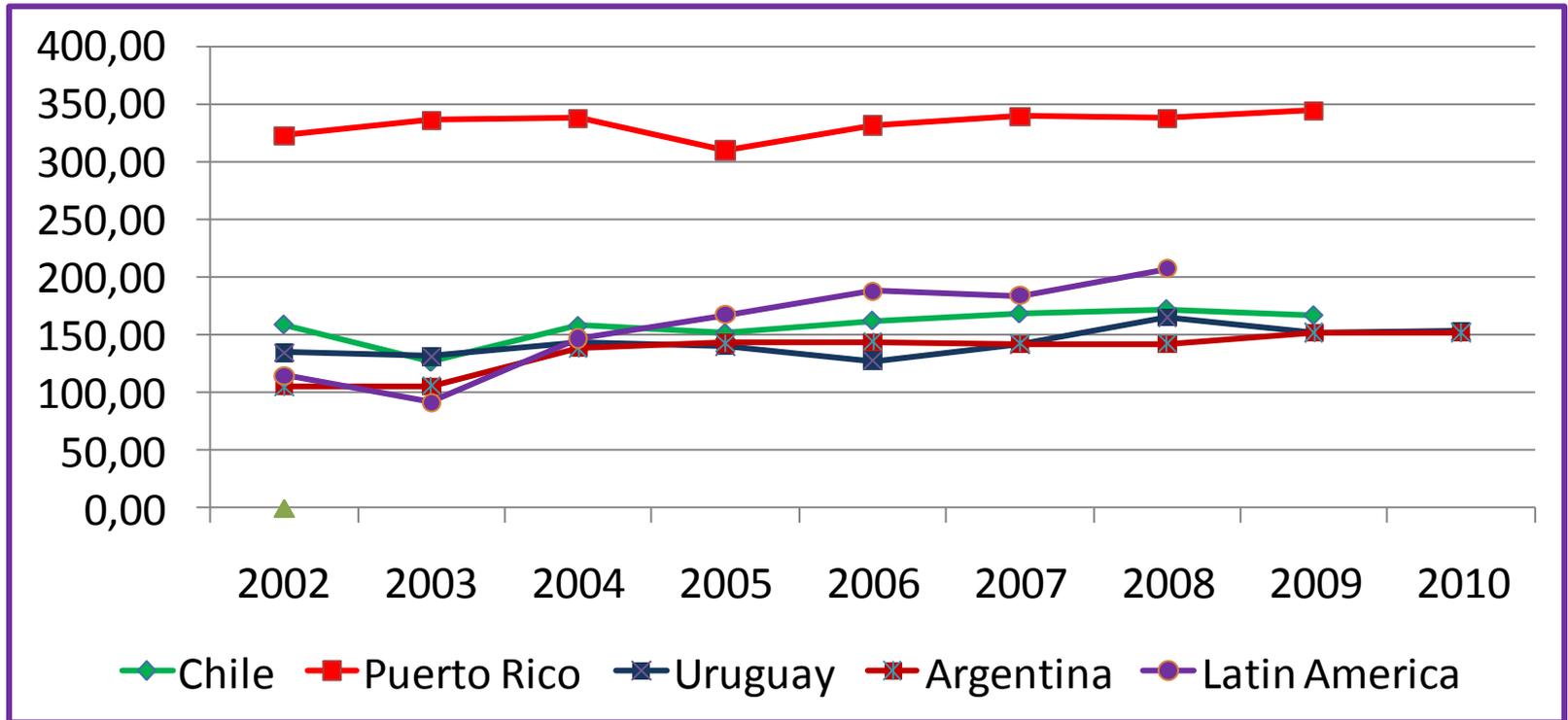


RRT incidence rates (pmp)



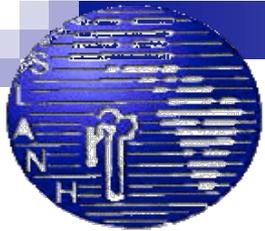
2007-2008: Incidence was reported by 14 countries (91% LA population). Number of patients registered: 2007-08 100968 (~40% of prevalent patients).

Stabilization incidence rate: Puerto Rico, Chile & Argentina

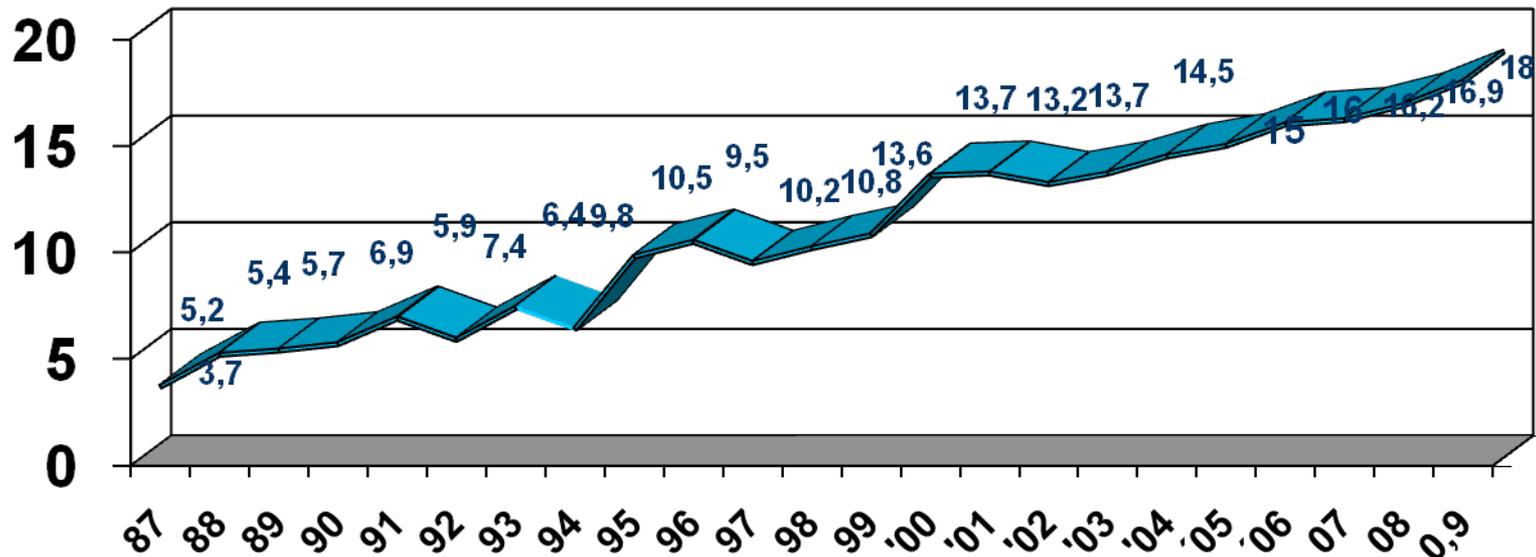


México 430 pmp
PR 334 pmp
Chile 172 pmp
Uruguay 165 pmp
LA 208 pmp

United States: 362 pmp
Portugal 232 pmp
Italia 150.9
Spain 128 pmp
Japan 288 pmp



LADKTR: Transplantation rate (pmp): 1987-2009



Tx registered in 2009: 9724 (19 countries)

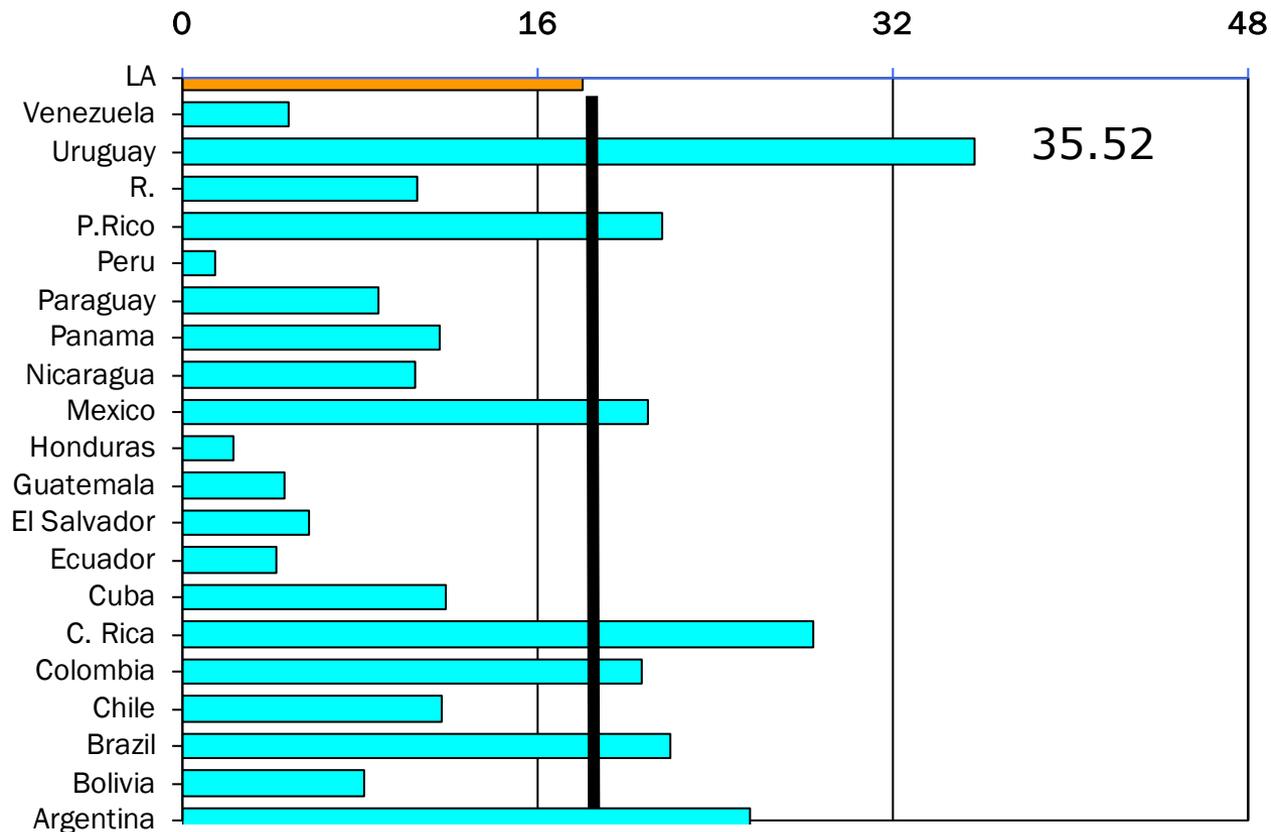
Total registered 1987-2009: 136567

Nicaragua, Honduras & El Salvador: only living donors

% of deceased donor: stable around 50%



Transplantation rates, by country year 2009



Double transplants performed in 7 countries: Argentina, Brazil, Colombia, Cuba, Perú, Uruguay & México.

¿ Why so many variations among countries?

- **Still countries with no full RRT coverage**
- **Diferences in stages of epidemiological transition, life expectancy, % of older people, GNI, urbanization, etc.**
- **RRT begun at different times in the LA countries.**
 - **1947, 1st dialysis in Brazil**
 - **1957, 1st transplant in Argentina.**
 - **2000: 1st dialysis in Nicaragua.**
- **Countries, even now, which do not have laws regulating RRT practice, nor assuring coverage.**



Conclusions

- **RRT: available in all countries, yet not to all pts who need it**
- **Higher prevalence rates: Puerto Rico, Uruguay and Chile**
- **Highest incidence rates: Mexico and Puerto Rico**
- **RRT Prevalence rates correlates directly with GNI, % of population over 65 años, life expectancy, health expenditure in constant dollars and % urban population.**
- **Kidney Transplantation rates increasing, but will not resolve the growing increase in prevalence.**
- **Prevention of risk factors and early detection and treatment of CKD continues been the solution to reduce the increasing RRT prevalence**

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