Chronic Kidney Diseases as a Global Public Health Problem Approaches and Iniciatives

KDIGO – Amsterdam - 2006

CKD in Latin America

Emmanuel A. Burdmann

LATIN AMERICA 2004

539,041,148 inhabitants

Per capita income US$ 3,600

Life expectance: 70.9 y

Annual populational growth: 1.4%

20 countries

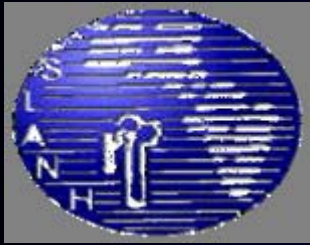21 national societies

4,700 nephrologists

SLANH

Sociedad Latinoamericana

de Nefrología e Hipertensión

SLANH

- **Around 228,500 patients currently treated for renal failure.**
  - ✓ **128,260 in hemodialysis**
  - ✓ **54,180 in peritoneal dialysis**
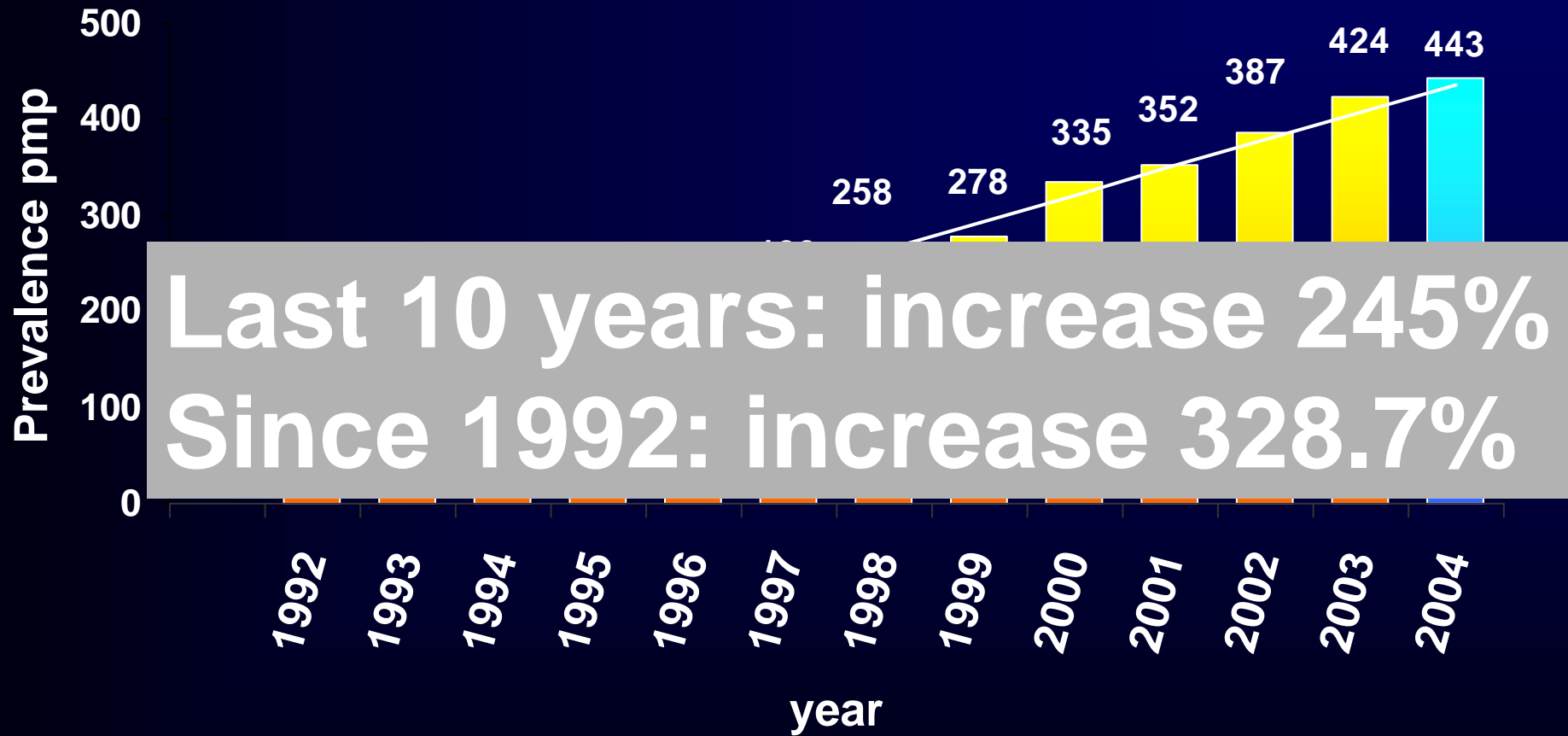 - ✓ **48,450 with a functioning renal transplant**

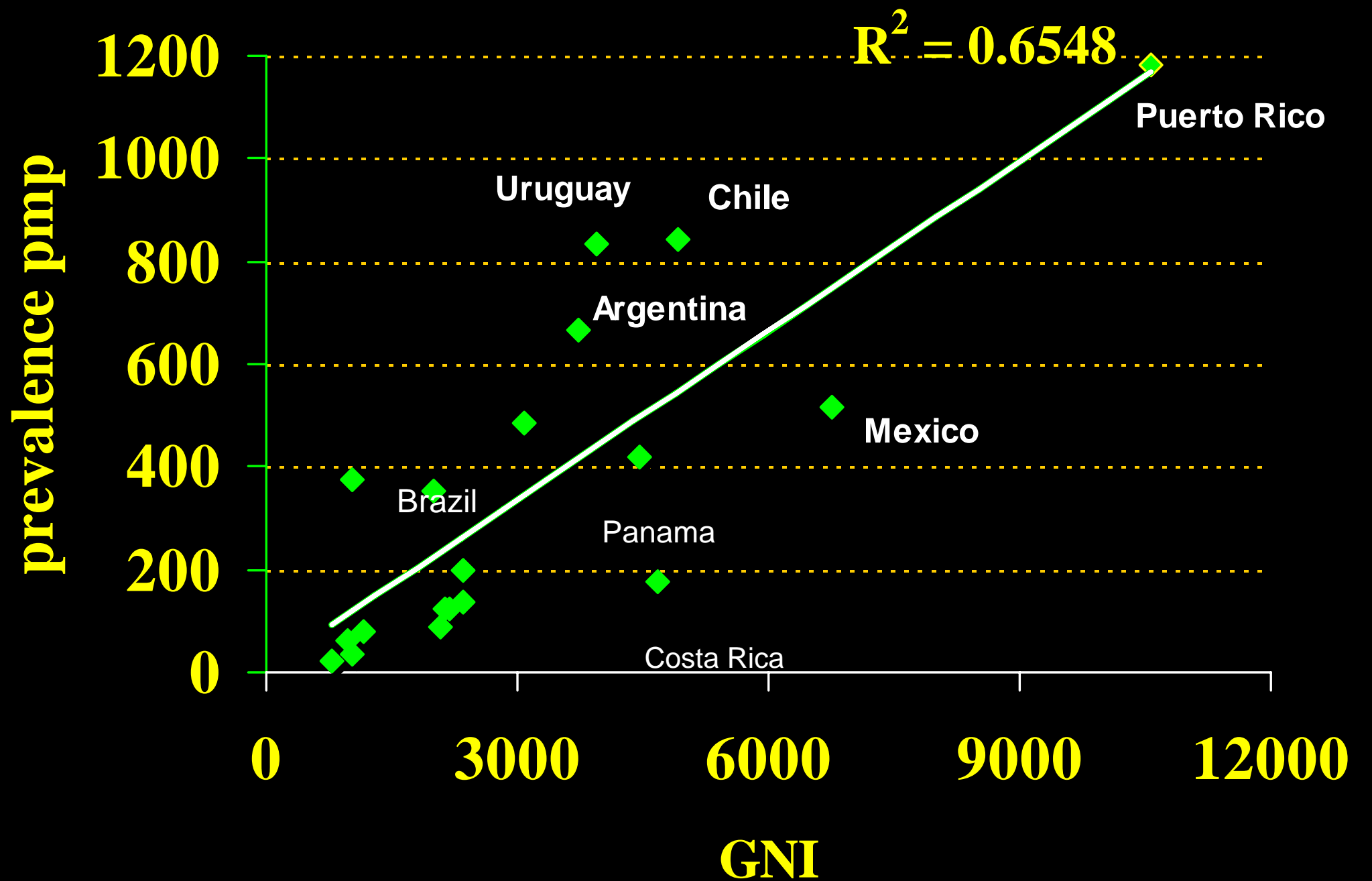# LATIN AMERICA 2004 – ACCESS to RRT

- **Argentina, Brazil, Cuba, Puerto Rico, Uruguay, Venezuela 100 %**

- **Colombia 56.2%**

- **Peru 30%**

- **Paraguay 25 %**

- **Bolivia 63% (55.6% only twice a week)**

Latin American Registry of Dialysis and Transplantation - SLANH

Latin American Registry 1992-2004

Treatment of ESRD, prevalence rate, all modalities

Prevalence pmp

500
400
300
258   278
200
100
0

335   352   387   424   443

Last 10 years: increase 245%
Since 1992: increase 328.7%

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004

year

$R^2 = 0.6548$

Puerto Rico

Uruguay   Chile

Argentina

Mexico

Brazil

Panama

Costa Rica

prevalence pmp

1200
1000
800
600
400
200
0

GNI

0   3000   6000   9000   12000

SLANH 2005

Incidence by Country 2002-2004

Latin American Registry of Dialysis and Transplantation - SLANH
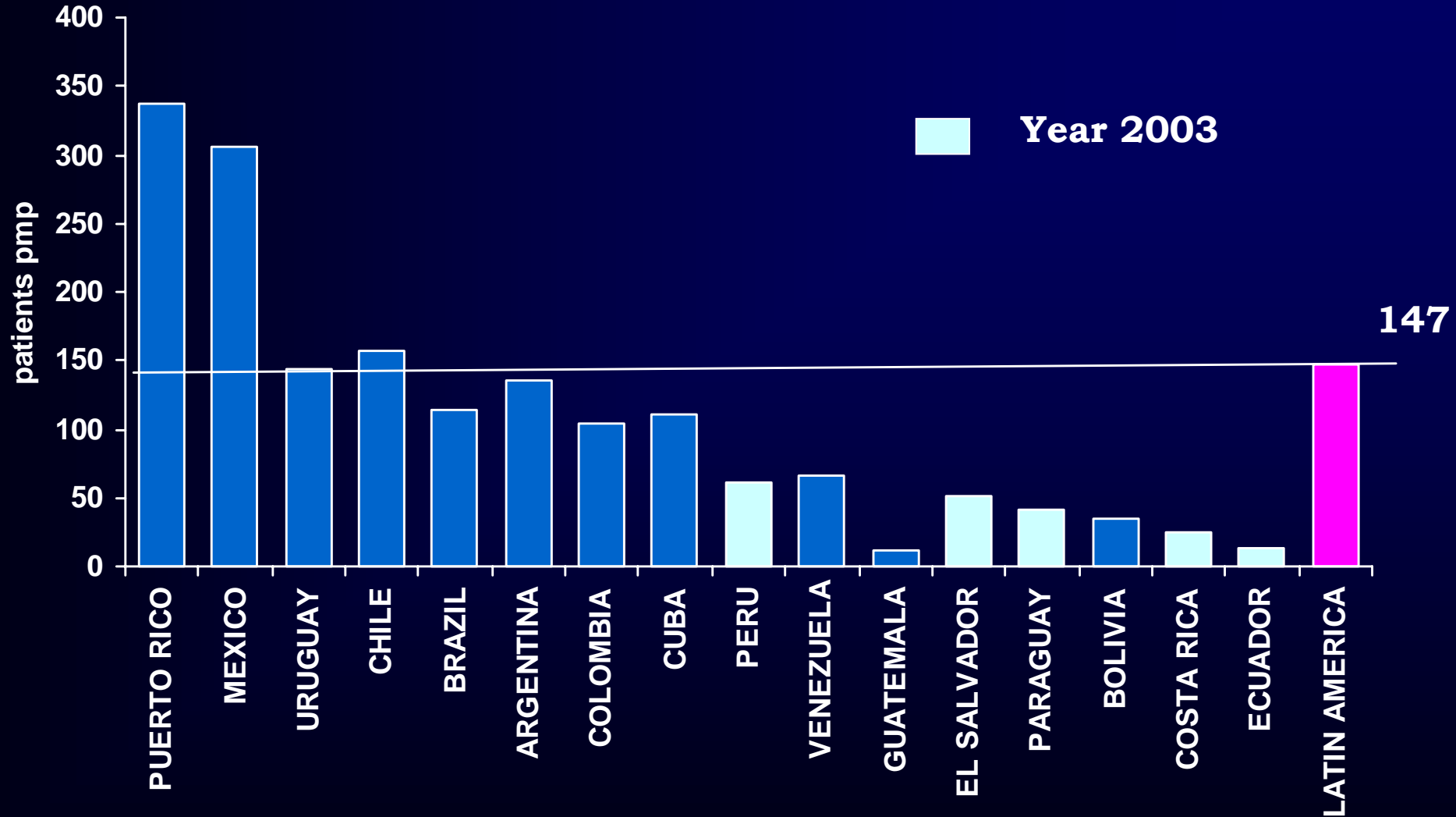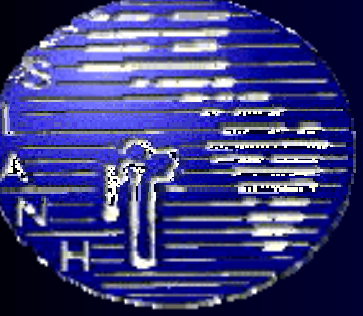
Diabetic nephropathy as etiology (2004)

Argentina	22 %
Bolivia	36 %
Chile	33 %
Colombia	30 %
Guatemala	20.7 %
Puerto Rico	55.2 %
Mexico	40 %
Mean 7 countries	**34.22%**

Latin American Registry of Dialysis and Transplantation - SLANH

HEMODIALYSIS REIMBURSEMENT

Country	US$	Reuse
Argentina	60	yes
Brazil	45	yes
Colombia	87-90	no
Chile	68	yes
Guatemala	85	no
Mexico	81-145	almost not
Uruguay	70	yes
Venezuela	28-30	no

CKD DETECTION AND SURVEILLANCE PROGRAMS

Argentina

Bolivia

Brazil

Chile

Costa Rica

Guatemala

Mexico

Uruguay

Venezuela

- ✓ **National Societies**
- ✓ **Governmental**
- ✓ **Academic Institutions**
- ✓ **Dialysis Groups**
- ✓ **Kidney Foundations**

Brazilian Society of Nephrology

- ✓ **Program "Previna-se"**
- ✓ **Blood/urinalysis, BP, health survey**
- ✓ **Different locations (2003-2006)**
- ✓ **188 different locations in 2006**

Sociedade Brasileira de Nefrologia
www.sbn.org.br

Rinaldo & Renaldo
os rins

Prevenir é melhor do que remediar!

Miguel Carlos Riella

Curitiba

Clinical and dipstick abnormalities	Screened population (n=8883)
Age (years)	48±16
Male gender (%)	45
History of Systemic Hypertension (%)	16
History of Diabetes Mellitus	3
Hematuria (%)	30
Proteinuria (%)	6
Glycosuria (%)	4
Hematuria and Proteinuria	4

Detection of renal dysfunction based on serum creatinine levels in a Brazilian community. The Bambuí Health and Ageing Study

V.M.A. Passos[1,3],
S.M. Barreto[2,3],
M.F.F. Lima-Costa[2,3] and
the Bambuí Health and
Ageing Study (BHAS) Group[3*]

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Belo Horizonte, MG, Brasil

- ✓ 2,000,000 individuals
- ✓ Abnormal serum creatinine: 0.43%
- ✓ In elderly (>60 years): 5.09%

Chile National Health Survey 2003
(ENS 2003, PUC – 3619 subjects)

- **Elevated creatinine: 6.7 %**
- **Creatinine clearance < 30 ml/min: 0.18%**
- **Creatinine clearance 30-80 ml/min/1.73 m^2: 21%**
- **Proteinuria: 14.2%**
- **Hypertension: 34%**

ESTIMATED CHRONIC KIDNEY DISEASE in URUGUAY

According NANHES III distribution and the Uruguayan ESRD prevalence

Population over 20 years old : 2.386.032

	NANHES III % of Population	Uruguay % of Population	Uruguay CKD Population
Stage 1	3,3	2,0	47.783
Stage 2	3,0	1,8	43.521
Stage 3	4,3	2,6	62.380
Stage 4	0,2	0,12	2.900
Stage 5	0,2	0,12	2.900
total	11,0	6,7	159.576

Nelson Mazzuchi, Villarrica Conference 2006

SLANH Renal Health Subcommittee

Sustainable and tenable renal health model: A Latin American proposal of classification, programming, and evaluation

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Meetings hold in Chile, Argentina, Mexico, Uruguay, Paraguay, Venezuela, Colombia, Equator, Puerto Rico, Peru, Brazil

CKD in Latin America

✓ **Extremely heterogenous pattern.**

✓ **Significant increase in prevalence.**

✓ **Large number of patients are not diagnosed.**

✓ **Increasing burden of chronic diseases like diabetes.**