

HIV TRANSPLANTATION: NECESSITY OR AMBITION?

ZUBAIR ASMAL
Nephrologist, Pretoria

Introduction

- CKD and ESRD
- Prevalence of ESRD
- Predicted prevalence of ESRD
- Prevalence of HIV
- HIV and Kidney disease
- HIV in Transplantation

CKD vs ESRD

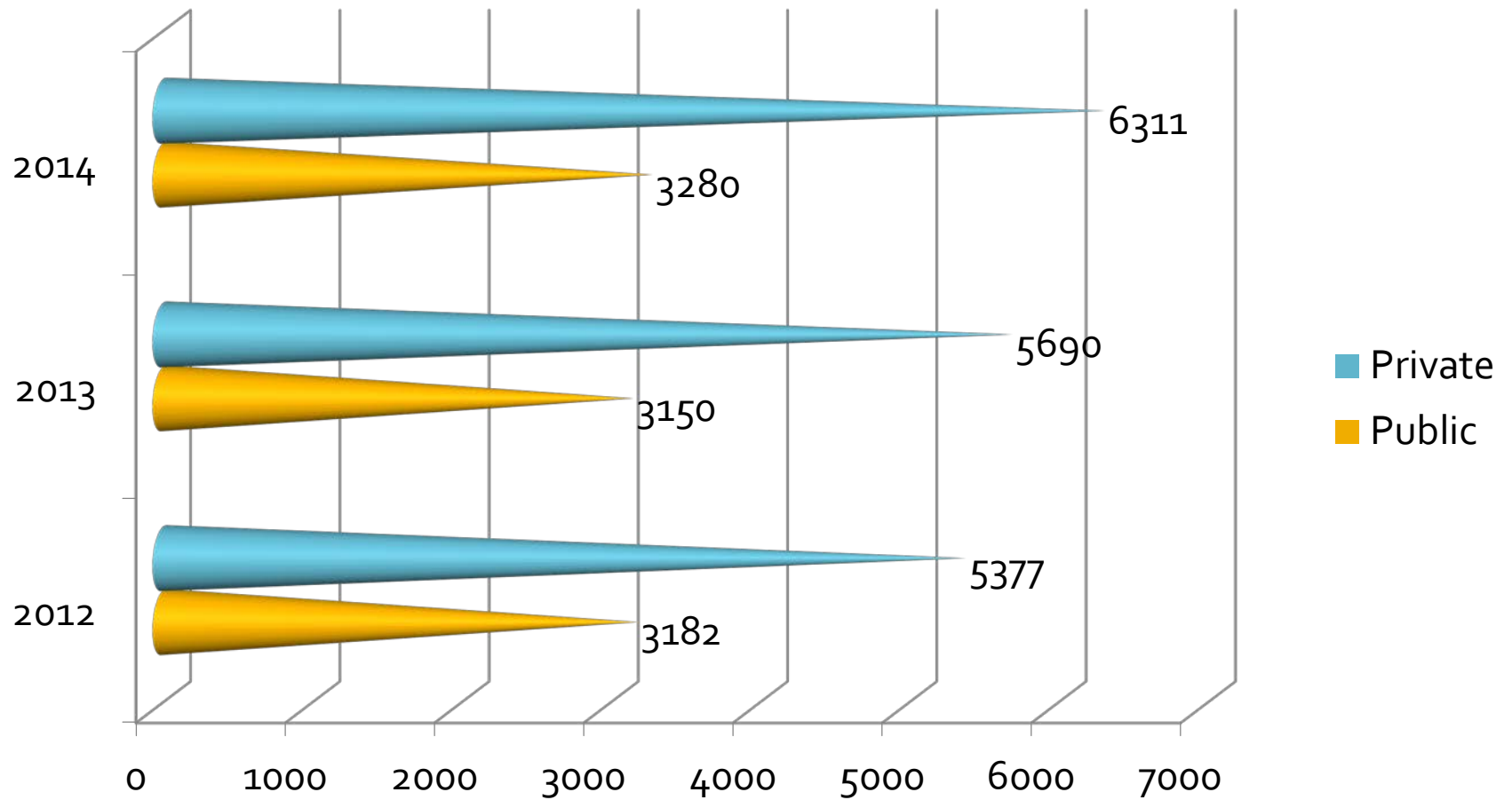
- Difference between CKD and ESRD
- Proteinuria and eGFR
- Differences between definition and methodology
- Few studies done
- Studies that have been done are biased in some way

- Meta-analysis of 90 studies
- Study quality was low (20% medium, 3% high)
- 93% studies were urban
- No difference between urban and rural
- Prevalence of CKD was 13.9% (about 7 million)

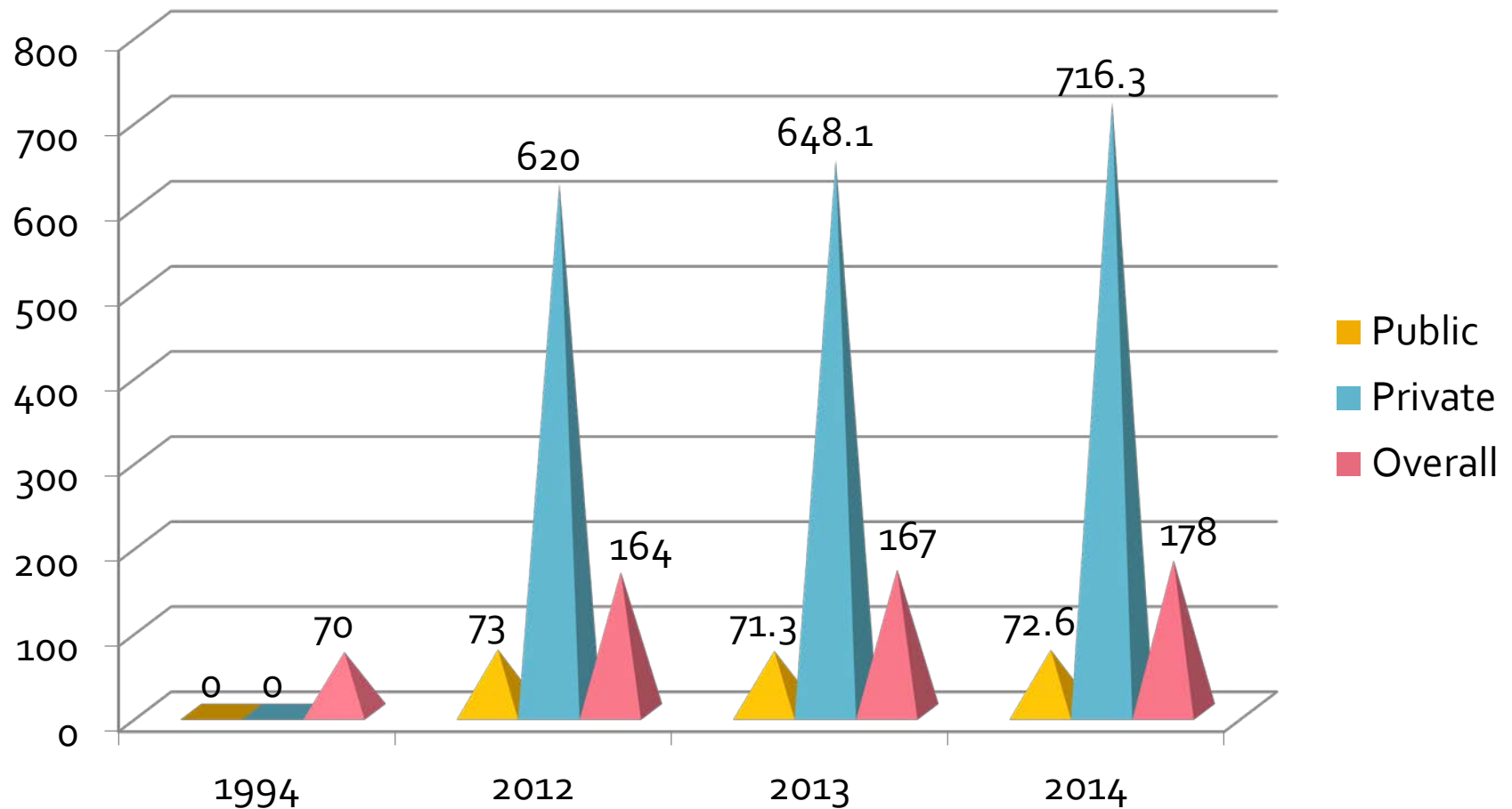
SADTR

- Inaccurate
- Reflects only patients on dialysis and transplanted
- Many patients not diagnosed
- ?80% of patients not accepted
- Huge difference between public and private

Pts on RRT

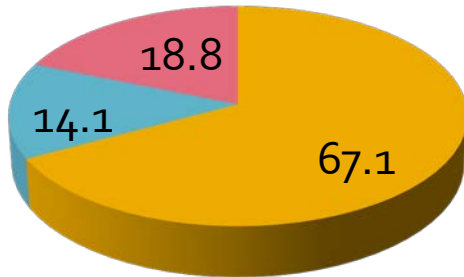


Rate per million



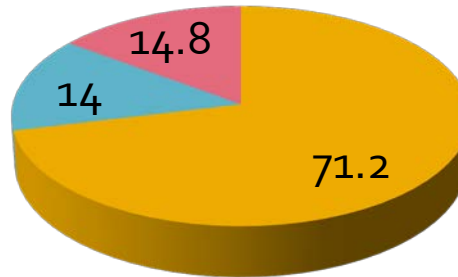
Modality

2012



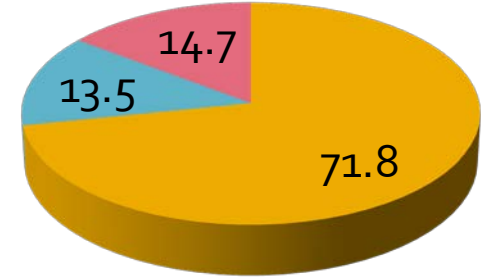
■ Haemodialysis
■ Peritoneal
■ Transplant

2013



■ Haemodialysis
■ Peritoneal
■ Transplant

2014

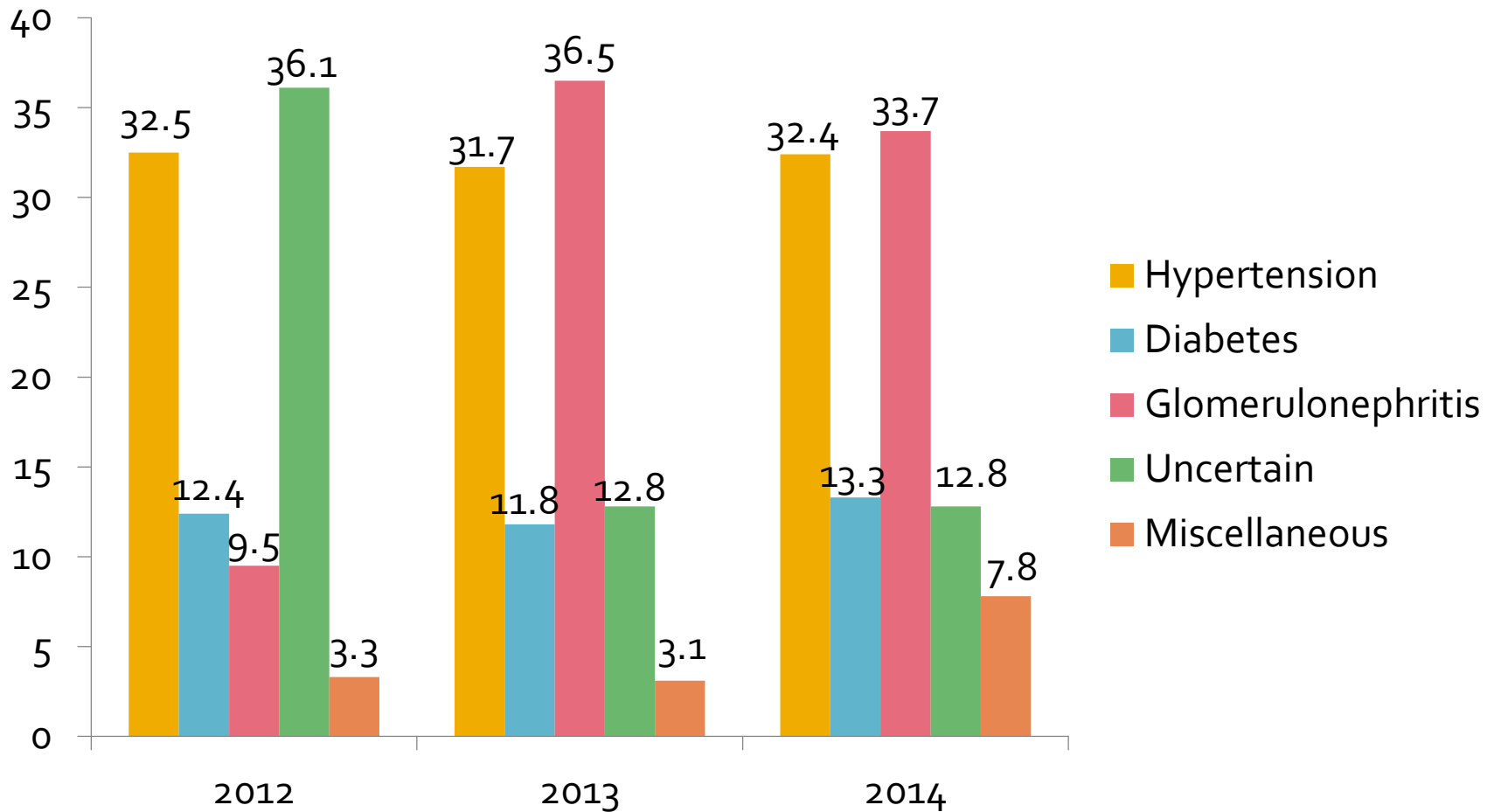


■ Haemodialysis
■ Peritoneal
■ Transplant

Causes of ESRD

- Hypertension 32.4%
- Diabetes 13.3% (public 11.2%, private 47.2%)
- Glomerulonephritis 33.7%
- HIV 6%
- Uncertain or not stated 12.8%
- Miscellaneous 7.8%

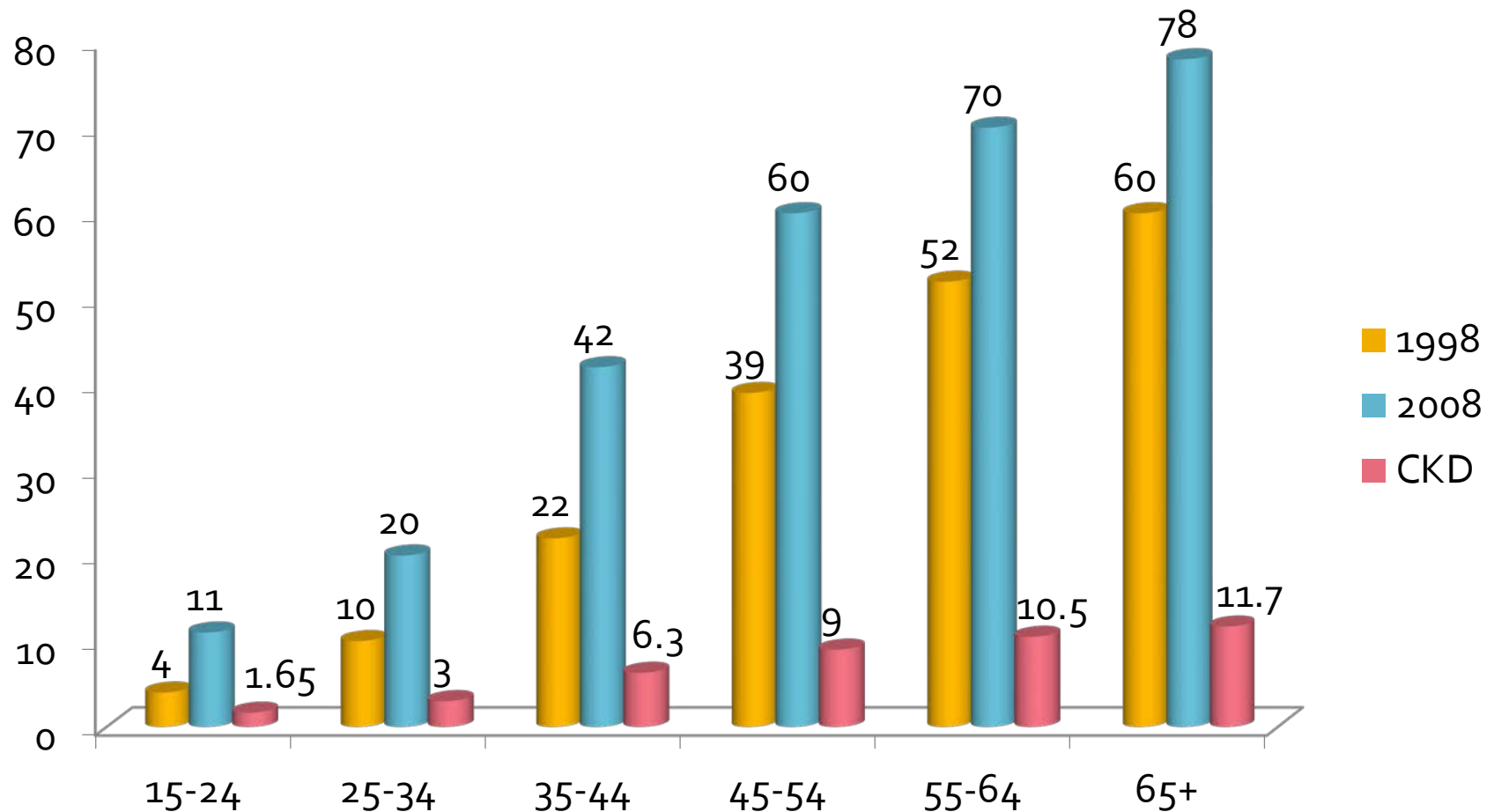
Causes of ESRD



Hypertension

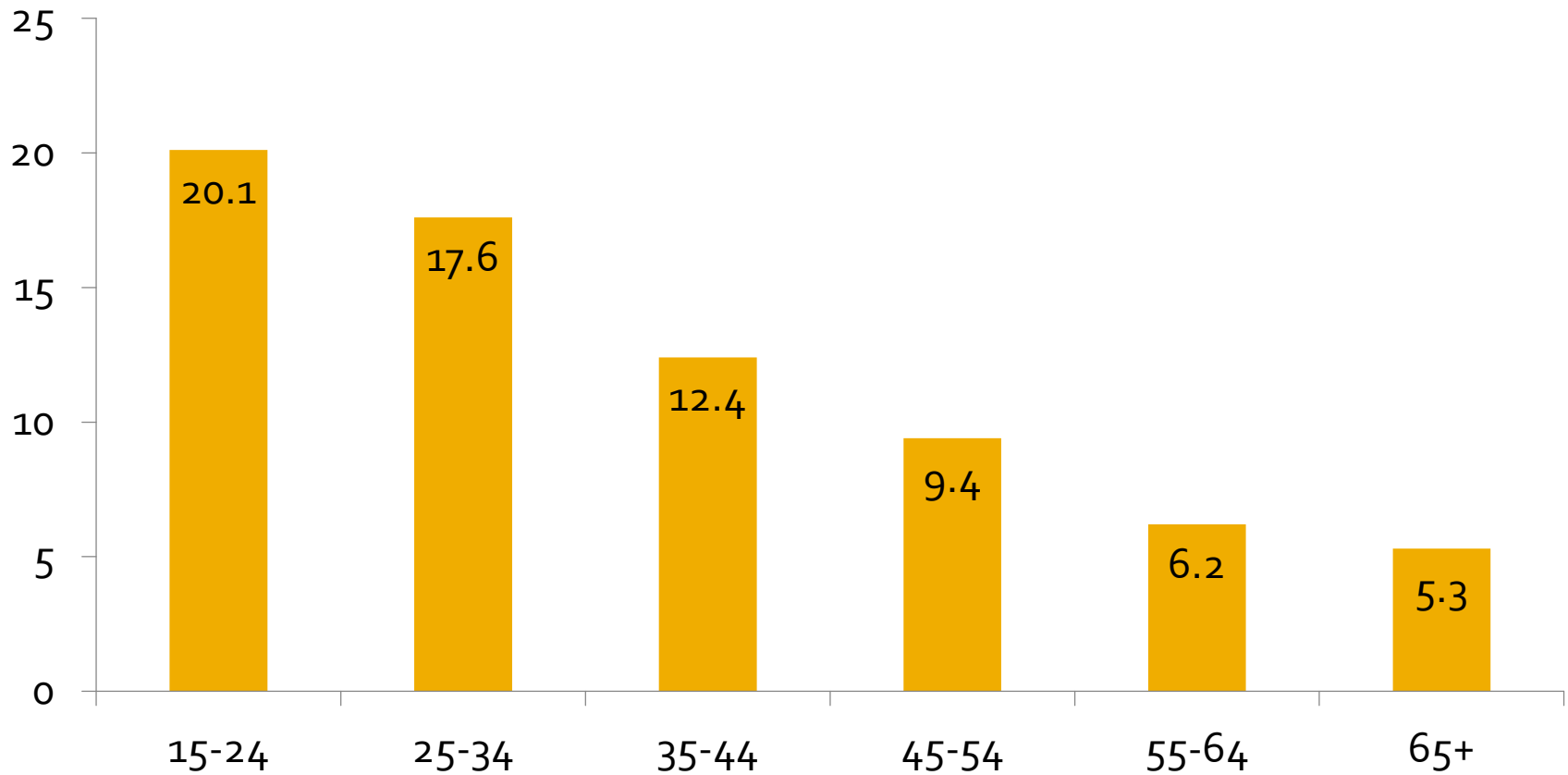
- 78% of people over age of 50 (Int. J. Epidemiol, feb, 2014)
- 30.4% of adult population (CVJ Africa, nov 2014)
- 15-20% of patients with hypertension develop kidney disease

Prevalence of Hypertension & CKD



Population

2011



Estimated CKD/ESRD

Age	Population	Hypertension	CKD	ESRD
15-24	10 378 019	1 141 582	228 316	5 707
25-34	9 088 327	1 817 665	363 533	9 088
35-44	6 416 386	2 694 882	538 976	13 474
45-54	4 838 572	2 903 143	580 628	14 515
55-64	3 183 176	2 228 223	445 644	11 141
65+	2 765 990	2 157 472	431 494	10 787
	36 670 470	12 942 967	2 588 591	64 712

Estimated Total of ESRD

- 64 712 pt should be on dialysis secondary to hypertension (32.4%)
- +/- 200 000 pts in total have ESRD

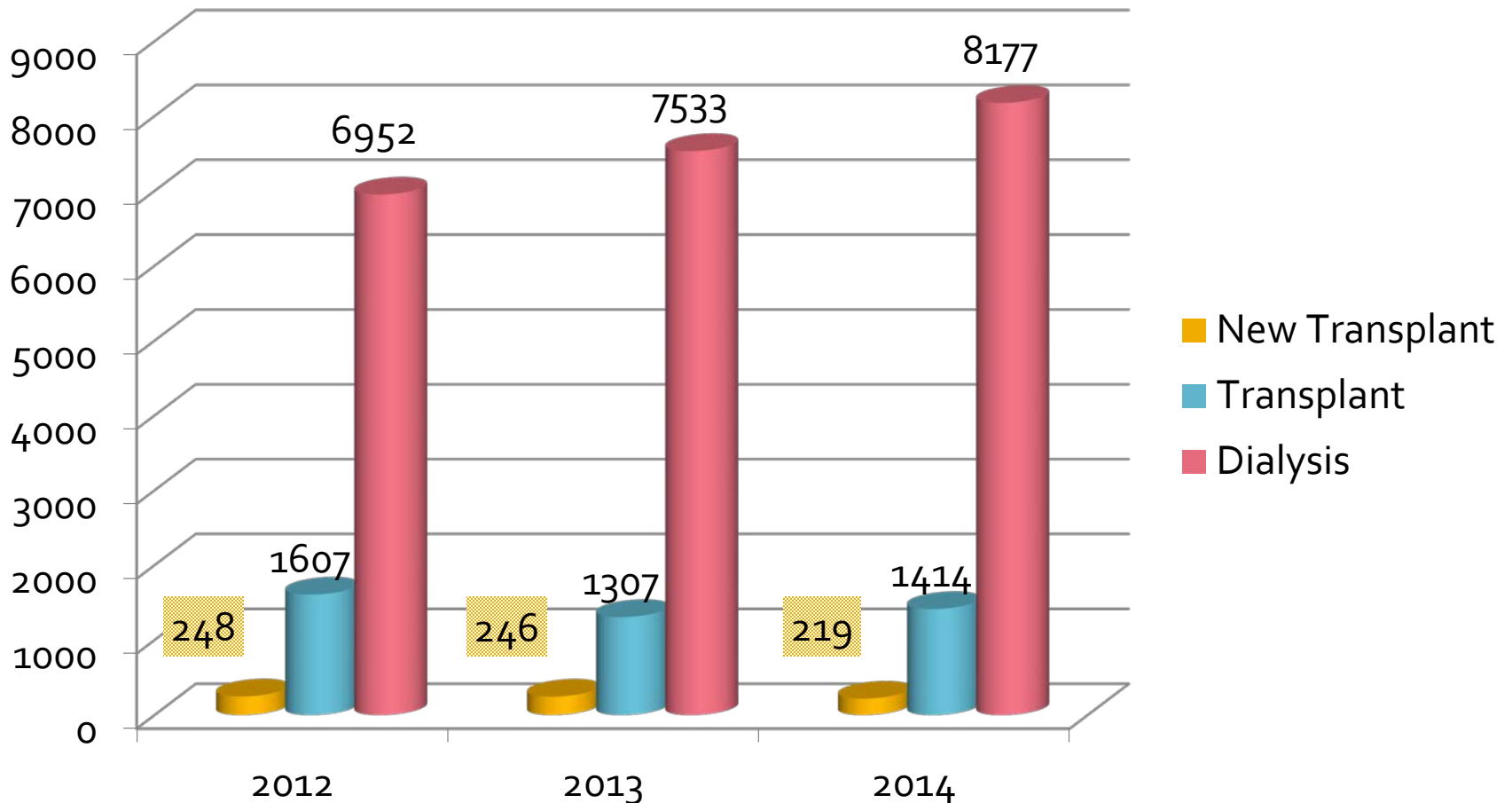
Diabetes

- 2.28 million people with diabetes
- 20-40% develop CKD
- 456 000 patients with CKD
- +/- 0.75% of total diabetics develop ESRD
- 17 100 of diabetics in ESRD
- 130 000

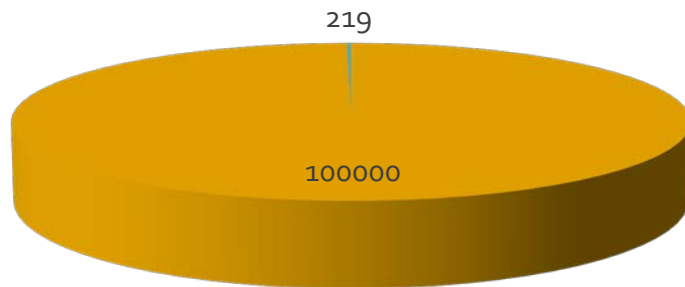
Total of ESRD

- 130 000 to 200 000 possible ESRD
- 65 000 to 100 000 people require kidneys!!!

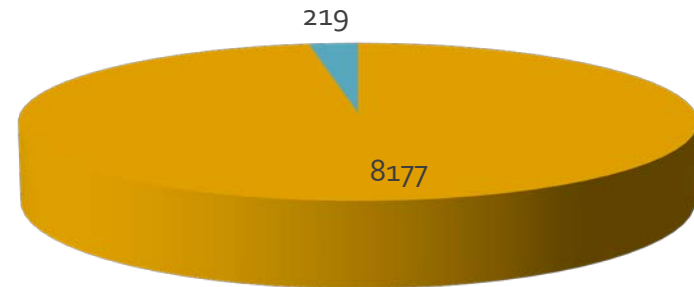
Transplantation (current)



Current vs Needed Transplants



■ Patients Needing Transplant ■ Current Transplant



■ Patients Needing Transplant ■ Current Transplant

HIV

- 7 million people
- 19.2% adult HIV prevalence
- 380 000 new HIV infections
- 30% develop ckd
- 48% on HAART
- 4,9 million can potentially donate

Evolution of CKD and ESRD

- Initially, infections and sepsis (OI)
- HIVAN/HIVICK
- Drug related
- Chronic diseases

Conclusion

- Rising prevalence of ESRD
- Many are still undiagnosed
- High prevalence of HIV
- Low transplant rate secondary to organ shortage
- **Should we be using HIV organs?**