

SRR PD Audit Data – 2012 Update



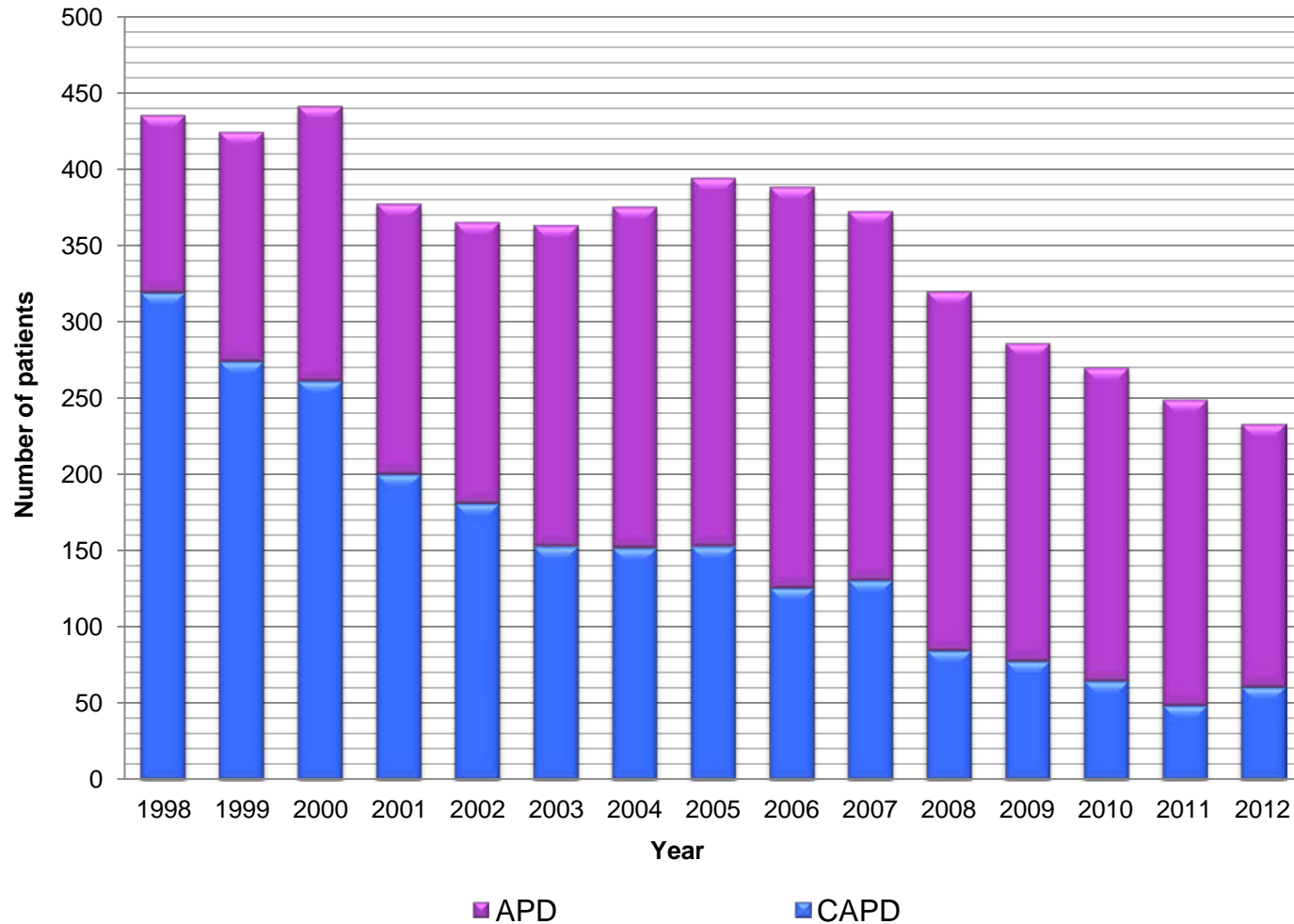
Dr Robert Mactier
Dr Michaela Brown

On behalf of the Scottish Renal Registry

SRA 22 March 2013 Kilmarnock

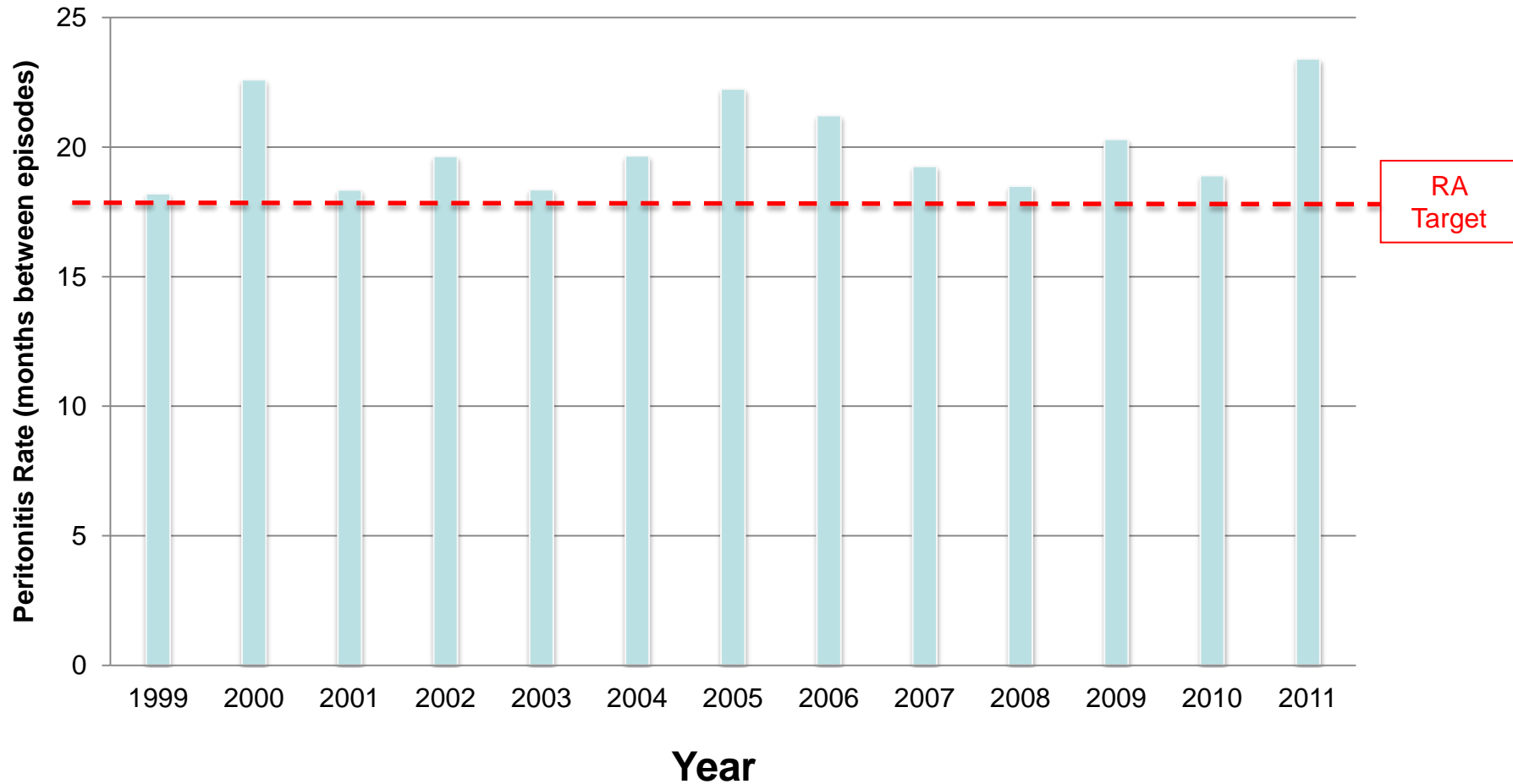


PD numbers and CAPD/APD split in Scotland 1999-2012





PD peritonitis rates in Scotland 1999-2011



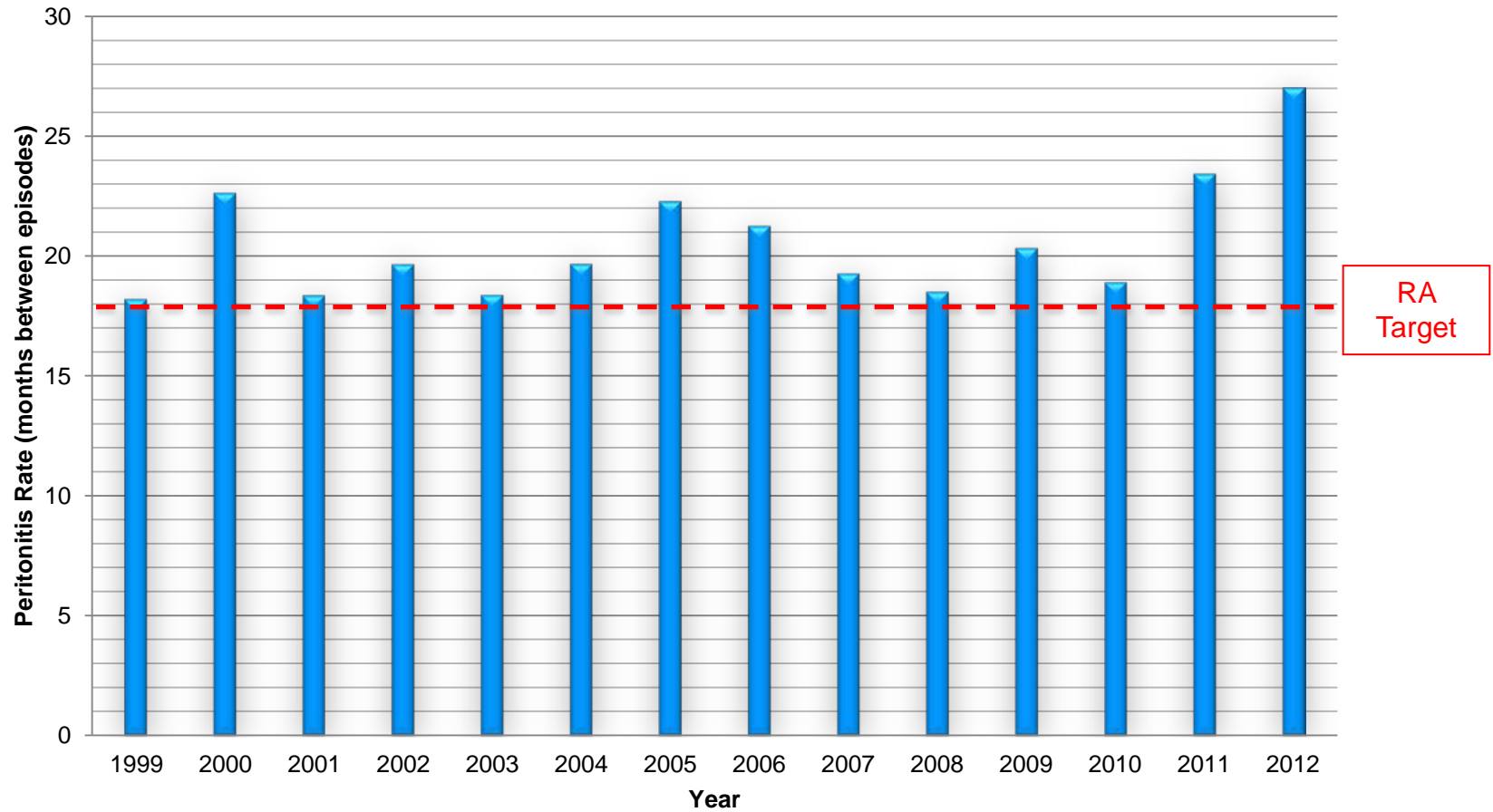


PD peritonitis rate in Scotland 2012

- 105 episodes of peritonitis
- 2834 PD treatment months
- one episode every 27 months

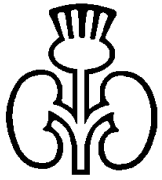


PD peritonitis rates in Scotland 1999-2012



Peritonitis Rates Worldwide

Country	Reference	Year	Population		Months between episodes	Episodes per year at risk
			Patients (n)	Centres (n)		
Brazil	Mores	2009	680		16.2	0.74
United Kingdom	Davenport	2009	1904	<i>patient years</i>	18.8	0.63
Scotland	Kavanagh	2004	1205		19.2	0.62
Australia/New Zealand	Fahim	2010	4675		19.3	0.62
Australia	Jarvis	2010	4675		19.9	0.60
Scotland	Brown	2011	1550		19.9	0.60
Netherlands	Ruger	2009	205		20	0.60
Canada	Mujais	2006		26	27.9	0.43
Portugal	Rodriques	2006	312		30.8	0.39
Spain	Perez-Fontan	2009	641		31.6	0.38
United States	Mujais	2006		35	32.4	0.37
Canada	Nessim	2009	4247		33.3	0.36
France	Castrale	2010	1631		33.3	0.36
Canada	Fang	2008	312		36.4	0.33
United States	Qamar	2009	137		50	0.24
Qatar	Shigidi	2010	241		50	0.24
Austria	Kipriva-Altart	2009	332		51	0.24
Japan	Nakamoto	2006	139		54.5	0.22
China	Fang	2008	496		60	0.20
Taiwan	Tzen-Wen	2008	100		200	0.06



Causes of PD technique failure

Peritonitis was the stated reason for:

- 38% (35 of 93) PD patient transfers to HD in 2010
- 39% (33 of 85) PD patient transfers to HD in 2011
- 31% (20 of 65) PD patient transfers to HD in 2012



Total weekly creatinine clearance <50 litres/week/1.73m²

- 9.2% of PD patients on 31st Dec 2010
- 9.2% of PD patients on 31st Dec 2011
- 10.7% of PD patients on 31st Dec 2012



Causes of PD technique failure

Underdialysis was the cause of:

- 15 (16%) of technique failures in 2010
- 27 (32%) of technique failures in 2011
- 18 (28%) of technique failures in 2012

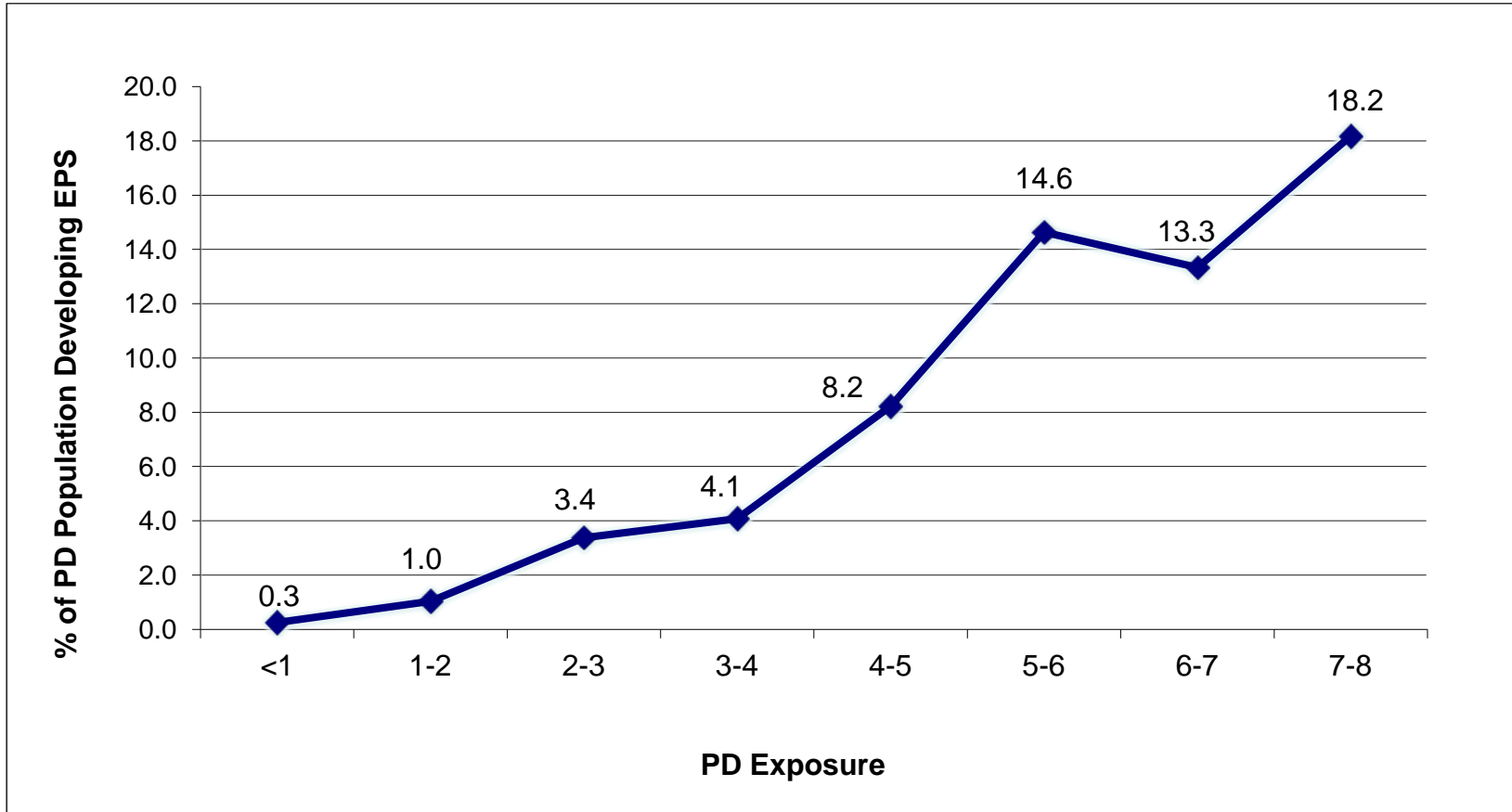


EPS in Scotland 2000-2009: Minimum Incidence

Total Time on PD	Total PD Cohort (n=1238)	EPS Cases (n=31)	Incidence (%)
< 1 year	470	1	0.2
1-2 years	327	3	0.9
2-3 years	198	5	2.5
3-4 years	117	6	5.1
4-5 years	63	6	9.5
5-6 years	35	6	17.1
>6 years	28	4	14.3



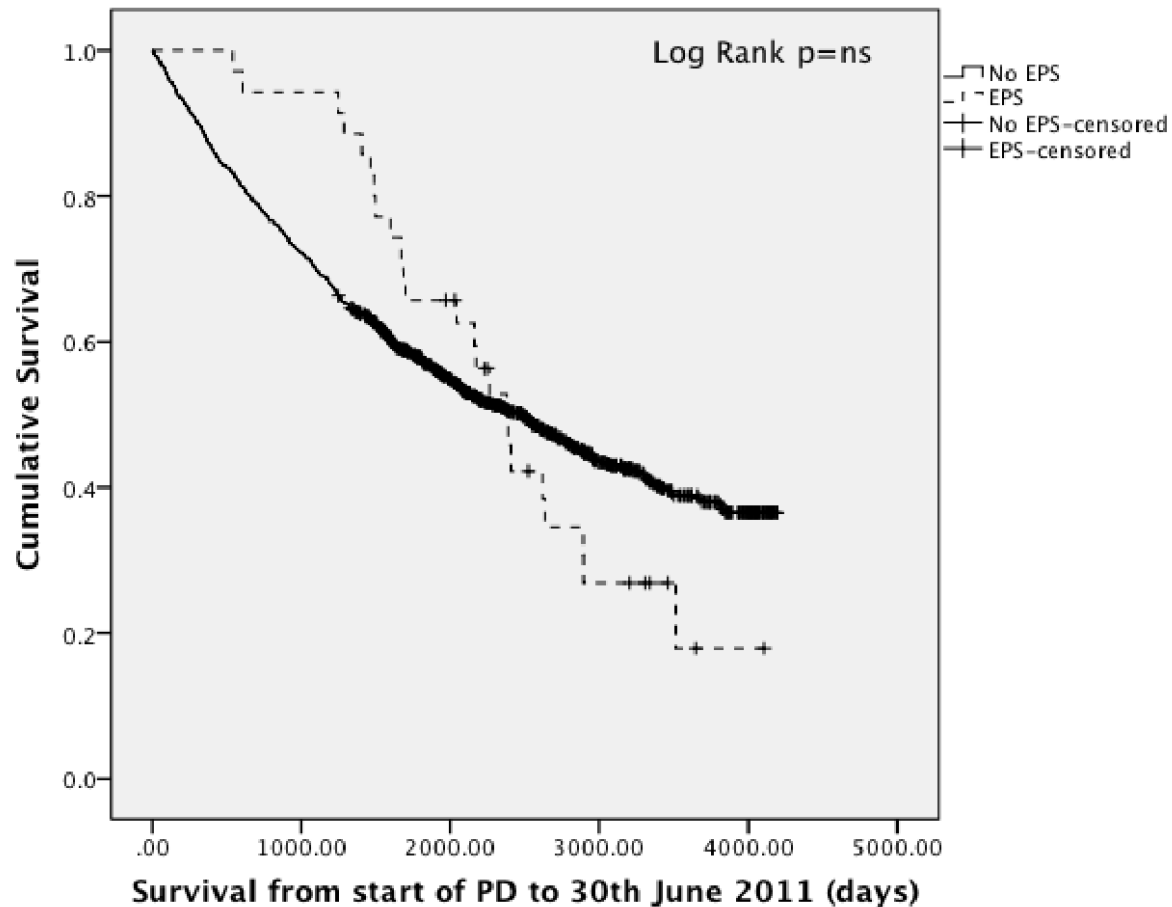
EPS Incidence: Final follow-up 2011



	Total	PD Exposure in Years									
		<1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	>9
PD Population	1238	398	291	207	147	73	41	30	11	4	1
EPS Cases	35	1	3	7	6	6	6	4	2	0	0
% With EPS	2.8	0.3	1.0	3.4	4.1	8.2	14.6	13.3	18.2	0.0	0.0



Survival of EPS Cases compared to PD cohort unaffected by EPS





redicting duration of PD exposure for relevant groups of patients

Patient Group	Number and % of patients still on PD at given time point*				
	1 year	2 years	3 years	4 years	5 years
All patients (n=1324) [†]	868 (65.6)	563 (42.5)	333 (25.2)	179 (13.5)	99 (7.5)
Diabetic (n=348)	207 (59.5)	113 (32.5)	60 (17.2)	28 (8.0)	12 (3.4)
Non diabetic (n=976)	661 (67.7)	450 (46.1)	273 (28.0)	151 (15.5)	87 (8.9)
Age Group at start PD (years)					
≤40 (n=268)	171 (63.8)	106 (39.6)	64 (19.2)	40 (14.9)	20 (7.5)
>40-50 (n=227)	155 (68.3)	96 (42.3)	51 (22.5)	28 (12.3)	14 (6.2)
>50-60 (n=266)	199 (74.8)	135 (50.8)	83 (31.2)	44 (16.5)	27 (10.2)
>60-70 (n=313)	205 (65.5)	143 (45.7)	92 (29.4)	48 (15.3)	28 (8.9)
>70 (n=250)	138 (55.2)	83 (33.2)	43 (17.2)	19 (7.6)	10 (4.0)
PRD					
Primary GN (n=236)	172 (72.9)	120 (50.8)	82 (34.7)	43 (18.2)	22 (9.3)
CIN (n=350)	243 (69.4)	176 (50.3)	105 (30.0)	54 (15.4)	34 (9.7)
Multisystem disease (n=243)	153 (63.0)	89 (36.6)	46 (18.9)	28 (11.5)	15 (6.2)
Diabetic Nephropathy (n=269)	157 (58.4)	85 (31.6)	46 (17.1)	22 (8.2)	10 (3.7)
Unknown (n=226)	143 (63.3)	93 (41.2)	54 (23.9)	32 (14.2)	18 (8.0)
Unit [‡]					
1 (n=133)	85 (63.9)	60 (45.1)	34 (25.6)	22 (16.5)	11 (8.3)
2 (n=246)	150 (61.0)	92 (37.4)	48 (19.5)	27 (11.0)	13 (5.3)
3 (n=118)	68 (57.6)	39 (33.1)	24 (20.3)	10 (8.5)	9 (7.6)
4 (n=86)	60 (69.8)	44 (51.2)	22 (25.6)	9 (10.5)	4 (4.7)
5 (n=201)	131 (65.2)	87 (43.3)	59 (29.4)	35 (17.4)	16 (8.0)
6 (n=133)	95 (71.4)	58 (43.6)	29 (21.8)	12 (9.0)	9 (6.8)
7 (n=96)	67 (69.8)	44 (45.8)	26 (27.1)	13 (13.5)	6 (6.3)
8 (n=131)	85 (64.9)	57 (43.5)	36 (27.5)	17 (13.0)	9 (6.9)
9 (n=112)	86 (76.8)	60 (53.6)	31 (36.6)	26 (23.2)	15 (13.4)
10 (n=68)	41 (60.3)	22 (32.4)	14 (20.6)	8 (11.8)	7 (10.3)
RRF (l/wk/1.73m ²)					
<10 l/week (n=117)	74 (63.2)	37 (31.6)	21 (17.9)	14 (12.0)	9 (7.7)
>10 l/week (n=918)	733 (79.8)	497 (54.1)	301 (32.8)	159 (17.3)	85 (9.3)
Unknown (n=289)	61 (21.1)	29 (10.0)	11 (3.8)	6 (2.1)	5 (1.7)
Serum Albumin (g/l)					
<30 (n=163)	95 (58.3)	63 (38.7)	35 (21.5)	12 (7.4)	7 (4.3)
≥30-35 (n=390)	270 (69.2)	168 (43.1)	102 (26.2)	55 (14.1)	30 (7.7)
≥35 (n=603)	443 (73.5)	299 (49.6)	176 (29.2)	99 (16.4)	52 (8.6)

Table 2: Proportion of patients continuing PD at given time point.



Summary

- Scotland peritonitis rate has improved significantly over the past 2 years
- Is the recent peritonitis rate improvement related to wider use of a bundle of care for peritonitis prevention?
- 10% of PD patients were at risk of underdialysis at each audit period
- Underdialysis is now almost as frequent a cause of technique failure as peritonitis
- 1:12 patients on PD for 4-5 years develop EPS compared with 1:7 on PD for more than 5 years