Scottish Renal Registry PD Audit
1999-2008

Dr Robert Mactier on behalf of the SRR,
SRA meeting,
Edinburgh,
21st March 2009
Trends in PD in Scotland 1999-2008

- 6 monthly prospective data collection
- Demographic data, APD or CAPD
- Peritonitis – rate, causative organism, clinical outcome,
- Adequacy of PD – weekly Kt/V and total creatinine clearance, RRF
- Causes of technique failure
• Gradual decline in PD numbers 435 ➔ 320 (87 per million ➔ 64 per million population)
• 26% fall in PD numbers
• Total percentage of APD has increased from 26.7% ➔ 74%
Number of audit periods each PD Unit has met the RA recommended minimum peritonitis rate

Of a total of 20 audit periods
### Peritonitis rates in adult PD patients in Scotland 1999-2008

<table>
<thead>
<tr>
<th>Audit period</th>
<th>Episodes of peritonitis</th>
<th>Months between episodes of peritonitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 1999 - Jun 2002</td>
<td>928</td>
<td>19.2</td>
</tr>
<tr>
<td>Jul 2002 - Dec 2004</td>
<td>573</td>
<td>20.1</td>
</tr>
<tr>
<td>Jan 2005 - Jun 2007</td>
<td>584</td>
<td>20.1</td>
</tr>
<tr>
<td>July 2007- Dec 2008</td>
<td>339</td>
<td>19.6</td>
</tr>
<tr>
<td>Jan 1999 - Dec 2008</td>
<td>2424</td>
<td>19.6</td>
</tr>
</tbody>
</table>
Incidence of catheter-related infection in PD and HD

- 1 episode of PD-related peritonitis every 19.6 months of PD in Scotland 1999-2008

- 1 episode of tunnelled catheter-related bacteraemia every 12.6 months of HD at GRI 2005-2007
Organisms Responsible for PD Peritonitis in Scotland by Year

- Staph aureus
- Coag-ve staph
- Gram-ve bacilli
- Fungi
- Other
- Culture Negative
PD Peritonitis: SA and MRSA as % of all peritonitis episodes

![Graph showing the percentage of SA and MRSA peritonitis episodes from 2000 to 2007.](graph.png)
Causes of PD Technique Failure (%) Nationally
1999-2008

- Peritonitis: 11%
- Failed Access: 8%
- Poor Dialysis: 4%
- Poor UF: 4%
- High IP: 3%
- Wish HD: 19%
- Stop Dialysis: 10%

Legend:
- %Peritonitis
- %Failed Access
- %Poor Dialysis
- %Poor UF
- %High IP
- %Wish HD
- %Stop Dialysis
Causes of PD Technique Failure (%) by year

Year

% Peritonitis
% Failed Access
% Poor Dialysis
% Poor UF
% High IP
Annual peritonitis rates: Edinburgh (unit 5) compared to the national average and Renal Association minimum standard
Conclusions: 10 years of PD audit

- PD numbers have decreased by 26%
- Postcode availability of APD has been resolved and APD has increased from 27 to 74% of PD patients
- PD peritonitis remains the commonest cause of technique failure
- The percentage of patients remaining on PD with total creatinine clearance <50l/1.73m²/week has decreased
- The increased rate of peritonitis in Edinburgh shows the value of regular audit and requires improvement to complete the audit cycle
Peritonitis: rates

Before and after PD educational session late 2004

Peritonitis Rates by Unit

- Jul. 2002-Dec. 2004
- Renal Association Minimal Standard

Units

Months between Peritonitis Episodes

1 2 3 4 5 6 7 8 9 10 All Units

1 2 3 4 5 6 7 8 9 10
PD Peritonitis: Outcome

Year

Number of peritonitis episodes

Total Cure
Total refract
Total Death
Peritonitis outcome by organism (all units 2000-2007)

- **CNS Gram Negative**: %Cure = 90%, %Refractory = 10%, %Death = 0%
- **Gram Positive**: %Cure = 80%, %Refractory = 10%, %Death = 0%
- **SA**: %Cure = 70%, %Refractory = 30%, %Death = 0%
- **MRSA**: %Cure = 60%, %Refractory = 40%, %Death = 0%
- **Fungal**: %Cure = 30%, %Refractory = 70%, %Death = 0%
- **Other**: %Cure = 80%, %Refractory = 20%, %Death = 0%
- **Culture Negative**: %Cure = 90%, %Refractory = 10%, %Death = 0%