The Problem with Access Dysfunction
- **Stenosis**
  - Decreased dialysis efficiency
  - Decreased adequacy
  - Poorer outcomes
- **Thrombosis**
  - Thrombectomies damage vessel walls
  - Causes recurrent interventions – $ to payers
  - 3.5 to 2.5 extra missed Tx’s – $ to facility
  - Decreases access life
- **Catheter**
  - Increases infection rate and mortality
  - 30% of hospitalizations due to access issues – Big $ to payer
  - 3 to 5 extra missed Tx’s & cost of catheter use – $ to facility
  - 20% of permanent CVC patients have exhausted all access sites
  - Ultimate impact on revenue – deceased patients

Financial Implications Of A Vascular Access Surveillance Program

The Cost of Access Complications
- Missed treatments in excess of ‘Baseline’
  - Baseline: 5.3
  - Weighted average of missed Tx’s for pts without access complications
  - No issues: 5.6
  - Angio: 4.6
  - Crot: 7.1
  - AV & Cath: 3.5

Surveillance Technologies
- **Technology**
  - *Ura* (direct measurement)
  - *Ura* (indirect measurement with fluid/stenosis)
  - *AV* (indirect measurement)

<table>
<thead>
<tr>
<th>Technology</th>
<th>Baseline: 5.3</th>
<th>$/Tx</th>
<th>Frequency</th>
<th>Per Tx Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Ura</em></td>
<td>20 mins/pt/test + scheduling</td>
<td>$21.8k plus $625/yr</td>
<td>Monthly or quarterly</td>
<td>$200</td>
<td>$20,400</td>
</tr>
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<td><em>Ura</em></td>
<td>20 mins/pt/test + scheduling</td>
<td>$200</td>
<td>Monthly or quarterly</td>
<td>$200</td>
<td>$20,400</td>
</tr>
<tr>
<td><em>AV</em></td>
<td>10-15 min/pt/test</td>
<td>$75/pt/year</td>
<td>Each Treatment</td>
<td>$75</td>
<td>$7,500</td>
</tr>
<tr>
<td><em>AV</em></td>
<td>10-15 min/pt/test</td>
<td>$75/pt/year</td>
<td>Quarterly</td>
<td>$75</td>
<td>$7,500</td>
</tr>
</tbody>
</table>

Notes:
- **Accuracy of AVF OCM** depends on flow rate and anatomic location of lesions/s
- **Accuracy of AVF Doppler studies** depends on anatomic location of lesions/s
- A low flow AVF can be evident/medical
- A low flow AVF can require 5-10 minutes of fluid load
- A low flow AVF can cause flow to be no longer evident/medical
- **Access Surveillance Program**

Surveillance is an important component of dialysis access care
- Does not replace access monitoring but rather, augments it
- There are several surveillance technologies and options
- Expense and scalability are key considerations when building a program
- Surveillance can lead to proactive care which has been documented to lead to better patient outcomes and costs
- Success is not only about technology but also about collaboration with dialysis access care providers

Key points
- Surveillance is an important component of dialysis access care
  - Does not replace access monitoring but rather, augments it
  - There are several surveillance technologies and options
  - Expense and scalability are key considerations when building a program
- Surveillance can lead to **proactive care** which has been documented to lead to better patient outcomes and costs
- Success is not only about technology but also about **collaboration** with dialysis access care providers

**Financial Implications**
- **Cost of technology and associated labor cost**
  - $0.27-$0.60/dialysis treatment
  - (cost to dialysis provider)
- **Value from proactive care**
  - Wide spectrum up to ~$1,750 prpm (savings to payors)
More anticipatory care yields better outcomes and lower patient costs

Impact of Anticipatory Care on Infection Rate, All-Cause Mortality Rate, and Average PMPM Payments

Surveillance technology and proactive care coordinate

- Having a surveillance solution in of itself is not sufficient – it has to be utilized
- Running a program is not easy – it has to be well managed
- Care collaboration with dialysis access providers is a key component in having a successful program that yields better patient outcomes

“Even if you are very talented and make all possible efforts some results simply need time; you will not get a baby in a month, even if you make pregnant 9 women”

— Warren Buffett

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