49th Annual Arizona Rural Health Conference
Rural America
The Rural Hospitals living their mission in Keeping Care Local for the patient community with End-Stage-Kidney Disease (ESKD) and Chronic Kidney Disease (CKD). The cost of transportation for ESKD patients is over $3B annually. Rural America is transferring a lot of these patients outside of the community. Today we will discuss how one CAH Hospital

• Stop the transfers

• Stop the drive

• Stop the flow of money leaving the community

• And let neighbors take care of neighbors

Keep Care Local
• How big is CKD?

• Over **11%** of the US population has CKD – **37M**
• **2%** of the CKD patients have End Stage Renal Disease (ESRD)
• **50%** of ESRD patients are **65 or older**
• Average ESRD patients go to the hospital twice a year
• **33%** use a wheelchair or walker
• **50%** are transport dependent
• Transportation cost for ESRD patients annually - **over $3B**
• In 2018 CMS spent **$130B** for CKD
## Number of ESKD patients in AZ Counties

<table>
<thead>
<tr>
<th>AZ County</th>
<th>ESKD</th>
<th>CKD Population</th>
<th>Unaware they have CKD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maricopa</td>
<td>10,471</td>
<td>523,550</td>
<td>471,195</td>
</tr>
<tr>
<td>Pinal</td>
<td>1,080</td>
<td>54,000</td>
<td>48,600</td>
</tr>
<tr>
<td>Gila</td>
<td>126</td>
<td>6,300</td>
<td>5,670</td>
</tr>
<tr>
<td>Pima</td>
<td>2,445</td>
<td>122,250</td>
<td>110,025</td>
</tr>
<tr>
<td>Yavapai</td>
<td>549</td>
<td>27,450</td>
<td>24,705</td>
</tr>
<tr>
<td>La Paz</td>
<td>50</td>
<td>2,500</td>
<td>2,250</td>
</tr>
<tr>
<td>Yuma</td>
<td>499</td>
<td>24,950</td>
<td>22,455</td>
</tr>
<tr>
<td>Mohave</td>
<td>496</td>
<td>24,800</td>
<td>22,320</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AZ County</th>
<th>ESKD</th>
<th>CKD Population</th>
<th>Unaware they have CKD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graham</td>
<td>90</td>
<td>4,500</td>
<td>4,050</td>
</tr>
<tr>
<td>Greenlee</td>
<td>22</td>
<td>1,100</td>
<td>990</td>
</tr>
<tr>
<td>Cochise</td>
<td>294</td>
<td>14,700</td>
<td>13,230</td>
</tr>
<tr>
<td>Santa Cruz</td>
<td>109</td>
<td>5,450</td>
<td>4,905</td>
</tr>
<tr>
<td>Navajo</td>
<td>259</td>
<td>12,950</td>
<td>11,655</td>
</tr>
<tr>
<td>Apache</td>
<td>168</td>
<td>8,400</td>
<td>7,560</td>
</tr>
<tr>
<td>Coconino</td>
<td>335</td>
<td>16,750</td>
<td>15,075</td>
</tr>
<tr>
<td>Total Arizona</td>
<td>16,993</td>
<td>849,650</td>
<td>764,685</td>
</tr>
</tbody>
</table>
Review why ESRD patients are going to the Hospital ...

Top 10 Common Hospitalization Diagnoses*

1. Septicemia (15.8%)
2. Acute and Unspecified Renal Failure (13.5%)
3. Congestive Heart Failure; Non-Hypertensive (6.2%)
4. Diabetes Mellitus with Complications (3.5%)
5. Pneumonia (3.0%)
6. Acute Myocardial Infarction (2.8%)
7. Complication of Device; Implant or Graft (2.4%)
8. Respiratory Failure; Insufficiency; Arrest (2.4%)
9. Urinary Tract Infections (2.1%)
10. Cardiac Dysrhythmias (2.1%)

Critical Access Hospital in Globe, AZ
CAH Business Case - background

• Location: Arizona – 1.5 hours away from Phoenix

• Population:
  • City:    7,000+  ESRD:  17
  • County: 54,000+ ESRD:  126

• Hospital:
  • CAH with 25 beds

• Team Approach
  • CFO / CEO – reviewed financial impact and revenue projections
  • Clinical Team – building trust with all involved
  • Training / Support
  • Dry run

• Today
  • In 12 months over 100 ESRD patients
New service lines are key to the success of rural hospitals

• Steps to successful preparation
• Steps to successful implementation
• Steps to successful program evaluation
• Steps to successful maintenance of the new service line
• Lessons learned
Steps to Successful Preparation

• Market Evaluation
• Board of Directors Support
• Nephrologist Support / Team Member
• Timeline Development
• Equipment and Supply Review
Steps to Successful Implementation

• Business Plan / Project Charter
  • Financial Impact
  • Potential Revenue
  • HR
  • Supply Chain
  • Operations
  • Marketing

• Build the Team
• Training
• Staffing and Scheduling Plan
• Nephrology Support
What changed?
Fresenius Dialysis Machine in Hospitals (BEFORE)

• 2008T BlueStar Dialysis Machine  FMCNA
  • It is BIG and not very portable
  • More complex
  • More expensive
  • Learning curve is longer
Founded in 1998, part of Fresenius Medical Care

- Pre-mixed bagged dialysate
- No water source, filtration or quality testing required
- Intuitive touchscreen navigation
- Simple instructions for operating, monitoring and troubleshooting
- Wireless capability to integrate with EMR system
- Generate data reports to measure and guide program improvements
• **Founded in 2003**
• Based in San Jose, CA
  - The Tablo Hemodialysis System, FDA cleared for use from the hospital to the home
  - Serve as a dialysis clinic on wheels, with 2-way wireless data transmission and a proprietary data analytics platform powering a new holistic approach to dialysis care
### Rural Hospital (59 beds) – Year 1

<table>
<thead>
<tr>
<th>Quarter</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatients</td>
<td>18</td>
<td>21</td>
<td>21</td>
<td>32</td>
<td>93</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Patient Revenue</td>
<td>$124,827.88</td>
<td>$149,793.46</td>
<td>$149,793.46</td>
<td>$224,690.19</td>
<td>$649,104.98</td>
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<tr>
<td>Dialysis Supplies</td>
<td>($11,156.24)</td>
<td>($13,387.49)</td>
<td>($13,387.49)</td>
<td>($20,081.24)</td>
<td>($58,012.47)</td>
</tr>
<tr>
<td>Cost for TeleNeph Package</td>
<td>($36,330.77)</td>
<td>($37,246.15)</td>
<td>($37,246.15)</td>
<td>($41,806.73)</td>
<td>($152,629.81)</td>
</tr>
<tr>
<td>Net Revenue to the Hospital</td>
<td>$77,340.87</td>
<td>$99,159.81</td>
<td>$99,159.81</td>
<td>$162,802.22</td>
<td>$438,462.70</td>
</tr>
</tbody>
</table>

*Based on assumptions listed in this presentation. Actual numbers may vary.*
## CAH – Dialysis Program Impact

<table>
<thead>
<tr>
<th>Total Dialysis Treatments</th>
<th>Initial Service Date</th>
<th>Total Charges</th>
<th>Acute Patient Days</th>
<th>Observation Days</th>
<th>Total Patient Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient #1</td>
<td>07/06/19</td>
<td>37,574</td>
<td>3.1</td>
<td></td>
<td>3.1</td>
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<tr>
<td>Patient #2</td>
<td>07/17/19</td>
<td>10,501</td>
<td>2.3</td>
<td></td>
<td>2.3</td>
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<tr>
<td>Patient #3</td>
<td>07/23/19</td>
<td>74,184</td>
<td>5.0</td>
<td></td>
<td>5.0</td>
</tr>
<tr>
<td>Patient #4</td>
<td>07/23/19</td>
<td>19,932</td>
<td>6.0</td>
<td></td>
<td>6.0</td>
</tr>
<tr>
<td>Patient #5</td>
<td>07/25/19</td>
<td>38,851</td>
<td>6.0</td>
<td></td>
<td>6.0</td>
</tr>
<tr>
<td>Patient #124</td>
<td>04/10/20</td>
<td>60,445</td>
<td>7.0</td>
<td></td>
<td>7.0</td>
</tr>
<tr>
<td>Patient #125</td>
<td>04/14/20</td>
<td>7,561</td>
<td>2.0</td>
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<td>2.0</td>
</tr>
<tr>
<td>Patient #126</td>
<td>11/11/19</td>
<td>38,928</td>
<td>5.0</td>
<td></td>
<td>5.0</td>
</tr>
</tbody>
</table>

|                           |                      | 225           | 3,703,318         | 335             | 65                 | 400               |

**Est. Net Revenue (7/6/2019 - 5/13/2020)**: 1,351,711

**Avg Dialysis Treatments Per Patient**

<table>
<thead>
<tr>
<th>Annualized Gross (Est.)</th>
<th>4,304,812</th>
<th>1.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Revenue (Est.)</td>
<td>1,571,256</td>
<td>0.7</td>
</tr>
<tr>
<td>Dialysis ADC</td>
<td></td>
<td></td>
</tr>
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</table>
• Dedicated Nephrologist – available 24 x 7 / licensed / credentialed
• Collaboration – the patient’s nephrologist, dialysis center and PCP
• Doctor’s medical notes – integration with EHR via pdf / fax / API
• Integration with Dialysis Equipment – Nephrologist receives alerts
• Face to face clinical team meetings – building trust with the team
• Training on-site
• 24 x 7 access to support (equipment & nephrologist)
• Provide CME education to clinical staff
• Provide processes & procedures for the tele-nephrology solution
• Tele-Nephrology platform – access to 24 x 7
• It is the hospital’s patient
“All those patients now stay here,” said the **CEO of CAH in AZ**. “All that business stays in the local community, which is very positive for the hospital. Overall, it's been nothing but a positive.”

Today, patients needing dialysis at CAH consult with Dr. Sahani via telemedicine and, if necessary, are administered dialysis at the hospital from trained nurses. This system has been a win-win—for patients, their families, and the hospital per the **Chief Nursing Officer**.

For dialysis patients, traveling back and forth to Phoenix was “really very burdensome on them and their families,” said the **Chief Nursing Officer**. “To be able to provide [dialysis] here, where their families are close and they can come in, I really think it's made a huge difference.”

“They may need surgical intervention, they may need cardiac intervention...and so those service lines are doing better because we're more efficient and more able to care,” **CEO** said. “It makes a lot of sense,” **CEO** said. “It's actually far more successful than we ever dreamed of.”
Open for Discussion

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