Clinical Safety & Effectiveness
Cohort # 15

Improving Referral Process from UT Medicine Primary Care to Specialty Care

CENTER FOR PATIENT SAFETY & HEALTH POLICY

UT Health Science Center
SAN ANTONIO
The Team

– Mariana Munante, MD: Medical Director Medical Drive Clinic, Primary Care Center, UT Medicine
– Gricelda Valdez: Clinic Manager, Medicine Specialty Care, UT Medicine
– Lisa Gonzales: Clinic Supervisor, Front End Cardiology, UT Medicine
– Maricela Linan: Benefits Coordinator, Medical Drive Clinic, UT Medicine
– Pamela Glasscock: Director of Clinical Operations, UT Medicine
– Facilitator: Hope Nora, PhD
– Sponsor: Sara Pastoor, MD: Director, Primary Care Center
The aim of this project is to decrease the amount of monthly referrals that are incompletely processed from UT Medicine Primary Care Medical Drive Clinical to Specialists by January 15, 2015 from the current baseline of 198 by 15%. The process begins when the referral is made and ends when the appointment is booked and authorized as needed with a specialist.

This is important to improve because incomplete processing of referral authorizations causes delays in care for patients and loss of revenue for the organization.
Project Milestones

• Team Created                                           Sept 2014
• AIM statement created                                  Oct 2014
• Weekly Team Meetings                                  Sept- Nov 2014
• Background Data, Brainstorm Sessions, Workflow and Fishbone Analyses Sept- Nov 2014
• Interventions Implemented                              Dec 2014
• Data Analysis                                          Oct- Jan 2015
• CS&E Presentation                                      Jan 23, 2015
Background

- The administrative burden to the primary care practice of processing patient’s referrals is tied to a patient's insurance type.
- This unreimbursed requirement can become overwhelming to the primary care practice.
- This is important to address because delays in the processing of referrals can delay needed care for patients and decrease revenue to specialty clinics.
Pre-intervention Flowchart

Current State Referral Process
Fishbone Diagram

**Problem Statement**

**Provider**
- Lack of knowledge about the referral process
- Diagnosis incorrectly associated
- Notes not closed in a timely manner

**Process**
- Referral batch jobs - Cadence
- UT Medicine Primary and Specialty Care do not take the same insurances
- Specialists do not process authorizations
- Duplicate referrals
- Approval required for PPO patients referred from specialty to specialty
- PPO patients and services requested not provided by UT Medicine referred back to PCCBC
- UT Medicine Specialist accepting only some patient diagnoses
- Variable authorization requirements depending on insurance

**Insurance**
- Lenghty paperwork for outside referrals
- Humana X lengthy process including procedure authorization
- BH referrals require phone call for authorization
- Approval required for PPO patients referred from specialty to specialty
- PPO patients and services requested not provided by UT Medicine referred back to PCCBC
- UT Medicine Specialist accepting only some patient diagnoses
- Variable authorization requirements depending on insurance

**Resources**
- Noisy
- Multiple interruptions
- Insufficient human resources
- Overhead not covered by reimbursement
- Lack of knowledge about appropriate workload per BC FTE

**Work environment**
- New clinic managers without access to systems
- Lack of standardization among PCC clinics

**Work environment**
- Providers
- Process
- Insurance
- Resources
- Problem Statement

**Referrals incompletely processed**
UT Medicine Medical Drive PCC Insurances

Number of Cases

Insurances
- All Medicaid Plans
- Humana
- Community First
- Traditional Medicare
- Medicare Managed
- BCBS
- Other
- UH
- Aetna

Percentage
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0% 90.0% 100.0%
PLAN: Potential Interventions
DO: Interventions Considered

1. Decrease work-load: Stop sending referrals from specialty to specialty not requiring authorization to the primary care BC and allow specialty care to book them directly.

2. Recruit help from specialty care: Stop sending referrals from Primary care to specialty for referrals not requiring authorization to the Primary care BC and allow specialty to book them directly while simultaneously:

3. Recruit help from patients: Provide each patient receiving a referral with a phone number to call and schedule their own specialty appointment, using the MARC as primary option and giving the patient alternative numbers if the MARC did not accept their insurance or did not provide the service.

4. Recruit help from non BC staff: for simple tasks like preparing packages for certain services, calling patients with referral information.

****Hire more BCs: Determine the appropriate workload per BC to justify
DO: Interventions Implemented

• Recruit help from front desk staff: simple tasks like preparing packages for certain services and calling patients with referral information

• Time study to justify hiring additional BCs
## DO: Time Study Results

### Medical Drive

<table>
<thead>
<tr>
<th>Number</th>
<th>Time (S)</th>
<th>Time (M)</th>
<th>Insurance</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>1316</td>
<td>21:56</td>
<td>Humana X HMO</td>
<td>Colonoscopy</td>
</tr>
<tr>
<td>2</td>
<td>375</td>
<td>6:15</td>
<td>Community First</td>
<td>Call, pt. verify ins covers referral.</td>
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<tr>
<td>3</td>
<td>91</td>
<td>1:31</td>
<td>Community First</td>
<td>Spec to Spec (Audio/Ent)</td>
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<tr>
<td>4</td>
<td>100</td>
<td>1:40</td>
<td>Community First</td>
<td>Urgent, Pt had apt already</td>
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<tr>
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<td>372</td>
<td>6:12</td>
<td>Humana X HMO</td>
<td>Ophthalmology, Contracted</td>
</tr>
<tr>
<td>6</td>
<td>946</td>
<td>15:46</td>
<td>Amerigroup Medicare</td>
<td>Sleep Study – verify CPAP</td>
</tr>
<tr>
<td>7</td>
<td>255</td>
<td>4:15</td>
<td>HMO-X West</td>
<td>Cardiology, Pt seen already. Duplicate.</td>
</tr>
<tr>
<td>8</td>
<td>195</td>
<td>3:15</td>
<td>Humana X HMO</td>
<td>Radiology- ultrasound</td>
</tr>
<tr>
<td>9</td>
<td>721</td>
<td>12:01</td>
<td>Medicare</td>
<td>Oral Surgeon</td>
</tr>
<tr>
<td>10</td>
<td>421</td>
<td>7:01</td>
<td>Humana X HMO</td>
<td>Colonoscopy, exp. Ins. No referral</td>
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</table>

**Average**: 479.2 (Time: 7:59)

### MARC

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<thead>
<tr>
<th>Number</th>
<th>Time(s)</th>
<th>Time(m)</th>
<th>Insurance</th>
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<td>1</td>
<td>90</td>
<td>1:30</td>
<td>Community First</td>
<td>Urgent. Wound care.</td>
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<tr>
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<td>716</td>
<td>11:56</td>
<td>Community First</td>
<td>Sleep Study</td>
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<td>850</td>
<td>14:10</td>
<td>Community First</td>
<td>Physical Therapy</td>
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<td>4</td>
<td>468</td>
<td>7:48</td>
<td>Community First</td>
<td>Wound care/Urgent</td>
</tr>
<tr>
<td>5</td>
<td>159</td>
<td>2:39</td>
<td>Community First</td>
<td>Colonoscopy, Changed to internal.</td>
</tr>
<tr>
<td>6</td>
<td>189</td>
<td>3:09</td>
<td>Humana X</td>
<td>Duplicate from Batch update, verified</td>
</tr>
<tr>
<td>7</td>
<td>788</td>
<td>13:08</td>
<td>Humana X</td>
<td>Contraception Management Meds</td>
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<tr>
<td>8</td>
<td>674</td>
<td>11:14</td>
<td>Community First</td>
<td>Wound care/Urgent</td>
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<tr>
<td>9</td>
<td>282</td>
<td>4:42</td>
<td>Community First</td>
<td>Sleep Study, Mychart Message</td>
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<tr>
<td>10</td>
<td>296</td>
<td>4:56</td>
<td>Community First</td>
<td>Podiatry, Mychart Message</td>
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**Average**: 451.2 (Time: 7:31)

### Westover Hills

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<tr>
<td>1</td>
<td>181</td>
<td>3:01</td>
<td>Human X (Gold)</td>
<td>Breast Cancer Screen Referral Radiology</td>
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<tr>
<td>2</td>
<td>788</td>
<td>13:08</td>
<td>Human X (Silver)</td>
<td>Physical Therapy</td>
</tr>
<tr>
<td>3</td>
<td>49</td>
<td>0:49</td>
<td>Humana PPO</td>
<td>Breast Cancer Liver Biopsy</td>
</tr>
<tr>
<td>4</td>
<td>237</td>
<td>3:57</td>
<td>Humana X</td>
<td>Hearing Test, Duplicate</td>
</tr>
<tr>
<td>5</td>
<td>70</td>
<td>1:10</td>
<td>Humana X</td>
<td>Psychiatric Referral</td>
</tr>
<tr>
<td>6</td>
<td>83</td>
<td>1:23</td>
<td>Humana X (Silver)</td>
<td>Radiology</td>
</tr>
<tr>
<td>7</td>
<td>25</td>
<td>0:25</td>
<td>Humana X-PPO</td>
<td>Radiology</td>
</tr>
<tr>
<td>8</td>
<td>45</td>
<td>0:45</td>
<td>Humana X-PPO</td>
<td>Radiology</td>
</tr>
<tr>
<td>9</td>
<td>334</td>
<td>5:34</td>
<td>Humana X (Silver)</td>
<td>OB/GYN</td>
</tr>
<tr>
<td>10</td>
<td>320</td>
<td>5:20</td>
<td>Humana X</td>
<td>Sleep Study</td>
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**Average**: 213.2 (Time: 3:33)

### Senior Health

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<td>1</td>
<td>360</td>
<td>6:00</td>
<td>Medicare</td>
<td>Psychology</td>
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<td>2</td>
<td>205</td>
<td>3:25</td>
<td>Medicare</td>
<td>Psychiatric Referral</td>
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<td>3</td>
<td>277</td>
<td>4:37</td>
<td>Medicare</td>
<td>Ortho Surgery</td>
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<tr>
<td>4</td>
<td>354</td>
<td>5:54</td>
<td>Medicare</td>
<td>Neurology</td>
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<tr>
<td>5</td>
<td>135</td>
<td>2:15</td>
<td>United HC Medicare Secure Horizons HMO West</td>
<td>Ophthalmology</td>
</tr>
<tr>
<td>6</td>
<td>177</td>
<td>2:57</td>
<td>Blue Cross BS-PPO</td>
<td>Psychology</td>
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<tr>
<td>7</td>
<td>62</td>
<td>1:02</td>
<td>Blue Cross BS-PPO</td>
<td>Gastro</td>
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<tr>
<td>8</td>
<td>285</td>
<td>4:45</td>
<td>Blue Cross BS-PPO</td>
<td>Neurology</td>
</tr>
<tr>
<td>9</td>
<td>1140</td>
<td>19:00</td>
<td>Humana X</td>
<td>Gastro</td>
</tr>
<tr>
<td>10</td>
<td>600</td>
<td>10:00</td>
<td>United HC Medicare Secure Horizons HMO West</td>
<td>Audiology</td>
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**Average**: 359.5 (Time: 5:59)
# DO: Time Study Results

<table>
<thead>
<tr>
<th></th>
<th>Medical Drive</th>
<th>MARC</th>
<th>Westover Hills</th>
<th>Senior Health</th>
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</thead>
<tbody>
<tr>
<td><strong>Referrals Per day</strong></td>
<td>56</td>
<td>60</td>
<td>129</td>
<td>75</td>
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<tr>
<td><strong>Referrals Per Hour</strong></td>
<td>7.5</td>
<td>8.0</td>
<td>17.1</td>
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<tr>
<td><strong>Cost Per Day</strong></td>
<td>$163.90</td>
<td>$163.90</td>
<td>$163.90</td>
<td>$163.90</td>
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<tr>
<td><strong>Cost Per Hour</strong></td>
<td>$21.85</td>
<td>$21.85</td>
<td>$21.85</td>
<td>$21.85</td>
</tr>
<tr>
<td><strong>Cost Per Referral</strong></td>
<td>$2.91</td>
<td>$2.73</td>
<td>$1.27</td>
<td>$2.19</td>
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<tr>
<td><strong>$ Day for Referrals</strong></td>
<td>$163.90</td>
<td>$163.90</td>
<td>$163.90</td>
<td>$163.90</td>
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<table>
<thead>
<tr>
<th>Insurance</th>
<th># Referrals</th>
<th>Total Seconds</th>
<th>Avg. Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humana X</td>
<td>14</td>
<td>6434</td>
<td>8</td>
</tr>
<tr>
<td>Community First</td>
<td>11</td>
<td>4101</td>
<td>6</td>
</tr>
<tr>
<td>Medicare</td>
<td>6</td>
<td>2863</td>
<td>8</td>
</tr>
<tr>
<td>HMO-X West</td>
<td>3</td>
<td>990</td>
<td>6</td>
</tr>
<tr>
<td>Humana X PPO</td>
<td>3</td>
<td>119</td>
<td>1</td>
</tr>
<tr>
<td>Blue Cross BS-PPO</td>
<td>3</td>
<td>524</td>
<td>3</td>
</tr>
</tbody>
</table>
Excluded the following referral trial types due to length of completion duration (outlier trials):
- Durable Medical Equipment: (60-120 minutes in duration)
- Pulmonary Function Tests: (30-45 minutes in duration)
- Bill Inquires (30 to 45 minutes)
- Sleep Studies (15 to 30 minutes) – included those under 25 min in study
Excluded the following referral trial types due to length of completion duration (outlier trials):

- Durable Medical Equipment: (60-120 minutes in duration)
- Pulmonary Function Tests: (30-45 minutes in duration)
- Bill Inquires: (30 to 45 minutes)
- Sleep Studies (15 to 30 minutes) – included those under 25 min in study
DO: Time Study Key Findings

Key Findings:
- PCC (Department) average time for BC to complete one referral: **6:00 minutes per referral**
- 450 work minutes per day/6 minutes per referral = **75 average referrals/day**
- 75 referrals per day /7.5 hours worked per day = **10 referrals/hour**
- $21.85 dollars per hour/10 referrals per hour = **$2.19 dollars per referral**
- Average number of referrals per patient encounter: **2 referrals per encounter**

Example Medical Drive Clinic:
- (13 apts. per day X 4.7 FTEs) = 61 apts. per day
- 2 referrals per encounter
- 2 x 61 = 122 referrals per day.
- **Referral workload (122 per clinic day) exceeds average benefit coordinator referral completion average per day (75 referrals/day)**
- Based on uninterrupted continuous work on referrals every day

Constants used for calculations:
- 7.5hrs per day X 60 min per hour = **450 min per work day**
- $39,500 (BC Salary)/241 work days a year = **$164 per day.**
- $164 per day / 7.5 hrs. per day = **$21.85 per hour**
- $21.85 per hour / 10 referrals per hour = **$2.19 per referral**
- Average referrals per encounter is determined by interview with benefit coordinator, data not available to determine average referral per encounter.
CHECK: Results/Impact

• Approval obtained for hiring new BC
CHECK: Results/Impact

Medical Drive Primary Care Clinic
Open Referrals to Specialists

Number of Open Referrals to Specialists from Sept 2014 to Dec 2014.
What Happened?

- Medical Drive Clinic opened in Sept, 2014 and workload is still evolving.
- EPIC is still evolving.
  - New referral process has not been fully trained due to the Holidays. Front desk staff retraining was required mid way through the month of December and was not done.
  - Unable to pull the same report again from which the data was extracted
  - New upgrade is expected February 2015 (more changes are coming)
ACT: Going Forward

• Propose housing all Primary Care benefit coordinators in the same location to allow for cross training, developing expertise in specific areas and better distribution of work-load

• Determine the BC workload and provide an appropriate support staff ratio for each clinic

• After EPIC upgrade (February 2015?) automatic electronic notification to PCPs will be sent when patients are seen by UT Medicine specialist. Discontinue BC notification with specialty to specialty referrals for patients not requiring authorization
Return on Investment

• Revenue from referrals is generated by specialist resulting from UT Medicine primary care referrals.

• Optimizing the referral process can benefit down-stream revenue generation. Reports requested about number of referrals generated and incomplete referrals (referrals that are not authorized and are not reimbursable)

• Consideration to manage benefit coordination at an institutional level to support increase of downstream revenue for specialty care

• At this time, not possible to calculate the ROI
Conclusion

• Referral coordination is an extremely complex process, insurance driven and unfunded at the primary care level.

• Accountable Care Organization involvement at all levels may be necessary to optimize patient care and downstream revenue generation.
Lessons Learned

• We have learned a lot about the referral process
• We understand how many hands it touches and how many patients it impacts
• We have been able to clarify definitions of referral status terms in EPIC
• We have identified gaps in training among people in the same position and even among trainers.
• We understand the impact of lack of communication among specialties
• CHANGE IS HARD!!!!
The Team!
Thank you!