Evaluation of a transitions clinic to bridge emergency department and primary care

Authors: Amanda Zhang, Tom Spiegel, Kate Sullivan, Geneatra Green, Lolita Smith, Stephanie Chia, Raj Krishnamurthy, Valerie Press

Problem

- Suboptimal transitions from ED to ambulatory care results in poor clinical outcomes and ED use for nonurgent needs
- Patients lacking insurance or primary care providers are more likely to return to ED for follow-up care; this is very common at UCM
- At UCM, recent changes in Medicaid acceptance policy and the closure of multiple local hospitals have generated further barriers in access to primary care for this population

Goal

- Reduce ED overuse: Reduce 30-day ED revisit and hospital readmissions by providing ED follow-up care to patients lacking primary care relationships
- Improve patient care: Establish patients who frequently visit the ED with longer-term primary care sites and clinicians

Intervention Design

- UCM Care Transitions Clinic (CTC) established in 2020
- ED transition program began in Fall 2020 to reduce ED overuse for ambulatory sensitive conditions and to link to PCPs
- APN-led visits provide wound care, manage chronic disease, follow-up labs, and perform basic procedures
- Patient advocates refer patients to longer-term ambulatory care
- Impact measured by:
  - Number patients seen
  - Rate of ED revisit and hospital readmissions
  - Percent established with primary care

Table 1: Show-rate by care type provided

<table>
<thead>
<tr>
<th>Care type provided</th>
<th># apts</th>
<th>% of all appts</th>
<th>% completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wound care</td>
<td>179</td>
<td>44%</td>
<td>63%</td>
</tr>
<tr>
<td>Clinical problem management</td>
<td>134</td>
<td>33%</td>
<td>47%</td>
</tr>
<tr>
<td>Lab follow-up</td>
<td>83</td>
<td>20%</td>
<td>43%</td>
</tr>
<tr>
<td>Procedure</td>
<td>9</td>
<td>2%</td>
<td>56%</td>
</tr>
<tr>
<td>Total</td>
<td>405</td>
<td>100%</td>
<td>53%</td>
</tr>
</tbody>
</table>

- Most common care type was wound care (44%, top 3: suture/staple removal, cellulitis, abscess), followed by clinical problem management (33%, top 3: elevated blood pressure, deep venous thrombosis/pulmonary embolism, edema).
- Wound checks had a higher rate of appointment completion compared to clinical appointments (show rate: 63% vs 47%).
- Medicaid patients were 40% less likely to complete their appointment compared to patients on other types of insurance (OR=0.62, CI=[0.40, 0.97]).

- Areas for improvement:
  - Ensuring apt follow-through: < ½ referred to CTC show
  - Medicaid patients significantly less likely to complete appointments
  - Possible solutions: virtual visits, early outreach by patient advocates ahead of scheduled appointment time

Conclusions

- Two predominant visits types:
  - Wound checks requiring regular follow-up care
  - Exacerbations of chronic disease (COPD, CAD)
- Transition clinics:
  - Are a viable intervention to provide timely access to follow-up medical care and social assistance for high-risk patients discharged from the ED
  - May reduce excess ED use for ambulatory care needs

Acknowledgements

- Dr. Press’ Lab and the CTC team
- HDSI for the Quality Improvement Designation
- Data and Analytics
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Problem

- Suboptimal transitions from ED to ambulatory care results in poor clinical outcomes and ED use for nonurgent needs
- Studies repeated show that Pts lacking insurance or PCPs are more likely to return to ED for f/u care; unfortunately, this is very common at UCM
- At UCM, recent changes in Medicaid acceptance policy and the closure of multiple local hospitals have generated further barriers in access to primary care for this population

Goal

- Reduce ED overuse: Reduce 30-day ED revisit and hospital readmissions by providing ED follow-up care to patients lacking primary care relationships
- Improve patient care: Establish patients who frequently visit the ED with long-term primary care sites and clinicians

Intervention Design

- UCM Care Transitions Clinic (CTC) established in Fall 2020 old Mitchell ED, at the time of study, capacity 15 pt/week
- APN-led visits provide wound care, manage chronic disease, follow-up labs, and perform basic procedures
- Patient advocates refer patients to longer-term ambulatory care NOT MEANT TO COME BACK TO US AGAIN AND AGAIN
- Impact measured by:
  - Number patients seen
  - Rate of ED revisit and hospital readmissions
  - Percent successfully established with primary care

Figure 1: Fishbone

Table 1: Reasons for CTC referral

<table>
<thead>
<tr>
<th>Reason for Referral</th>
<th># appts</th>
<th>% of all appts</th>
<th># appts completed</th>
<th>% completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wound check</td>
<td>50</td>
<td>43%</td>
<td>29</td>
<td>58%</td>
</tr>
<tr>
<td>Chronic disease</td>
<td>50</td>
<td>43%</td>
<td>19</td>
<td>38%</td>
</tr>
<tr>
<td>Labs</td>
<td>10</td>
<td>9%</td>
<td>5</td>
<td>50%</td>
</tr>
<tr>
<td>Procedure</td>
<td>2</td>
<td>2%</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>No data</td>
<td>4</td>
<td>3%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>116</td>
<td>100%</td>
<td>54</td>
<td>NA</td>
</tr>
</tbody>
</table>

- Majority (86%) of visits split equally between wound check (top 3: cellulitis, abscess, suture removal) and chronic disease management (top 3: SOB, chest pain, covid)
- Wound checks 20% more likely to be completed compared to chronic disease appointments (58% show rate vs 38%)

Figure 2: CTC utilization and referral results

Figure 3: Preliminary Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Completed appts (N=47)</th>
<th>Missed appts (N=55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-day ED revisit</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>30-day hospital readmission</td>
<td>9%</td>
<td>7%</td>
</tr>
</tbody>
</table>

- Pts who complete CTC appointment have lower rate of ED revisit (15% vs 20%) but the effect is not statistically significant

Conclusions

- Two predominant visits types: (2 predom medical needs fulfilling)
  - Wound checks requiring regular follow-up care + Exacerbations of chronic disease
  - Patient advocates: Successful referring patients to primary care
    - Initial contact with advocate among < quarter of patients
  - What did we learn about the effectiveness of transitions clinics?
    - May reduce excess ED use for ambulatory care needs
    - Particularly if connect patients to continuity care
    - Ultimately, More data needed to confirm
  - What are we working on now?
    - Target population: as discussed earlier, 1/5 of pts referred to CTC already have UCM PCP. Solution: recently implemented an ED to PCG pathway in parallel to the CTC program
    - Ensuring apt follow-through: This is an extremely challenging problem. < ≈½ referred to CTC show Solution: patient adv and CTC staff communicate with pts ahead of and after missed appts to reschedule when needed. Hopefully, these interventions lead to real improv

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