**BACKGROUND**

- Diabetes is a prevalent chronic health issue that leads to morbidity and mortality in our patient population at Jefferson Hospital Ambulatory Practice (JHAP).
- 30.3 million people in the US are living with diabetes mellitus. Diabetes was the 7th leading cause of death in the US in 2015.
- The percentage of our patient population at JHAP with uncontrolled diabetes is high with a rate that approaches 40%.
- The percentage of our patients with diabetes that had a follow up appointment scheduled was strikingly low at 20%.
- Follow up and compliance has been a significant deterrent to optimal diabetes management at our practice and are the main issues we attempted to address.
- We targeted patients with uncontrolled diabetes, defined as A1c > 9% or those without an A1c result in the last year, in accordance with our institutional goals.

**AIM**

- Increase percentage of scheduled follow up appointments in our diabetic population by 50% within 8 months.
- Decrease percentage of uncontrolled diabetics by 10% within 8 months.

**INTERVENTION**

**Figure 1**
- **Social Determinants of Health (cost of healthy food, insulin storage)***
- **Technology***
- **Provider workflow***
- **ADA guidelines***
- **Policies***
- **Community support***
- **A1c cutoff for pharmacist referral***
- **EMR review charts***
- **Viewing data Epic integration***
- **Documentation of achieved goals***
- **Appointments follow up appointments***
- **Patient knowledge***
- **Provider knowledge***
- **Patient non-adherence***
- **Uncontrolled Diabetes***
- **Environment***

- Our interventions were completed between 7/2018-2/2019.
- Our primary intervention was for the MAs to call all diabetic patients and schedule an appointment based on the algorithm below (Figure 2).
- Our secondary intervention was for uncontrolled diabetics to complete a comprehensive diabetes care visit with our pharmacist including medication review, medication titration, and follow up planning.

**RESULTS**

**Figure 2** MA Appointment Scheduling Algorithm

- **Pre-QI Interval (3/1/18 – 8/31/18)**
- **QI Interval (9/1/18 – 3/6/19)**

<table>
<thead>
<tr>
<th>Total Number of Patients seen by PharmD</th>
<th>Pre-QI Interval</th>
<th>QI Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phases (3/1/18 – 8/31/18)</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>A1c decreased during interval</td>
<td>14 (46.7%)</td>
<td>16 (47.1%)</td>
</tr>
<tr>
<td>A1c increased during interval</td>
<td>3 (10%)</td>
<td>5 (14.7%)</td>
</tr>
<tr>
<td>Due for A1c</td>
<td>7 (23.3%)</td>
<td>7 (20.6%)</td>
</tr>
<tr>
<td>Not yet due for A1c</td>
<td>6 (20%)</td>
<td>5 (14.7%)</td>
</tr>
<tr>
<td>Deceased</td>
<td>--</td>
<td>1 (2.9%)</td>
</tr>
<tr>
<td>Referred to PharmD but no-showed</td>
<td>13</td>
<td>8</td>
</tr>
</tbody>
</table>

**DISCUSSION**

- We successfully doubled the percentage of follow-up appointments scheduled for patients with uncontrolled diabetes (Figure 3).
- We attribute our percent increase in follow-up success to the medical assistants who called all diabetic patients to schedule appointments.
- Despite the increase in appointments there was no increase in percentage of patients with controlled HbA1C (Figure 3).
- While we were able to improve HbA1C control for some patients, others had worsening glycemic control, resulting in no overall improvement in our sample.
- Using a small random sample size, the average change in A1C after 2 visits was 0.4%, meaning we did not significantly improve glycemic control.
- Patients who completed a follow-up with the pharmacist showed a 2.9% decrease in A1C (Table 1).

**FUTURE DIRECTIONS**

- Use an Epic smartphrase to provide a uniform way for providers to document glycemic control and management.

**FUTURE DIRECTIONS**

- We believe if the clinic can maintain this increase in follow-up appointments for all our diabetic patients for one year, the A1C will trend downwards.
- Consider having a dedicated diabetes focused case manager or MA in the clinic to organize the monthly phone calls to all diabetic patients without follow-up.
- Continue to make follow-up with pharmacist a priority for all patients with uncontrolled diabetes.

**References**

1. Centers for Disease Control and Prevention. 2017 National Diabetes Fact Sheet