



## BACKGROUND

- Diabetes is a devastating chronic disease with more than 100 million adults in the US living with this diagnosis (1).
- Diabetes was the 7th leading cause of death in 2015 (1).
- We chose to investigate the care of diabetic patients within our residency clinics given that the quality of care residents deliver during their training predicts the quality of care that they will deliver as independent physicians.

## OBJECTIVES

- To determine whether a diabetes reporting tool created within the electronic medical record (EMR) can improve diabetes metric compliance in family medicine residency clinics.

## METHODS

- The project included all adult diabetic patients >18yo on a family medicine resident primary care panel within Samaritan Health Services.
- A reporting tool was created within the EMR, which gave information on common diabetic panel metrics, including:
  - last A1c and date
  - Last foot exam and date
  - last microalbumin and date
  - On a diabetic statin
  - Most recent appointment
- Instructions on how to use the report were distributed to all family medicine residents via email, and the report was demonstrated to residents during a didactic session.
- Before the intervention and three months after the intervention, we measured compliance with foot exams, microalbumin, A1C, and statin use, per 2019 ADA guidelines (3) as below:
  - a foot exam and microalbumin done within the last year
  - A1C done within the last six months
  - on a statin if indicated (age 40-75, has cholesterol level of 70-189).

## RESULTS

- 433 diabetic patients were consistently on FM resident panels both before the intervention (October 2019) and after the intervention (December 2019)
- Overall, 17% of these patients were completely up to date per ADA guidelines before the intervention and 18% were completely up to date after the intervention.
- Overall, patients are most compliant with statins, then A1C, then foot exams, then microalbumin. This was true both pre and post intervention.
- When looking for changes from pre to post, the largest improvement in compliance was seen in foot exams (3% increase in compliance).
- Small changes were noted from pre to post in the percent of overdue items for diabetic patients.

Table 1. Compliance before vs after the intervention

	% (N) of Diabetic patients up to date BEFORE INTERVENTION (N=220)	% (N) of Diabetic patients up to date AFTER INTERVENTION (N=212)	Change in % of Patients Up to Date
Foot Exam (Annual)	40% (173)	43% (187)	+3%
Microalbumin (Annual)	36% (158)	38% (164)	+1%
A1C (Every 6 months)	56% (243)	53% (231)	-3%
Should be considered for a Statin (Patient is age 40-75, has cholesterol level of 70-189, and was not on a statin)	83% (361)	83% (360)	0%

Figure 1. Compliance before vs after the intervention

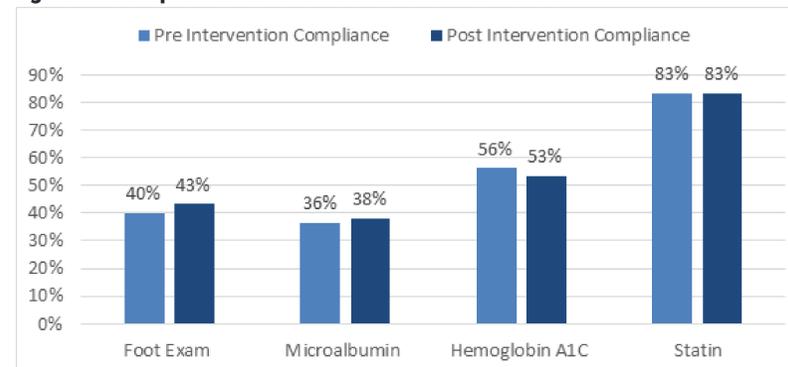
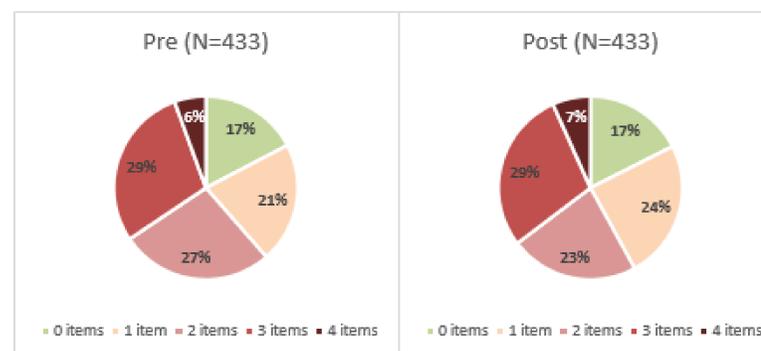


Figure 2. Number of overdue/non-compliant items, before vs after the intervention



## CONCLUSIONS

- An Epic reporting tool is an easily accessible, up to date method to evaluate diabetic panels.
- However, we saw only limited improvements in diabetic patient monitoring.
- Our results are likely limited by our short follow-up timeframe (3 months) in addition to the non structured manner of how the residents decided to best utilize the results of the reporting tool.
  - Three months is likely not enough time for residents to utilize the reporting tool and work with MAs, care coordinators and front staff to bring diabetic patients into clinic to address and/or meet these metrics.
  - After creating an individualized report, there was not a structured manner provided to the residents as to how to address those patients on their report who were not completely up to date with ADA guidelines.
- Although having an easily accessible up to date tool to evaluate diabetic panels and metrics has the potential to be useful, the ways of utilizing of the information obtained to improve metrics should be further investigated.

## FUTURE IMPLICATIONS

- Future steps may include developing a process for further 1:1 or small group academic detailing.
- Work groups with MAs, care coordinators, and front desk staff would be beneficial in improving diabetic metrics with the information obtained from this tool.

## REFERENCES & ACKNOWLEDGEMENTS

1. <https://www.cdc.gov/media/releases/2017/p0718-diabetes-report.html>
2. Asch DA, Nicholson S, Srinivas S, Herrin J, Epstein AJ. Evaluating obstetrical residency programs using patient outcomes. JAMA. 2009; 302 ( 12 ): 1277 – 83 . Crossref, Medline, Google Scholar
3. Riddle, Matthew C, editor. "Standards of Medical Care in Diabetes-2019." Journal of Clinical and Applied Research and Education, Jan. 2019, [https://care.diabetesjournals.org/content/diacare/suppl/2018/12/17/42.Supplement\\_1.DC1/DC\\_42\\_S1\\_2019\\_UPDATED.pdf](https://care.diabetesjournals.org/content/diacare/suppl/2018/12/17/42.Supplement_1.DC1/DC_42_S1_2019_UPDATED.pdf). Google.