A Simple Chart Tool to Improve Efficiency And Quality In Urban Homeless Diabetes Care

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Introduction

- Homeless patients frequently suffer from chronic health problems like diabetes mellitus (DM) and may suffer severe complications
- We reviewed charts of frequent clinic attenders and found that diabetes was one of the top reasons listed for the visit (Figure 1).
- Goals for this project were to streamline and improve monitoring of quality indicators for diabetic patients in our clinic.
- Only 1 in 5 diabetic patients had an up to date flowsheet, the current system for monitoring diabetes management and outcomes.
- Traditional flowsheet included HgA1C, BP, ASA, microalbumin and foot exam.

FIG. 1 FREQUENT ATTENDER VISIT DIAGNOSES

Diagnosis	HTN	Pain	DM	Refills	Depression	CVD	Hepatitis	Results
Percent of visits	22	20	15	15	13	9	8	7

Methods

- We reviewed charts of patients with DM to determine how quickly key quality indicators could be gathered and if the patient met quality goals
- A chart tool sticky note was developed (Figure 2) to help organize important care indicators for diabetic patients based on an expanded D5 criteria
- This D5+ sticky note intervention was undertaken over a 3 month period with frequent reminders, which consisted of:
  - Discussion at team meetings
  - Educating staff and physicians
  - Providing the sticker to be placed on each visit note under vital signs
- At the end of the intervention period, a post-chart review was completed evaluating times to find D5+ indicators and whether or not patients met goals

FIG. 2 D5+ CHART STICKER

	BP<130/80	Current smoking	Aspirin	A1c<8	Statin	LDL<100	Microalb <30 OR ACE/ARB	Foot Exam
Value	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
Date								

Results

FIG. 3 PRE- AND POST-INTERVENTION TIMES TO FIND QUALITY INDICATOR RESULTS AND GOALS ACHIEVED

	Pre-Sticker N=16	Post-No Sticker N=11	Post-Partial Sticker N=19	Post-Complete Sticker N=5
Mean Time	5 minutes 48 seconds	5 minutes 27 seconds	3 minutes 3 seconds	20 seconds
BP at Goal	25% (4)	27.3%(3)	42.1%(8)	60%(3)
Non-Smoker	38% (7)	9.1%(1)	47.4%(9)	40%(2)
Aspirin or Contraindicated	50%(8)	45.5%(5)	57.9%(11)	100%(5)
A1c<8	73% (11)	36.4%(4)	52.6%(10)	40%(2)
LDL<100	38% (6)	45.5%(5)	39.8%(7)	60%(3)
Microalb<30 or ACE	80% (12)	90.9%(10)	84.2%(16)	100%(5)
Foot Exam Performed	43.8% (7)	45.4%(5)	42.1% (8)	100%(5)

FIG 4: TIME (IN MINUTES) TO FIND ALL COMPONENTS OF THE D5+ STICKER IN PATIENTS' CHARTS

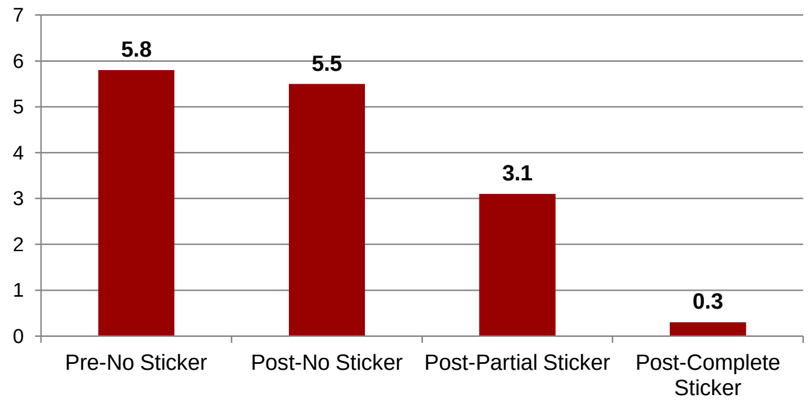
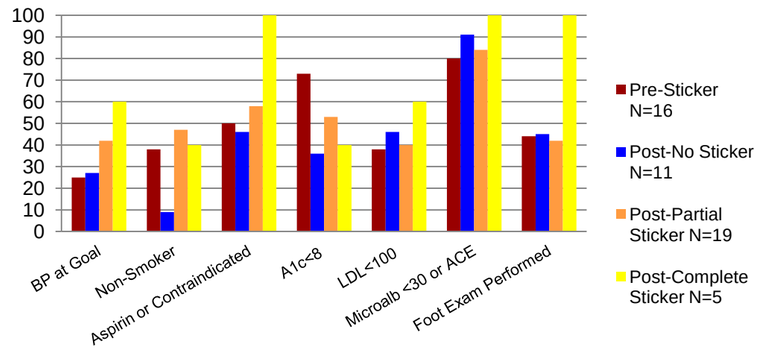


FIG. 5: PERCENT OF QUALITY COMPONENTS MET BY PRESENCE AND USE OF D5+ STICKER IN CHART



Conclusions

- This chart tool was an effective way to decrease time needed for clinicians to find key quality data in charts.
- The chart tool was associated with improvement in compliance with certain physician behavior dependent items such as foot exams.
- The tool was still not utilized to its full potential with only 63% of charts having the tool present, although this is increased from 20% flowsheet use in the previous system.

Limitations

- Given the limited number of charts included in the review, statistical significance could not be determined for most data.
- Results may not be highly generalized to all populations
- Many practices, including ours, are moving toward EMRs so the physical chart tool may be obsolete for many practices.

Future Directions

- Develop an equivalent EMR-based tool for our clinic