

PDSA worksheet plan - do - study - act	team	Diabetes- Care Assistant
	change	Diabetes Quality
	cycle #	1
	title	Medication Utilization

PLAN: Objective for this cycle (What you hope to learn)

Specific questions to address:

1. How accurate is our database data on patient utilization of ACE inhibitors (or ARBS), Statins, and Aspirins?
2. How many patients are truly not taking these medications and who should be?
3. How can we best implement changes to ensure that patients who are indicated to take these medications are doing so?

Predictions/Hypotheses (What do you think will happen when test is done?)

The percentage of diabetic patients who are indicated to take an ACE inhibitor (or ARB), Statin, or Aspirin who are actually taking these medications will increase after we intervene.

Plan for change or test: who, what, when, how and where

Who: Diabetes patients in the UNC Internal Medicine clinic

What: Review patient medication to ensure patients are taking indicated medications

When: In the next 2 months (by December 2007)

How: Review patient medications and conditions in WebCIS; Update our database to determine who should be taking a medication that they are not currently on and to clarify legitimate reasons why patient is not taking a medication (ex. Contraindicated, not indicated, delay, refuse) Develop an intervention to try to increase the percentage of patients taking these indicated medications

Standards for Key Medication Use

ASA

Indication: Over 40 years old

Contraindication: Warfarin (Coumadin®) (unless prosthetic valve), GI bleed, some pts with Crohn's disease

Precaution: Limit use to 81 mg or ½ tab of a 325 mg tablet in most cases, beware use with Plavix

Statin (use labs in past year)

Indication: Over 40 years old AND TC > 135, OR TC – HDL = over 130, OR LDL over 100

Contraindication: H/O Rhabdomyolysis previously on a statin, Severe liver disease (LFTs > 3x upper limit of normal), Pregnancy

Precaution: Warfarin (Coumadin®) patients (due to drug interaction), beware high doses in frail elderly with kidney disease, high dose statins with Gemfibrozil (Lopid®)

ACE-I or ARB

Indication: Hypertension (> 130 SBP OR >85 DBP), Microalbuminuria (30-300) or proteinuria (with or without HTN), Recent MI with ventricular dysfunction, Systolic or left-sided heart failure

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Contraindication: H/O Angioedema (swollen lips or airways), Hyperkalemia, Pregnancy
 Precaution: Elevated SCr > 3.3

Where: ACC Internal Medicine clinic

Plan for data collection: who, what, when, how and how long

Who: Meg Rutledge, Diabetes CA

What: Review WebCIS charts and update the database accordingly for the first 100 patients who were queried to be a “No,” “Not Indicated,” or “Not assessed” for the utilization of an ACE Inhibitor (or ARB), Statin, or Aspirin.

When: September – October 2007

How: Looking up all medications, problem lists, PCP notes, etc.

How long: Completed 10/2/2007

DO: Carry out the change/test. Collect data.

Note when completed, observations, problems encountered, and special circumstances:

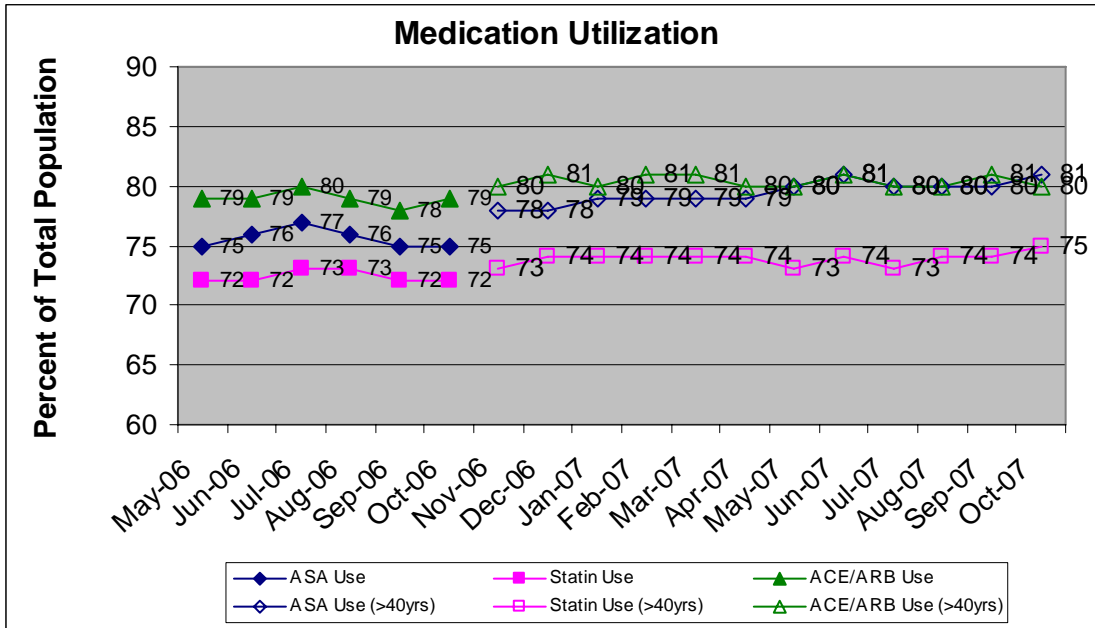
Data was assessed and completed without difficulty. Assessment was time consuming, taking approximately 6 hours to review 100 patient charts and update the medication utilization list accordingly. Accuracy cannot be absolutely certain, as some providers do not update medication lists or mention all medications in patient visit notes in the WebCIS program.

<h1 style="margin: 0;">PDSA worksheet</h1> <h2 style="margin: 0;">plan - do - study - act</h2>	team	Diabetes- Care Assistant
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STUDY: Analyze data (quantitative and qualitative).

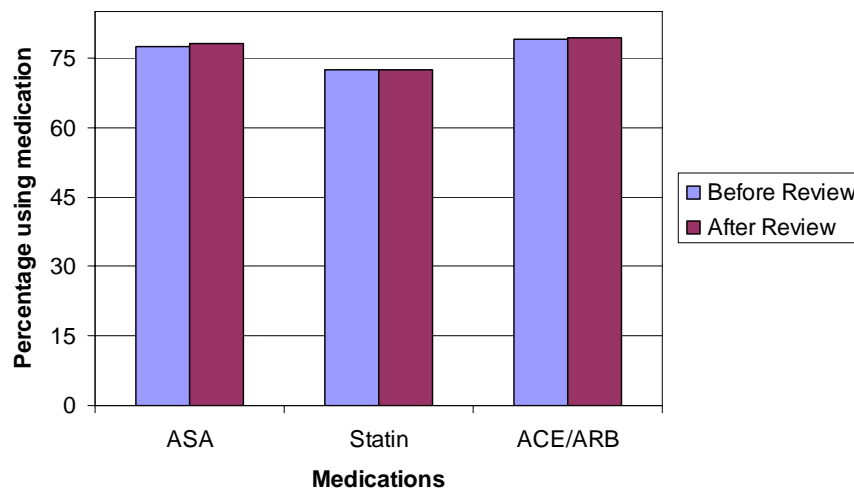
Summarize data:

Recent trends in medication utilization.



Medication utilization for all diabetic patients was first assessed, regardless of age.

All Diabetic Patients and Medication Utilization

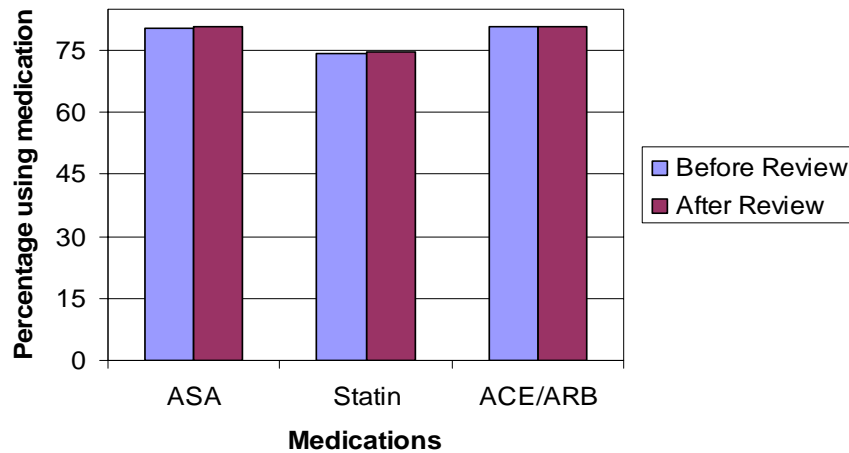


After updating the medications of 100 diabetic patients in our database (consisting of almost 2,000 patients), medication utilization for patients of all ages increased slightly or stayed the same. ASA usage for all patients increased from 77.6% to 78.2%, Statin usage stayed the same at 72.6%, and ACE/ARB usage increased from 79.1% to 79.4%.

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Medication utilization for diabetic patients over the age of 40 was then assessed.

Diabetic Patients Over 40 and Medication Utilization



After updating the medications of 71 diabetic patients in our database over the age of 40, medication utilization also increased slightly. ASA usage increased from 80.5% to 80.9%, Statin usage increased from 74.4% to 74.6%, and ACE/ARB usage increased from 80.7% to 80.8%.

Although these increases in percentage of usage are minimal, this is only after updating medication utilization in about 0.5% of the diabetic patients in our entire database. This suggests that by assessing the remaining patients, we may find that the percentage of overall medication utilization for diabetic patients on an ASA, Statin, or ACE/ARB is greater than we think.

For patients who are not currently taking an ASA, Statin, or ACE/ARB the following reasons were found:

	ASA	Statin	ACE/ARB
Not Indicated	Under 40 years old	Lipids at goal	BP at goal
No	Over 40 without contraindications	Indicated due to TC>135 and over 40, LDL>100, or TC-HDL>130 with no contraindications	Hypertensive with no contraindications
Contraindicated	GI bleeds, Crohns, Coumadin	Coumadin, liver disease, elderly with renal disease, cramping	Serum Creatinine>3.3
Delay	none	patient trying to get pregnant	rechecking BP at next visit

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ACT: Document what was learned. Are you confident that you should expand size/scope of test or implement?

Thus far, it is clear that assessing the data and updating the database is very time consuming and many patients remain indicated for medications that they are not currently taking. Time would be better spent intervening in order to enhance the medication utilization of our diabetic patients.

What changes are needed for the next cycle?

A timeline for intervention and evaluation of results is needed.
 We need to formulate an intervention that will increase patient utilization of ASA, Statin, and ACE/ARB where indicated.