

<b>PDSA worksheet</b> plan - do - study - act	Team	Krista Fajman, MD (PGY1)
	Change	Evaluate Sticker Intervention
	Cycle #	3
	Title	HTN in the SDC
	Date range	1/29/08 - 2/25/08

**BACKGROUND:** (What led you to start this project? Is this cycle a continuation of another cycle? Why is this topic relevant? Include any baseline data that has already been collections)

Previous quality improvement projects have identified that opportunities to address hypertension, particularly in Same Day Clinic, are missed. Jenn Pagliei MD found that approximately one half of patients presenting to Same Day Clinic with uncontrolled hypertension were not treated with medications, and over one quarter of patients with elevated blood pressure did not even have their uncontrolled hypertension addressed by a provider. An initial approach to decrease hypertension by Ryan Sanford MD focused specifically on this group by flagging patients' charts with blood pressure readings of >160/95 in clinic with a bright label. Ryan's initial data suggested that this intervention alerted providers to the elevated readings, and the rates of physicians' addressing blood pressure increased markedly, leading to increased interventions with medications or discussion of adherence barriers and financial difficulties.

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

Continue collecting Ryan's data and also look at rates of documentation of interventions in Webcis.

Specific questions to address this cycle:

1. Has flagging patient's charts with elevated blood pressures decreased the proportion of patients whose blood pressure was never addressed on their clinic visit?
2. Were hypertension and any interventions, documented in the assessment and plan in WebCIS?
3. If < 90% of those returned were documented in Webcis, what can we do to reach our documentation goal?

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

With improved provider awareness and notification of uncontrolled HTN in the SDC, fewer patients will leave the visit without having their BP addressed. Furthermore, this will also remind providers to address these issues in Webcis.

Change or test: (continuation of cycle 2)

-**Who:** SDC resident physicians

-**What:** We will begin targeting them with a brightly colored label on the vitals sheet for those patients with a BP >160/>95. The vitals sheet will be placed on the front of the door packet.

-**When:** beginning 1/14/08.

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**-How:** Those patients with BPs above the designated cutoffs will have the label placed on the vitals sheet by the nurse performing the initial evaluation. They will then place the vitals sheet on the front of the door packet

**-Where:** SDC

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

**Who:** Krista Fajman

**What:** Continue to collect the daily BP log, and save labeled vital sign sheets. In addition, we will review WebCIS to look for documentation of hypertension and any interventions that were made.

**When:** from 01/14/08 until 02/25/08.

**How:** Review of WebCIS.

**How long:** 6 weeks

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

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

The bright sticker intervention was started (by Ryan Sanford) on 1/14/08. I began working on the project on 1/29/08. Initially Ryan made a concerted effort to have residents return the vitals sheet with the label to determine whether residents were using the labels. He found that people were not reliably returning the sheets.

In this cycle, we decided not to focus on return rates of the stickers. Rather we focused on documentation of HTN and any interventions made in WebCIS. Also note that on 2/xx/08, the sticker was revised to make it less busy, with larger font and less reading for anyone whose eye it catches. Eventually, the label may not need boxed choices as long as it continues to cue physicians to address blood pressure.

Patients BP is \_\_\_\_\_ MD Recheck \_\_\_\_\_

- BP improved on re-check
- Medications started/titrated
- Barriers addressed
- Other \_\_\_\_\_

### **Remember WebCIS documentation.**

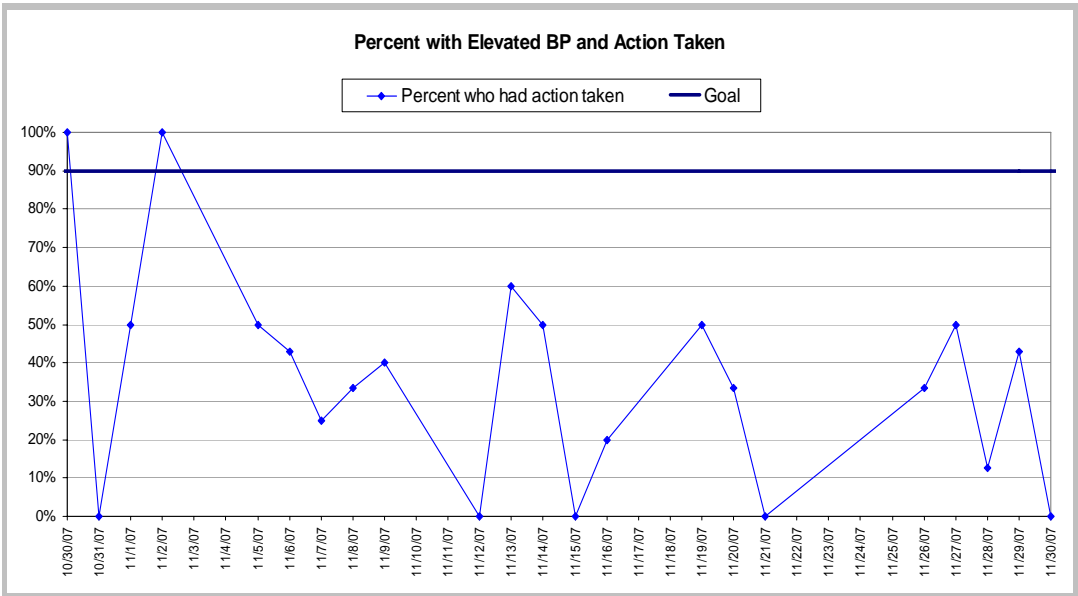
We made some changes to data collection and reporting. At the beginning of this project, Jenn Pagliei collected data by counting up the total number of patients with an elevated BP. We decided that it would be valuable to go back into our data to determine what the previous rates of WebCIS documentation were to determine whether the sticker was

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prompting providers to 1) address HTN at all and 2) intervene to improve HTN control. Therefore, we referred back to the hard copy log (maintained by Nicole Twiddy, RN the SDC nurse) which contains the patients seen in SDC each day and their BP. For each month starting with November 2007, we recorded data for each patient (including MRN) with an elevated BP. New data that we tracked were whether barriers were addressed and whether HTN was addressed in the note at all. Tracking the data this way will allow us more flexibility should we want to look back at previous patients tagged in this study. New measures for all patients (since November 2007) were completed through 2/15/08. We also charted the data weekly instead of daily as Jenn Pagliei did to try to reduce the apparent variability in the data and decrease frequency of data collection.

**STUDY:** Analyze and summarize data (quantitative and qualitative).

Chart 1: Data (shown daily) from PDSA cycle 1



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Chart 2: Data (shown weekly) for PDSA cycles 1 - 3. Arrow shows initiation of sticker intervention.

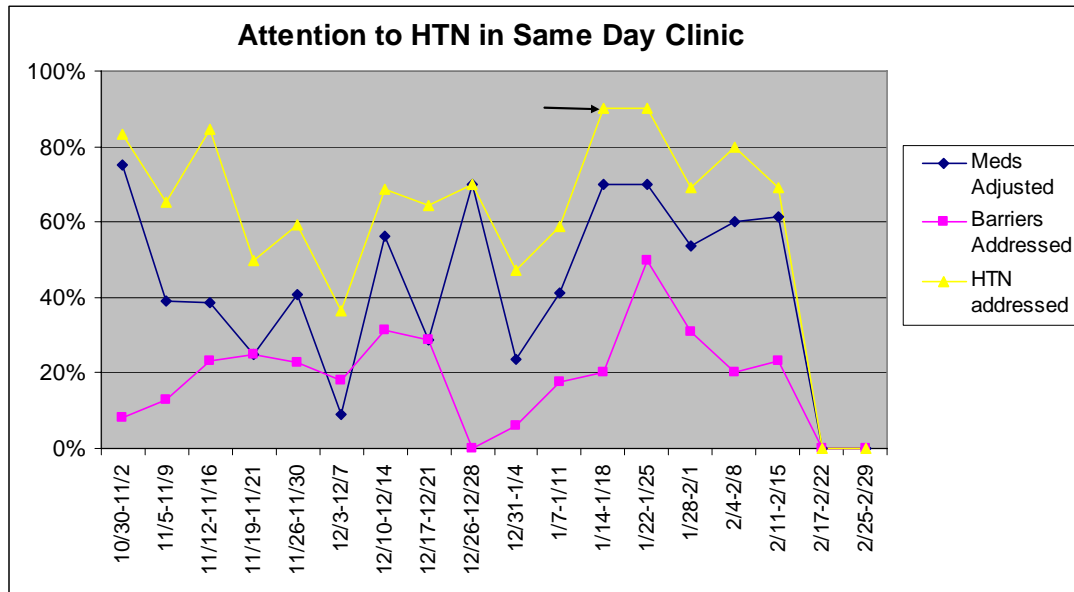
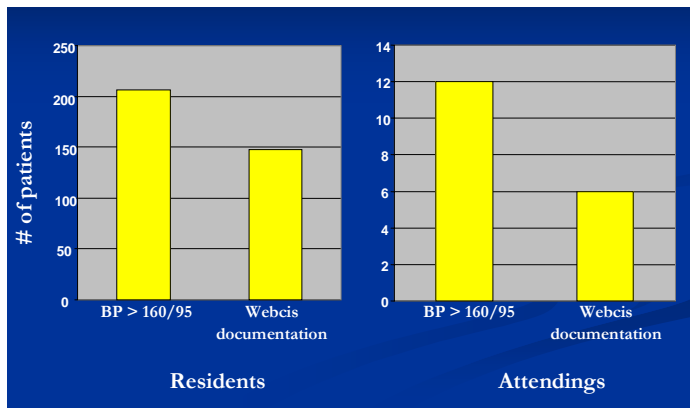


Chart 3. Rates of addressing HTN per provider type



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

Conclusions from this cycle:

1. Overall rates of addressing HTN with patients and documenting HTN in WebCIS have improved (see chart 2). However, the initial rate of participation has tapered off.
2. When an intervention is performed, medications are adjusted more often than barriers addressed (chart 2).
3. The sticker appears to work if providers are aware of its purpose and the overall project. The presence of the sticker alone may be enough to prompt the provider to

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address HTN. It may not be necessary that the provider mark on the sticker or for us to collect the sticker back in order to increase provider awareness of HTN in SDC.

4. There is no stability in any of the processes we are currently tracking (see chart 1 and 2).
5. Both residents and attendings precepting in SDC are unaware of this project even though it has been going on since November 2007.
6. There is no difference in rates of addressing HTN in SDC based on provider type (medical student vs. resident vs. attending), see chart 3.

What changes are needed for the next cycle?

1. Address whether we need to collect the stickers back.
2. Increase knowledge of and participation in the project by attendings and residents in order to improve rates and overall stability of the data/process so that missed opportunities are not due to lack of knowledge about the project.
  - a. Increase education of the project to providers in the SDC: After talking with multiple residents over the past few weeks, it is apparent that residents are unaware of the project and when they see the label they are disregarding it because they did not think it was directed toward them.
  - b. The project needs to remain visible. This could be done by keeping updated information on a nearby (uncluttered) bulletin board and near the patient list addressing the current CQI project. With the nurses' help, new residents to clinic should be directed toward posted information about the project prior to seeing patients.
  - c. Residents should be aware that there is always a CQI project occurring while in Same Day Clinic and that they are expected to participate. Keeping the project visible will help with this issue as well. We also aim to make CQI a part of SDC and expect all residents to participate in some way when they rotate through SDC.
  - d. Given the high turnover of resident physicians it has been difficult to assure that all providers are aware of recent goals and interventions. SDC preceptors are more constant and stable throughout each week. We will look to educate them on the project in hopes that they will provide continuous reminders to resident physicians regarding their role in addressing blood elevated blood pressures on each visit. Dr. Chelminski will play a principal role in this effort. One possible method would be an email announcement to clinic preceptors describing the current project and how they could help us increase our rates of addressing elevated blood pressures and documenting this in WebCIS. In addition, any attendings seeing patients in SDC should be held to the same standards as the resident providers.