



Figure 2: More accessible locations inside clinic rooms provided quicker access to orange slips when high blood pressure was detected.

## Conclusion, Barriers, Next Steps

- Our data shows when interventions are implemented, completion rates increase.
- There is a notable decline the week following the introduction of an intervention, possibly due to the Hawthorne effect.
- A limitation is that we specifically targeted the nursing staff when physicians and other providers are also accountable for the completion of orange slips.
- Time constraints also made it difficult to reach out to all nursing staff
- Next steps include:
  - Maintaining high completion rates
  - Introducing interventions to combat Hawthorne effect or other biases
  - Targeting buy-in with clinic staff to improve completion rates.

## References

1. ACO Shared Savings Program Quality Measures; Baltimore, MD. Center for Medicare and Medicaid Services. 2018. Table 33.
2. High Blood Pressure. National Heart Lung and Blood Institute. <https://www.nhlbi.nih.gov/health-topics/high-blood-pressure>. Published 2018. Accessed April 19, 2019.
3. McCambridge J, Witton J, Elbourne DR. Systematic review of the Hawthorne effect: new concepts are needed to study research participation effects. *J Clin Epidemiol*. 2014;67(3):267–277. doi:10.1016/j.jclinepi.2013.08.015

## Background & Need Addressed

- Center for Medicare and Medicaid Services (CMS) quality metrics require >90% of patients at an accountable care organization (ACO) have well-controlled hypertension (<140/90) to receive full reimbursement.<sup>1</sup>
- Hypertension control is important to avoid complications such as heart attack, stroke, and renal failure.<sup>2</sup>
- Current rates of hypertension control at Lakewood CFM are 64.1%
- The rest of Cleveland Clinic Primary Care has rates of 74.9%
- To counter this, notification of elevated blood pressure slips were created (Fig. 1)
- Pre-intervention, initiation rates of slips were 33% (Table 1)

## Aim Statement

- **We aim to improve orange slip initiation rates at Center for Family Medicine at Lakewood Family Health Center to 66% by the end of the spring semester, 2019.**

## Methods

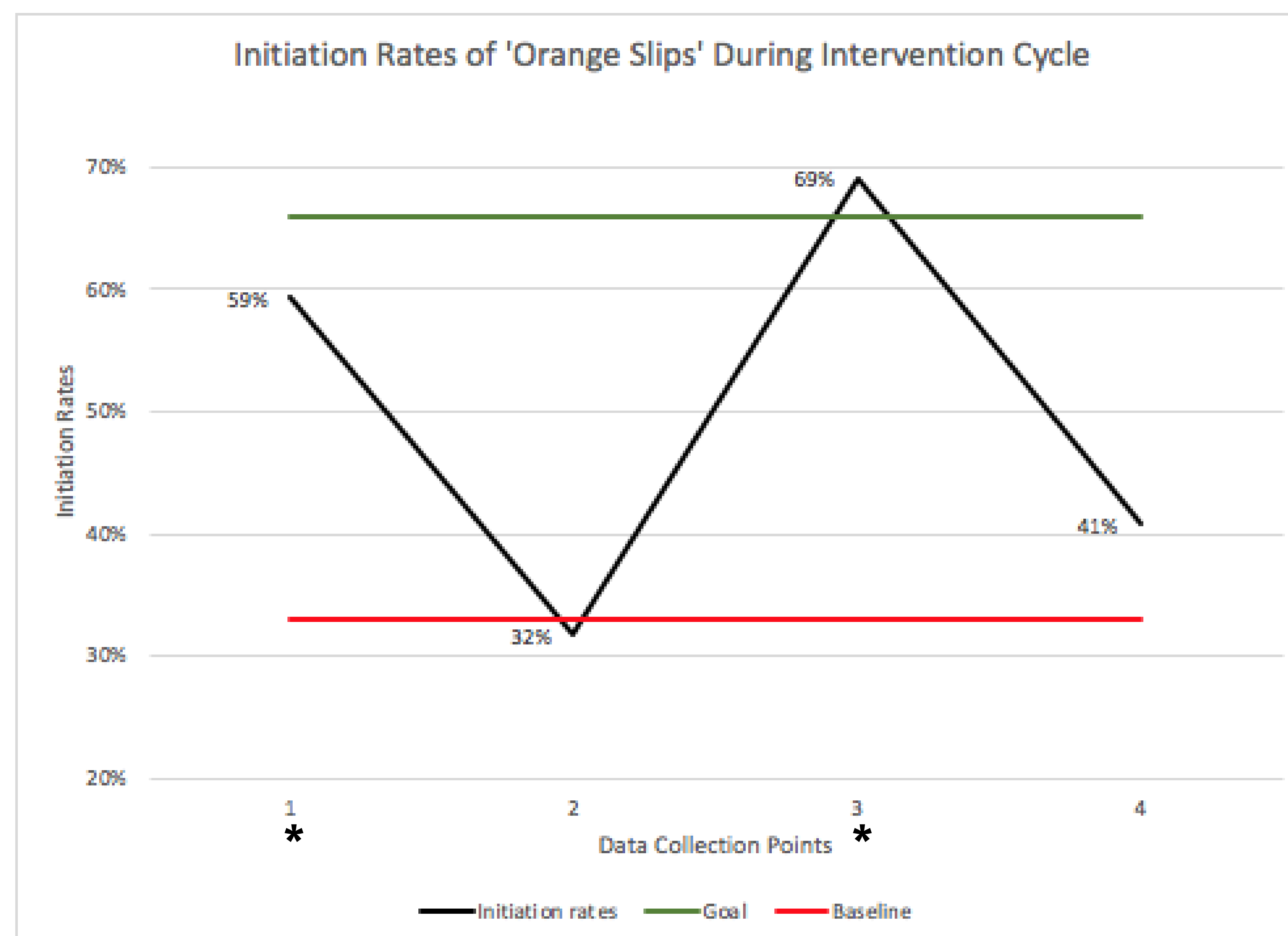
- Our first intervention was to change the location of the slips
- Originally, they were located at the nurse's station; we moved them into the exam rooms (Fig. 2)
- Our second intervention was educational and involved refreshing the nursing staff on the purpose of the slips
- The material included information on what it meant to be an ACO and the complications of hypertension

## Results

- Data representations of total completed orange slips, starting with initiation to being tracked at the final point of contact.

Jan. 28th – Feb. 1st	March 26th - 29th	April 1st - 5th	April 8th - 12th	April 15th - 19th
-	35/59	20/63	67/97	29/71
0.33	0.5932	0.3175	0.6907	0.4085
33%	59%	31%	69%	40.8%
-	Intervention #1	--	Intervention #2	-

Table 1: Fractional, decimal, and percent completed for each week of data collected. Interventions occurred on the March 26th – 29th week, and April 8th – 12th week.



Graph 1. Orange Slip Initiation Rates Improve After Interventions

Figure 1: "Orange Slips" created for used for elevated blood pressures.

**Notification of Elevated Blood Pressure**

Reading:

Recheck:

[Place sticker here]

Please ensure follow up has been scheduled within 30 days with (select one):

☐ Pharm clinic
 ☐ Nurse visit
 ☐ PCP/Provider
 ☐ Within goal= no appointment

Please place completed slip in Medical Records basket