

# A Nurse-Led Initiative Improves Adherence Rates for Stroke Follow-up and Blood Pressure Management

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## Introduction

Aggressive management of multiple vascular risk factors reduces stroke rates. It was unknown however, whether a structured nurse-led program of follow up could increase adherence rates for stroke patients upon hospital discharge.

## Purpose

The purpose of this study was to determine if a nurse-led initiative focused on helping patients manage secondary stroke risk factors after discharge, could improve compliance and ultimately reduce recurrent strokes.

A registered nurse started the pilot program called Stroke Therapy, Education, Prevention (STEP) in November 2011 at Oregon Health & Science University.

A prospective assessment of STEP patients was then undertaken and compared to a retrospective cohort.

## Methods

The pilot STEP program was based on protocols used for other stroke prevention trials. This nurse-led program included inpatient initiation and outpatient maintenance of pharmacologic goals and lifestyle modification, including:

- Antithrombotics, antihypertensives and statins, when indicated.
- Education regarding AHA/ASA diet, exercise and smoking cessation guidelines.
- Stroke warning signs and symptoms and the need to call 911.

### Eligible patients:

- Diagnosis of non-disabling ischemic stroke or TIA .
- Lived within a distance likely for follow up
- Had no insurance restrictions.

Prior to discharge, the STEP nurse completed patient medication and lifestyle education, and reviewed outpatient goals.

### Post Discharge Follow Up

- 7-10 days the STEP nurse called the patient to review medication compliance and reinforce education.
- 30 days post discharge patients were seen in clinic by the STEP nurse where a resting blood pressure (BP) is measured. If the patient does not meet targets (<140 SBP or <130 SBP for DM) medications were adjusted by a stroke neurologist.

For analysis, a retrospective cohort matched based on STEP eligibility criteria was compared to the STEP cohort to determine if the STEP program improved patient retention rates and BP management. Chi-Square analysis was used to compare visit adherence and percentage achieving goal BPs at 30 days.

## Results

	30 Day Visit Completed	Percentage	p-value
STEP Patients	25/32	78%	0.0048
Matched Cohort	14/32	44%	

	Overall 30 Day BP at Goal	Percentage	p-value
STEP Patients	13/32	41%	0.026
Matched Cohort	5/32	16%	

## Conclusion

Follow up adherence and BP management in the group as a whole was better in the nurse-led model compared to those in the matched cohort receiving usual follow up care, and is recommended for secondary stroke prevention. Long term follow up may further increase in-target rates of BP control and other stroke risk factors.