# Quality improvement project to improve diagnosis and management of postural hypotension in older patients over 65 years during acute admission

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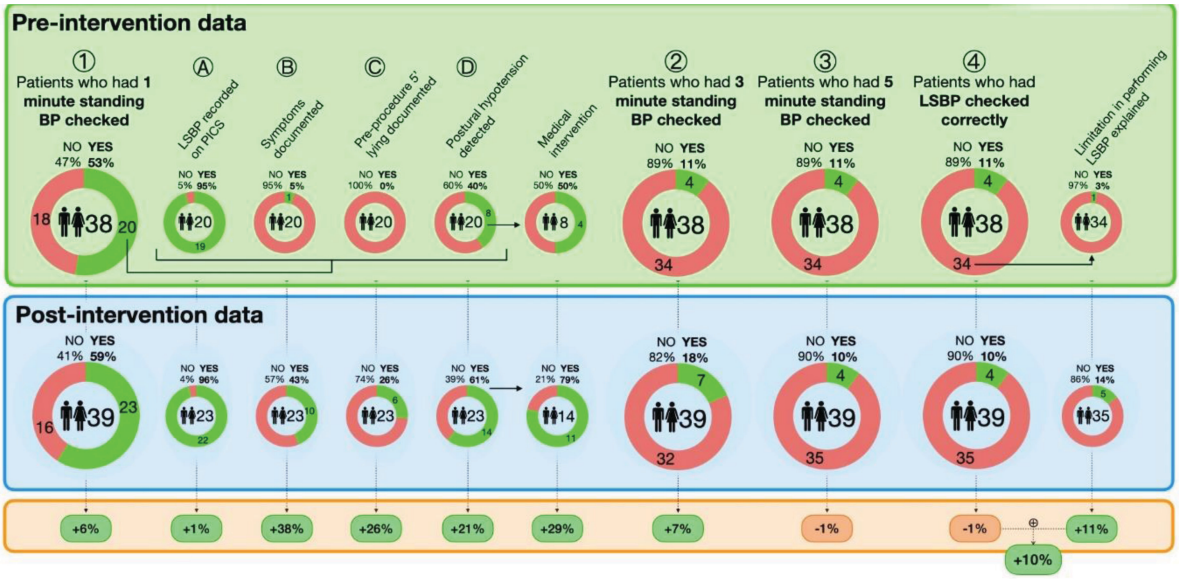


**Fig 1. Pre- and post-intervention data.**

## Introduction

Postural hypotension, also called orthostatic hypotension, is an abnormal drop in blood pressure on standing.[1] It impairs quality of life and increases the risk of falls, cardiovascular disease, depression, dementia and death. Early detection in patients with symptoms or certain risk factors may prevent some of these complications. Current guidelines for detecting and managing postural hypotension are varied and based on limited evidence.[1]

National Institute for Health and Care Excellence (NICE) guidelines for management of falls in patients over 65 recommend a multifactorial risk assessment including measurement of lying to standing blood pressure (LSBP) for all hospital patients presenting with fall.[2] According to our previous departmental audit in August 2021, it was noted only 35.6% of patients above 65 admitted with fall had their LSBP measured. In view of this, we decided to improve the practice of measurement of LSBP and management of postural hypotension.

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## Methods

We used Royal College of Physician guidelines (2013) as a standard to measure LSBP. During the initial cycle, we provided in-house teaching to nurse and medical staff through a brief educational video and dissemination of literature about postural hypotension via email. Following this, we collected our data for the first plan, do, study, act (PDSA) cycle. The next intervention was the development of an illustrative poster depicting the correct method of measurement and documentation of LSBP. We also disseminated the educational video to emphasise the teaching to all medical and nursing staff. Following this intervention, further data was collected to see improvement in the next PDSA cycle.

## Results

Results showed that initially 53% of patients had their LSBP measured correctly at 1 minute on standing and this improved to 59% after intervention. At 3 minutes on standing the initial percentage of measurement improved from 11% to 18%. Also,

documentation of symptoms significantly improved from 5% pre-intervention to 43% post-intervention. Management of postural hypotension improved post-intervention from 50% to 79% (Fig 1).

## Conclusion

Postural hypotension is an important cause of falls in patients above 65 years. Accurate measurement of postural hypotension and its management is imperative in preventing further falls. Our quality improvement project shows that adequate education and PDSA interventions does help in improving awareness and management of postural hypotension.

Further improvement could be achieved by providing an aide memoire such as flashcards to nursing and medical staff which will remind them of the steps of accurate measurement of LSBP and the management of postural hypotension. ■

## References

1 Gilani A, Juraschek SP, Belanger MJ, Vowles JE, Wannamethee SG. Postural hypotension. *BMJ* 2021;373:n922.
2 National Institute for Health and Care Excellence. *Falls in older people: assessing risk and prevention: Clinical guideline [CG161]*. NICE, 2013.