

Quality Improvement: Enhancing IPC Application in Stroke Care

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Background

- DVT can occur in 2-10% patients after an acute stroke and can develop as early as day 2⁽¹⁾
- Untreated proximal DVT has a 6-15% mortality risk ^(1,2)
- Intermittent pneumatic compression (IPC) of the legs is recommended to reduce the risk of DVT in non-ambulatory stroke patients ⁽³⁾

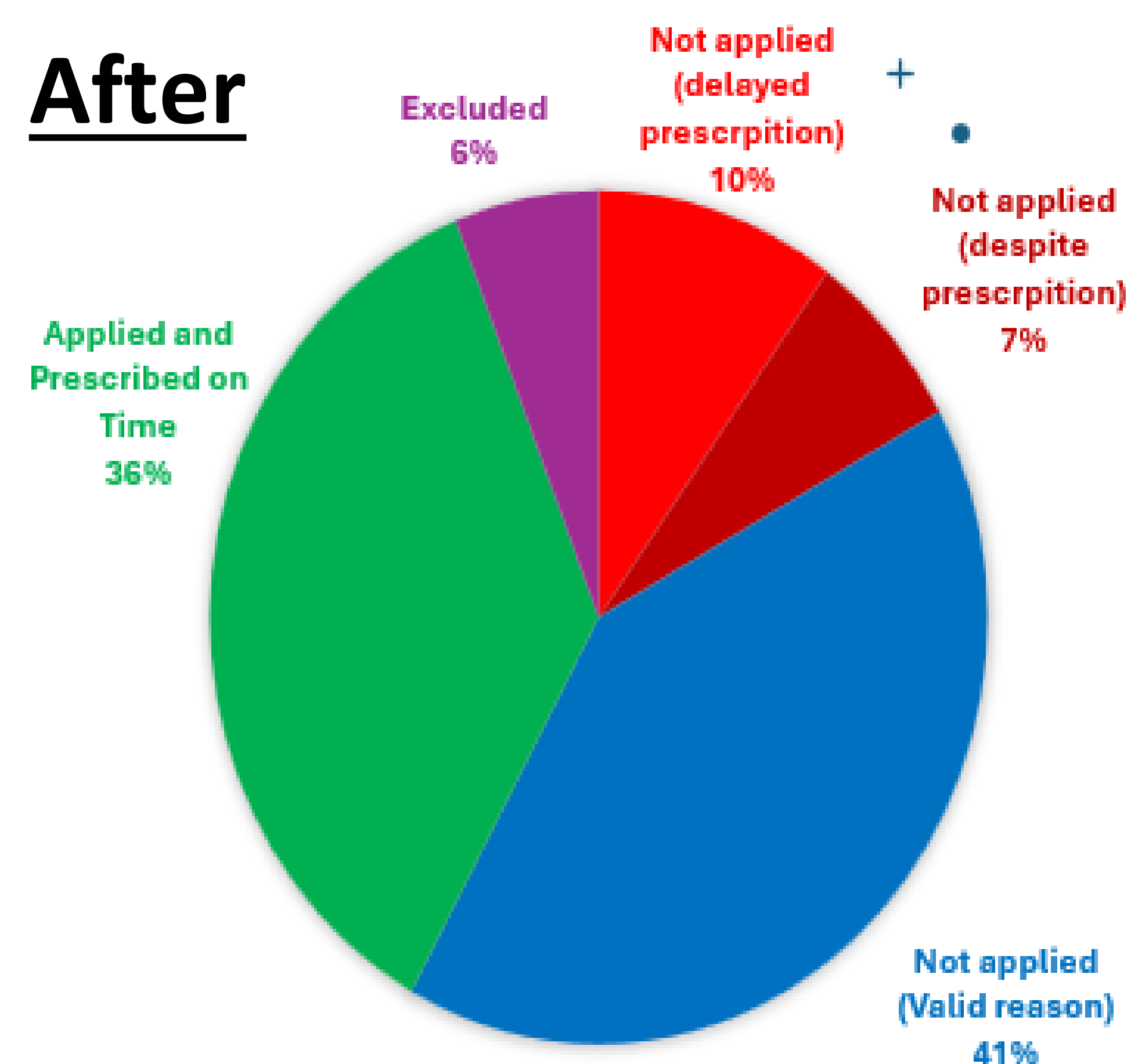
Methods

- IPC should be applied to all new stroke admissions by the post-take ward round
- Audited 100 admissions (June–July 2024) before and 100 admissions (Aug–Sept 2024) after intervention
- Intervention: Reminder posters in doctors' offices and nursing bases

Results

- Initial audit - **21.6%** of patients did not have their IPC applied on time
- Post-intervention audit: Timely IPC application improved by **3.5%** post-intervention

After



Discussion

- Reminder posters improved IPC prescription but did not fully address application delays. Future interventions should target nursing workflow to enhance compliance

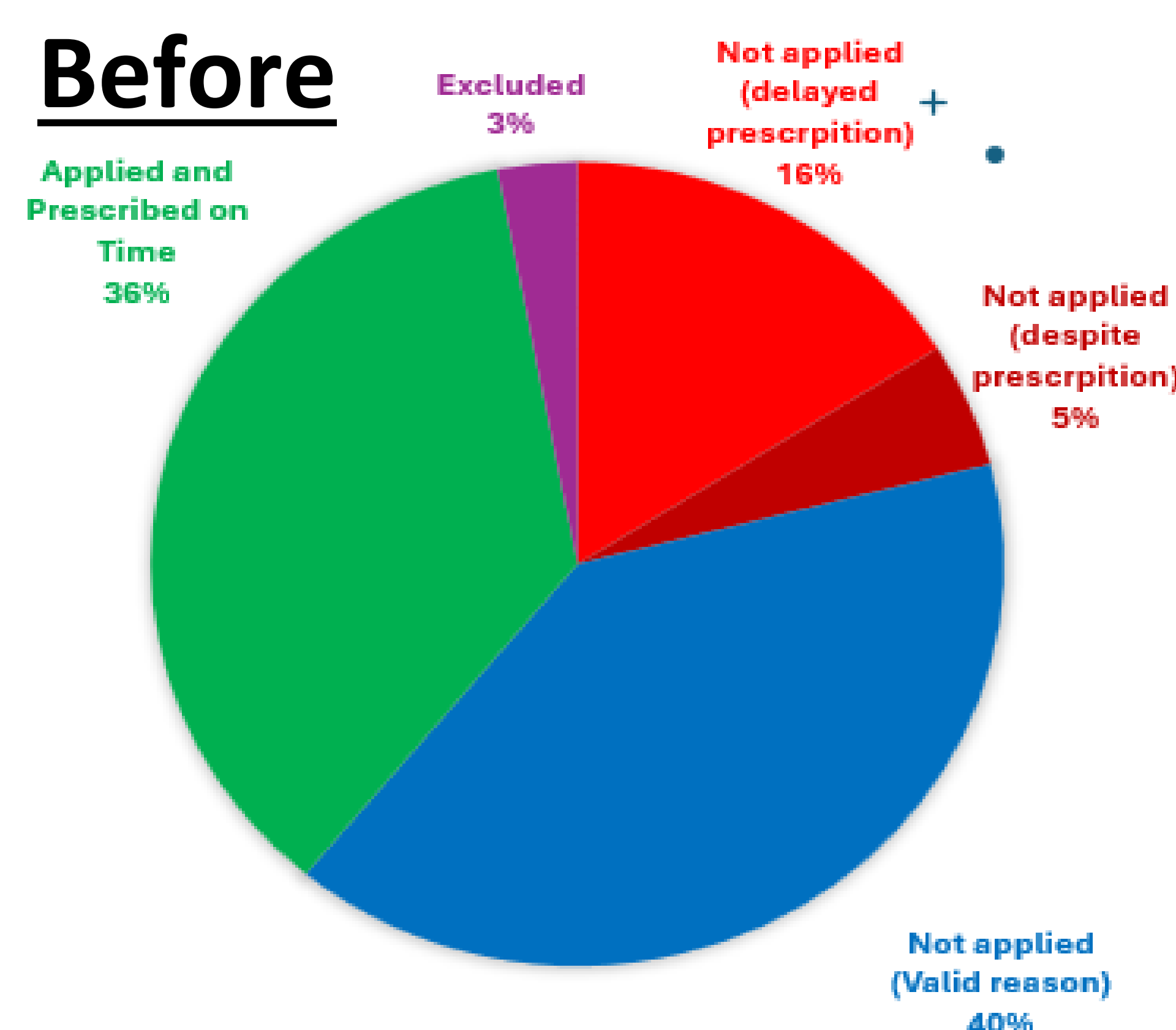
Limitations:

- Focus on a single Intervention
- Relatively small cohort size
- Doesn't account for environment (e.g. staffing levels, patient volume)

Conclusion

- The intervention successfully improved timely IPC prescription rates but did not fully address the delay in application by nursing staff
- Targeted reminders can improve compliance, but additional strategies may be necessary for sustainability

Before



References

1. Khan MT, Ikram A, Saeed O, Afridi T, Sila CA, Smith MS, et al. Deep vein thrombosis in acute stroke: a systemic review of the literature. *Cureus*. 2017 Dec 23;9(12):e1982.
2. Waheed SM, Kudravalli P, Hotwagner DT. Deep Vein Thrombosis. *StatPearls [Internet]*. Treasure Island (FL): StatPearls Publishing; 2025 Jan
3. Dennis M, Caso V, Kappelle LJ, Pavlovic A, Sandercock P; European Stroke Organisation. European Stroke Organisation (ESO) guidelines for prophylaxis for venous thromboembolism in immobile patients with acute ischaemic stroke. *Eur Stroke J*. 2016 Mar;1(1):6-19.