

## Background

- 300,000–600,000 new cases of venous thromboembolisms (VTE) every year at \$7–\$10 billion annually cost.<sup>1,2</sup>
- Anticoagulants are primary treatment for VTE, with treatment continuing at least 3–6 months, and sometimes indefinitely.<sup>3</sup>
- Since their approval in 2012, use of direct oral anticoagulants (DOACs) to treat VTE has been on the rise.
- DOACs do not require blood monitoring, leaving patients & providers without transition support.
- DOAC safety and effectiveness are highly dependent on safe prescribing<sup>4</sup> and patients' ability to effectively manage their medications.<sup>5</sup>

## Methods

- North Mississippi Medical Center (NMMC) was 1 of 6 AMGA members to participate in study to improve care for patients with VTE across settings (ambulatory, emergency department, and hospital)
- Study primary outcomes:
  - Follow-up within 7-days (visit or phone call) of index diagnosis (Dx) and anticoagulant prescription (Rx)
  - Hospital admission or ED visit with VTE Dx within 45 days of index Dx/Rx
  - Hospital admission or ED visit with anticoagulant-associated adverse drug event (ADE) Dx within 45 days of index Dx/Rx
- NMMC *VTE Care Connections* program outcomes:
  - Referrals to ACC for VTE patients with a DOAC prescribed.
  - VTE patients with medication in-hand at discharge or outpatient diagnosis.

## References

- Grosse SD, Nelson RE, Nyarko KA, Richardson LC, Raskob GE. The economic burden of incident venous thromboembolism in the United States: A review of estimated attributable healthcare costs. *Thromb Res*. Jan 2016;137:3-10. doi:10.1016/j.thromres.2015.11.033
- CDC Data and Statistics on Venous Thromboembolism. Accessed February 12, 2024. <https://www.cdc.gov/ncbddd/dvt/ha-vte.html>
- Ortel et al. American Society of Hematology Guidelines for VTE. *Blood Adv*. 2020 Oct 13; 4(19):4693-4738.
- Barr D, Epps QJ. Direct oral anticoagulants: a review of common medication errors. *J Thromb Thrombolysis*. Jan 2019;47(1):146-154. doi:10.1007/s11239-018-1752-9
- Al Rowily A, Baraka MA, Abutaleb MH, et al. Patients' views and experiences on the use and safety of directly acting oral anticoagulants: a qualitative study. *J Pharm Policy Pract*. May 1 2023;16(1):58. doi:10.1186/s40545-023-00563-y

Contacts:

James Taylor, PharmD ([JTaylor@nmhs.net](mailto:JTaylor@nmhs.net))

Elizabeth Ciemins, PhD, MPH, MA ([eciemins@amga.org](mailto:eciemins@amga.org))

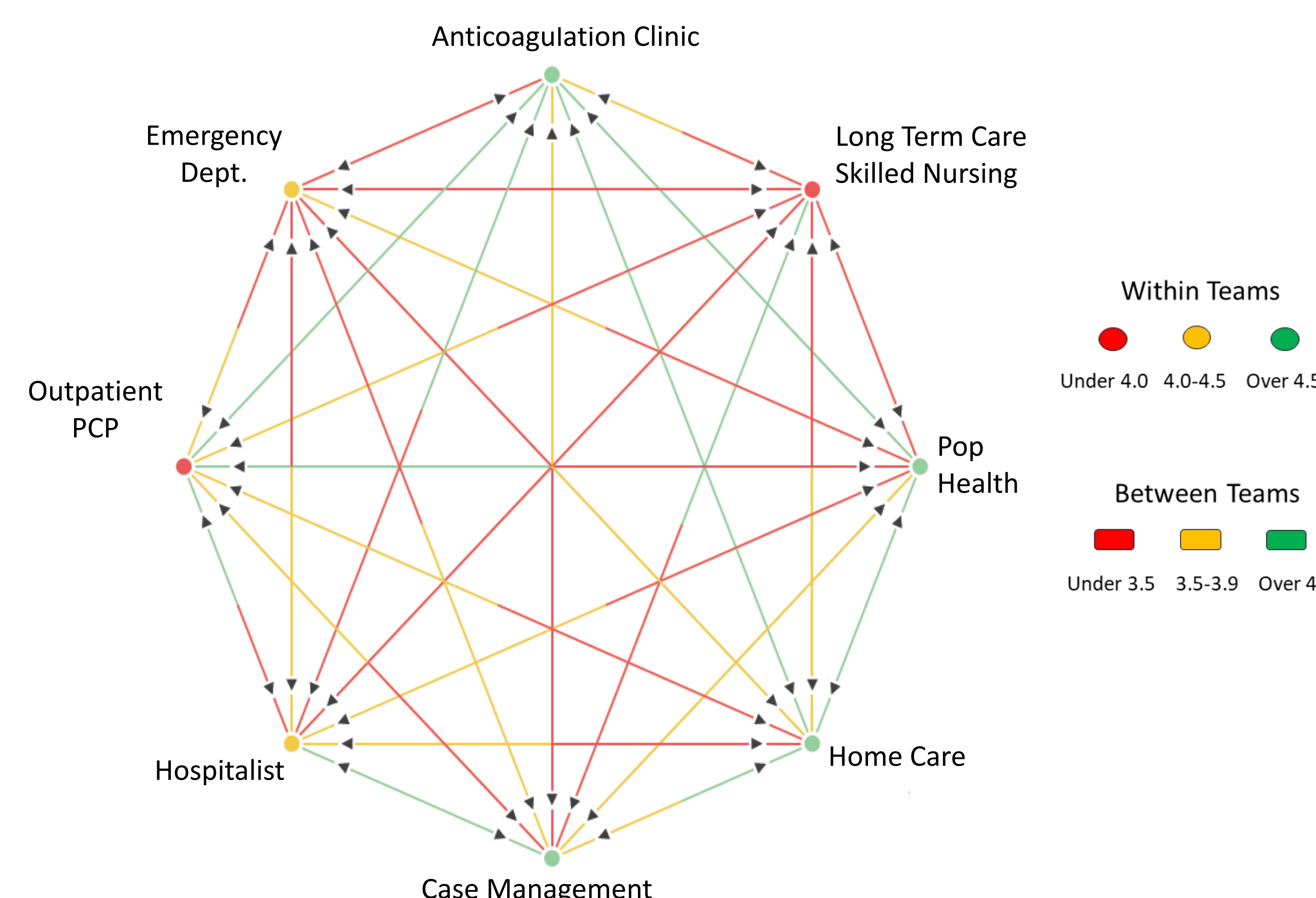
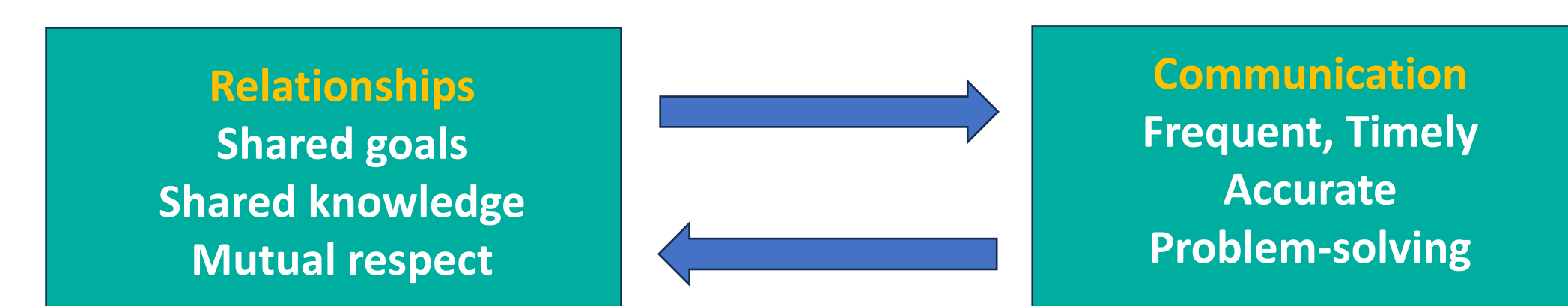
## Successful Interventions

### North Mississippi Medical Center: VTE Care Connections

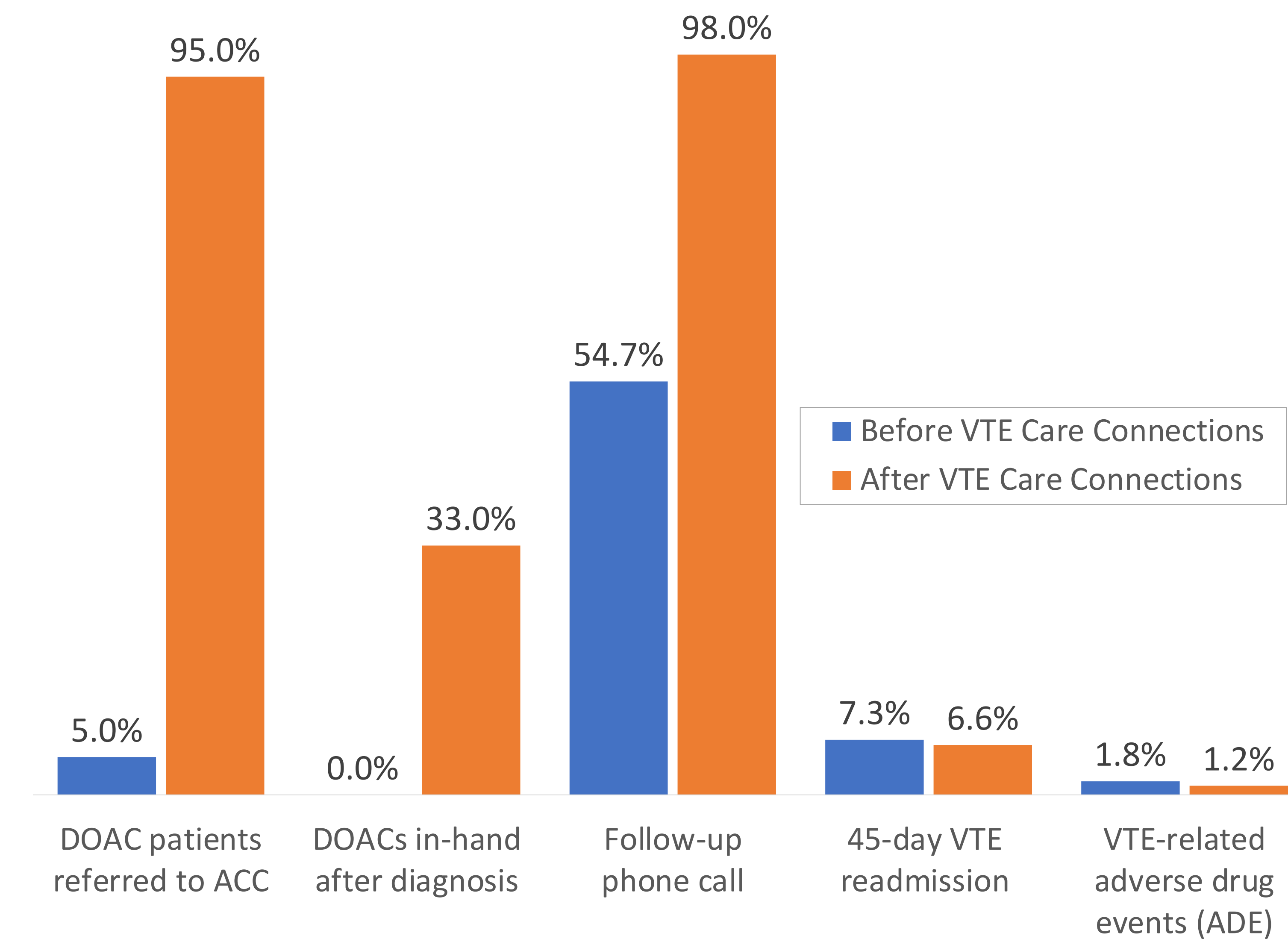
|                     |  |
|---------------------|--|
| <b>Care Gap</b>     | Develop a comprehensive, sustainable, and scalable program to ensure safe care transitions for patients diagnosed with VTE   |
| <b>Action Taken</b> | <p><i>VTE Care Connections</i></p> <ul style="list-style-type: none"> <li>• Registry and automated DOAC referrals to anti-coagulation clinic</li> <li>• Auto-reminders to clinicians during key decision times including 3, 6 and 12 months after medication initiation</li> <li>• Review orders before discharge to identify and correct any errors in dosing and avoid treatment delays</li> <li>• Call from a clinical pharmacist within 72 hours of discharge or diagnosis to verify patient has anticoagulant in hand, understands how to take it and consequences of missing a dose or stopping abruptly, and has a follow-up visit scheduled with their primary care provider.</li> <li>• Patient education documentation in the EHR</li> <li>• Ensures patients have “medication in hand” at discharge through a <b>meds-to-beds program</b> and <b>starter packs</b></li> <li>• Test claims to determine insurance coverage and out-of-pocket costs for the medication; utilizes patient assistance programs to provide DOACs when financial assistance is needed.</li> </ul> |

### Relational Coordination as an Intervention

- NMMC core study team identified key groups involved in VTE care.
- Using the Relational Coordination (RC) survey, they assessed relationships within and among teams by these 7 domains using a 5-point Likert scale.
- Results were reviewed with each team to explore ways to improve VTE transitions of care.



## VTE Care Connections Outcomes



### Examples of interventions that came out of RC survey work

| Intervention Domains/Needs                                | Associated Interventions   |
|---|--|
| Improve communication and relationships between providers | <ul style="list-style-type: none"> <li>• Work across teams to identify patients in need of medication access or additional education</li> </ul>  |
| Safe Prescribing and Management of Anticoagulants         | <ul style="list-style-type: none"> <li>• Use the employee pharmacy to dispense anticoagulants in the hospital through the creation of a “meds-to-beds” program.</li> <li>• Coordinate with local retail pharmacies to stock “starter packs” for DOACs (24/7).</li> <li>• Utilize patient assistance programs to provide DOACs when financial assistance is needed.</li> <li>• Use clinical pharmacists in ACC to provide hospital and ED with guidance on prescribing options for DOACs</li> </ul> |

## Conclusions

- The ACC and clinical pharmacists can play an important role in managing VTE patients on DOACs, including care coordination, safe prescribing, and patient education via timely follow-up.
- The *VTE Care Connections* program showed how relational coordination can help identify needs, intervention planning, implementation and uptake.
- *VTE Care Connections* to be expanded to broader North Mississippi Health System.
- Positive outcomes for VTE patients were associated with identifying & addressing communication and relationship concerns, integrating coordination processes into the EHR, adding DOAC patients to the ACC, ensuring medications in hand at discharge and leveraging clinical pharmacists.