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Cardiogenic Shock Registry
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#AHA24

Contemporary Practice Patterns of Vasoactive Agents in Cardiogenic Shock

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American Heart Association.
100 YEARS
Bold Hearts

DISCLOSURES

No relevant disclosures

BACKGROUND

- Vasoactive agents are employed as the 1st line therapy to maintain systemic perfusion in cardiogenic shock (CS).
- No adequately sized randomized trials have rigorously demonstrated the beneficial effects of one agent vs. another in CS leading to potential for substantial variability in practice.

AHA SCIENTIFIC STATEMENT

Contemporary Management of Cardiogenic Shock

A Scientific Statement From the American Heart Association

van Diepen S, Katz JN et al. *Circulation* 2017;136(16):e232

"…the optimal first-line vasoactive medication in CS remains unclear."

- **Epidemiology of vasoactive use in CS remains poorly characterized; better understanding of contemporary practice patterns may help to inform future research.**

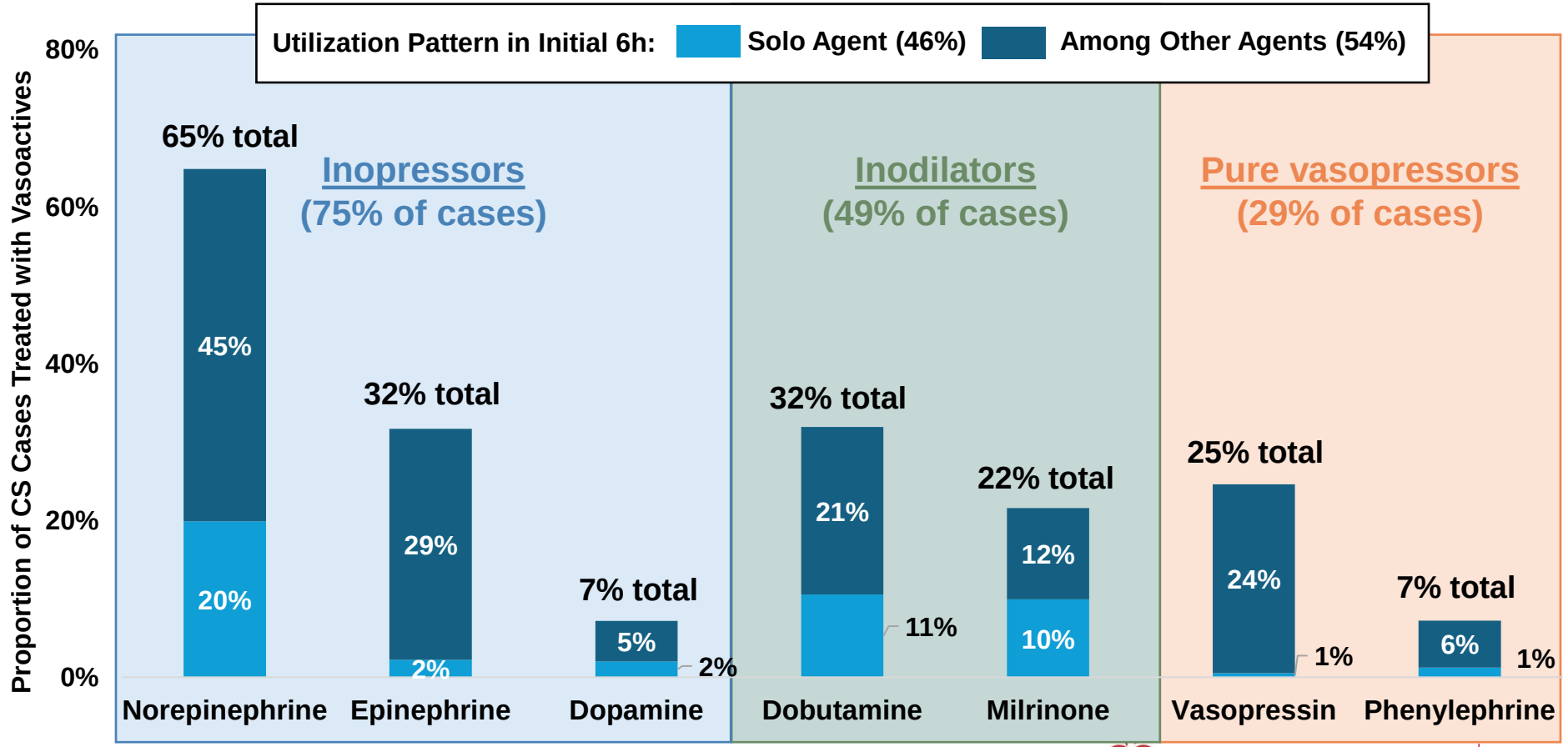
METHODS

- **AHA Cardiogenic Shock Registry admissions treated with vasoactive agents from 2022-2024 across 64 sites**
- **Vasoactive agents used with 6h of CS onset were analyzed individually and categorically as follows:**
  1. Inopressors – norepinephrine, epinephrine, or dopamine
  2. Inodilators – dobutamine or milrinone
  3. Pure vasopressors – vasopressin or phenylephrine
- **Frequency of use examined overall and across key subgroups:**
  - Shock Academic Research Consortium (SHARC)† Etiology of CS
  - Concomitant Mechanical Circulatory Support Use

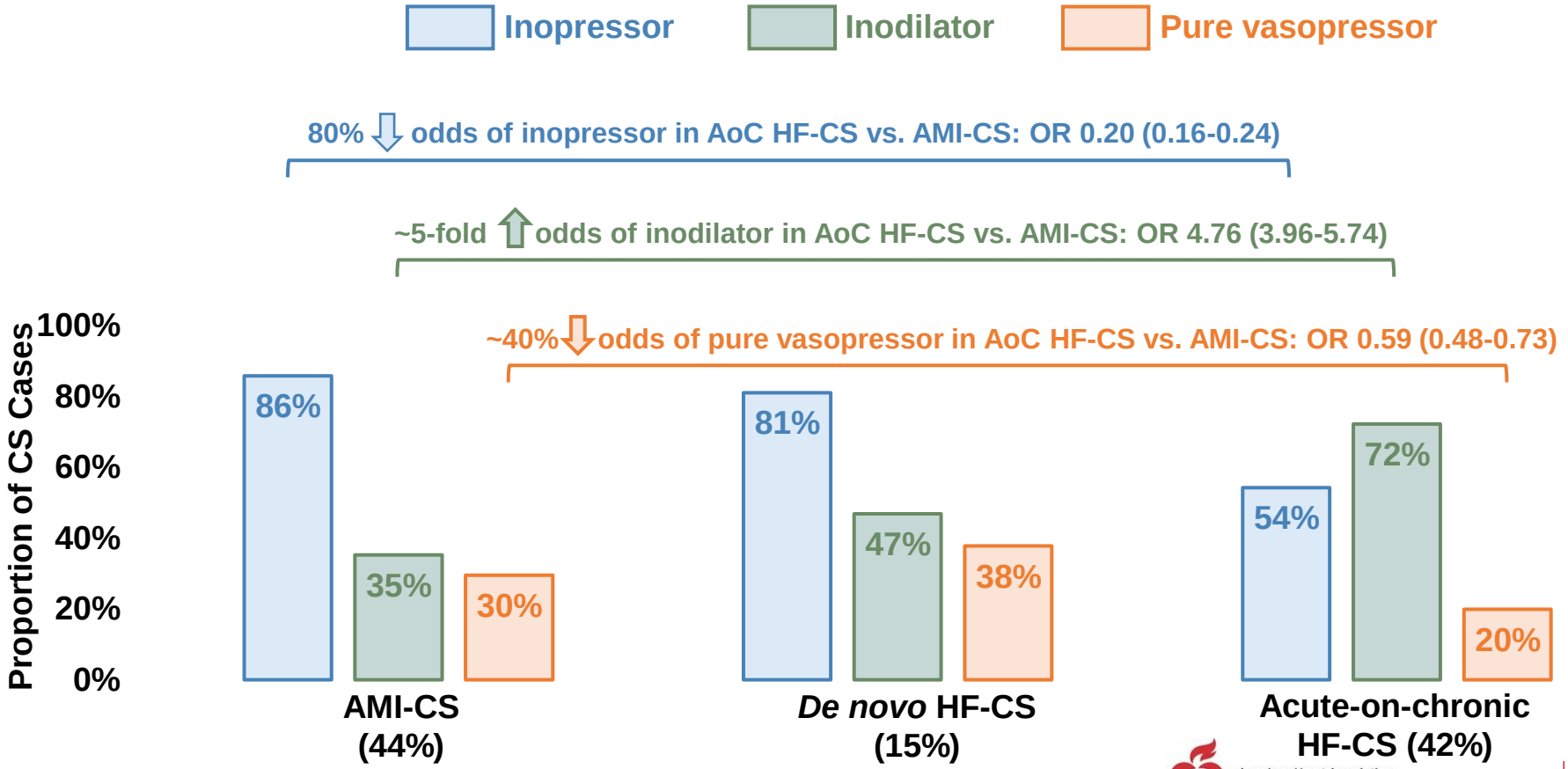
†Waksman R et al. *Circulation* 2023;148(14):1113-1126.
Berg DD et al. *Eur Heart J Acute Cardiovasc Care* 2024; https://doi.org/10.1093/ehjacc/zuae098

RESULTS

3,331 patients treated with ≥1 vasoactive agent w/in 6h of CS onset



VASOACTIVE TYPE BY SHARC CS ETIOLOGY



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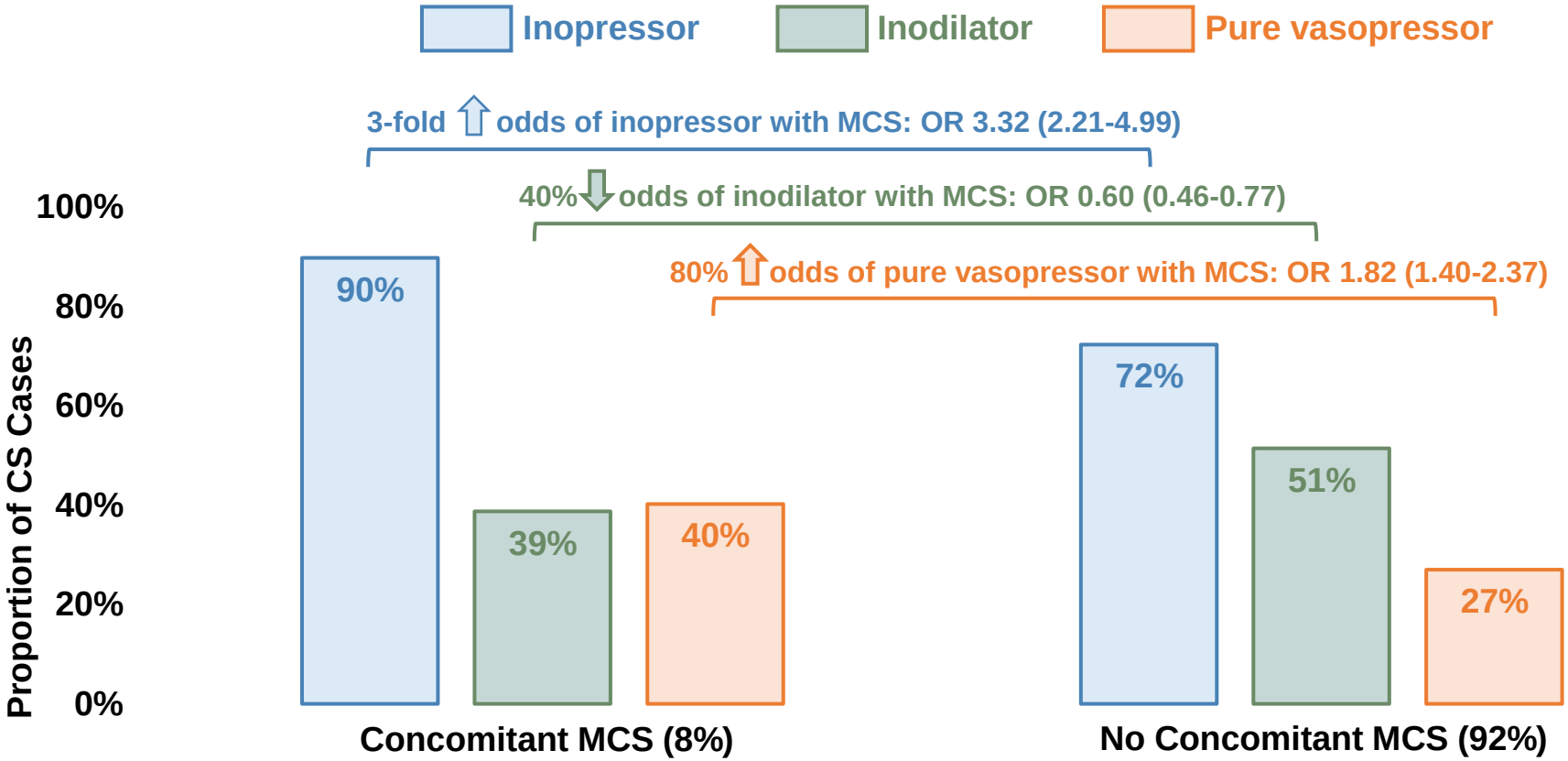
VASOACTIVE TYPE BY CONCOMITANT MCS



SUMMARY

- **Inopressors are the most frequently utilized vasoactive agents in CS, with norepinephrine being the most commonly used agent.**
- **CS etiology and concomitant MCS use are associated with differential practice patterns for vasoactive selection.**
  - **Inopressors** are more commonly utilized in **AMI-CS** → the relative efficacy and safety of inopressor vs. inodilator use in AMI-CS warrants further investigation
  - **Inodilators** are more commonly used in **HF-CS**, particularly acute-on-chronic presentations
  - **Inopressors** more common in those with **MCS** vs. those without MCS
- **These data characterize the contemporary landscape of vasoactive use in CS and may inform future research.**