Augmentative AI to Help Care Managers Centralize the Right Care at Home

Anant Vasudevan, MD, MBA,[1] Liza Ferguson, RN,[2] Niberto Moreno, MD [2]
[1]Radial, Boston, MA; [2]CareMax, Miami, FL

Background

- Home health agency (HHA) services after hospital discharge can lead to better outcomes for patients and lower total costs of care compared to facility-based post-acute care (FBPAC).
- Suboptimal care coordination, siloed care management, and outdated tools lead to missed opportunities for HHA discharge and overutilization of FBPAC.

Practice Problem

- CareMax identified an opportunity to address FBPAC over-utilization for Medicare ACO members in MA and FL.
- Among CareMax ACO members, FBPAC overutilization led to higher readmission rates.
- Discharge with HHA services ($3k) is more cost-effective than discharge to a facility: skilled nursing ($12k), inpatient rehab ($22k), long-term acute care hospital ($30k)

Objectives

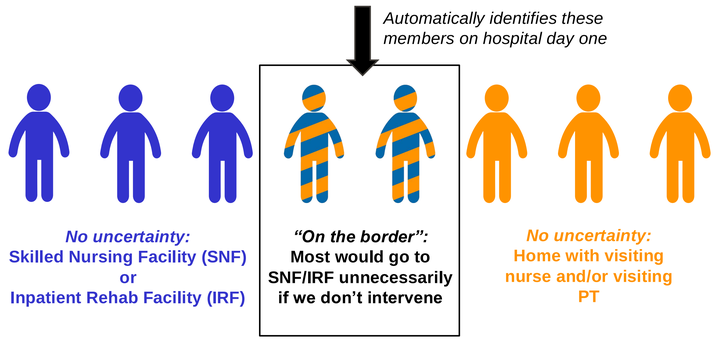
- Implement a systematic method of discharging more of the right patients home with HHA services instead of FBPAC
- Measure quality (30d readmissions) and cost impacts

Intervention (I)

- Augmentative AI (**Figure 1a**): AI to identify patients who historically would have been discharged to FBPAC but may be appropriate for safe discharge with HHA instead.
  - Data Sources: ACO claims, Health Information Exchange (HIE) data, Area Deprivation Index (ADI), ADT feeds
  - Risk stratification (examples):
    - Clinical: chronic disease burden, acuity of admission, utilization history
    - Functional: physical frailty, immobility
    - Social: Dual-Eligible status, ADI quintile

Study Overview and Findings

Figure 1a. Augmentative AI for risk stratification



Risk stratification focused on identifying Medicare ACO members "at-risk" for potentially avoidable discharge to FBPAC

Figure 1b. Nurse-driven workflow

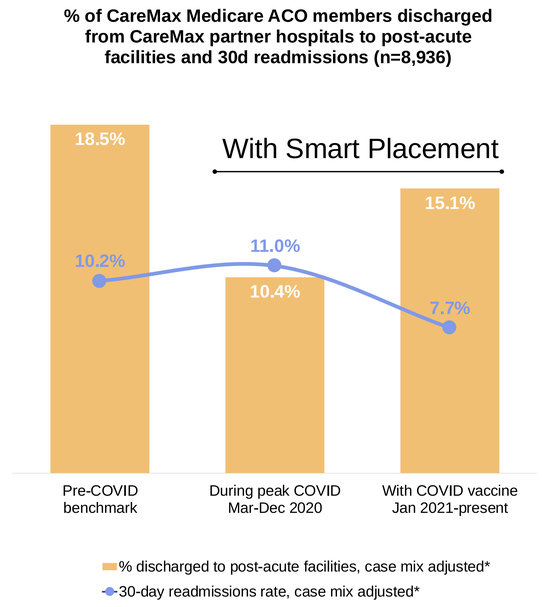


Transition Liaison RN
Primary user

Inpatient care team
RN case manager, hospitalist, PT/OT, etc.

Transition Liaison RNs collaboratively discuss how to mitigate barriers to home discharge with inpatient care teams

Figure 2. Results



-19%
reduction in discharges to facility-based post-acute care

-25%
reduction in 30-day readmissions

$1 million+
savings accrued to CareMax Medicare ACO

*case mix adjustment calculation is raw data divided by case mix index

Intervention (II)

- Nurse-driven workflow (**Figure 1b**):
  - User: "Transition Liaison", an ACO RN Care Manager
  - Stakeholder alignment: Collaborative discussion at multidisciplinary rounds of AI-flagged patients

Conclusions

- CareMax successfully boosted its comprehensive care management program using AI + nurse-driven workflow
- Risk stratification using augmentative AI can help discharge planning teams systematically focus on the right patients early during their hospital stay
- Innovative nurse-driven workflows can help care teams overcome barriers to home discharge

Future Directions

- Continued growth of home-based medical care hinges on identifying candidates quickly, consistently, and accurately
- An AI-driven approach could facilitate upstream identification of candidates appropriate for a variety of home-based care modalities: home hospital, telehealth, SNF at home, remote patient monitoring, etc.

Disclosure

- Anant Vasudevan is a hospitalist at Brigham and Women's Hospital and Chief Medical Officer at Radial



Anant Vasudevan, MD, MBA
anant@radialanalytics.com

Funding: NSF NIH