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Celebrating 30 Years

Recent Research on Home Health Care for Rural Populations and Implications for Policy and Practice

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Background

- Approximately 3.5 million Medicare beneficiaries receive home health care services annually (MedPAC, 2017)
- Rural home health patients tend to be sicker and at higher risk for hospitalization (Probst & Bhavsar, 2014)
- Delivering home health services in rural areas can be particularly challenging and access is sometimes limited (CMS, 2014; Skillman et al., 2016; Probst et al., 2014)

- Prospective payment system reform
  - Budget neutral
  - 30-day payment episodes
  - New case-mix (Home Health Groupings Model-ish?)
- Home Health Value-Based Purchasing (HHVBP) model
- Bundled payments
  - Bundled Payments for Care Improvement (BPCI) Advanced
  - Condition-specific bundles, e.g., Comprehensive Care for Joint Replacement (CJR)
- Rural add-on payments
  - Extended through 2019
  - Then new payment calculations until phased out by 2022

Three recent studies on home health care for rural populations

1) How are beneficiaries who are admitted to home health care from the community (community-entry) different from beneficiaries who are admitted following a hospital stay (post-acute)?

2) Is service provision related to quality outcomes (readmissions, ED visits, functional status change)for beneficiaries receiving home health following lower extremity joint replacement?

3) Do rural add-on payments increase access to home health care?

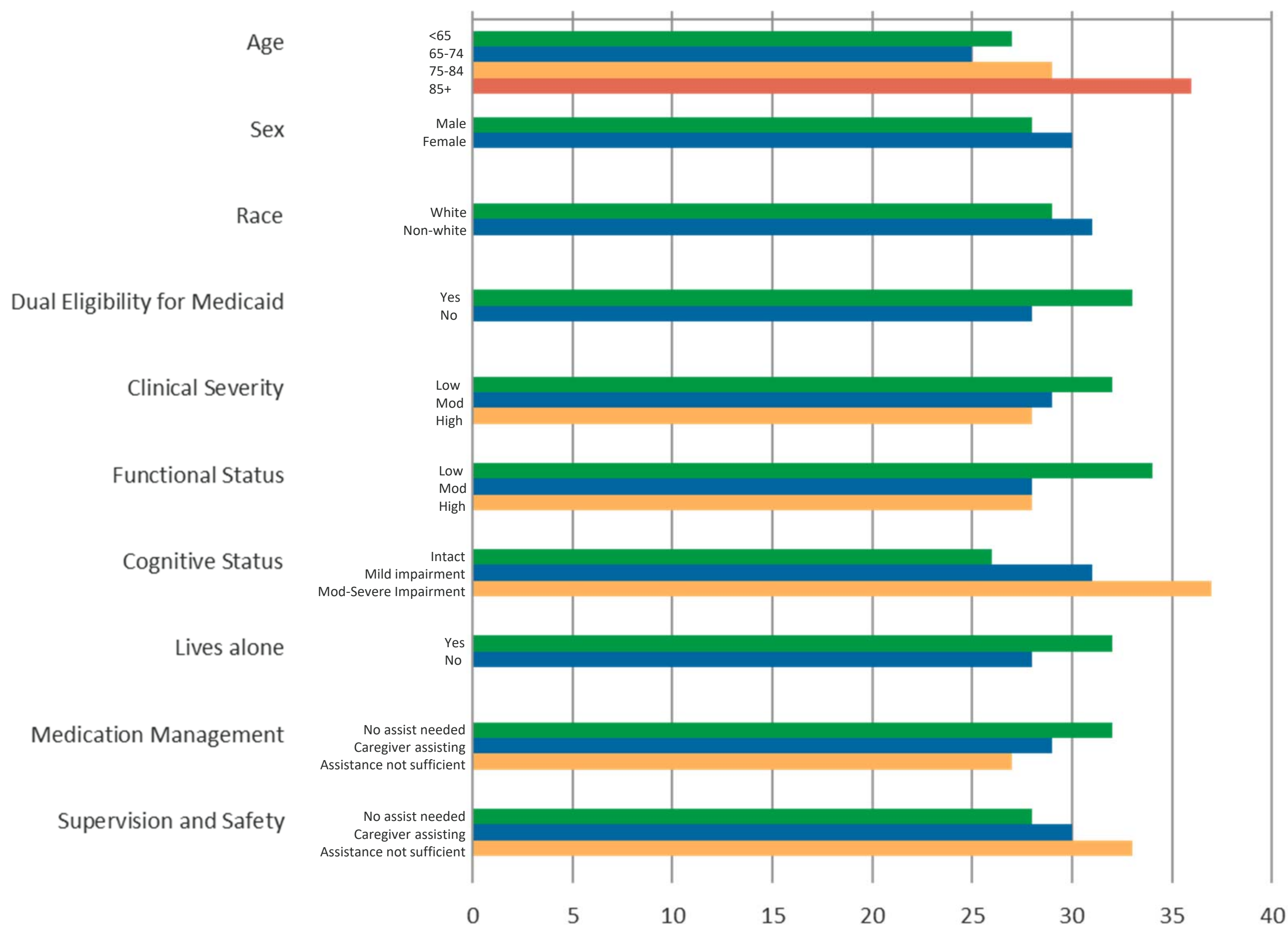
Community-entry versus post-acute home health care: methods

- Design: Retrospective cohort analysis
- Data Sources:
  - Medicare administrative data from 2011-2013 including home health claims, OASIS, and Provider of Services file
  - 2012 Area Health Resource File
  - 2015 USDA Economic Research Service County Typology Codes
- Analysis:
  - Hierarchical logistic regression models to examine rates of community-entry versus post-acute home health care
  - Controlled for potential confounders (e.g., home health agency characteristics, community factors)

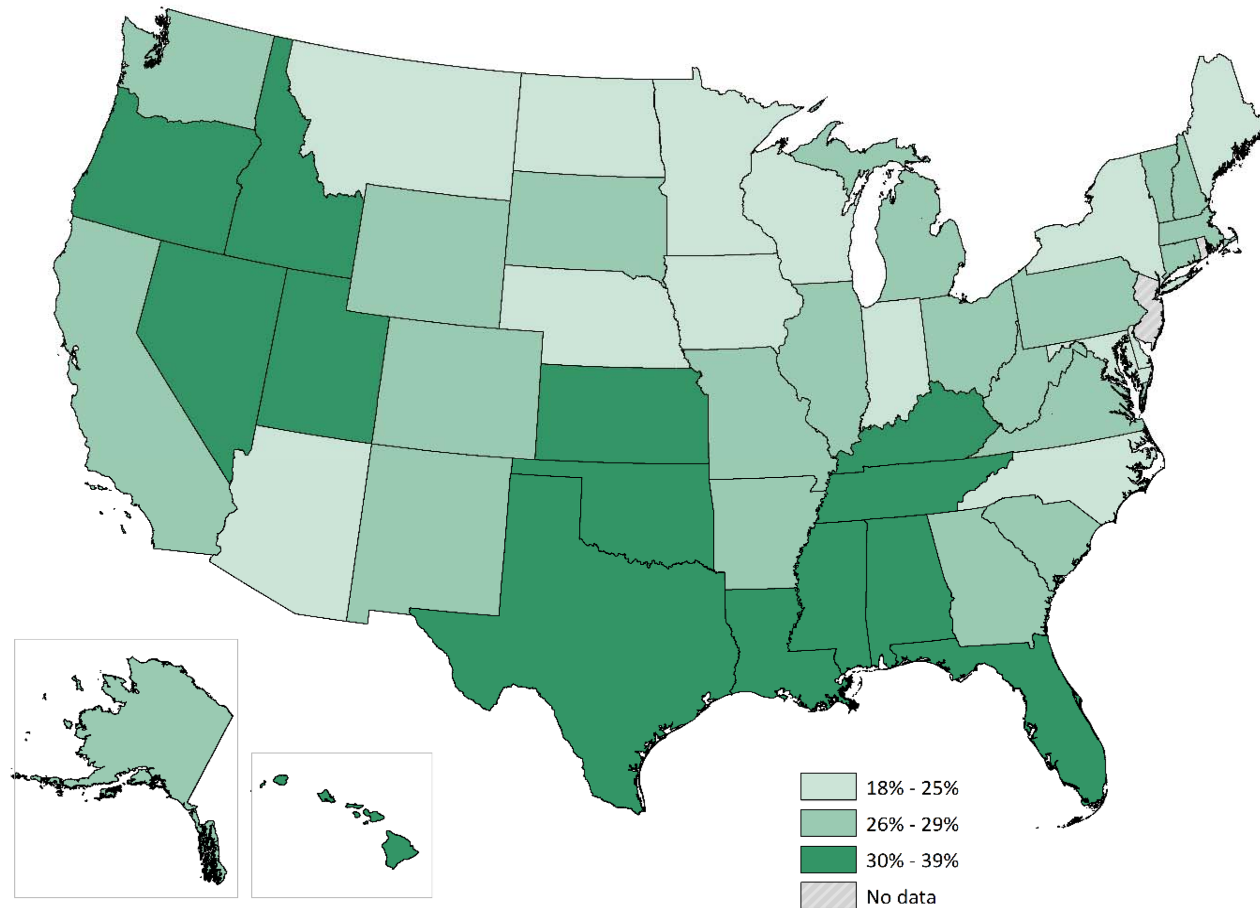
Community-entry versus post-acute home health care: results

- N=858,683 rural Medicare beneficiaries
  - 71% post-acute
  - 29% community-entry
- Beneficiary characteristics are significantly different between community-entry and post-acute
- Wide variation by state in rates of community-entry, ranging from a low of 18% in Maryland to a high of 39% in Texas
- Community-entry home health stays are longer and more likely to include medical social work services

Adjusted rates of community-entry home heath among rural beneficiaries by beneficiary characteristics



Adjusted rates of community-entry home health episodes among rural beneficiaries by state

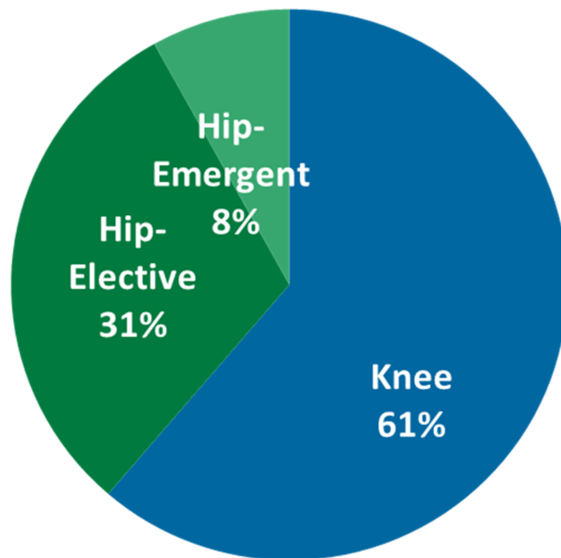


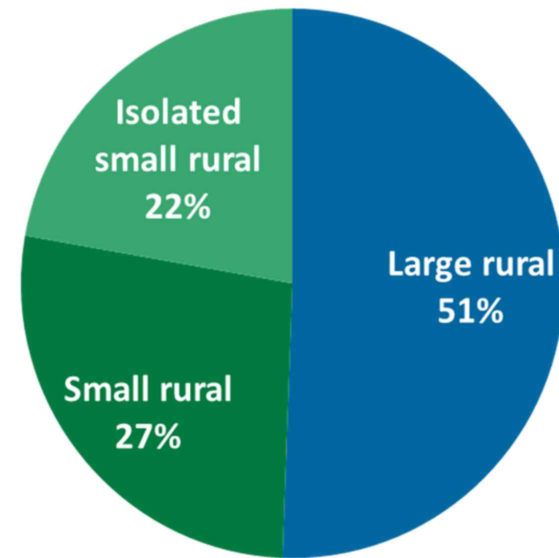
Service provision and quality outcomes following LEJR: methods

- Design: Retrospective cohort analysis
- Data Sources:
  - Medicare administrative data from 2011-2013 including home health claims, OASIS, and Provider of Services file
  - 2012 Area Health Resource File
  - 2015 USDA Economic Research Service County Typology Codes
- Analysis:
  - Hierarchical logistic regression models to examine relationship between service provision (number and type of visits) and quality outcomes (readmissions, ED visits, community discharge, change in functional status) for beneficiaries following total hip and knee replacement
  - Controlled for potential confounders (e.g., beneficiary characteristics, home health agency characteristics, community factors)

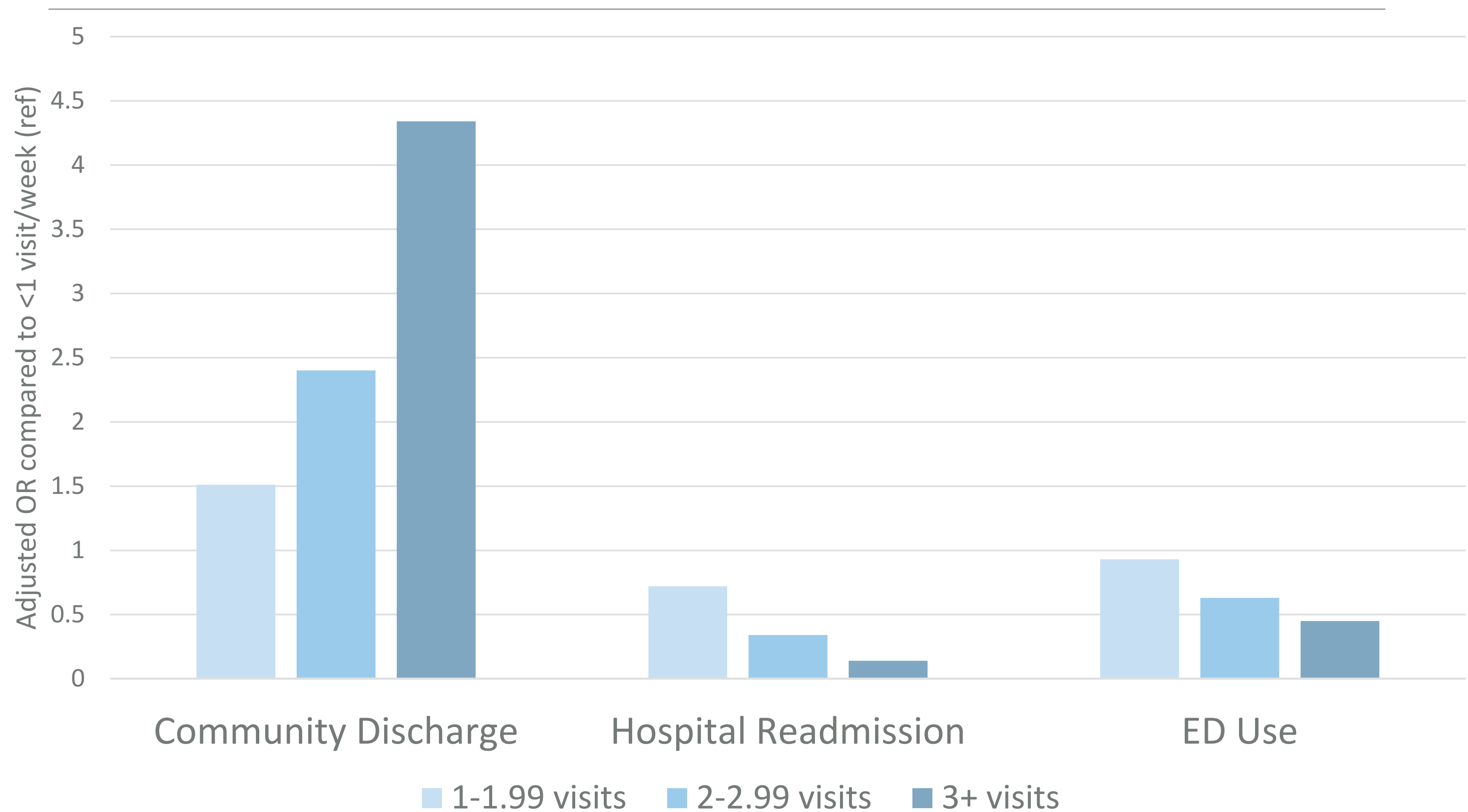
Service provision and quality outcomes following LEJR: results

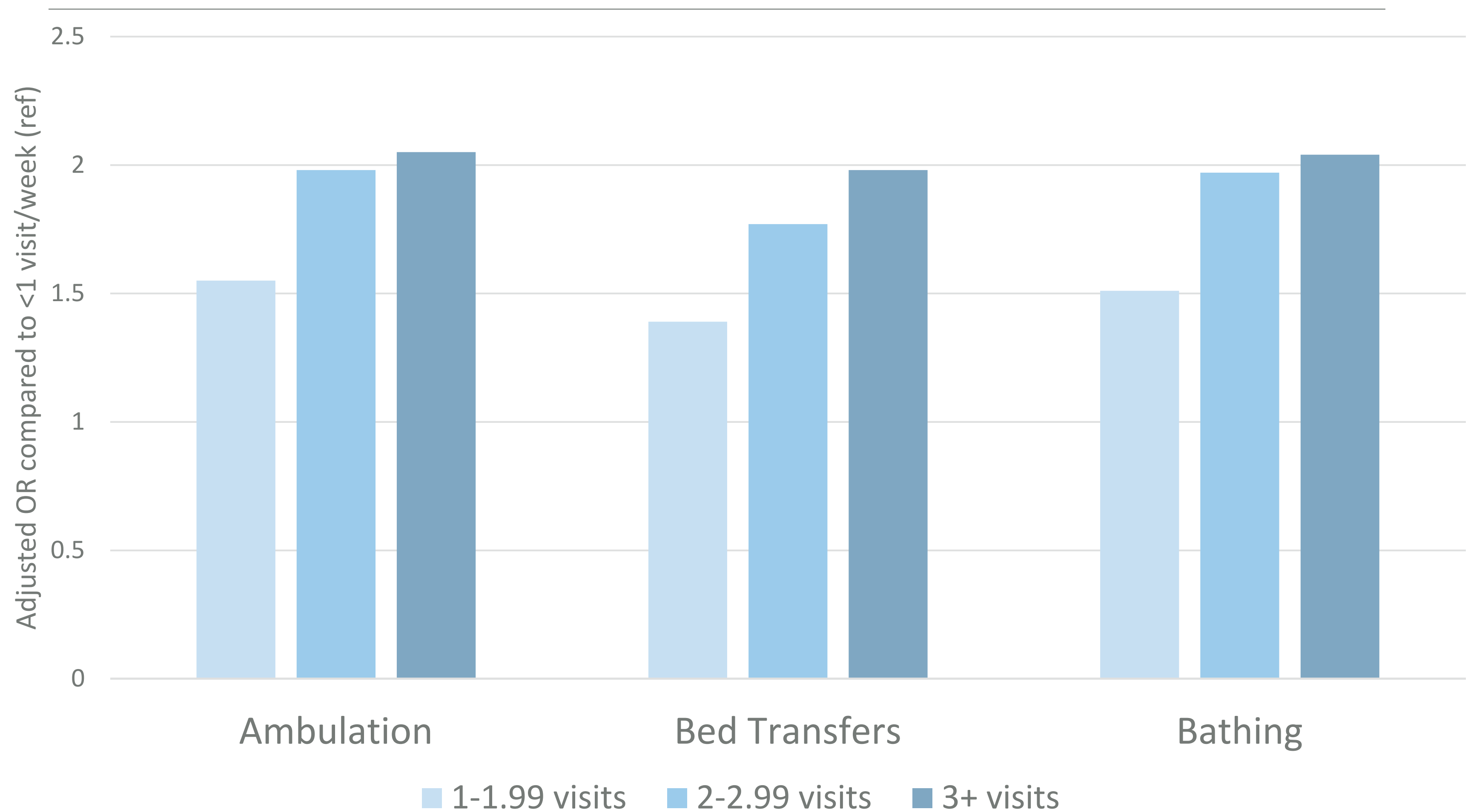
N=81,620 beneficiaries





- 95% of beneficiaries receive PT
  - Fewer PT visits for beneficiaries in isolated small rural communities
  - More PT visits associated with better outcomes
- More visits from nursing, OT, social work, and home health aides not associated with better outcomes

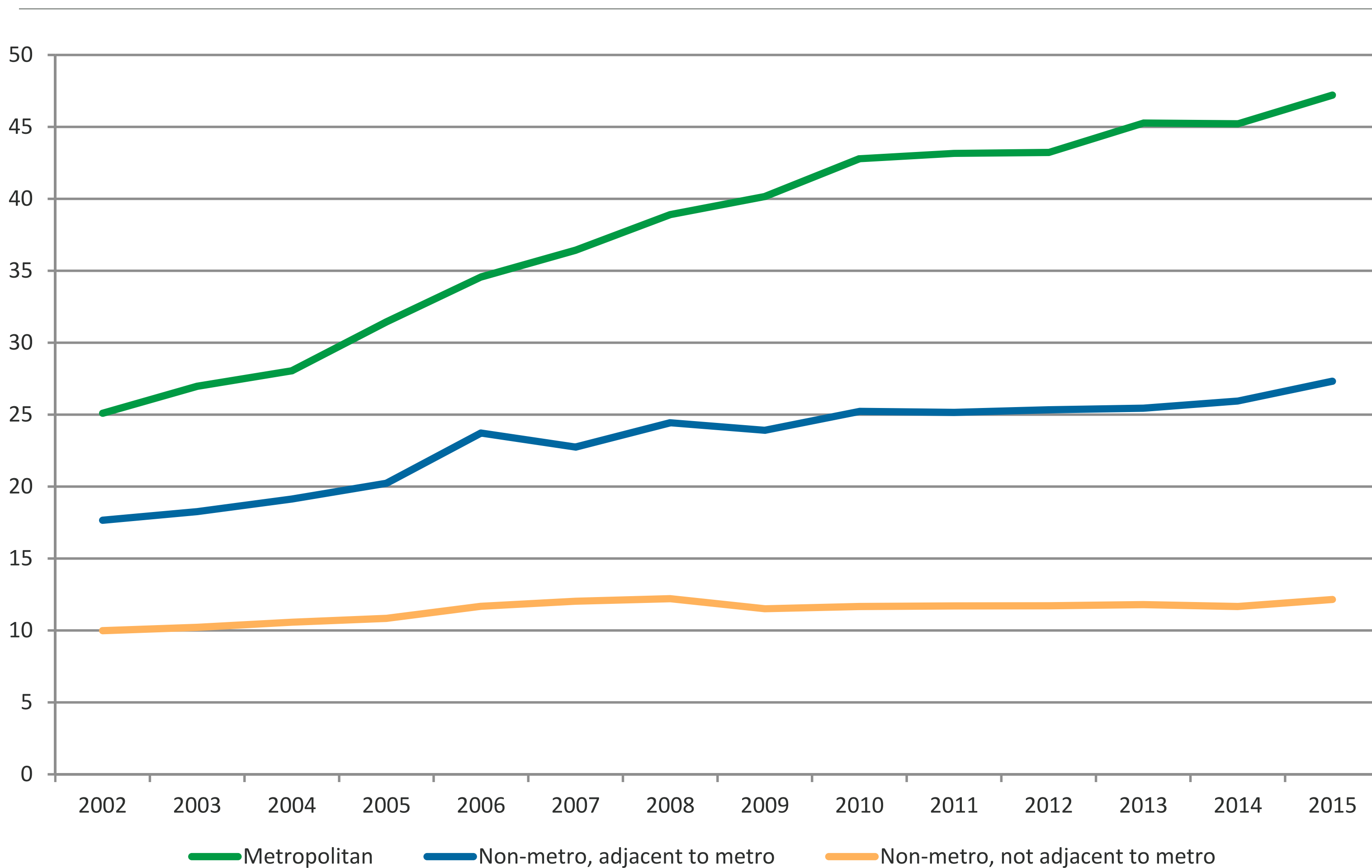

Physical Therapy Visits and
Quality Outcomes
Adjusted OR compared to <1 visit/week (ref)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Community Discharge
Hospital Readmission
ED Use
1-1.99 visits
2-2.99 visits
3+ visits


Physical Therapy Visits and Improvement in Function
Adjusted OR compared to <1 visit/week (ref)
2.5
2
1.5
1
0.5
0
Ambulation
Bed Transfers
Bathing
1-1.99 visits
2-2.99 visits
3+ visits

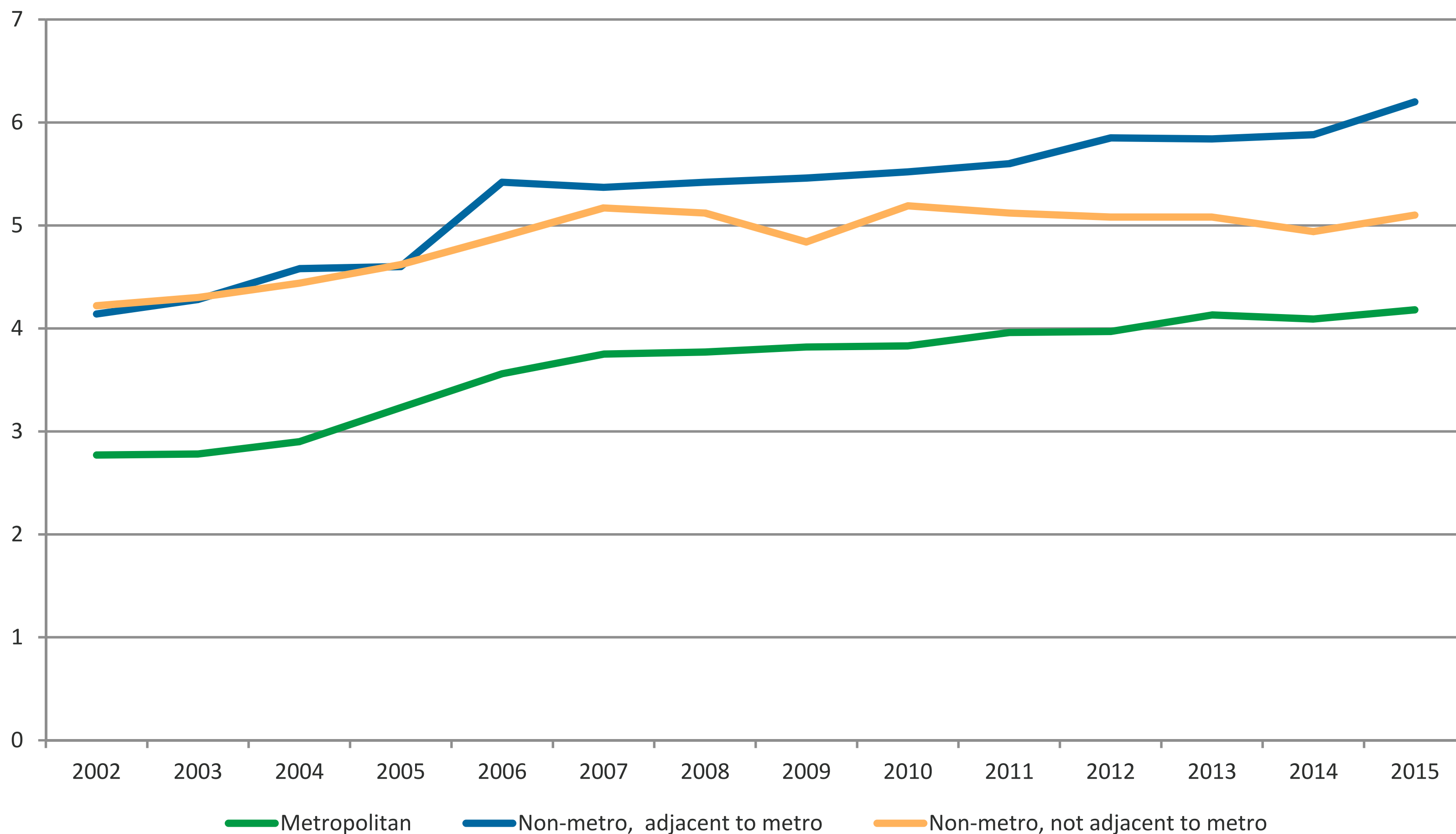
Rural add-on payments and access to home health care: methods

- Design: Retrospective analysis of pseudo-natural experiment
- Data Sources:
  - Publicly available data about Medicare-certified home health agencies form 2002-2014 including Home Health Compare, Provider of Services File, and Geographic Variation File
- Analysis:
  - Examined whether the amount of rural add-on payments were related to the number of home health agencies serving rural counties standardized by population

Average Number of Home Health Agencies Per County



Average Number of Home Health Agencies Per 1,000 Beneficiaries Per County



Rural add-on payments and access to home health care: results

- Larger increase in population-adjusted number of home health agencies serving metro-adjacent versus non-metro-adjacent rural counties
- Presence of any rural add-on payment (3, 5, or 10%) was associated with a small, but insignificant increase in home health agencies serving rural counties, driven by increase in metro-adjacent rural counties
- 3% rural add-on payment associated with a significant increase of .15 home health agencies per 1,000 beneficiaries in metro-adjacent rural counties only

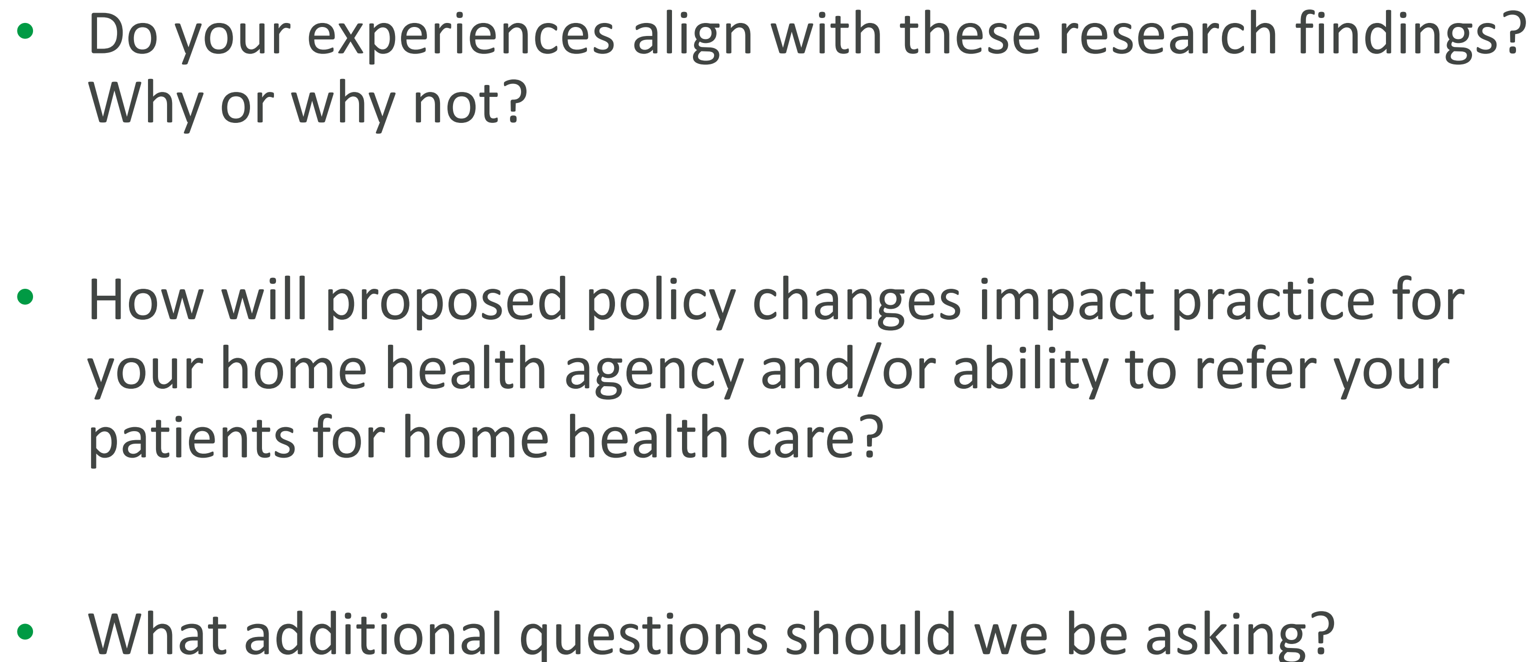
Conclusions and Policy Implications

- Populations differ between community-entry and post-acute home health
  - Will new payment model in 2020 disincentivize community-entry home health?
  - Do HHVBP measures recognize community-entry adequately?
- More PT visits are associated with better outcomes for rural beneficiaries receiving home health following LE joint replacement
  - Will bundling initiatives and new payment model support or hinder home health agencies' ability to deliver PT services?
- Rural add-on payments do not appear to significantly increase the number of agencies serving non-metro-adjacent rural counties
  - Are the new calculations for rural add-on payments better targeted to drive increases in access in the most rural areas?
  - What will happen when add-on payments are phased out?

- Available data do not give us the full picture
- Some measures are imperfect
- Analyses may mask individual variation

- Next steps
  - More detailed analysis of dually-eligible beneficiaries and community-entry home health
  - Exploration of trajectories into post-acute care and potential for unmet need in home health
  - Examination of access to specific services and quality of care related to rural add-on payments

Discussion



- Do your experiences align with these research findings? Why or why not?
- How will proposed policy changes impact practice for your home health agency and/or ability to refer your patients for home health care?
- What additional questions should we be asking?

Thank you!

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