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The Disparity of Telemedicine Adoption During the COVID-19 Pandemic

The World of mHealth

S25

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Disclosure

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Learning Objectives

After participating in this session, the learner should be better able to:

- Understand the digital divide
- Learn the gap between in-person and telemedicine care
- Examine healthcare disparity from a social determinant standpoint

Introduction

- Telemedicine adoption rises under COVID-19 Pandemic.
- Telemedicine benefits:
  - Lower Cost
  - Efficiency, no need to visit in person
- Does it really work for all populations?

Question

- What factors affect Telemedicine adoption?
- How to improve the care coverage?
- Patient Disparity:
  - Racial minority
  - Non-English speakers
  - Older adults
  - Living far from Hospital
  - Non-insurers
  - Patient of lower income

Hypothesis

- Patients who are older are less likely to use telemedicine services
- Patients who are not insured
- Patient with lower income …..
- Patient living in rural area ….
- Patient who do not speak English…

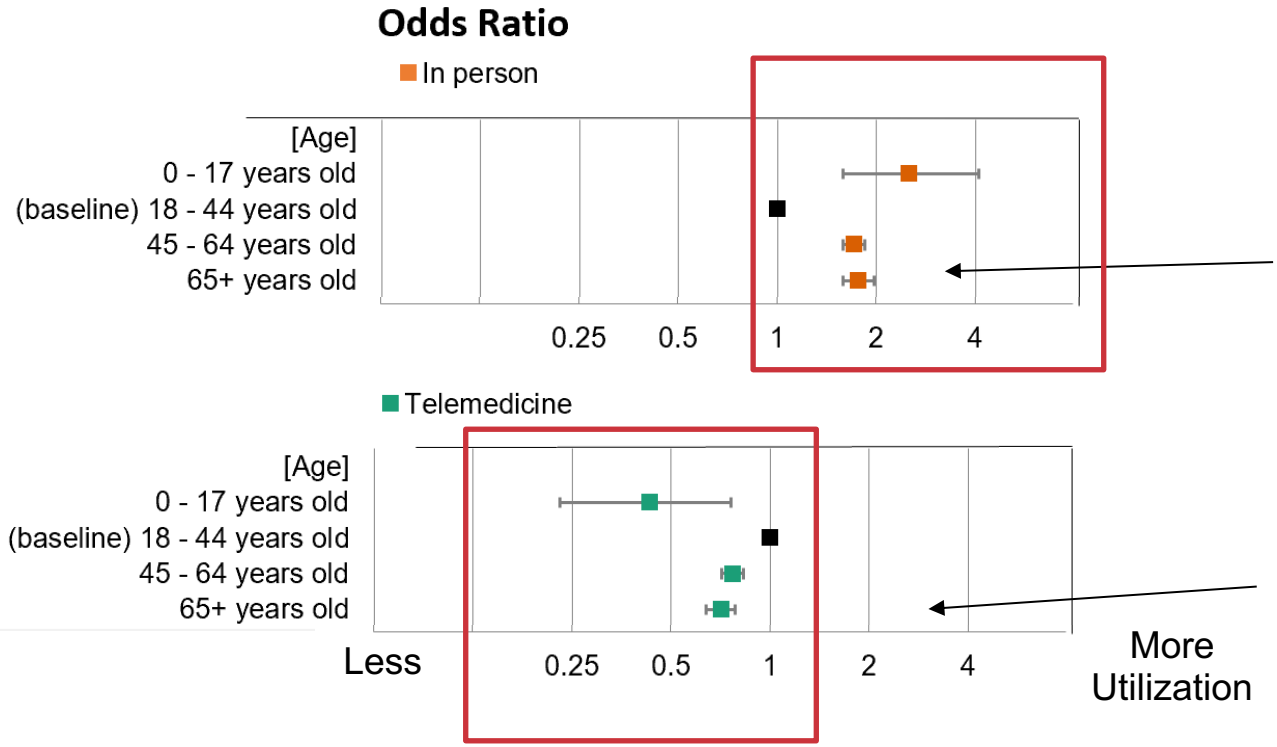
Data Source

- Retrospective cohort study, association analysis
- Froedtert hospital, Wisconsin
- Clinical Translational Science Institute, WI
- Time range: March 2020 – March 2022
- 2.3M patients
- Measurement: Odds ratio patient with characteristics X are more/less likely to utilize telemedicine services during pandemic

Social determinant factors

Social and Economic Factors	Data Source
Sex	Electronic Health Records
Race	Electronic Health Records
Age	Electronic Health Records
Ethnicity	Electronic Health Records
Insurance Status	Electronic Health Records
Language (English/Non-English)	Electronic Health Records
Area Deprivation Index	U.S. Census Bureau data
Rural-Urban Continuum Codes	U.S. Census Bureau data

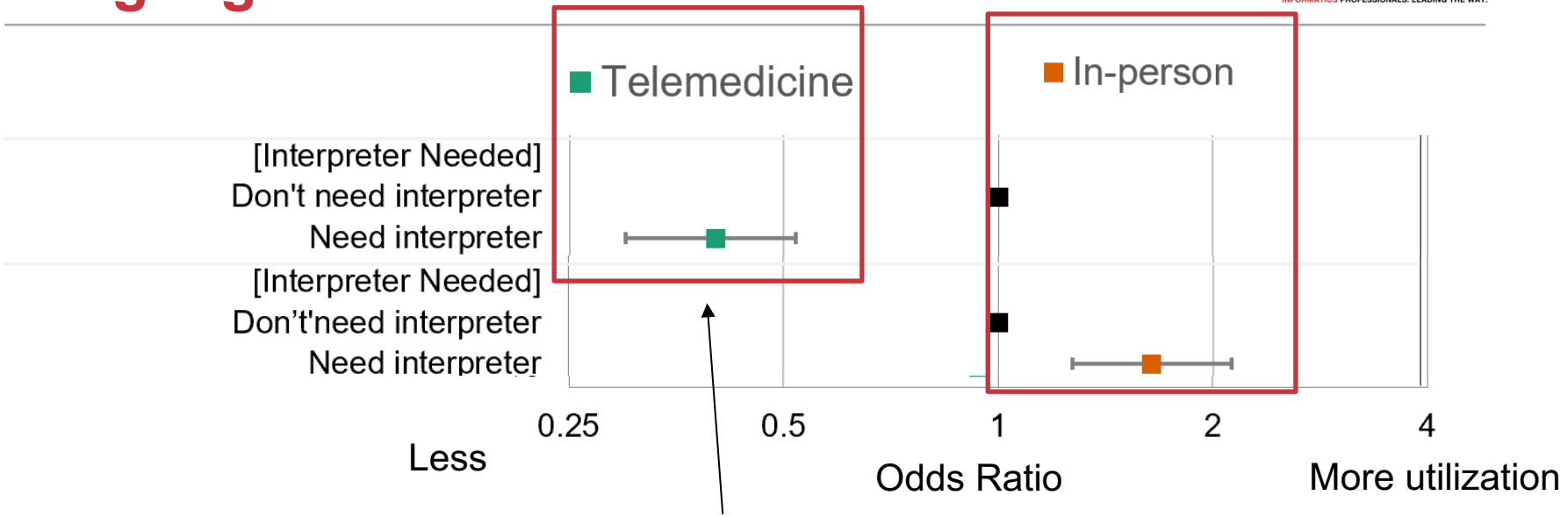
Age



Older adults had more In-person visits

Older adults had less telemedical visits

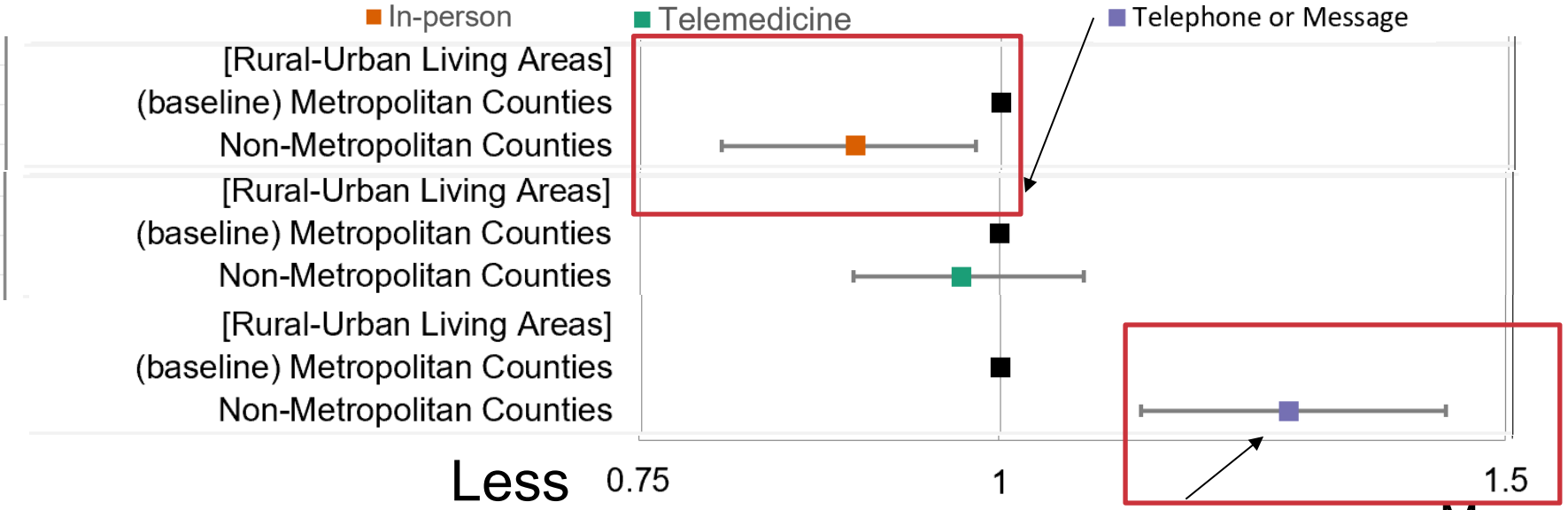
Language



Patients who don't speak English are underserved population
(Telemedicine may not address their care needs
Due to Non-English speakers.)

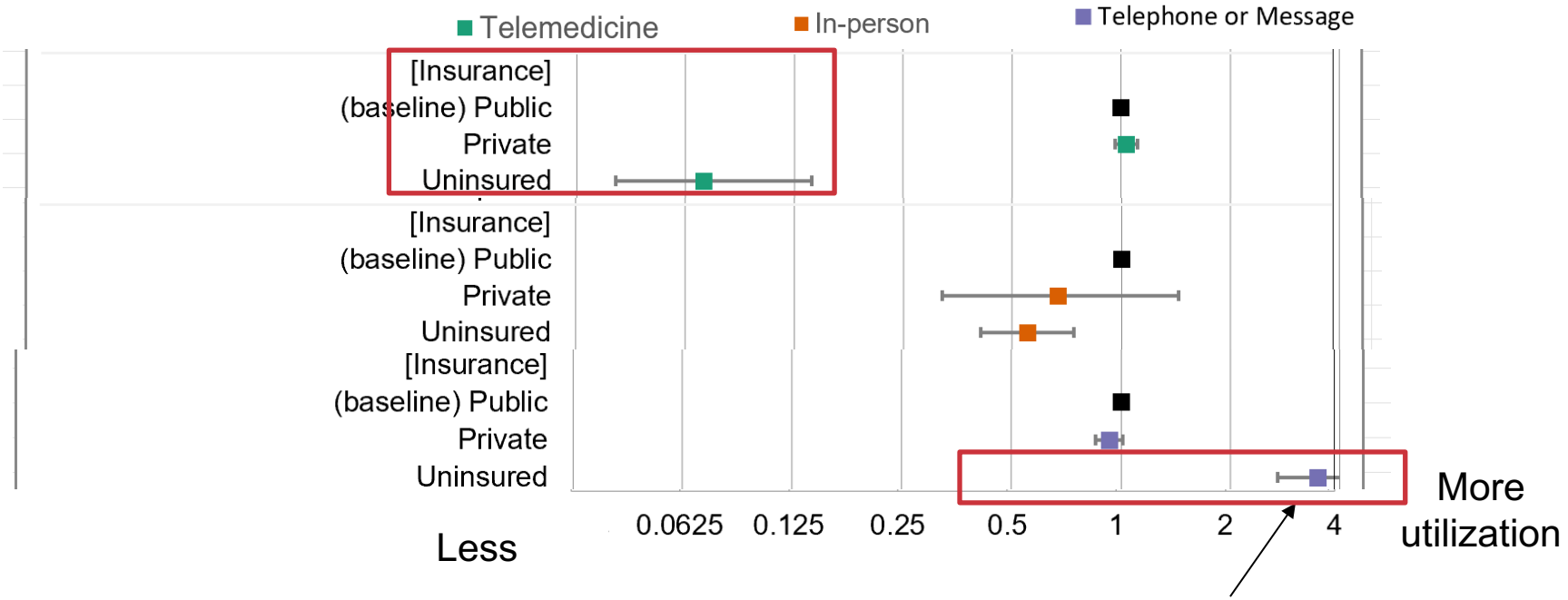
Rural-urban Continuum Code

Patients in rural area go to hospital less frequently. (0.89x)



Non-metropolitan residents have more phone calls (1.26x)

Insurance Type



Uninsured patients use 3.7 times more on calling/messaging for healthcare needs

Telemedicine Utilization Gap

Telemedicine exacerbated disparities in:

- People who do not speak English (with a 0.30 odds ratio compared to baseline)
- Older age (65y/o+, 0.89x)
- Rural residences (0.89x)
- Uninsured (0.07x)

Telemedicine Utilization Gap

Telemedicine exacerbated disparities in:

- Coverage remains low (~21%)
  - National average is 30%~40% on first month, then move to 5 - 10% hereafter
- Phone and in-person care are major forms (60-70%)
- Telemedicine cannot fully cover/replace in-person care

Reason of Limited Telemedicine Adoption?

Treatment & diagnosis impossible via telemedicine

Many treatment options are not possible via telemedicine

- Physical therapy,
- inpatient examinations,
- lab test
- More…

Suggestion

- Focus online consultation services
- Convenient, cost-effective
- Can have more specialties involved when needed
- Less technological barriors

Changes?

- Tech:
  - Provide accessible platform for older adults
  - Use video remote interpreting technology:
- Financial Support
  - Availability of free digital devices and internet
  - Partnership with community organizations
- Clarify the role of telemedicine
  - Only use for initial consultations
  - Encourage in-person visit hereafter

Conclusion

- Telemedicine: an under-used service have potentials and gaps
- Minority socioeconomic groups: Unequal utilization
- Systematic guideline is needed.

Thank you!

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