#### University of Massachusetts Medical School

### eScholarship@UMMS

UMass Center for Clinical and Translational Science Research Retreat 2017 UMass Center for Clinical and Translational Science Research Retreat

May 16th, 1:45 PM

# Pharmacotherapy Use in Older Patients with Heart Failure and Reduced Ejection Fraction Living in Skilled Nursing Facilities

Lin Li University of Massachusetts Medical School

Et al.

## Let us know how access to this document benefits you.

Follow this and additional works at: https://escholarship.umassmed.edu/cts\_retreat

Part of the Cardiology Commons, Cardiovascular Diseases Commons, Geriatrics Commons, and the Translational Medical Research Commons

Li L, Jesdale WM, Hume A, Gambassi G, Goldberg RJ, Lapane KL. (2017). Pharmacotherapy Use in Older Patients with Heart Failure and Reduced Ejection Fraction Living in Skilled Nursing Facilities. UMass Center for Clinical and Translational Science Research Retreat. Retrieved from <a href="https://escholarship.umassmed.edu/cts\_retreat/2017/posters/44">https://escholarship.umassmed.edu/cts\_retreat/2017/posters/44</a>

Creative Commons License



This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in UMass Center for Clinical and Translational Science Research Retreat by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.

# PHARMACOTHERAPY USE IN OLDER PATIENTS WITH HEART FAILURE AND REDUCED EJECTION FRACTION LIVING IN SKILLED NURSING FACILITIES

Lin Li, PhD¹, Bill M. Jesdale, PhD¹, Anne Hume, PharmD², Giovanni Gambassi, MD³, Robert J. Goldberg, PhD¹, Kate L. Lapane, PhD¹

<sup>1</sup>Department of Quantitative Health Sciences, University of Massachusetts Medical School; <sup>2</sup>University of Rhode Island College of Pharmacy, Kingston, RI; <sup>3</sup>Department of Medical Sciences, Division of Internal Medicine and Angiology, Catholic University of Sacred Heart, Largo Agostino Gemelli, Rome, Italy

**Background:** Little is known about the use of angiotensin-converting enzyme inhibitors (ACEIs) or angiotensin receptor blockers (ARBs) and  $\beta$ -blockers among older adults with heart failure and reduced ejection fraction (HFrEF) in skilled nursing facilities (SNFs).

**Methods:** Using national data Minimum Data Set 3.0 cross-linked with Medicare data (2011-2012), we studied 31,675 patients with HFrEF (ICD-9 codes: 428.2 or 428.4) aged ≥65 years admitted to 9,659 SNFs. We estimated the prevalence of a Part D claim for ACEIs/ARBs or β-blockers during 3 months before the SNF stay and used log-binomial models to evaluate correlates of use by estimating prevalence ratios (PR) and 95% confidence intervals (CI).

**Results**: The median age of the study population was 83 years, 60% were women, and 10% and 4% were African Americans and Hispanics, respectively. Approximately 46% had ≥3 important risk factors for HFrEF. Fifty-seven percent received an ACEI/ARB and 47% a β-blocker; 25% received neither. Older age was inversely associated with receipt of these therapies: adjusted PRs were 0.94 (95% CI: 0.91-0.96) for ACEIs/ARBs and 0.86 (95% CI: 0.84-0.89) for β-blockers for patients aged ≥85 years compared with those aged 65-74 years. Compared with Whites, use of these therapies was higher among African Americans (adjusted PRs were 1.07 [95% CI: 1.04-1.10] for ACEIs/ARBs and 1.11 [95% CI: 1.08-1.15] for β-blockers) and Hispanics (adjusted PRs were 1.13 [95% CI: 1.09-1.18] for ACEIs/ARBs and 1.12 [95% CI: 1.07-1.18] for β-blockers). The prevalence of ACEI/ARB use was greater in patients with ≥3 important risk factors than in those with ≤1 factor: adjusted PR was 1.16 (95% CI 1.13-1.19).

**Conclusions**: Use of guideline-directed medications may be suboptimal in older patients with HFrEF receiving SNF care. Whether this is a result of adverse drug events from prior use or insufficient evidence in vulnerable populations needs to be examined.

**Acknowledgements:** Lin Li has received funding from a National Institutes of Health Ruth L. Kirschstein National Research Service Award Institutional Research Training Grant (5T32HL120823-02)

#### Contact:

Lin Li
University of Massachusetts Medical School
lin.li@umassmed.edu