

BILBAO SPAIN

Tobias Gerhard

Bio



Tobias Gerhard is Director of the Rutgers Institute for Health, Health Care Policy and Aging Research and Founding Director of its Center for Pharmacoepidemiology and Treatment Science. He received his pharmacy degree from the University of Freiburg, Germany (2002), and his PhD in pharmacoepidemiology from the University of Florida (2007). Dr. Gerhard's work focuses on the development and evaluation of modern pharmacoepidemiologic methods with applications in mental health and geriatric

pharmacotherapy. He has extensive experience working with large claims and electronic health record datasets and has published widely on use, safety, and outcomes of therapeutics, particularly of psychotropic medications in vulnerable populations. His work has been funded by NIA, NIMH, AHRQ, PCORI, and by multiple foundations. Dr. Gerhard's work has been recognized with a Young Investigator Award from the Brain and Behavior Research Foundation, a New Investigator Award from the American Society of Clinical Psychopharmacology, and the 2020 Sternfels Prize for Drug Safety Discoveries. Dr. Gerhard is a Fellow of the International Society for Pharmacoepidemiology (ISPE) and its Immediate Past President, and an elected member of the American Epidemiological Society (AES). He has served on committees for FDA and the National Academies of Sciences, Engineering, and Medicine (NASEM).



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SPAIN

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Abstract



Metformin is first-line therapy for patients with type 2 diabetes. Until 2016, metformin was contraindicated in the US for patients with renal impairment due to concerns about metformin-induced lactic acidosis, a rare and often fatal condition of lactic acid build-up in the body. In 2016, FDA concluded that metformin could be used safely with mild and moderate renal impairment. Our study estimated the comparative risk of hospitalization for lactic acidosis between initiators of metformin and sulfonylureas, stratified by baseline renal impairment and using a newly validated outcome definition.

In 2008-2018 US Medicare data, we assessed incidence rates of lactic acidosis hospitalizations among >65 years old initiators of metformin and sulfonylurea stratified by baseline renal impairment. We then performed inverse probability of treatment weighted Cox regression using propensity scores estimated using a large number of sociodemographic, diagnostic, medication and healthcare utilization variables.

There were a total of 94 lactic acidosis hospitalizations in 560,963 patients without and 154,573 patients with renal impairment with incidence rates ranging from 11.7/100,000 person years in metformin initiators without renal impairment to 31.3/100,000 person years in sulfonylurea initiators with renal impairment. There was no apparent risk increase for metformin vs. sulfonylureas in those with [HR 0.68 (0.32-1.45); ARR -3.56 (-12.80, 5.69)] or without [HR 0.75 (0.22-2.44); ARR -1.75 (-24.01, 20.50)] renal impairment.

Commensurate with the 2016 label changes, MET users had no increased LA risk compared with SU users, regardless of renal impairment

