Peer Review Plan for NNCSS Technical Report: Prevalence of Parkinson's Disease: Methods and Prevalence Estimates by Age, Sex, and other Demographic and Geographic Characteristics among Adults Aged 35 and Older, United States, 2019

Title: Prevalence of Parkinson's Disease: Methods and Prevalence Estimates by Age, Sex, and other Demographic and Geographic Characteristics among Adults Aged 35 and Older, United States, 2019

Subject of Planned Report: Production of national prevalence estimates for PD in 2019

Purpose of Planned Report: To present the methods used by CDC to produce national prevalence estimates for Parkinson's disease and key prevalence findings for 2019 by select demographic and geographic characteristics.

Type of Dissemination: Influential Scientific Information (ISI)

Timing of Review: December 2023

Type of Review: Individual

Opportunities for the Public to Comment (how and when): No

Peer Reviewers Provided with Public Comments before the Review: No

Anticipated Number of Reviewers: 4

Primary Disciplines or Expertise: Neurology, neuroscience, Parkinson's Disease, quantitative data analysis, movement disorders, descriptive epidemiologic studies

Reviewers Selected by (agency or designated outside organization): Centers for Disease Control and Prevention

Public Nominations Requested for Reviewers: No

Peer Reviewers:

Sneha Mantri, MD, MS
Academic and Professional Credentials: MD, MS
Current Position Title: Director, Program in Medical Humanities, Assistant Professor of Neurology, Parkinson's Disease and Movement Disorders Center
Organizational Affiliation: Duke University School of Medicine
Areas of Expertise, Discipline, Relevant Experiences: Movement Disorders, Parkinson's Disease, Atypical Parkinsonism, Deep Brain Stimulation, Dystonia, patient-physician communication initiatives sponsored by the Michael J. Fox Foundation

Codrin Lungu, MD
Academic and Professional Credentials: MD
Current Position Title: Global Clinical Lead, Rare Disease Neurology
Organizational Affiliation: Pfizer Global Product Development, National Institutes of Health (NIH)
Areas of Expertise, Discipline, Relevant Experiences: Parkinson's Disease, Dystonia, Tremor, Myoclonus, neurotoxins, contribution to peer-reviewed publications

Caroline Tanner, MD, PhD
Academic and Professional Credentials: MD, PhD
Current Position Title: Professor of Neurology
Organizational Affiliation: University of California, San Francisco School of Medicine
Areas of Expertise, Discipline, Relevant Experiences: Movement disorders neurologist; PD, atypical Parkinsonism, Environmental Health, descriptive epidemiologic studies, environmental and genetic determinants, biomarkers, early detection, prevention and treatment intervention research; advises California PD Registry; on NINDS Common Data Elements Steering Committee; nominated by MJFF, NINDS

Allan Wu, MD
Academic and Professional Credentials: MD
Current Position Title: Professor of Neurology, Movement Disorders Program, Director of Applied Informatics
Organizational Affiliation: Northwestern University Feinberg School of Medicine
Areas of Expertise, Discipline, Relevant Experiences: Movement disorders neurologist, physician informaticist, studies to improve efficiency, usefulness, and use of eHRs for patients and physicians; develops learning healthcare systems to improve decision making and care delivery, eHR for data collection; supporting efforts to have California Parkinson's Disease Registry utilize eCR; nominated by Michael J Fox Foundation

Charge to Peer Reviewers:

The document that you will review is a draft technical report of the initial methods used by CDC to produce national prevalence estimates for Parkinson's disease, and key prevalence findings for 2019 by select demographic and geographic characteristics. CDC conducted this work, with input from federal and external subject matter experts, as part of establishing the National Neurological Conditions Surveillance System (NNCSS). The 21st Century Cures Act authorized development of NNCSS, charging CDC with conducting integrated surveillance for neurological conditions, to facilitate further research. CDC chose Parkinson's disease as one of NNCSS's first two neurological conditions in part because it is one of the most rapidly growing neurodegenerative conditions and a significant source of disability.

The report's methods and results are presented in two sections that mirror the iterative steps of the PD demonstration project. Part 1 documents our methods and findings related to selecting PD surveillance case definitions (also known as case algorithms) for use in the types of population-based data sources available to CDC. Part 2 documents our selection of population-based data sources, and our application of the selected PD surveillance case definitions in the selected data sources to estimate PD prevalence.

We request your expert opinion on the following:

- Do the rationale, methods and analyses laid out in Parts 1 and 2 of the report adequately address the objectives of the work?
- Are the findings and conclusions (Parts 1, 2, and overall) appropriate and defensible?
- Is the use of prevalence ranges sufficiently explained and understandable?
- Is there adequate clarity in the explanations and terminology used to describe the lower and upper estimates for the prevalence ranges, and the case definitions that produced them?
- Are there any biases, errors of omission, or limitations that we have not addressed?
- How can the surveillance case definitions and prevalence estimates contained in this report be useful to researchers, clinicians, other healthcare and public health professionals, and others?

We would also welcome any other comments you would like to make.

After receiving comments from all peer reviewers, CDC will compile them and prepare a unified response. The combined peer reviewer comments, without attribution, and CDC's unified response will be posted on the NNCSS website as part of the CDC Peer Review Agenda.

Thank you for your assistance with this review. We recognize and appreciate the commitment of time and energy this will involve.