



**INDIAN COUNCIL OF MEDICAL RESEARCH  
DEPARTMENT OF HEALTH RESEARCH**

**Press Release**

**Director General, ICMR releases Multilingual Dementia Research and Assessment Toolbox: MUDRA Toolbox**

*ICMR developed the tool in five different languages for use in the clinic and research*

**New Delhi, 6th October, 2021:** Today, Director General, ICMR, Dr. Balram Bhargava released MUDRA Toolbox a collective effort by seven leading centres in India- NIMHANS (Bangalore), AIIMS (New-Delhi), SCTIMST (Trivandrum), NIMS (Hyderabad), Apollo Hospital (Kolkata), Manipal Hospital (Bangalore), and Jawaharlal Nehru Medical College. MUDRA Toolbox is a pioneering initiative undertaken by ICMR Neuro Cognitive Tool Box (ICMR-NCTB) consortium to transform India's dementia and mild cognitive impairment research and clinical practices.

According to the Dementia India Report 2010 by Alzheimer's and Related Disorders Society of India (ARDSI), there are approximately 5.29 million people living with dementia in India and this number is expected to increase to 7.61 million by 2030. Dementia refers to a neurological disorder that causes a decline in a person's cognition and affects their ability to carry on with day-to-day activities. Despite the high number of people with dementia in the country, only one in ten people with dementia are diagnosed in India due to low awareness and the lack of linguistically and culturally appropriate tests that are essential for diagnosis. Early diagnosis is key to optimal management of the disease and adequate care for people with dementia.

**Dr. R S Dhaliwal**, Head-NCD informed that to address this gap in diagnosis, ICMR commissioned a multidisciplinary project with team of researchers from various fields including neurologists, psychologists, and speech-language pathologists to develop a culturally, educationally and linguistically relevant neurocognitive toolbox. MUDRA Toolbox is a unique tool consisting of various tests and questionnaires and is sensitive to the factors that affect performance on cognitive tests including education, language and culture.

**Prof. Jeyaraj D Pandian**, Principal, Christian Medical College Ludhiana who in the Chair of this Task Force stated that MUDRA Toolbox is a comprehensive tool specifically to diagnose dementia in the Indian population. The investigators had worked very hard over the last 6 years to develop and validate the tool in Indian population.

**Dr. Balram Bhargava**, DG, ICMR said "The validated Multilingual Dementia Research and Assessment (MUDRA) Toolbox available now in various Indian

languages Hindi, Bengali, Telugu, Kannada and Malayalam. This was one of the crucial needs for undertaking uniform, standardized dementia research in the country. The tool box includes various cognitive tests to assess different domains of cognition such as attention and executive function, memory, language, and visuospatial functions. The questionnaires assess depression, functionality, quality of life, prevalence of neuropsychiatric symptoms and informant questionnaire on cognitive decline in elderly. ICMR has decided to make this tool freely accessible to professionals and researchers across the country. We hope this would be used in quality longitudinal studies and for early and accurate diagnosis of dementia. It includes a short 5 minutes cognitive screening instrument for the busy clinic, and a detailed version for more in-depth clinical testing or for research.”

**Dr. Meenakshi Sharma**, a senior scientist at ICMR involved in development of this battery said “Most of the existing batteries are largely designed for educated English-speaking population, the MUDRA Toolbox, on the other hand, was developed to address cultural and linguistic diversity. The toolbox is designed to provide detailed neuropsychological profile of a patient and is a standardized measure of diagnosis for mild cognitive impairment (MCI) and dementia.”

**Dr. Suvarna Alladi**, Prof. Neurology, NIMHANS and Clinical Coordinator for development of MUDRA Toolbox said “Research paper describing the study design ‘*Standardizing Dementia Diagnosis Across Linguistic and Educational Diversity: Study Design of the Indian Council of Medical Research-Neurocognitive Tool Box (ICMR-NCTB)*’ has been published in February 2020 in Journal of International Neuropsychological Society. The toolbox has been validated for diagnosis of dementia and MCI. The clinicians and researchers will be encouraged to use the tool and submit data online which will help for improving the performance of tool and coming up with its higher version.”

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**About ICMR:** The Indian Council of Medical Research (ICMR), New Delhi, is the apex body in India for the formulation, coordination and promotion of biomedical research, is one of the oldest medical research bodies in the world. ICMR’s research priorities align with the National health priorities. These efforts are undertaken with a view to reduce the total burden of disease and to promote health and well-being of the population. ICMR promotes biomedical research in the country through intramural as well as extramural research. Visit us at <https://www.icmr.gov.in/>

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