better cannabis policy. Unfortunately, cannabis policy in the USA has often failed to be grounded in scientific evidence for several reasons, ranging from cannabis' federally illegal status and ideologically based beliefs about cannabis, to inadequate funding of research. The Canadian strategy for legalisation, which includes provincial, federal, and private stakeholders, offers tremendous potential. With the health of millions of Canadians and, by extension, people living in countries whose future cannabis policies will be affected, at stake—the world will be watching.

Kevin P Hill, Tony P George
Division of Addiction Psychiatry, Harvard Medical School, Boston, MA, USA (KPH); Beth Israel Deaconess Medical Center, Boston, MA 02215, USA (KPH); Department of Psychiatry, University of Toronto, Toronto, ON, Canada (TPG); and Addictions Division, Centre for Addiction and Mental Health, Toronto, ON, Canada (TPG)
khill1@bidmc.harvard.edu

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ICD-11: the importance of a science of psychiatric nosology

WHO

After a decade of work, WHO released ICD-11 to its 194 member states for review and preparation for implementation.[1] The World Health Assembly is expected to approve the revision at its next meeting in May, 2019, with reporting of health statistics to be based on ICD-11 from January, 2022. The current version of the classification ICD-10 was approved in 1990, making this period the longest between major revisions of the ICD since its inception. Revision of the chapter on mental, behavioural, and neurodevelopmental disorders for ICD-11 provides the field with an important opportunity to incorporate a broad range of developments in our understanding of mental disorders over the past quarter century.

Clinical neuroscience has advanced knowledge of the neurobiology of mental symptoms and has emphasised the value of translational neuroscience for improving assessment and treatment.[2] It has noted that genes and environments interact to cause pathology, that symptoms fall on dimensions and evolve over time, and that interventions do not sufficiently target relevant underlying mechanisms. Global mental health, on the other hand, has advanced understanding of social determinants of mental symptoms and has emphasised the value of a public health approach to assessment and intervention.[3] It has noted that experience and expression of pathology differs across cultures, that symptoms fall on dimensions and evolve over time, and that interventions are often transdiagnostic. From both of these perspectives, psychiatric nosologies require improvement.

What is a nosologist to do? A first step is to draw carefully on relevant advances. Knowledge about underlying neurobiological mechanisms provided by neuroscience can be incorporated in psychiatric classifications. DSM-5 spent a good deal of time and effort on the optimal metastructure for psychiatric classifications, reviewing the literature on relevant diagnostic validators. ICD-11 collaborated in this process and has, mostly, made similar decisions regarding metastructure. For example, evidence that some obsessive-compulsive and related disorders share underlying neurocircuitry and respond to similar interventions was used in both DSM-5 and ICD-11 to justify moving these conditions to a new section.[4] The argument that substance use disorders and gambling disorder require analogous public health approaches was used to justify the ICD-11 decision to classify these conditions together.[5]

A second step is the ongoing acquisition of empirical data addressing specific nosological decision points. Metastructure questions, for example, might be usefully informed by data on how clinicians use classification systems. Early in the revision of ICD-11, formative field studies[6] of psychiatrists and psychologists around the globe were done and found that respondents thought it key for a classification to facilitate communication and to inform treatment, and they preferred a simpler system (100 or fewer categories) with flexible guidance, rather than strict criteria-based diagnoses. Other early studies[7,8] examined clinicians' conceptualisations of the relationships among mental disorders. Clinicians' conceptual map of these disorders was stable across professions, languages, and countries, and was generally consistent with the proposed structure for ICD-11.

Nosological science might draw on a range of experimental designs. Epidemiological data, for example, could be key in informing nosology; data from the World Mental Health Survey Initiative[9] have shed light on a range of questions regarding optimal shaping and thresholding of diagnostic criteria, drawing on respondents from around the globe. A Global Clinical Practice Network[10] of nearly 15 000 practitioners from 155 countries has allowed rigorous case-controlled testing of specific ICD-11 proposals, maximising the cross-national clinical utility of the classification. Field trials,[11,12] in a range of different countries where the ICD-11 will be implemented, have further contributed to ensuring the cross-cultural reliability and utility of ICD-11 diagnostic guidelines. Overall, ICD-11 field testing has indicated that the ICD-11 represents a significant albeit incremental advance from the ICD-10.

Given the complexity of nosological decision making and gaps in knowledge, ongoing critiques of any psychiatric classification system should be expected and encouraged. Advances in psychiatric research in general, and progress in nosological science in particular, will continue to be iterative. Such progress is key to improving the clinical utility of classification systems and to reducing the global disease burden of mental disorders. Neuroscience research will continue to be informative, but no evidence has suggested that genetic or other biological information will lead to a paradigm shift in diagnostic classification in the immediate future. Public mental health considerations will continue to be important, particularly for global health classification. Ultimately, however, the success of the field will depend on ongoing funding for and attention to psychiatric nosological science.

Dan J Stein, Geoffrey M Reed
SA Medical Research Council Unit on Risk and Resilience in Mental Disorders, Department of Psychiatry, University of Cape Town, Cape Town 7494, South Africa (DJS); Department of Mental Health and Substance Abuse, WHO, Geneva, Switzerland (GMR); and Department of Psychiatry, Columbia University Medical Center, New York, NY, USA (GMR)
dan.stein@uct.ac.za

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