International Psychogeriatrics (2015), 27:6, 881–882 © International Psychogeriatric Association 2015
doi:10.1017/S1041610215000502

COMMENTARY PAPER OF THE MONTH

Delirium classification by the diagnostic and statistical manual – a moving target

The following paper, entitled "A Comparison of Delirium Diagnosis in Elderly Medical Inpatients using the CAM, DRS-R98, DSM-IV and DSM-5 Criteria" by Adamis and colleagues, reports the results of a single delirium assessment of 200 medical inpatients, aged 70 years and older. The aim was to compare the prevalence of delirium using two different diagnostic classification systems (DSM-5 and DSM-IV) and two commonly used research tools (Confusion Assessment Method and the Delirium Rating Scale-Revised '98). This editorial focuses on the comparison of the two versions of the DSM. The authors conclude that, while both diagnostic systems identify a core concept of delirium, the DSM-IV criteria are the most inclusive of the four approaches and the DSM-5, the most restrictive, identifying a prevalence of 19.5% and 13%, respectively in this sample. Furthermore, they conclude that these two systems do not appear to detect the *same* patients: only 14 of 26 (54%) individuals identified as delirious by the more exclusive DSM-5 criteria were also identified as such by DSM-IV.

The prospective application of the DSM-IV and DSM-5 criteria in the same sample is one of the strengths of this study. Previously published work includes only a retrospectively applied *post hoc* method, using a "strict" versus "relaxed" operationalization of the DSM-5 criteria, compared to the DSM-IV classification system which was employed at the time of data collection (Meagher *et al.*, 2014). Similar to the Adamis study, Meagher and colleagues found the DSM-IV criteria to be the most inclusive, identifying the largest number of patients. Comparability to the new DSM-5 system varied, depending on how the criteria were operationalized: a strict interpretation which required all referenced characteristics to be present, resulted in overlap between the two diagnostic systems in only 30% of individuals diagnosed with DSM-IV delirium. The relaxed interpretation resulted in identification in 89% of similar cases.

It is of both scientific and clinical concern that a significant discrepancy exists between the two systems. Generalizing from the Adamis study, DSM-5 criteria will identify different and substantially fewer patients with delirium. Scientific strides have been made over the last 15 years, demonstrating the negative outcomes of this syndrome and making a coherent argument for its clinical detection, treatment, and prevention. The bulk of this literature is predicated on the DSM-IV diagnostic system. To arbitrarily move our diagnostic target to a new group of patients previously not meeting criteria, and more importantly, excluding one-third of the previously identified patients with similar symptoms, threatens to interfere with clinical care and confuse both the science and the clinicians seeking to identify and care for patients. The changes in DSM-5 criteria were not predicated on evidence of inadequacy of the DSM-IV criteria as a whole (Blazer and van Nieuwenhuizen, 2012). Furthermore, subsyndromal forms of delirium are only incrementally less likely to result in the same poor outcomes documented for the full syndrome, arguing for an inclusive approach to categorization (Meagher *et al.*, 2012; Cole *et al.*, 2013). While it is important to understand the outcomes of the newly identified subgroup of delirious patients by the DSM-5, changing the focus of future research potentially sets back research generalizability and may place patients at risk, due to disregard of their clinically relevant symptoms.

The DSM-5 "A" criterion represents a change from "*disturbance in consciousness* with reduced ability to focus, sustain or shift attention" in the DSM-IV to "*disturbance in attention* ... and awareness (reduced orientation to the environment)" (see Table 1). Whereas, delirium has long been regarded as a disorder of consciousness, the content of this criterion has been the bugbear of delirium phenomenology for many versions of the DSM. The DSM-III phrase, "clouding of consciousness" was described as "a metaphorical concept that [is] obsolete, vague, and redundant" (Lipowski, 1990); now the most recent incarnation of this criterion has replaced "consciousness" with "awareness." As discussed in a recent editorial, the implication of these seemingly small changes in wording, now emphasizing inattention over arousal or its equivalent, threatens to exclude large numbers of very ill patients who are unable to demonstrate their problems with attention (i.e. untestable) due

https://doi.org/10.1017/S1041610215000502 Published online by Cambridge University Press

to their decreased arousal (European Delirium Association and American Delirium Society, 2014). The addition of a new "D" criterion, which requires the exclusion of patients with coma and other neuropsychiatric conditions, only fuels this trend.

Adamis and colleagues have operationalized Criterion A by using items from the Reversible Cognitive Dysfunction Scale (see Table 2). This is an important example of transparency in research. A recent study of delirium reference standard practice highlights the significant variability in methods around diagnosis and encourages greater standardization (Neufeld *et al.*, 2014). Excellent examples of such standardization can be found in earlier applications of the DSM in delirium research (Gottlieb *et al.*, 1991; Meagher *et al.*, 2014). While there is not always space in written publications for this level of detail, it would be helpful if all authors published study manuals and detailed methodologies in online appendices to increase generalizability of diagnostic practice. Since the diagnosis of delirium is made exclusively upon clinical grounds, such standardization is essential in order to help move the field forward, particularly as we are dealing with shifting diagnostic systems.

In summary, the Adamis study is an important contribution to the field of delirium research – it highlights a problem with the moving target of diagnostic classification and the benefits of careful phenomenological study of the differing approaches to delirium diagnosis. It confirms the inclusivity of the DSM-IV criteria. In addition to identifying fewer patients with the diagnosis, the use of the new DSM-5 criteria, compared to DSM-IV, will identify different individuals in nearly one half of cases. One remedy is to revert to the DSM-IV criteria, or include them alongside the DSM-5 in future studies so that we can evaluate the impact of changes in detection on outcome. Secondly, regardless of the classification system in use, researchers would help propel the science of delirium further by publishing detailed descriptions of how each diagnostic criterion was operationalized when making the diagnosis.

Conflict of interest

None.

KARIN J. NEUFELD

Department of Psychiatry and Behavioral Sciences, Johns Hopkins University, Baltimore, USA Email: kneufel2@jhmi.edu

References

Blazer, D. G. and van Nieuwenhuizen, A. O. (2012). Evidence for the diagnostic criteria of delirium: an update. *Current Opinion in Psychiatry*, 25, 239–243. doi:10.1097/YCO.0b013e3283523ce8.

Cole, M. G. *et al.* (2013). The course of subsyndromal delirium in older long-term care residents. *The American Journal of Geriatric Psychiatry: Official Journal of the American Association for Geriatric Psychiatry*, 21, 289–296. doi:10.1016/j.jagp.2012.12.008.

European Delirium Association and American Delirium Society (2014). The DSM-5 criteria, level of arousal and delirium diagnosis: inclusiveness is safer. *BMC Medicine*, 12, 141. doi:10.1186/s12916-014-0141-2.

Gottlieb, G. L., Johnson, J., Wanich, C. and Sullivan, E. (1991). Delirium in the medically ill elderly: operationalizing the DSM-III criteria. *International Psychogeriatrics/IPA*, 3, 181–196.

Lipowski, Z. J. (1990). *Delirium: Acute Confusional States*. New York: Oxford University Press.

Meagher, D., Adamis, D., Trzepacz, P. and Leonard, M. (2012). Features of subsyndromal and persistent delirium. *The British Journal of Psychiatry: The Journal of Mental Science*, 200, 37–44. doi:10.1192/bjp.bp.111.095273; 10.1192/bjp.bp.111.095273.

Meagher, D. J. *et al.* (2014). Concordance between DSM-IV and DSM-5 criteria for delirium diagnosis in a pooled database of 768 prospectively evaluated patients using the delirium rating scale-revised-98. *BMC Medicine*, 12, 164. doi:10.1186/s12916-014-0164-8.

Neufeld, K. J. *et al.* (2014). Delirium diagnosis methodology used in research: a survey-based study. *The American Journal of Geriatric Psychiatry: Official Journal of the American Association for Geriatric Psychiatry*, 22, 1513–1521. doi:10.1016/j.jagp.2014.03.003.

https://doi.org/10.1017/S1041610215000502 Published online by Cambridge University Press