Reviewer's report

Title: Validating estimates of problematic drug use in England

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Reviewer: Li-Tzy WU

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General
Study Aim -- This study aims to assess the face validity of problematic and injecting drug use estimates derived using a statistical model, known as the Multiple Indicator Method (MIM), for all English Drug Action Teams in 2001.

Abstract – Not sure if this sentence “This 61% of DATs had acceptable PDU/IDU estimates” is correct.

“These figures increased as a consequence of this study.” ----- There are no clear data to support if this is the case.

“the MIM provides a way of providing valid estimates for an increasing number of DATS” ----- There is uncertainty concerning the reliability and validity of the indicators, it is unclear if the MIM actually provides a way of providing valid estimates for an increasing number of DATS.

Background – The paper was not numbered completely.

The two main acronyms, IDU and PDU, had never been defined at the beginning of the paper. Yet IDU, PDU, injecting drug use, and problematic drug use were used interchangeably. Readability could be improved significantly if acronyms were defined and then be used consistently throughout the text.

The authors stated that the MIM estimates are based on a model but did not explain what model it is. Clarification would be helpful.

The sentence “… there is no way of directly obtaining this information …” needs clarification. Does it mean that there is no way of directly obtaining the information concerning how many problematic and injecting drug users there actually are in each DAT? Are there expensive ways available?

Methods – “Problematic drug use” was defined as current use of illicit opiates, crack-cocaine, or benzodiazepines, which seems to be arbitrarily. Rationale is needed to justify why it is limited to these three drug classes. Citation to support this definition would be helpful.

The target study sample [149 English Drug Action Teams] is appropriate. However it is not clear how the study was conducted to ensure that only the person (or persons) best placed in each English Drug Action Teams assessed the number of drug users.

There needs to be a description of the 2001 MIM estimates for the 149 DATS in England because this study is to determine their face validity.

Results –

The overall readability would be improved significantly if the Results section was reorganized with clear sections for each PDU and IDU and with clear subheadings for each section.

What are NTA, and BCS?

Under the subheading “FURTHER ANALYSIS OF INJECTING DRUG USE”, the authors described the findings of PDU. Should it be IDU?

The sentence beginning with “Figure 1 shows…,” the authors should make it clear that Figure 1 is related to
Before “Figure 1”, a subheading for “COMPARISON OF DATS OWN PDU ESTIMATES AND THE MIM PDU ESTIMATES” is recommended.

Under the subheading “COMPARISON OF DATS OWN IDU ESTIMATES AND THE MIM IDU ESTIMATES”, the authors mentioned PDU (second line).

There are three Figure-1.

Discussion –
The first paragraph, it is unclear how 63% was obtained.

The second paragraph, it is unclear how 51% was obtained.

A brief description of “capture-recapture” would be helpful to readers.

Conclusions – “Not withstanding this limitation, 46 DATs (31%) had a PDU estimate, while 38 (26)% had an IDU estimate” ------ The estimates of 31% and 26% still are considered low. Implications from these low estimates and how it may affect the findings of this study should be discussed [eg, the validity of DAT’s assessments/interpretations of the number of drug users in DATs.]

“The MIM shows that it is not necessary to use capture-recapture for every DAT. Both from a scientific and an economic point of view, the current results indicate that focusing capture-recapture on selected anchor points is likely to yield better results.” ----- These sentences need clarification on why focusing capture-recapture on selected anchor points is likely to yield better results.

The last paragraph of Conclusions – “Recently, researchers have estimated problematic drug use for all DATS in England using capture recapture. The estimated number of problematic drug user in England for 2004 was 340,000.” ----- Were the estimates of 340,000 obtained from the capture recapture method? “This figure represents an 18% increase on the 2001 MIM study, yet between 2001 and 2004 the level of self-reported drug use among people aged 16-59 in then population has dropped by 11% from an estimated 2.3 million to 2.1 million15, and the number of opiate overdose deaths declined16.” ----- How “self-reported drug use” was defined and how it was related to the definition for “problematic drug user”?  

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests