

Peer Review File

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Reviewer A

Abstract and Highlight Box

- The content is very clearly summarized.

Reply: Thank you for your comment.

Introduction

- The background of this study and the current status of fungal infections in the world are very clearly summarized, highlighting key issues.

Reply: Thank you for your comment.

Materials and Methods

- Please consider adding references to foreign AFS metrics that served as the basis for this metric, either in the references section or explicitly in the text.

Reply: Thank you for your suggestion. The foreign AFS metrics referred to in this consensus were all referenced from the international Delphi consensus, i.e. reference 16. We have supplemented the references where foreign AFS metrics are mentioned in the text, and listed the serial numbers of the retained metrics and the modified metrics in *Section 3.2 Candidate metrics*.

Changes in the text: see Line 133-135.

- The consensus development team seems overwhelmingly composed of respiratory specialists; what is the reason for this?

- Why were members from this field chosen for the consensus development team?

Reply: Thank you for your inquiry. This is because China and other countries have different national conditions. Chinese respiratory specialists mainly treat pulmonary infectious diseases, while infectious disease specialists mainly treat liver diseases and tuberculosis. To dispel similar doubts, we have explained the reasons for the composition of the experts in *Section 4 Discussion*.

Changes in the text: see Line 241-243.

- It seems desirable to have more infectious disease specialists with extensive experience in the diagnosis and treatment of fungal infections involved in specifying AFS metrics, but this study only includes two such members. What are your thoughts on this matter?

Reply: Thank you for your inquiry. As mentioned above, infectious disease specialists in China are mainly responsible for liver disease and tuberculosis. To dispel similar doubts, we have explained the reasons for the composition of the experts in *Section 4 Discussion*.

Changes in the text: see Line 241-243.

- There may be variation in the survey results of the consensus development team

members due to differences in their experience, with some having more experience in diagnosing and treating fungal infections than others. It might be beneficial to add each expert's practical experience with infectious diseases to Table 1.

Reply: Thank you for your suggestion. All experts in this consensus have more than 10 years of experience in the diagnosis and treatment of fungal infections, and the relevant data have been given in Table 1.

Changes in the text: no changes.

Results

- In cases where experts disputed certain metric items, it would be desirable to mention the basis of their disagreement, whether it stems from literature or clinical experience. While there may be constraints on disclosing personal information, specifying which field of medicine the disputing physician comes from would provide more valuable information to readers. For instance, I am particularly interested in knowing which field of medicine the physician who disputed the metric concerning "Length of Treatment" comes from. As mentioned in the text, this is crucial clinically, especially in certain fungal infections like Cryptococcus infection in artificial heart valve recipients, where lifelong treatment is necessary.

Reply: Thank you for your insightful comments. Based on your suggestion, we have indicated in *Section 3 Results* which medical field the disputing experts are from, and the doctors disputing the "Length of Treatment" metrics are specialists in respirology or pharmacology.

Changes in the text: see Line 233.

Discussion

- The importance of AFS and detailed considerations regarding metrics related to "Appropriate Timing of Antifungal Therapy" are thoroughly discussed.

Reply: Thank you for your comment.

Reviewer B

Line 16: "but can also..."

Reply: Done.

Changes in the text: see Line 16.

Line 21, 63: please first define "ICU" (abbreviations have to be defined in both the Abstract and the Main Text.)

Reply: Done.

Changes in the text: see Line 21, 64.

Line 30, 44, 315: "the standard of..."

Reply: Done.

Changes in the text: see Line 30, 45, 329.

Line 47: “including choose the right drug and right dosage,” => “including choosing the right drug with the right dosage,”

Reply: Done.

Changes in the text: see Line 48.

Line 60: “suggests that...”

Reply: Done.

Changes in the text: see Line 61.

Line 70: “the clinical application of antifungals” => “the clinical application of antifungal drugs”

Reply: Done.

Changes in the text: see Line 72.

Line 95: “improving” => “improve”; “controlling” => “control” (verb usage after “to”)

Reply: Done.

Changes in the text: see Line 97.

Line 104: “Antifungal Drugs” (style issue, upper case)

Reply: Done.

Changes in the text: see Line 106.

Line 111: new line for “2.3 The Delphi process”

Reply: Done.

Changes in the text: see Line 114.

Line 127: “were recovered” => “were well responded to”

Reply: Done.

Changes in the text: see Line 129.

Line 132: “8” => “eight”; “4” => “four” (better to spell out number <10 for formal writing; please check across the whole paper)

Reply: Numbers below 10 have been spelled out for formal writing, except for numbers in brackets.

Changes in the text: see Line 39, 121, 134, 135, 136, 215, 219, 233, 260.

Line 141: please first define “PCR” and “NGS” (abbreviations have to be defined in both the Abstract and the Main Text.)

Reply: Done.

Changes in the text: see Line 141, 143, 144, 146.

Line 146: use comma after the quotation of the metric, and use “as the preliminary metrics” in lower case after that

Reply: Done.

Changes in the text: see Line 151.

Line 168: please first define “IM” (abbreviations have to be defined in both the Abstract and the Main Text.)

Reply: Done.

Changes in the text: see Line 173.

Line 193: please first define “TDM”

Reply: Done.

Changes in the text: see Line 201.

Line 243: please first define “mNGS/tNGS”

Reply: Done.

Changes in the text: see Line 144.

Line 256: delete “sustained”

Reply: Done.

Changes in the text: see Line 270.

Line 282: please first define “PK/PD”

Reply: Done.

Changes in the text: see Line 200.

Line 290, 301, 305: “as an metric” => “as a metric”

Reply: Done.

Changes in the text: see Line 304, 315, 319.

Line 316: “antifungals” => “antifungal drugs”

Reply: Done.

Changes in the text: see Line 330.