Tool to assess knowledge of precautions against transmission of microorganisms in Brazil's primary health care

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Introduction

Health care workers' adherence to Standard Precautions and Specific Precautions is essential to preventing transmission of microorganisms in both, hospitals and primary health care (PHC). Little is known about the risk of infection transmission and practice of precautions in non-hospital settings, particularly in PHC. In addition, comparing the information available is problematic due to lack of standard and specific tools for PHC.

Objective

To develop and validate a tool for assessing health care workers' knowledge of specific precautions in PHC.

Methods

The study was approved by the Ethics Committee for Research on Human Subjects at Federal University of São Carlos .

Multimethod research carried out in São Carlos, Brazil, in three consecutive phases.

Focal Group – phase 1

- Identify relevant issues

Developed tool – phase 2

- Development of a tool to assess the knowledge and behavior

Validated – phase 3

- Validated by judges by means of a 4-point Likert scale with Content Validity Index (CVI) ≥ 0.80 for approval of items.

Results

Phase 1

Gaps at professionals' knowledge.

- Low awareness of risk of infection transmission
- Hand hygiene
- Use of gloves
- Tuberculosis
- Handling sharp objects at home

Phase 2

Tool developed consists of two modules.

- **Module A** - A total of 40 dichotomous questions to assessing the participants' knowledge for each priority issue.

- **Module B** contains 12 questions with five Likert-type response options, ranging from 'never' to 'always,' to assess the said professionals' behavior in everyday work situations.

Phase 3

Every tool question was evaluated for clarity, relevance and pertinence. Only two of them pertaining to the dimensions 'hand hygiene' and 'glove use' were left out (IVC < 0.80). The judges suggested small changes in the phrasing of 11 items in Module A, and also validated the tool as a whole as regards relevance, breadth, and representativeness.

Conclusion

- The tool developed was validated and is available for use.
- The tool can be used in similar cultural and socioeconomic contexts.
- Further studies should employ this assessment tool for pre and post educational action with health care.

References
Padoveze MC, Figueiredo, RM. The role of primary care in the prevention and control of healthcare associated infections. Rev Esc Enferm USP, 2014.
Martín-Madrazo C et al. Evaluación del cumplimiento de higiene de las manos en un área de atención primaria de Madrid. Enferm Infecc Microbiol Clin. 2011.
Centers for Disease Control and Prevention. CDC. Guide to infection prevention in outpatient settings: minimum expectations for safe care, 2015.
Milshina N, et al. Risk of infection among primary health workers in the Western Development Region, Nepal: knowledge and compliance. J Infect Dev Ctries. 2011.
Maroldi MAC. Precauções padrão e específicas para controle da transmissão de patógenos: necessidades da atenção primária em saúde [Dissertation]. São Carlos (SP): Universidade Federal de São Carlos; 2015.