

Abstract:

Objectives: The present study aimed to assess the level of knowledge on peripherally inserted central catheter (PICC) maintenance among nurses in China and to analyse the related factors influencing this variable.

Design: A cross-sectional survey.

Setting: Ninety-one hospitals at three different levels in Hunan Province, China: county hospitals, municipal hospitals and provincial hospitals.

Participants: A total of 4110 registered nurses engaged in clinical work related to intravenous infusion.

Primary and secondary outcome measures: Nurses' knowledge of PICC maintenance was measured by the score of an anonymous, self-reported questionnaire.

Results: The mean score of PICC maintenance among 4110 nurses was 72.86 ± 14.86 . 83.5% of the participants exhibited a score of 60 or above, and 34.1% of them exhibited a good grade with a score of 80 or above. The difference in the correct rate among different dimensions was statistically significant ($H=17.721$, $p<0.01$). The generalised linear model indicated that the factors influencing the nurses' PICC maintenance knowledge included gender, age, professional title, work setting and previous history of PICC maintenance training.

Conclusions: In conclusion, the knowledge of PICC maintenance was at a medium level among nurses in Hunan province, China. Multiple steps should be taken to improve the nurses' PICC maintenance knowledge, including disseminating PICC maintenance knowledge in multiple ways, such as courses, lectures, seminars and new media. Particular attention should be given to populations who responded poorly in this survey, and targeted education for nurses should be distributed based on their performance on specific dimensions, such as the replacement of dressing and needle-free connectors. In addition, the quality of the nurses' practical performance could be measured in the future.

Reference:

Xu, B., Zhang, J., Hou, J., Ma, M., Gong, Z., and Tang, S. (2020) Nurses' knowledge of peripherally inserted central catheter maintenance and its influencing factors in Hunan province, China: a cross-sectional survey. *BMJ Open*. 10(5), p.e033804.
<https://doi.org/10.1136/bmjopen-2019-033804>.



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