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PAPER TITLE:

**A COST-EFFECTIVE APPROACH OF IDENTIFYING COMMUNITY-DWELLING
ELDERS WITH POSSIBLE DEMENTIA THROUGH PERIODIC MINI-COG
SCREENING**

Abstract

AIM: There has been ongoing debate over the real benefits and cost-worthiness of dementia screening especially targeting elders living in the community and without obvious symptoms^{1,2}. Dementia screening tests even with high specificity, may still generate a significant number of false positives in a low-prevalence population³. Apart from causing unnecessary distress in both patients and their families, false positives could also lead to additional cost and misuse of professional resources due to avoidable diagnostic workups⁴. An objective of this study was to explore the benefits of a periodic screening model, with the Mini-Cog as the screening tool, in minimizing the possibility of generating false-positives.

METHOD: 96 non-clinical community-dwelling Chinese elders in Toronto, age ranged from 65-94, were recruited for the study. Research participants were screened for possible dementia by the Mini-Cog (sensitivity=0.91; specificity=0.86)⁵ repeatedly at 3 consecutive times and the interval between each screening round was 4-month. The rate of detection in each screening round was recorded, and participants' consistency of having positive-screen in all screening rounds was evaluated.

RESULTS: Of the 96 Chinese elders who received the 1st round screening, 35 (36%) were screen-positives. 78 (81%) of the recruited participants entered into the 2nd round of screening, of those, 25 (32%) were having a positive-screen. In the 3rd round, there were 73 (76% of the 1st round participants) being tested by the Mini-Cog, and of those, 26 (36%) were screen-positives. By combining the results of the 3 consecutive screenings, there were 13 (19% of the 73) who were consistently found to be screen-

positives and should warrant diagnostic workups. The net sensitivity of the periodic screening was 0.75, and the net specificity was 0.99.

CONCLUSION: A periodic screening model involving lay-interviewers and employing a brief, easy-to-use and inexpensive screening instrument may be a cost-effective solution for community-based dementia screening.

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