Crucial role of primary healthcare professionals in the assessment and diagnosis of dementia

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Worldwide, dementia is one of the major causes of disability and dependency among elderly populations. Globally, there are approximately 50 million people with dementia, and nearly 10 million new cases are diagnosed every year.[1] The global costs and economic impacts of dementia to the society are huge—an amount equivalent to about 1 trillion dollars in 2019.[2] China accounts for approximately 25% of the worldwide population of patients with dementia.[3] The overall prevalence of dementia in Chinese people aged ≥60 years is 5.3% (95% confidence interval=4.3%-6.3%).[4] Both the annual cost per person and the proportion of the national gross domestic product that dementia accounts for exceeds the global averages, imposing a substantial economic burden on China.[5] In addition, other conditions that are common in elderly populations, such as frailty, hip fractures, and cancer[6-9] may further compound the consequences of dementia.

In this issue of *the Hong Kong Medical Journal*, Lam and colleagues report findings with important implications for the assessment and diagnosis of dementia.[10] They review recent approaches for its diagnosis and highlighted their applications in primary healthcare settings. They summarise the importance and definition of dementia, categorise the differential diagnosis of cognitive impairment, and explain the diagnostic approach, including the history and physical examination, cognitive assessment, laboratory tests, and neuroimaging. Most importantly, Lam et al[10] provide background information and advice for healthcare professionals on how they should utilise recent approaches in diagnosing dementia in clinical practice. Recent studies have used standardised patients who were recruited from local communities and extensively trained to present the same set of standard symptoms to multiple providers to assess quality of clinical care in China, India, and Kenya. They have shown that the quality of primary care in low-and-middle-income countries was poor.[11-16] Most cases were incorrectly diagnosed based on a very lenient definition, and simple medical conditions were improperly managed in the majority of cases. Antibiotics were usually inappropriately overprescribed, and it was less likely for primary care providers to refer patients to higher-level hospitals for specialist care when needed. Although the large "know-do gap"—the gap between healthcare providers' knowledge and their performance in clinical practice—can explain part of the low quality, the lack of essential and updated knowledge to handle this medical condition is still one of the major reasons for substandard care.[17-19] According to the National Institute for Health and Care Excellence guideline on dementia issued in 2018, primary care professionals are expanding their roles in the diagnosis and assessment of dementia, which highlights the need for updated education and training for healthcare professionals on dementia diagnosis and treatment.[20]

Lam et al[10] provide background information for the diagnosis of dementia; however, there are caveats that require caution when we are using these methods. First, the costs of each type of diagnostic method should be considered. For example, neuroimaging can be very expensive and is not without hazard. It may not be suitable for extensive use in primary care. Second, the sensitivity and specificity of the tools should be explored to minimise misdiagnosis due to false positive or false negative results. Third, individuals with a high risk of cognitive impairment and dementia should also be identified. Patients with a profile of cardiovascular risk factors (ie, hypertension, diabetes, or dyslipidaemia) are more likely to have dementia.[21] Diagnosis and screening may be more efficient if primary care professionals could recognise these patients earlier.

Not only should primary care providers be trained in management of dementia, but a national level project should be implemented to train specialists on dementia so as to enhance capacity to devise interventions in the community, such as establishment of more memory clinics. Training modules are suggested to be based on most recent research findings, including systematic reviews and meta-analysis. For instance, the 2018 National Institute on Aging–Alzheimer's Association Research Framework could be adopted in the design of training materials.[22,23] Moreover, the prevalence of dementia and updated clinical management guidelines in China should be incorporated. Recent studies in Hong Kong have also highlighted some novel findings that could be applicable for care of dementia.[24-28] In addition to training professionals, building an appropriately structured partnership,

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which takes incentives for both primary care providers and specialists, the welfare of patients and caregivers, and the cost of government and society into consideration, is also a challenge for policymakers in redesigning healthcare policy. It is also essential to enhance public awareness so that dementia patients and their caregivers are encouraged to seek help from professional care facilities for reducing their physical and mental burden.[5]

Author contributions

All authors contributed to the concept or design, acquisition of data. analysis or interpretation of data, drafting of the article, and critical revision for important intellectual content. All authors had full access to the data, contributed to the study, approved the final version for publication, and take responsibility for its accuracy and integrity.

Conflicts of interest

The authors have declared no conflict of interest.

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