**Title: The role of the primary care nurse in screening people with suspected dementia**

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Nurses working in the primary care or independent setting are uniquely positioned to be able to screen people with suspected dementia, they are often known to the person and engage with them in a relaxed setting which could be designed to be dementia friendly. This article offers a brief overview of causes and types of dementia, suggests relevant tools, and illustrates the need to include carers. There is a need for screening people with suspected dementia (PWSD) as numbers are increasing, with the World Health Organisation identifying 55 million people already living with this condition and a prediction of this increasing to 75 million by 2030 (WHO (World Health Organisation) 2017).

Primary care is accountable for the screening and ongoing management of care for people with dementia, which is a challenge, particularly as dementia is so multifaceted in presentation and relies heavily on carer input. Contributing factors to successful identification and management includes the wide variation in practitioners' knowledge of dementia combined with limited time available for practitioners to managing dementia with its multiple physical, psychological, and social dimensions. (Evripidou et al. 2019). It is imperative to include the carer with early screening processes. The National Institute for Health and Care Excellence guideline (2018) explains how a PWSD should be assessed and managed post-diagnosis with full carer support. The process of screening of the PWSD is an important public health need and is key component of the National Health Service Long term plan (NHS 2019) alongside offering a timely assessment, and post-diagnosis care

**The complexity of screening for dementia**

Currently, no screening test can find people with dementia before showing symptoms, therefore, a national screening for dementia programme has not been recommended (United Kingdom National Screening Committee 2019). However, when assessing dementia, practitioners must be proficient in identifying the characterising markers, such as being able to rate the presence of marked impairment in cognition. Understandably, memory and its severity of impairment is often the focus of assessment and is present in most forms of dementia. However, cognitive impairment is not limited to memory, and assessment needs to explore other domains such as complex attention, ability to execute a task to an end point, maintain focus, learning, language, perceptual-motor control, and social awareness. Past medical history needs to be also recognised with markers for dementia consisting of inherited genetic predisposition, previous levels of functioning with growing evidence suggests a relationship between the development of cognitive impairment and life-style related risk factors shared with other non-communicable diseases such as cardiovascular disease, diabetes, and cancer. These risk factors include physical inactivity, obesity, unhealthy diets, tobacco use and harmful use of alcohol.

In screening PWSD, meaningful involvement and inclusion of their significant carers can assist in several ways. Dementia is "an illness of two people" where the PWSD is affected. Still, the heaviest burden falls to their primary carer, who will often be a spouse or sibling (all of whom will have differing healthcare experiences). Best practice screening involves the practitioner encompassing the input from an engaged and informed carer. A solid foundation of trust where the carer feels an active part in the process conveys inclusive practice.

Dementia is complex, with over 200 sub-types of dementia, each with individual causes and markers. The most common are identified as Alzheimer's, Vascular dementia, Lewy Body, frontotemporal dementias, and mixed dementia and briefly outlined in the following table.

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| **Common types of Dementia** | **Common Markers** |
| Alzheimer's disease:  Involves neurofibrillary tangles, amyloid plaque, and atrophy of the brain. | Slow, insidious onset with a progressive steady decline with symptoms worsening over time.  Early stage is identified with memory loss, especially for names and recent events, word-finding difficulties. |
| Vascular dementia  Abrupt or gradual onset because of the brain's blood supply being compromised by arterial disease. | Focal neurological signs of vascular disease (hypertension, diabetes, arterial disease, and smoking) in conjunction with cognitive impairment. |
| Lewy body dementia  Lewy bodies are small aggregations of a protein that occur in neurons in various areas of the brain, including the cerebral cortex in dementia with Lewy bodies. | Shares several symptoms with Alzheimer's disease and Parkinson's disease. Presentation of visual hallucinations, recurrent falls, and marked fluctuations in levels of conscious. |
| Frontotemporal dementia  Affects frontal regions of the brain responsible for planning, emotion, motivation, and language. | More prevalent in the younger age group.  Behaviour can be disinhibited and socially inappropriate behaviours, apathy, decreased motivation and impaired judgement.  (Previously known as Pick's disease) |
| Mixed dementia | More than one type of dementia can co-exist causing mixed dementia.  Common mix: Alzheimer's and vascular dementias, where markers are common to both conditions.  Mix dementia more common with advanced age, beyond 80 years. |

Table 1: Summary of types, causes and presentation of dementia.

**The experience of screening**

For a PWSD, being invited for a dementia assessment is often unwelcomed or rejected, placing an extra burden on a carer to coax and cajole attendance. During screening sessions, the selected assessment process can have unintentional effects. For example, a screening session which uses a formal assessment (e.g., Mini-Mental State Examination) could create a distressing environment for the PWSD triggering a defensive reaction in the PWSD, such as reacting to inferior performance or perceiving the test as childish. A carer may feel they need calm and reassure the PWSD which may lead to less engagement. Tang et al. (2017) reported that the public lacks awareness of how a screening process operates, and there is a need for more significant pre-screening information. If both the PWSD and carer are clear about the purpose and outcomes, it can pave the way for shared decision-making discussions about implementing post-session support.

**Structured tools and assessments:**

A standard approach to screening for dementia is to assess the PWSD and, if possible, have their main carer present (someone who knows them well). Decisions on assessing the PWSD and carer together or apart will be on a case-by-case basis. A physical examination can identify and treat other causes of cognitive impairment. The rule of thumb when assessing a PWSD is to eradicate all other plausible causes so that dementia is the last one remaining.

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| ***Assessment for PWSD*** |  |
| Test Your Memory (TYM). | A cognitive function test,  Short time to complete  Advocated for use in non-specialist setting  The test involves:   * Orientation. * Ability to copy a sentence. * Semantic knowledge. * Calculation. * Verbal fluency. * Similarities. * Naming. * Visuospatial abilities. * Recall of a copied sentence.   The ability to do the test is also scored.  (Hancock & Larner 2011) |
| ***Assessment working with a carer*** |  |
| Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) | Recommended as a support to other PWSD screening assessment.  Can be completed independently by carer.  The test involves:  The carer answering questions about how the PWSD compares today with ten years ago. The answers are in a Likert scale format.  (Harrison & Fearon et.al 2014) |

Table 2: Examples of validated assessments for PWSD and carers

**Conclusion**

Dementia-informed primary care nurses will play a key role in managing the sensitive processes of screening PWSD and their carers. The PWSD and their carer will be best served by a primary care nurse who identifies the responsiveness required when faced with ambivalence, fear, reluctance and, in some cases, refusal to engage with the assessment process. Inclusive, empathetic conversations combined with evidence-led screening practices provided within primary care settings will lay the foundations for a post-diagnosis person-centred approach, which will pave the way for navigating the shared decision-making conversations.

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