Evaluation of dementia, depression, and delirium (3Ds) training
Holly De Luca & Rebecca Parkinson

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Abstract
This paper describes the evaluation of training to support staff working with older people to screen for dementia, depression, and delirium. We describe the approach to training. The evaluation shows a significant increase in confidence in screening in these areas and qualitative feedback offers data to support the development of the training delivery and curriculum.

Keywords
dementia; delirium; depression; training; evaluation

Introduction
The National Dementia Strategy (Department of Health, 2009) highlights the importance of early recognition, diagnosis, advice, and support for all people living with dementia. The strategy also focuses on more integrated working between mental health services, GPs, and primary care services. The Cumbria Dementia Strategy has aimed to meet some of the national objectives by introducing training aimed to improve recognition of common needs for those living with dementia. The training aimed to raise awareness of dementia, depression, and delirium (the 3Ds) while also introducing a screening tool to differentiate between the three conditions. It also highlighted the appropriate action to take following completion of the tool including referral information and advice and support from memory services where this was of benefit.
The 3Ds screening tool is comprised of three sections, a screen for dementia using the General Practitioner Assessment of Cognition (GPCOG), a screen for depression using the Patient Health Questionnaire for Depression and Anxiety (PHQ-4), and a delirium screen. The GPCOG is a reliable, valid, and efficient instrument to screen for dementia specifically in a primary care setting (Brodaty et al., 2002). Recent reviews of dementia-screening tools for primary care settings recommend the use of the GPCOG and indicate that it performs at least as well as the standard screening tool, the Mini-Mental State Examination (MMSE) (Brodaty et al., 2004). The PHQ-4 was developed to create an ultra-brief screener for depression and anxiety for use in primary care settings. The PHQ-4 combines two validated two-item screening questions. A recent study found that increasing PHQ-4 scores were strongly associated with functional impairment and that anxiety had a substantial effect on functional status that was independent of depression (Kroenke, et al., 2009). The delirium screen is a brief version of the confusion assessment method (CAM). The CAM is a standardised, evidence-based tool that enables clinicians to identify and recognise delirium quickly and accurately in clinical settings (Inouye et al., 2001). The CAM has demonstrated sensitivity of 94–100%, specificity of 89–95%, and high inter-rater reliability (Pompei et al., 1995).

An evaluation tool was developed to assess whether trainee confidence in recognising the early signs of dementia had been increased following training, along with confidence in knowing where and how to make an appropriate referral. The three hypotheses to be tested are:

1. Confidence in recognising dementia will significantly increase from pre-training to post-training (Question 1 in Table 1 below).
2. Confidence in knowing where/who to contact for advice if concerned about a patient’s memory will significantly increase from pre-training to post-training (Question 2).
3. Confidence in knowing where to make a referral if concerned about a patient’s memory will significantly increase from pre-training to post-training (Question 3).

Method
Training was delivered in four waves, targeting community hospitals in the first, GP practice nurses in the second, and district nurses in the third. The fourth wave consisted of central training sessions being held in each locality with a view to catch those who had been unable to attend the session at their place of work, but also for those interested in learning more about the three conditions. Within this wave, training sessions were also delivered to services that had got in touch with the Memory Matters service requesting the training, e.g., Hospital at Home, the Community Rehabilitation Service, and the Respiratory Service. Organising training within the community hospitals involved contacting ward managers, discussing their training needs, and arranging appropriate times to deliver the training in order to capture varying shift patterns. GP practice managers were contacted via opt-in letter, offering training to practice nurses tailored to their training needs. District nurse managers were also contacted and offered the training.

Training sessions were delivered into community hospitals across the county where training around dementia, depression and delirium was offered alongside specific training on the 3Ds tool and referral information. GP practices requested the training for their practice nurses. Due to the opt-in letter, it was presumed practices that did not contact us as detailed in the letter did not require training at this time. Sessions were delivered to district nurses in the east and west localities with a future plan to deliver training to district nurses in the south of the county.

Each person attending a training session was asked to complete a pre- and post-training evaluation form. The evaluation forms were devised to collect both qualitative and quantitative data to consider if the training had impacted on clinicians’ confidence in recognising dementia, where to seek advice when concerned about a patient’s memory, and making a referral to the appropriate service. Quantitative data were gathered using a Likert scale using the format below:

1 2 3 4 5
not much a bit a lot

Results
Descriptive results from the data obtained are shown in Table 1.

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre Mean</th>
<th>Pre SD</th>
<th>Post Mean</th>
<th>Post SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>3.35</td>
<td>.82</td>
<td>4.29</td>
<td>.75</td>
</tr>
<tr>
<td>Question 2</td>
<td>3.21</td>
<td>1.11</td>
<td>4.48</td>
<td>.74</td>
</tr>
<tr>
<td>Question 3</td>
<td>3.14</td>
<td>1.15</td>
<td>4.48</td>
<td>.78</td>
</tr>
</tbody>
</table>
The data collected were ordinal and a repeated measures design was used so the difference between two conditions (pre-training and post-training) was tested using a non-parametric Wilcoxon statistical test. There was a significant increase from pre-training to post-training in trainee confidence in recognising dementia ($Z = -7.611, p < .001$), confidence of knowing where to contact for advice if concerned about a patient’s memory ($Z = -7.761, p < .001$) and in confidence of knowing where to make a referral if concerned about a patient’s memory ($Z = -7.831, p < .001$).

Qualitative data were also collected from two questions; “What was the best thing about the training? Can you say why it was the best?” and “What could have been improved about the training?” Feedback was used to inform future training.

**Discussion**

The descriptive statistics from the data set show the mean level of confidence in recognising dementia went from 3.35 to 4.29 pre- to post-training, confidence in knowing where to contact for advice and knowing where to make a referral if concerned about a patient's memory went from 3.21 and 3.14 to 4.48 and 4.48, respectively. From further in-depth statistical analysis it can be seen that all three of these results were significant at $p < .001$, meaning the three hypotheses outlined above are supported.

This therefore means the 3Ds training sessions which have taken place across the county have been successful and effective in meeting some of the objectives set out in the National and Cumbria Dementia Strategy. Specifically, objectives aimed at improving early recognition and closer working relationships between mental health services and primary care have been met as staff begin to use the screening tool as part of their everyday practice and liaise with memory services. Staff comments have included:

- Very communicative staff with understanding of the workplace. Underpins work/community role.
- Like the scenarios which help give you an idea of some situations you’ll be experiencing. Going through the assessment tools. Helpful and appropriate hand-outs. Learning about the new tool for screening and implementing into my practice.
- Issues to consider when looking at the results of the evaluation are that the training session was the same regardless of the skill set and level of knowledge of those attending. Responses from the question asking what could be improved about the training included:
  - Just a little more in depth.
  - Went too fast.
  - A lot to take in in an hour.
  - No improvements needed. Straight to the point.

While statements from the question asking about the best part of the training included:

- Information about delirium with a refresher for dementia and depression.
- Being able to ask questions throughout the presentation. Well-presented and clear slides. Easy to understand. Knowledgeable trainers. Good delivery and length of session.

These highlight the differences of opinion in terms of the length, delivery speed, and depth of information discussed. This means for some the course will have been a refresher while for others new information will have been learned. To address this issue in future it may be worthwhile having different training sessions designed to cover differing skill sets and levels of knowledge surrounding dementia, so that more time can be taken in explaining some of the course content when needed.

In future, if this or similar training were to take place again, what may be a more effective use of time and resources would be if more central sessions where held within each locality, each targeting a different service or skill set and knowledge base. The training could be designed in such a way that people booked onto the training session they believed best suited their needs through the learning network. Organising the training this way would ensure there would be an adequate number of people at each session to maximise the trainers’ time as well as saving on resources through the reduced travel time and cost incurred. However, a disadvantage of using this method for the training would be that it isn’t as easy for certain staff members to attend, e.g., those working within community hospitals where certain minimum staffing levels must be maintained at all times. Therefore, the training design used for this evaluation was appropriate for the audience which needed to be targeted.

- Our fault, not enough attendees at one session but good for staff attending – personal support.

Due to the evaluation forms being developed and implemented after training sessions had already been commenced in community hospitals, in Eden it means the results reported are only from sessions which took place after
that, In light of these positive results for the training sessions being effective, training is still ongoing and so it may be worthwhile re-analysing these results when all training sessions have taken place and a complete data set has been obtained. Nevertheless, this analysis provides support for the importance, need, and effectiveness of the training and so demonstrates the reason why training should continue.

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**References**


