



## **The PSNC Dementia Challenge Award 2014: Avon LPC Project Outcomes**

The Avon LPC Project aimed to establish a standard for dementia friendly pharmacies and measure the value of dementia interventions across pharmacies in South Gloucestershire, North Somerset and Bath & NE Somerset using PharmOutcomes.

The project was supported by a grant from Pinnacle Health Partnership LLP.

### **Project outline:**

1. Three tiered service
  - a. Registration and initial assessment to see if memory loss was affecting a person's life
  - b. Mini-Cog assessment
  - c. Medication review looking for known drugs that enhance memory loss
2. Training was delivered in conjunction with CPPE using their dementia friends and focal point dementia programme. Over 150 people attended the two events representing about 70 community pharmacies (almost 1 in 3 of all contractors in Avon).
3. Phase 1 of the project went live with 10 pharmacies in Bath & NE Somerset. Phase 2 used four pharmacies in South Gloucestershire and five in North Somerset (19 in total)
4. PharmOutcomes was used to record the consultations and assess the outcomes.

Three tiered service:

#### Tier 1

- Each patient was asked the CQINN question regarding their memory. "Have you become more forgetful over the past 12 months to the extent that it has affected your life?"
  - If this was answered positively, or if people were unsure they were registered onto the service

#### Tier 2

- Patients were offered a Mini-Cog test. This consisted of the following assessment
  - Listening to and then remembering three words
  - Drawing a clock face and depicting a specified time
    - Marked out of two
  - Reciting the three words back to the pharmacist
    - A point for each word (out of three)

#### Tier 3

- Medication review to look specifically at medicines that are known to cause symptoms similar to dementia or medicines that will cause further memory loss in a patient suffering dementia
- patients were offered lifestyle advice, information and signposting to local support services where appropriate.

Post assessment, patients were followed up and any further information recorded for a patient. This was designed to include the following:

- Any dementia diagnoses made
- Any changes to condition post a medication review
- Outcomes from lifestyle and signposting interventions

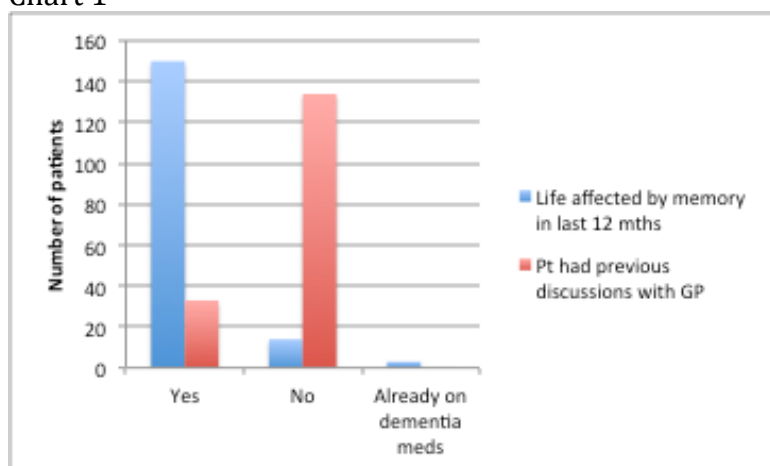
### **Outcomes:**

Registrations: 180 patients were registered onto the service in 15 out of the 19 accredited pharmacies. The average number of registrations per pharmacy was 12 with the range from 1 – 48.

### **Tier 1**

Of the 180 patients registered 169 were taken through the Tier 1 service. 150 responded positively that their memory has affected their lifestyle in the past 12 months. In total only 33 responded that they had spoken to their GP about their memory. A further three people were already taking dementia medication (Chart 1)

Chart 1



Out of the 150 who were concerned about their memory, 123 (82%) had not previously spoken to their GP about their memory loss. Therefore, out of the 167 Tier 1 interventions, 123 people, 74% were found to have concerns about their memory loss.

It was also noted that 14 people were not concerned about their memory loss, but three of them had spoken to their GP.

## Tier 2

Out of the 180 registered, 152 people were offered Mini-Cog test. The combined scores reflect the following patient outcome:

- 0-2 Positive score for dementia
- 3-5 Negative score for dementia

27 patients (18%) scored positively for dementia (Chart 2) and out of that 1 person scored zero, 4 scored one and 23 scored two points (Chart 3).

Chart 2

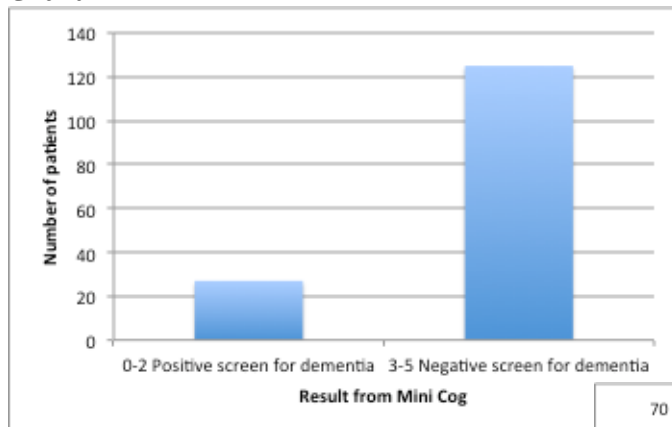
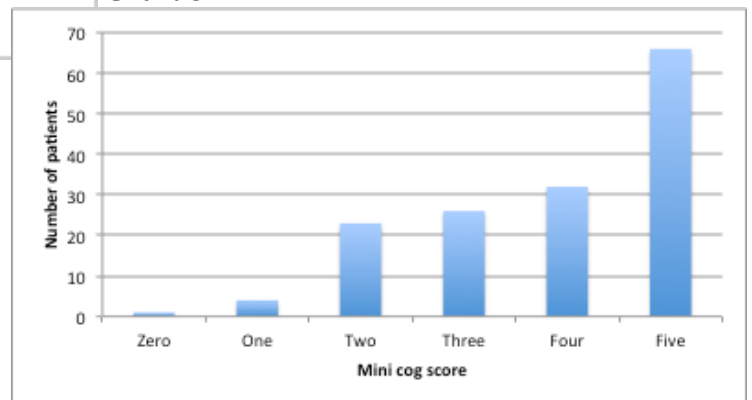


Chart 3

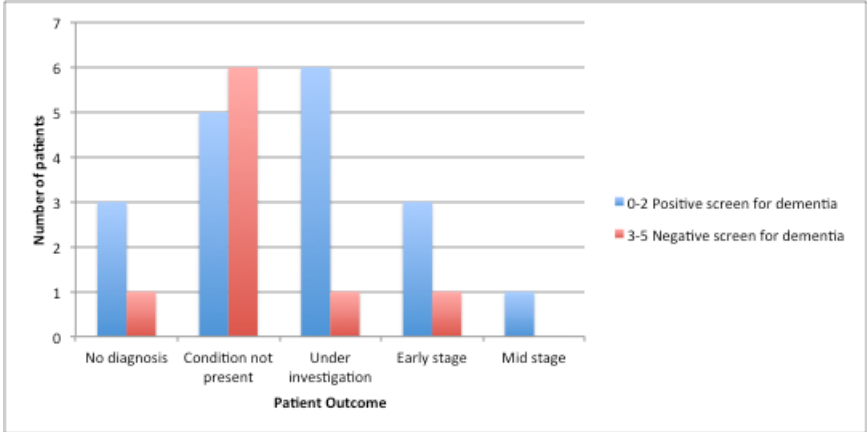


17 patients out the 27 who failed the Mini-Cog test were concerned about their memory, but before speaking to the pharmacist, had not spoken to their GP. Interestingly, 3 patients who didn't feel in the last 12 months their life was affected failed the Mini-Cog. Of the remaining 7, four were concerned and had spoken to their GP and 3 had gone straight in to the Mini-Cog without going through Tier 1.

## Dementia Diagnoses

At the time of writing, 27 people have been follows up to assess their progress. 18 people failed the Mini-Cog and 9 people passed. See Chart 4.

Chart 4



Out of the seven people still under investigation, six people had not previously engaged their GP. Of the four people diagnosed with early stage dementia, three had not previously engaged their GP and it is unknown whether the one mid stage had prior discussions with their GP. Therefore out of the 180 people registered, four (2.2%) have been diagnosed with early stage, one (0.5%), mid stage and seven (3.9%) remain under investigation. Of these people 83% had not discussed it with their GP.

Tier 3

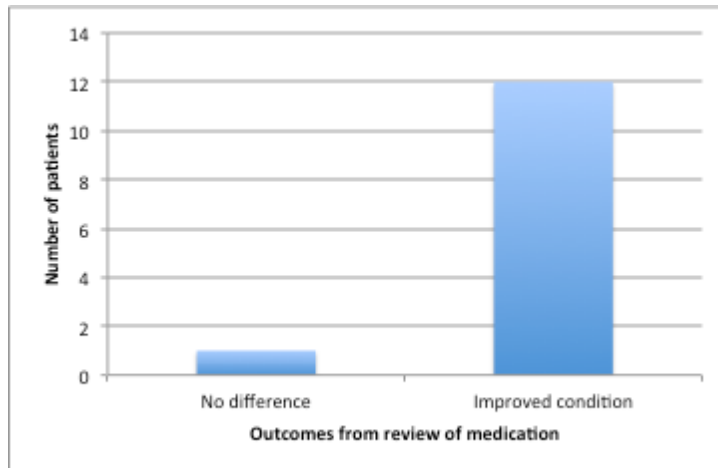
31 people received a review of their medication under the Tier 3 service. 75 medicines were reviewed over the 31 patients with the top 12 as follows:

Medication	Number of interventions
Zapain 30mg/500mg tablets (AMCo) 100 tablet	4
Buscopan 10mg tablets (Boehringer Ingelheim Ltd) 56 tablet 2 x 28 tablets	3
Levothyroxine sodium 25microgram tablets 28 tablet	3
Spiriva 18microgram inhalation powder capsules with HandiHaler (Boehringer Ingelheim Ltd) 30 capsule 6 x 5 capsules	3
Amitriptyline 10mg tablets 28 tablet	2
Citalopram 10mg tablets 28 tablet	2
Clopidogrel 75mg tablets 28 tablet	2
Gabapentin 300mg capsules 100 capsule	2
Levothyroxine sodium 100microgram tablets 28 tablet	2
Oxybutynin 2.5mg tablets 56 tablet	2
Sertraline 100mg tablets 28 tablet	2
Tramadol 50mg capsules 30 capsule	2

Of the 31, 13 patients were followed up to understand the benefits. The results are shown in Chart 5.



Chart 5



Of the 12 people who saw improvements, 1 patient has had her Oxybutynin stopped, 1 has had her levothyroxine dose adjusted as a result of blood tests along with stopping her Buscopan. One patient who was adversely affected by the dry mouth side effects has now better controlled post the consultation and ideas provided by the pharmacist. Overall, 12 out of the 13 patients who were followed up (92%) said they benefitted from the medication review.

### Summary

Out of 180 patients registered into the dementia identification service, 150 out of 169 expressed concern about their memory (Tier 1). Post carrying out a Mini-Cog test on 152 patients, 27 failed (Tier 2).

27 patients have subsequently been followed and out of the 18 who failed the Mini-Cog, up with three diagnosed with early stage of dementia and one mid stage, while six remain under investigation. A further one remains under investigation and one diagnosed in early stage from the cohort of patients who passed the Mini-Cog.

It is reasonable to expect that if all 27 people who failed the Mini-Cog had been followed up, 6 would have reported early stage dementia and 1.5 mid stage.

Per 100 people seen, 17.7 failed the Mini-Cog, 3.33 were diagnosed with early stage dementia and 0.83 with mid stage dementia.

It is likely that many more of the people expressing concerns about their memories will go on to develop dementia or signs of cognitive impairment in the future.

Extended benefits to the project include:

- The project created over 150 dementia friends and raised awareness of dementia in over 70 pharmacies in Avon and their communities.
- Over 180 people with concerns about their memories were able to talk about their concerns and receive information, advice and signposting to local support services.
- 31 people had their medication reviewed. 92% of those followed up felt they had benefitted from their review.

- The pharmacies involved in the project developed closer links with support organisations such as The Alzheimer’s Society and The Carers Centre.

### Financial summary

Payments were made to register the patient (£2) and to carry out the Mini-Cog (£10).  
Out of the 152 people tested, 27 failed.

Tier 1 activity =	$£2 * 152 =$	£304
Tier 2 activity =	$£10 * 152 =$	£1,520
Total =		£1,824
Cost of positive Mini-Cog identification (27)=		£67.55
Cost of positive dementia (early or mid stage)=		£243.20 (£1,824 / 7.5)