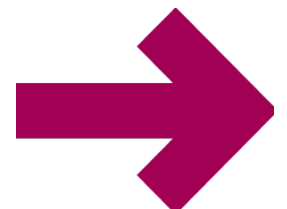


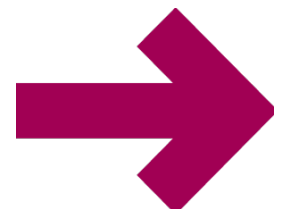
**Experience so far...building an app for
Diagnosing Dementia in Care Home
settings
DiADeM**

3:00 – 3:30pm – Colin Sloane



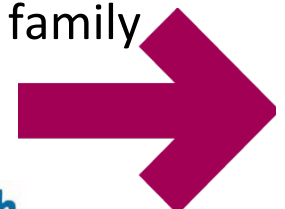
What will be covered in this session

- **Why DiADeM? What is it?**
- **Code4Health/LiveCode/App in a Day**
- **Apperta Foundation Challenge**
- **Open EHR**
- **Progress to date**
- **Challenges and lessons Learned**



Why DiADeM? What is it?

- DiADeM is a tool aimed for diagnosing of advanced dementia in people who are in care homes where a formal referral to memory services is rarely desirable and could be distressing for them.
- Reports estimate that between 70% and 80% of care home residents have dementia and that many do not have a formal diagnosis
- Some care home residents with advanced dementia and/or frailty, may currently be denied a diagnosis due to difficulty attending a memory service clinic.
- A Diagnosis enables access to appropriate support, care planning and in some cases, treatment
- Can give the person with dementia the opportunity to share with family members and other carers their preferences for future care



The Paper Based DiADeM Tool

A diagnosis of dementia is usually made within memory services. Some care home residents with advanced dementia have never had a formal diagnosis. In these cases a referral to memory services is rarely desirable. It is likely to be distressing for the individual and is usually unnecessary¹.

People with advanced dementia, their families and staff caring for them, still benefit from a formal diagnosis. It enables access to appropriate care to meet individual needs and prompts staff to consider MCA and DOLS issues where appropriate. A diagnosis of dementia can be made with a high degree of certainty if all five criteria listed below are met:

1

Functional impairment

The person is no longer fully independent in relation to basic activities of daily living, washing, dressing, feeding and attending to own continence needs. The requirement of prompting or supervision of staff constitutes a loss of full independence.

☐

2

Cognitive impairment – 6 CIT assessment

Question	Scoring	Score achieved
1. What year is it?	Correct – 0 points, incorrect – 4 points	
2. What month is it?	Correct – 0 points; Incorrect – 3 points	
3. Give an address phrase to remember with 5 components e.g. John, Smith, 42, High St, Wakefield		
4. About what time is it (within 1 hour)	Correct – 0 points; Incorrect – 3 points	
5. Count backwards from 20-1	No errors – 0 points; 1 error – 2 points; more than 1 error – 4 points	
6. Say the months of the year in reverse	No errors – 0 points; 1 error – 2 points; more than 1 error – 4 points	
7. Repeat address phase	No errors – 0 points; score 2 points for every component wrong e.g. 3 errors, 6 points	
TOTAL SCORE:		

6 CIT scores: 7 and below normal; 8 and above indicate impairment.

Assessment tools other than 6CIT can be used. If used does score indicate impairment Y/N?

NB. Scores obtained in this patient group would be expected to be at the severe end of scale and for some patients their cognitive impairment will be of such severity that they cannot undertake the assessment.

Y / N

☐

3

Corroborating History

History of gradual cognitive decline (typically for the last few years) is confirmed by care staff, relatives and medical records. Staff/relatives confirm that in their opinion the patient consistently demonstrates both functional and cognitive impairment.

☐

4

Investigations

Dementia screening **bloods are normal** (where clinically appropriate and patient consents to bloods). If patient lacks capacity to consent to bloods, a best interest decision must be made and documented accordingly. NB. If intracranial pathology (e.g. subdural haematoma, cerebral tumour) is suspected, referral for a brain scan may be appropriate. Otherwise where dementia is advanced, differential diagnosis is unlikely to affect patient management & a brain scan is unnecessary.

☐

5

Exclusion Criteria

There is **no acute underlying cause to explain** confusion i.e. delirium (acute confusional state) has been excluded. Mood disorder or psychosis is also excluded.

☐

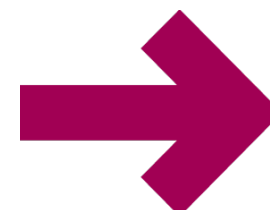
A diagnosis of dementia can be made with a high degree of certainty if **all five** criteria listed above are met. If dementia is confirmed, please add this patient to your GP practice dementia register using the recommended **codes**. Consent should be sought for this from the person themselves or a family carer where the individual lacks capacity.

¹ "Guidance for Commissioners of Dementia Services", published by The Joint Commissioning Panel for Mental Health states patients who present with advanced symptoms of dementia can be diagnosed and managed by primary care with or without CMHT help. www.icpmh.info

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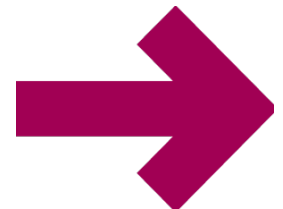
where a diagnosis of dementia is confirmed, a copy of the completed DiADeM tool should be saved into the patient's clinical record as evidence for the diagnosis

A diagnosis of dementia can be made with a high degree of certainty if all five criteria listed are met

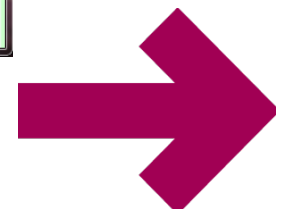
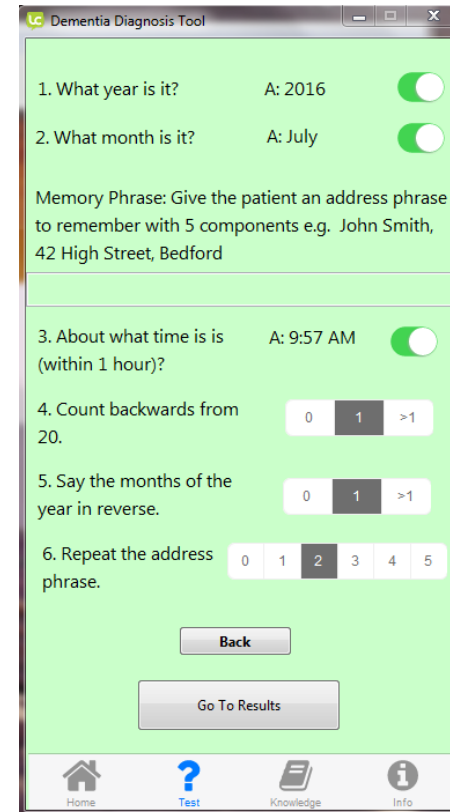
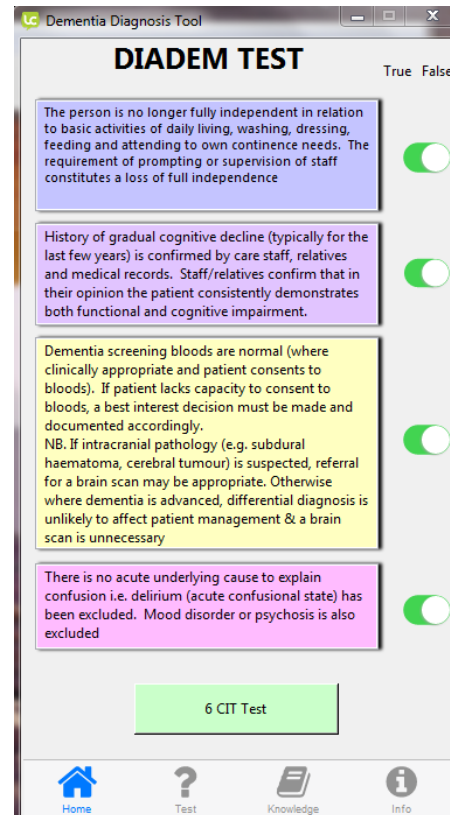
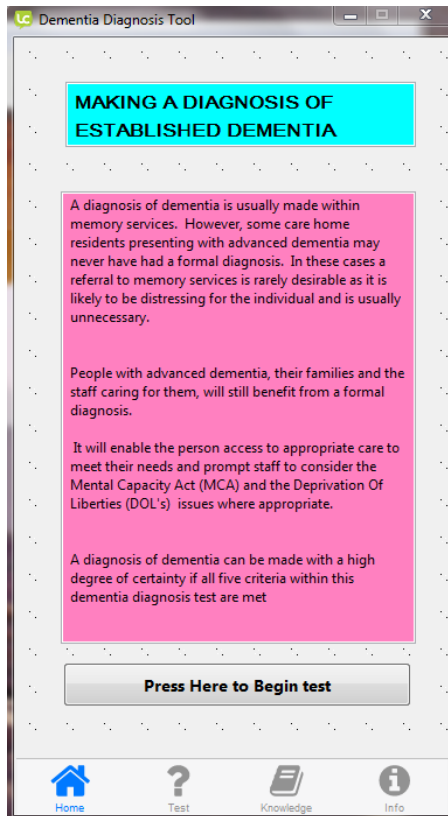


Code4Health/LiveCode/App in a Day

- How we came across Code4Health and the app in a day training etc?
 - NHS England Newsletter March 2015
 - NHS Code4Health Programme Launched 2015 UK e-health Week
 - Call for 'communities of interest' we answered the call
 - An opportunity to use E –Health Technology to improve DiADeM
- 10 Clinical Network staff did 'app in a day' training
- Livecode used to develop prototype DiADeM app



Prototype DiADeM app



- **Apperta Foundation Challenge**

YH SCN successful entry in the Apperta Foundation Challenge

Now have Developer support - Application Insight.

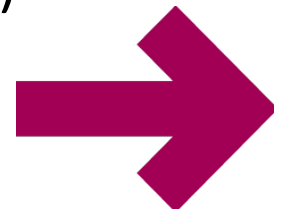
- **Open EHR**

Took part in Open EHR training

Shared DiADeM concept

DiADeM Project now on Open EHR

Elements of tool saved as architypes (6 CIT, GP COG etc)



Open EHR and CKM

Yorkshire and the Humber
Clinical Networks

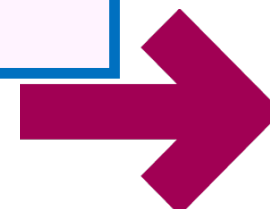
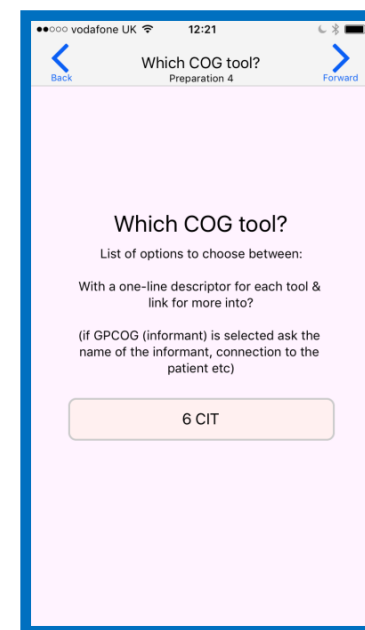
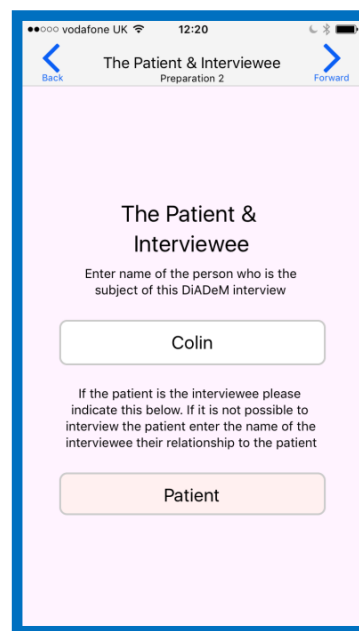
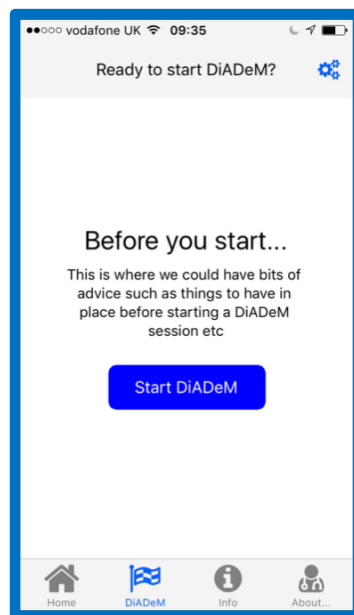
The screenshot shows the Clinical Knowledge Manager (CKM) web application. The browser address bar displays <http://clinicalmodels.org.uk/ckm/#>. The application header includes the 'openEHR' logo and a navigation menu with options like 'Archetypes', 'Templates', 'Termsets', 'Release Sets', 'Reviews', 'Projects', 'Discussion', 'Reports', 'Tools', and 'Help'. A sidebar on the left provides filters for 'Subdomain' (All subdomains), 'Project / Incubator' (All projects), and 'Status' (All active, Under review, Published). The main content area is titled 'Project: DiADeM' and includes a description: 'Project to develop archetypes and templates to support the development of the DiADeM project by the Yorkshire and Humber Dementia Strategic Clinical Network.' Below the description, there is a list of archetypes, templates, and termsets. The 'Archetypes' section lists: '6 CIT Assessment v0' (The 6 CIT Test used to test for Dementia), 'Encounter' (Interaction, contact or care event between a subject of care and healthcare provider(s)), 'GPCOG screening test.v0' (The General Practitioner Assessment of Cognition (GPCOG) screening test), and 'YHSCN - DiADeM assessment v0' (Additional clinical information used to complete DiADeM assessment). The 'Templates' section lists 'DiADeM Assessment.v0'. The 'Termsets' section is currently empty. On the right side, there is a section for 'Active Reviews' with a table showing columns for 'Resource', 'No.', 'Compl. Deadline', 'Recommendation', and 'Action'. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying the time as 08:56 on 11/07/2016.

<http://clinicalmodels.org.uk/ckm>

www.england.nhs.uk



DiADeM App Progress to date



Challenges and lessons Learned

Working together

Clinicians v's Coders

Coders v's Clinicians

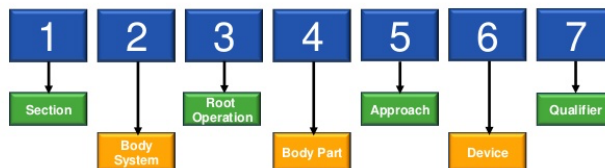
ICD 10 Code

```
on preOpenStack
  if the environment is "mobile" then
    set the fullscreenmode of me to "exactFit"
    put specialFolderPath("documents") & "/pref.txt" into prefFile
    if there is a file prefFile then
      set the urlang of this stack to item 1 of URL ("file:" & prefFile)
      put item 2 of URL ("file:" & prefFile) into tNum
    else
      put line 1 of mobilePreferredLanguages() into tLang
      if not (the langs of this stack contains tLang) or tLang = "en" then
        put "en" into tLang
        put 1 into tNum
      else
        if tLang = "zh" then
          set the urlang of this stack to "zh-hans"
          put 2 into tNum
        else
          set the urlang of this stack to tLang
          if tLang contains "hans" then
            put 2 into tNum
          else
            put 3 into tNum
          end if
        end if
      end if
    end if
    set the hilite of btn 1 of grp "ulang" to false
    set the hilite of btn 2 of grp "ulang" to false
    set the hilite of btn 3 of grp "ulang" to false
    set the hilite of btn (the urlang of this stack) to true
    set the label of btn "ulang" to line tNum of the langs of btn "ulang"
    setLang
    inputCreator "msg", "multiline", "msg", "TRUE", "none", "no", "default"
    restoreText
  end if
end preOpenStack

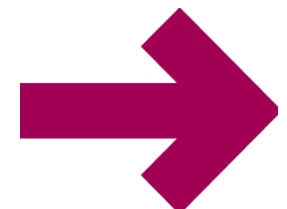
end if
put tLang & ", " & tNum into URL ("file:" & prefFile)
end if
```



Anatomy of an ICD-10-PCS Code



1. Section relates to type of procedure
2. Body system refers to general body system
3. Root operation specifies objective of procedure
4. Body part refers to specific part of body system on which procedure is being performed
5. Approach is the technique used to reach the site of the procedure
6. Device specifies devices that remain after procedure is completed
7. Qualifier provides additional information about procedure



Challenges and lessons Learned

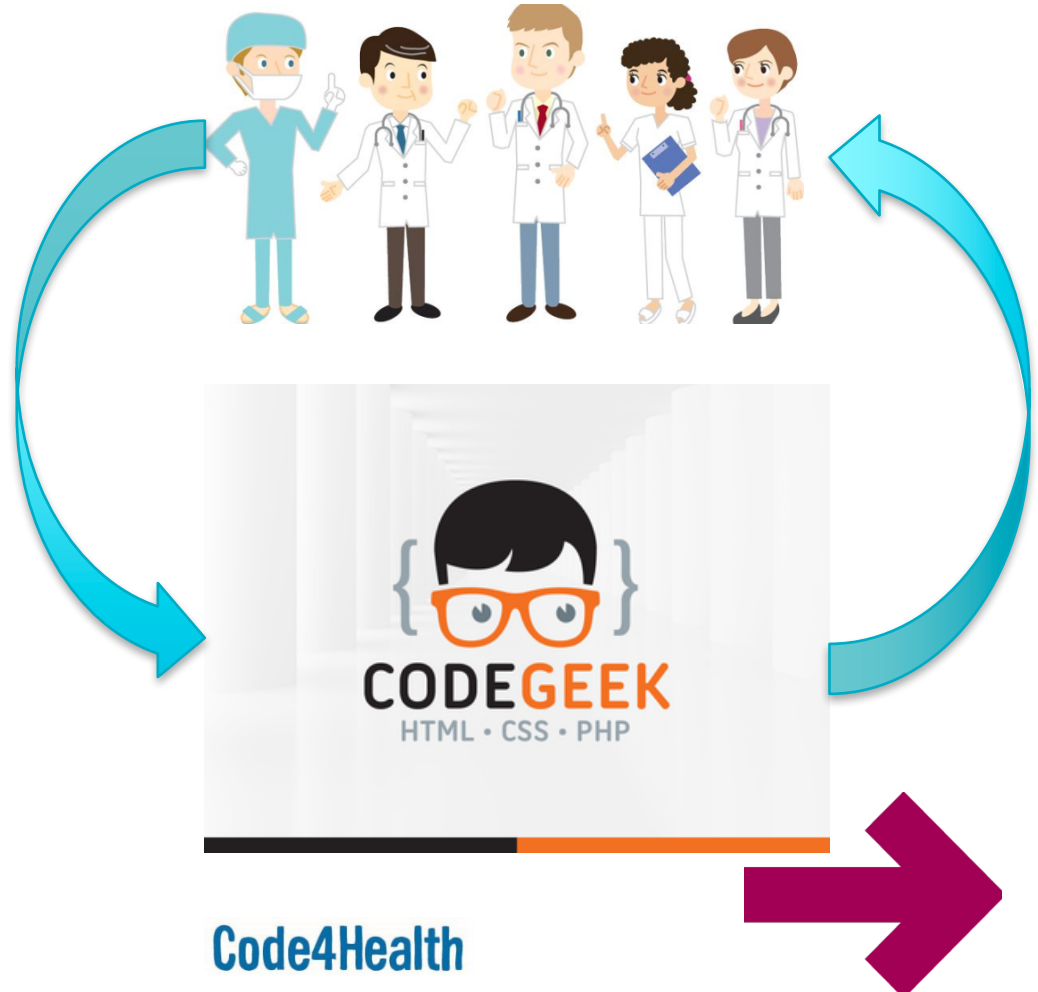
Yorkshire and the Humber
Clinical Networks

Working together

Generally Health Professionals
DONT KNOW coding

Generally Coders DON'T KNOW
Health Services

KEEP AN OPEN MIND!!



Thank You for Listening

Please feel free to contact me
colinsloane@nhs.net

