

***Functional Impact of HIV  
Associated Neurocognitive  
Disorder (HAND) and  
Strategies for  
Rehabilitation in the UK***

Elizabeth Stevens HIV Occupational Therapist  
Heartlands Hospital Birmingham UK

Toronto June 2013

# Patient perception

**"I don't  
read any  
more"**

**"I feel  
dyslexic"**

**"I  
frequently  
forget to  
take my  
pills"**

**"What's  
wrong with  
me?"**

**"My  
partner  
does all  
the  
cooking  
now"**

# Strategies for Rehabilitation

Depression or anxiety can masquerade as HAND

Intervention around mood can reduce stress symptoms and then frequently the person reports their memory has improved – they did not have HAND

Conversely HAND might cause low mood/anxiety in itself

# Stress Management

Stress management focusing on teaching relaxation and other self-help skills is used

Occupational re-engagement is a medium for improving both mood problems & HAND symptoms

# Memory Strategies

Specific memory strategies for individual people – depends on their context



Many are very simple



Alarm as  
reminder



Routine  
/habituation



Use of  
key-ring  
pill holder



Visual  
prompts –  
pills kept  
where they  
can be seen

# AHC started in January 2011

## July 2012

- Presented data on 131 patients
- Fortnightly clinic
- HADS
- IHDS cut off 10

## June 2013

- **Presenting data on 211 patients (up to April 2013)**
- **Clinic expanded to weekly**
- **HADS**
- **IHDS cut off 9**

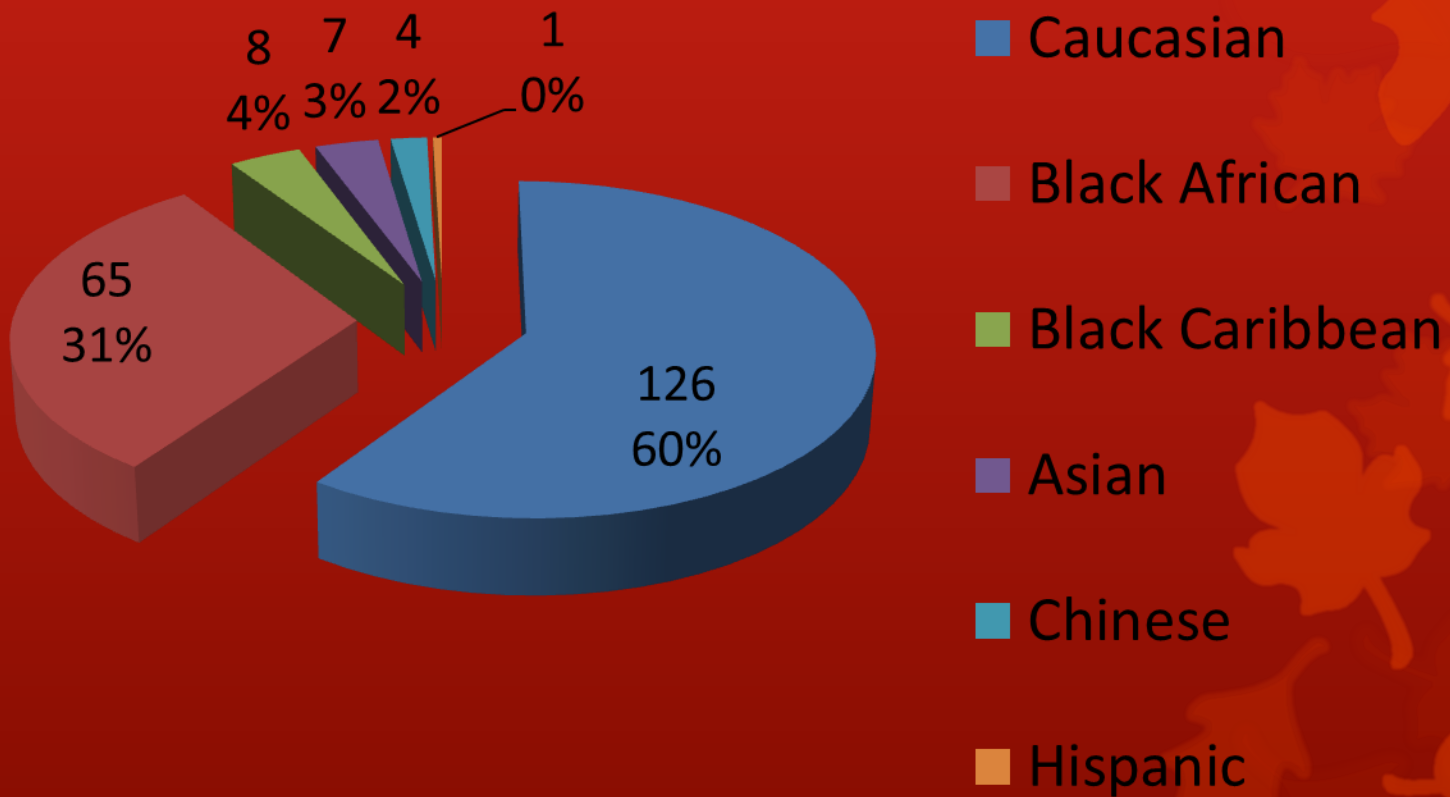
# Demographics (whole cohort N=211)

- Female n52 (25%)
- Male n159 (75%)
- Exactly the same ratio as before (and when split between the first 131 and the second 80)
- Average age of this cohort: 43 years
- Range 22 – 73 years
- $\geq 50$  years = 45 people (21%)



# Ethnic Origin

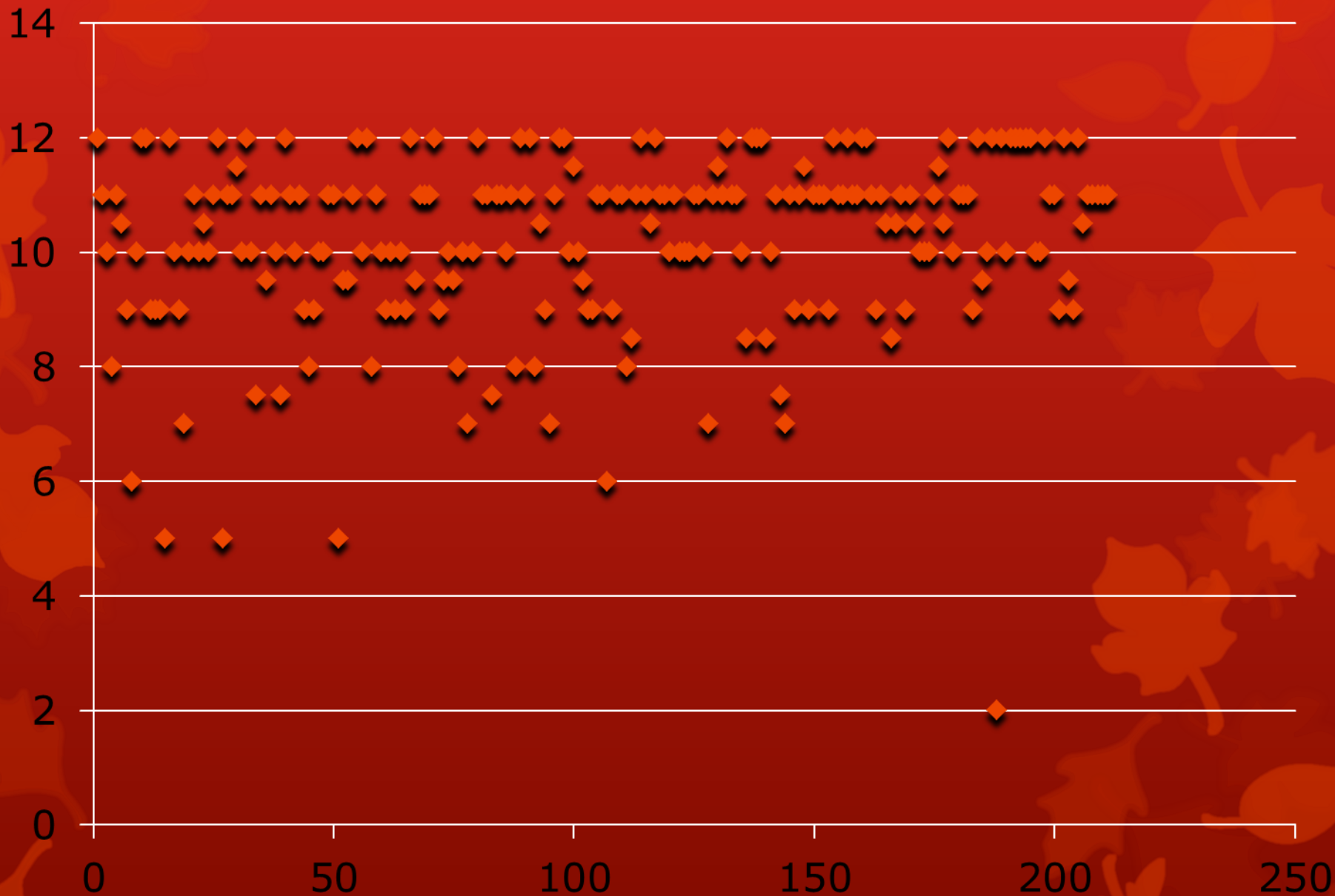
## 211 people



## Total cohort at 2013 – 211 patients

- Total qualifying for follow up for any reason = 112 (53%)
- Total not for follow up at all = 99 (47%)
- Overall average length of diagnosis = 7.6 years

# IHDS totals distribution across cohort of 211



# IHDS total scores (whole cohort)

- ◎ Average total score = 10.2
- ◎ 95 (45%) scored 10 or below – 36 (38%) of the 95 were BA
- ◎ 49 (23%) scored 9 or below - 18 (37%) of the 49 were BA
- ◎ 38 of these scored maximum 12/12. Six (16%) of these were BA.
- ◎ 37 people scored on the cut off of 10. 15 (41%) of these were BA.
- ◎ 23 scored 9 of which 8 (35%) were BA.

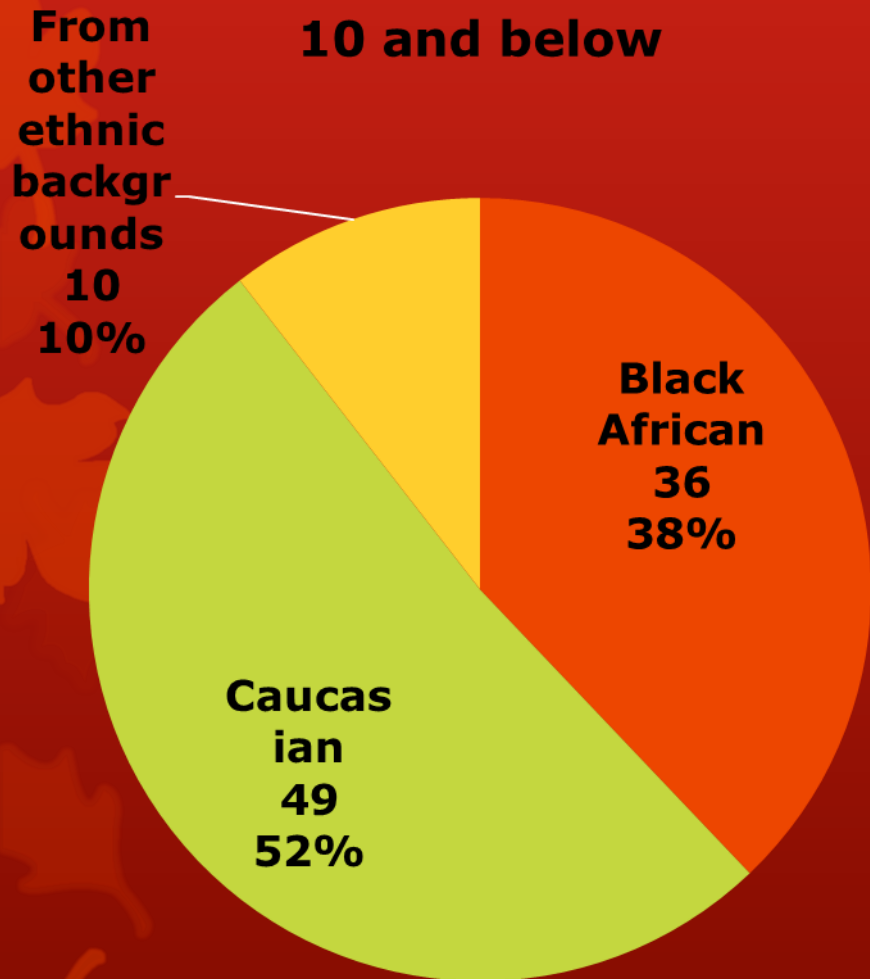
# Average scores on IHDS

	<b>Black African cohort</b>	<b>Caucasian cohort</b>	<b>Other ethnic origins</b>	<b>≥ 50 years</b>	<b>49 and under</b>
Number in whole group of 211 people	65 (31%)	126 (60%)	20 (9%)	45 (21%)	166 (79%)
Average IHDS score /12	9.9	10.4	10	9.4	10.4
Number identified for neurocog F/U*	32 (49% )	44 (35%)	10 (50%)	23 (51%)	63 (38%)

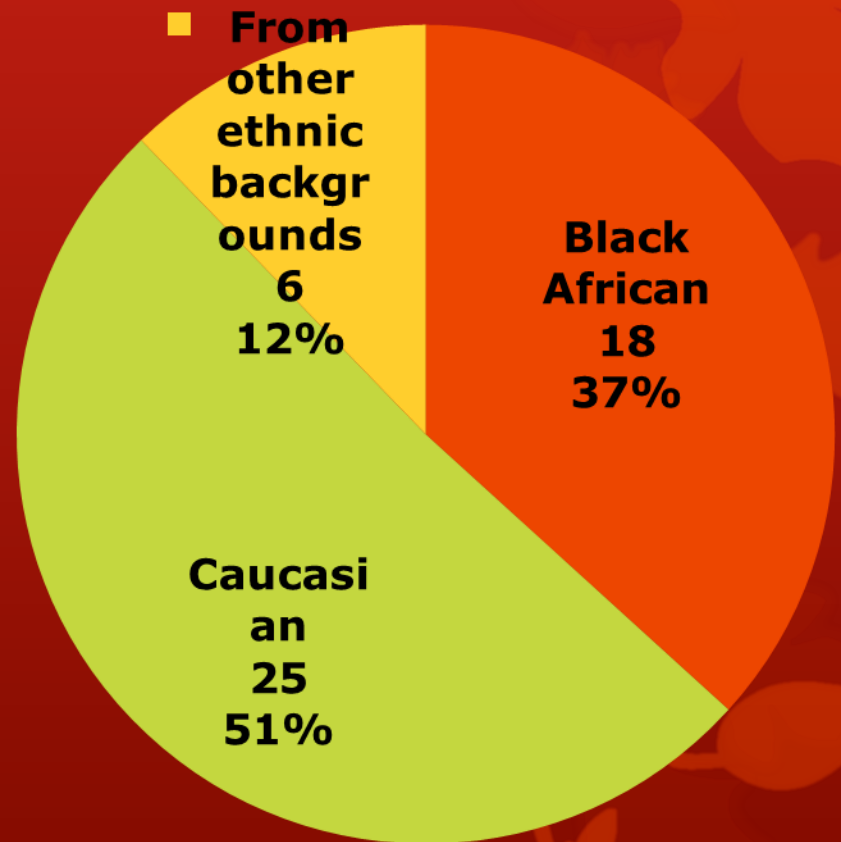
\* NB those identified here were a mix of using cut-off of 10 and of 9

# Ethnic background of those identified for F/U using 10 and 9 as the cut off for further assessment

## 10 and below



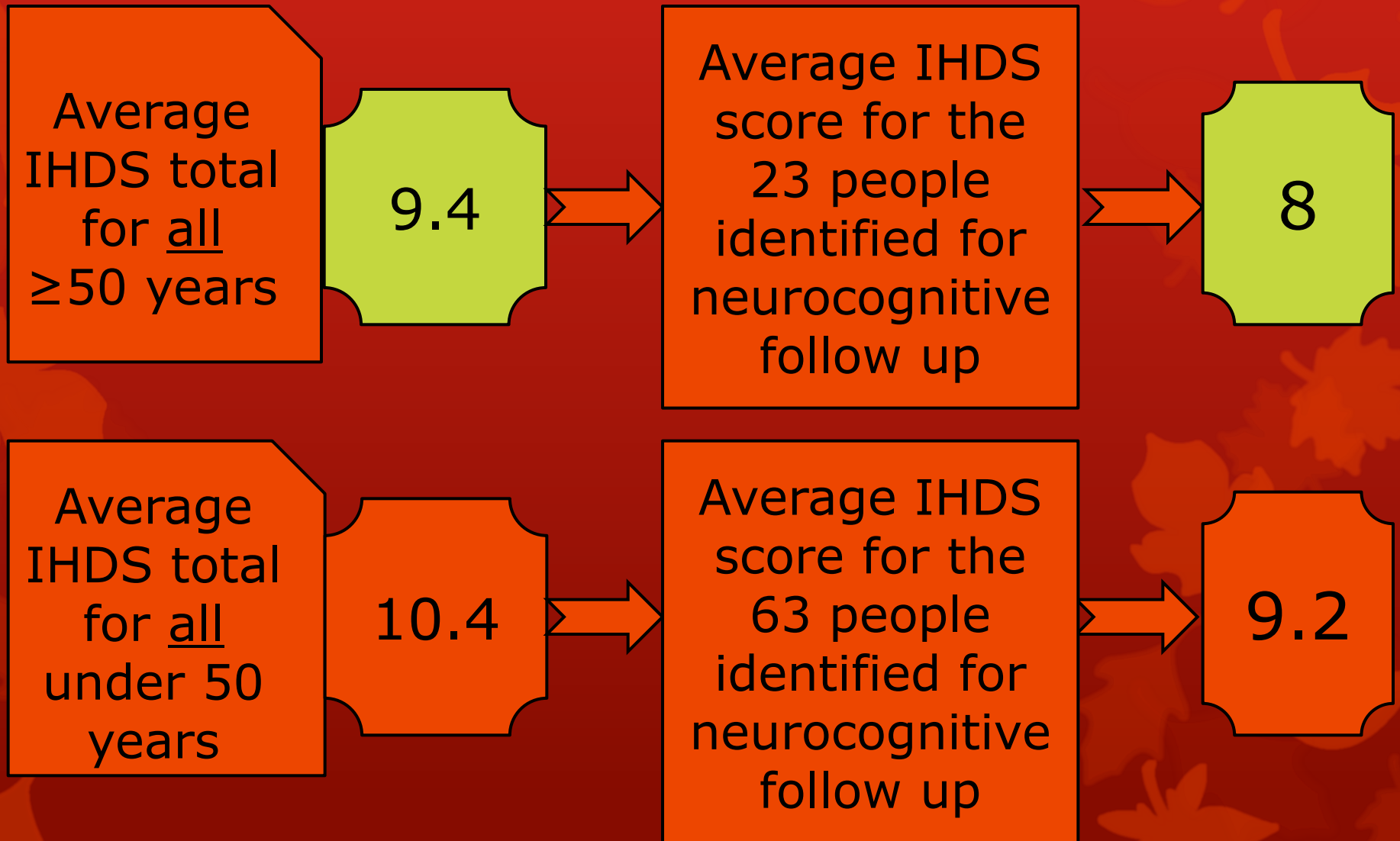
## 9 and below



# Comparison of follow ups in $\geq 50$ years at cut off 9 or 10 on IHDS

- In the first 131 people, 67% of those aged 50 and over were identified for follow up (total 27 people  $\geq 50$  and 18 were followed up)
- Now 47% were identified for follow up (total 45 people  $\geq 50$  and 23 were followed up)
- This includes the first cohort analysed and changing the cut off score has dropped the numbers identified. This will presumably decrease further over time

# Were the IHDS scores lower in the $\geq 50$ years cohort?





# Average length of diagnosis

```
graph TD; A[Average length of diagnosis] --> B(Over 50 years); A --> C(Under 50 years); B --> D[9.4 years]; C --> E[7.1 years]
```

**Over  
50  
years**

**9.4 years**

**Under  
50  
years**

**7.1 years**

# Conclusions

- The AHC clinic helps identify people who might not have been seen otherwise
- Lowering the IHDS cut-off score from 10 to 9 has enabled us to focus time on those most in need
- Lowering the IHDS score has not changed the proportion of BA patients who are seen as needing further input
- Those aged over 50 have lower IHDS scores – work needs to be done to see if this correlates directly with real life impairment

# Conclusions

- The most important aspect is that regardless of screening or assessment, functional intervention is needed in order to make it meaningful
- Will continue to collect practice data and analyse again when numbers are larger see how significant the differences are
- Intended to compare the further assessment outcomes of those at IHDS 10 and those at IHDS 9 and below
- Need to compare against nadir CD4

# References

- Antinori et al (2007) Updated Research Nosology for HIV Associated Neurocognitive Disorders. 69 (18) pp1789-99. Neurology.
- British HIV Association (2012) BHIVA Guidelines for the Treatment of HIV-1 Positive Adults with Antiretroviral Therapy 2012. BHIVA.
- Carey C.L. et al (2006) Prospective memory in HIV-1 Infection. 28 pp536 – 548. Journal of Clinical and Experimental Neuropsychology.
- Doyle et al (2012) Aging, Prospective Memory, and Health-Related Quality of Life in HIV Infection. 18 (8) pp2309 – 2318. AIDS and Behaviour.
- European AIDS Clinical Society (EACS) Guidelines Version 6.1 November 2012  
[www.europeanaidsclicinalsociety.org](http://www.europeanaidsclicinalsociety.org)

# References

- Heaton et al (2010) HIV-associated Neurocognitive Disorders Persist in the Era of Potent Antiretroviral Therapy. 75 pp2087 – 2096. Neurology.
- Sacktor N et al (2005) The International HIV Dementia Scale: a New Rapid Screening Test for HIV Dementia. 19 (13) pp1367-74. AIDS.
- Zigmund A.S., Snaith R.P. (1983) The Hospital anxiety and Depression Scale. 67 (6) pp361-370. Acta Psychiatrica Scandinavica.