



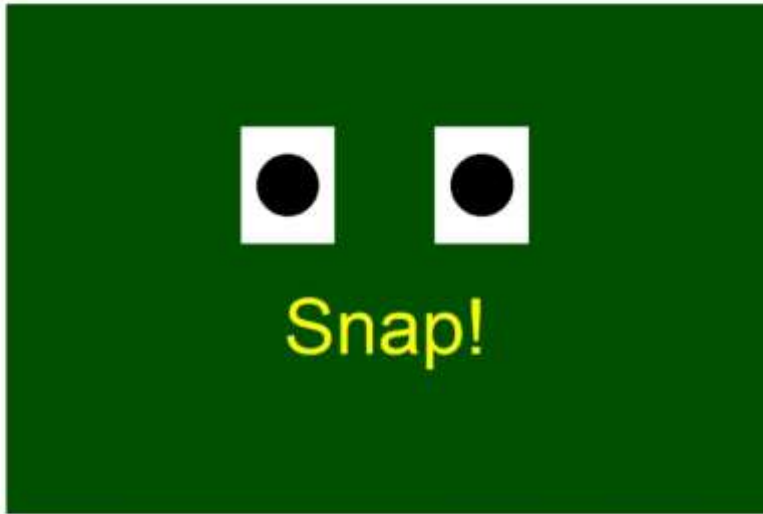
Dementias
Platform^{UK}
Medical Research Council

Cognition

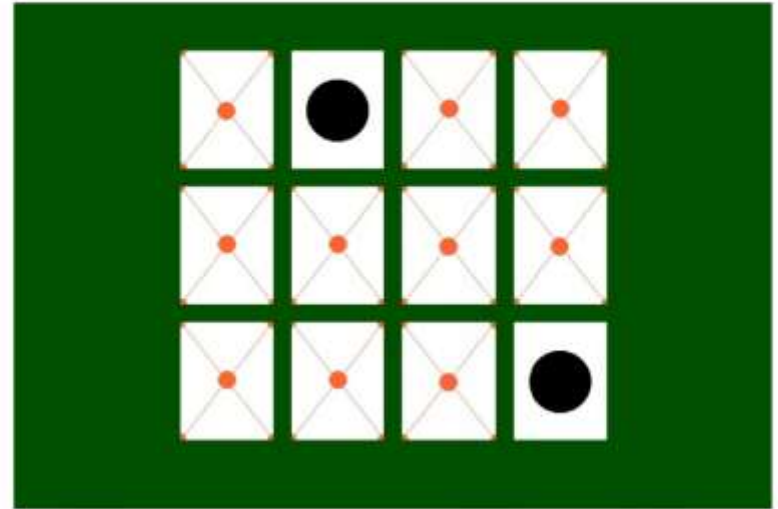
Neurodegenerative conditions

Condition	Self-report at baseline (n)	Incident outcomes* (n) by the end of:			
		2012	2017	2022	2027
Stroke	7,000	2,000	5,000	9,000	20,000
Alzheimer's	100	800	3,000	9,000	30,000
Parkinson's	900	1,000	3,000	6,000	14,000

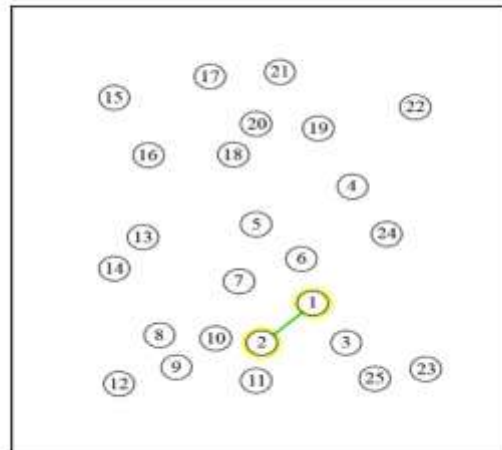
Reaction Time



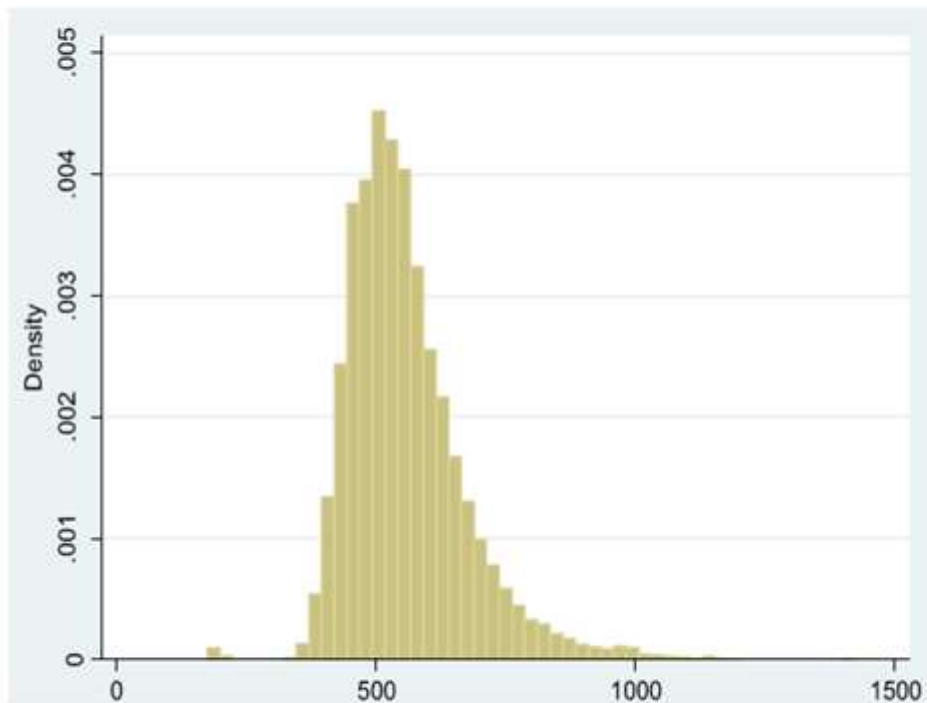
Paired Associates Learning



Trail-making

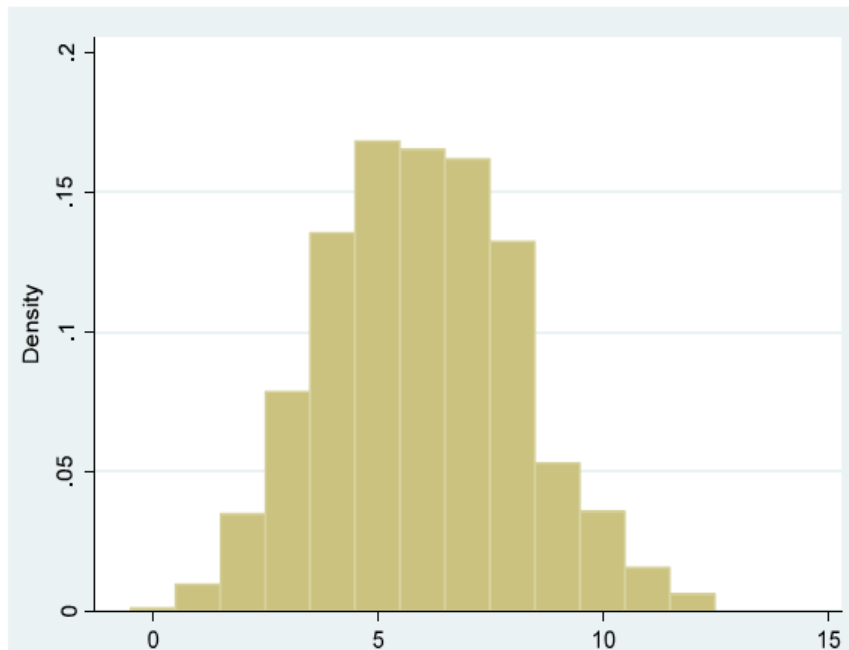


Reaction time (n=450,000)



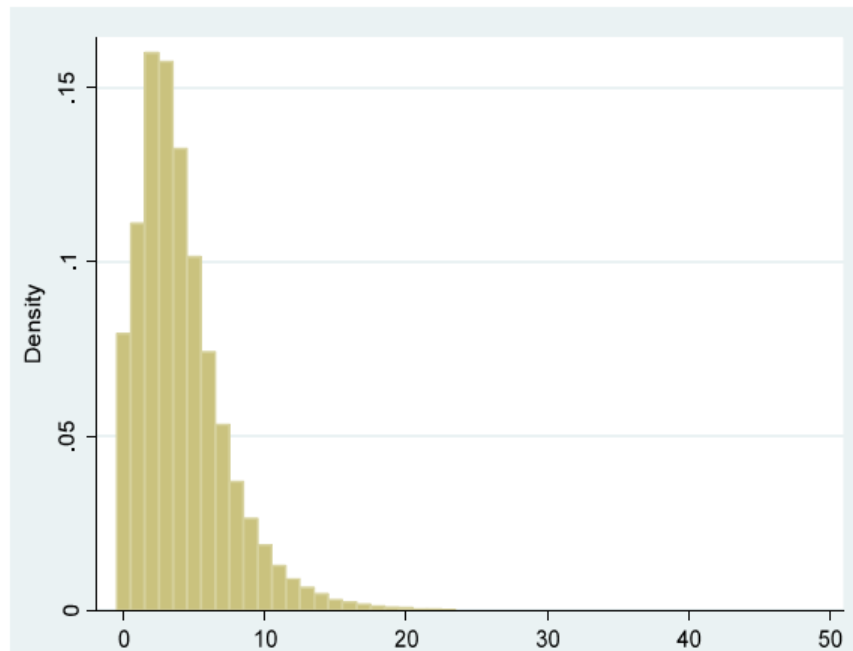
Age (years)	Mean (mSec)
40-44	506
45-49	523
50-54	540
55-59	559
60-64	580
65-69	603

Numeric and verbal reasoning (n=115,000)



Age (years)	Mean
40-44	6.0
45-49	6.0
50-54	6.1
55-59	6.2
60-64	6.0
65-69	5.6

Episodic memory (n=450,000)



Age (years)	Mean
40-44	3.4
45-49	3.7
50-54	3.9
55-59	4.1
60-64	4.4
65-69	4.8

Summary of Cognitive data

Test	Baseline N (Clinic)	Numbers according to follow-up		
		5 year (Clinic)	7 year (Web)	8-14 year (Imaging)
Reaction time	452,000	20,000	140,000	100,000
Episodic memory	452,000	20,000	140,000	100,000
Numeric and verbal reasoning	115,000	20,000	140,000	100,000
Working memory	115,000	20,000	140,000	100,000
Trail making	-	-	140,000	100,000
Digit-symbol substitution	-	-	140,000	90,000
NIH crystallised IQ (vocab)	-	-	-	90,000
Nonverbal reasoning (matrix)	-	-	-	90,000
Verbal declarative memory	-	-	-	90,000
Self report cognitive problems				90,000

Risk stratification for clinical studies (and in silico experiments)

Sample	N
UKB base population	502,713
Episodic memory	498,053
Episodic memory >2 SD below mean	17,096
..... plus age 55 years+	12,447
..... plus APOE4 carrier (20%)	2,489

Platform Science: a step-change

