

COSMOS and UK Children's Mobile Phone Cohort Study



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UK Mobile Telecommunications & Health (MTHR) Research Programme

Recommendations (2007 Report):

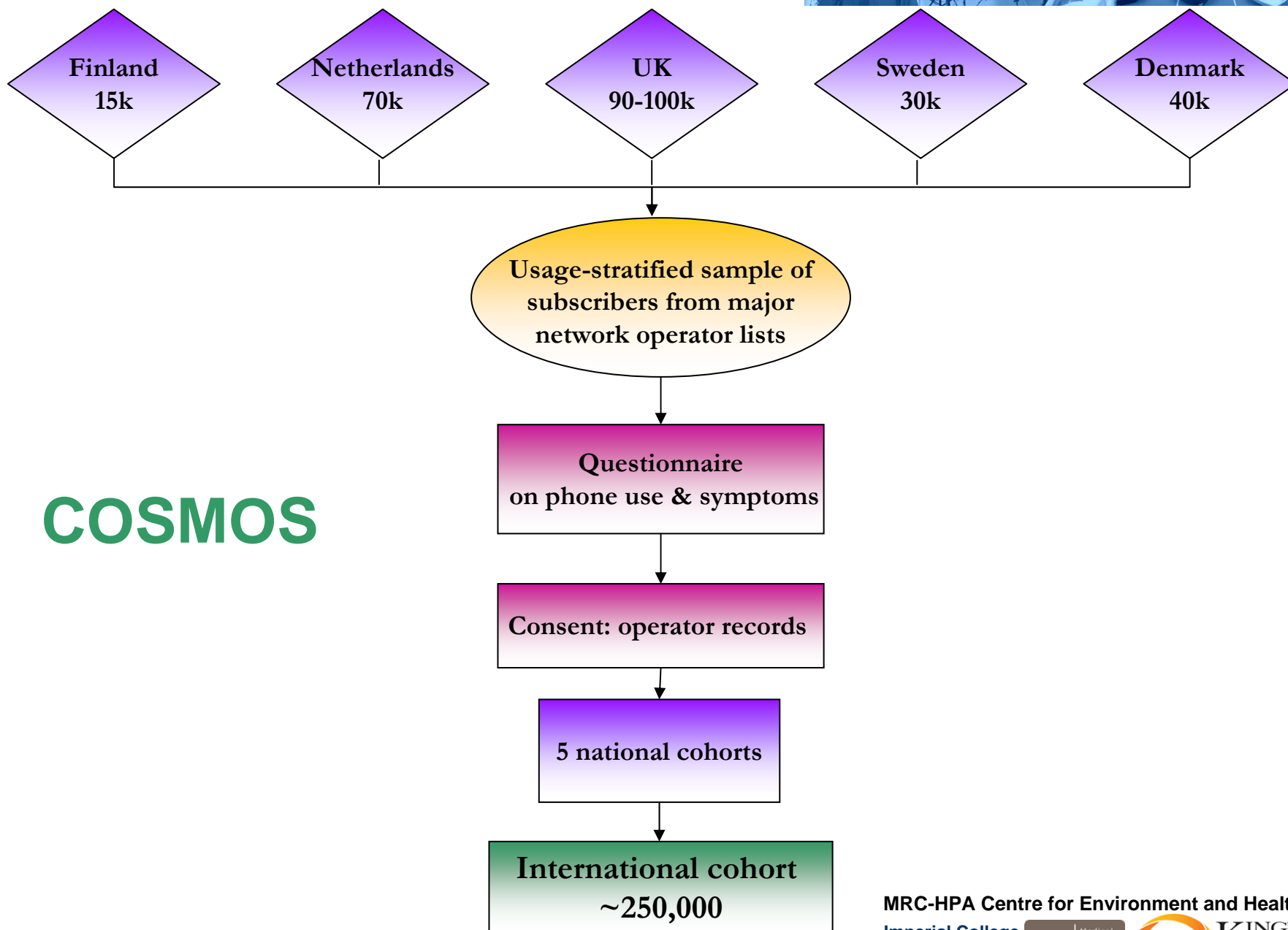
- International cohort study on mobile phone use and health
- Cohort study of mobile phone use amongst children
 - focus on symptoms (e.g, headaches, dizziness, sleeplessness) and cognitive function



COSMOS: International cohort study on mobile phone use and health

Aims

- **To establish** an international cohort of mobile phone users aged 18+
- **To characterise** exposure to mobile phone use
- **To follow** cohort for 25+ years in terms of symptoms, mortality, cancer incidence, and other health outcomes





How is mobile phone use being assessed?

- **Baseline**

- Questionnaire e.g. historical use, principal user, laterality, hands-free, data
- Also Wi-fi, DECT, VOIP, etc
- Traffic data from network operators for 3 months prior to date of invitation letter mailing



How is mobile phone use being assessed?

- **Monitor Mobile Phone use over time**
 - Annual download of 3 months traffic data from network operators
 - Identify “churners” and “porters”
 - Repeat questionnaire (year 4 of study)

What health outcomes are being followed up?

HEALTH OUTCOME	MAIN SOURCES OF INFO
<p>CANCERS</p> <p>Brain & acoustic neuroma</p> <p>Leukaemias</p> <p>Salivary gland</p> <p>Eye and skin</p>	<p>Cancer registers</p> <p>Hospital discharge registers</p>
<p>NEUROLOGICAL DISEASE</p> <p>Multiple sclerosis (MS)</p> <p>Motor neurone disease</p> <p>Alzheimer's & Parkinson's disease</p> <p>Cerebro-vascular disease</p>	<p>National registers</p> <p>Mortality registers</p> <p>Hospital discharge registers</p>
<p>SPECIFIC SYMPTOMS</p> <p>Health-related quality of life, sleep disorder, headache, tinnitus, depression</p>	<p>Questionnaire</p> <p>baseline & repeat</p> <p>(using validated indices)</p>

COSMOS UK



PIs: Elliott, Toledano

- Funded by Mobile Telecommunications & Health Research (MTHR-2) programme
- Contracts with 4 main operators for subscriber sample stratified by age/sex/use and to obtain traffic data
- Pre-test on 4,500 subscribers completed:
 - May-August 2009
- Main phase of invitations to ~2 million:
 - Early 2010

Denmark



PIs: Schuz, Johansen

- Funded by Danish Strategic Research Council
- Contracts with operators covering ~90% of market for subscriber sample stratified by use/age/sex and to obtain traffic data.
- 1st phase of invitations:
 - ~20,000 cohort established in 2008
- 2nd phase of invitations:
 - Autumn 2009

Sweden



PIs: Ahlbom, Hillert, Feychting

- Funded by Swedish Research Council together with matched funds from industry
- Contracts with operators covering ~90% of market for subscriber sample stratified by use/age and to obtain traffic data
- 1st phase of invitations:
 - ~31,000 cohort established in 2008/9
- 2nd phase of invitations:
 - Autumn 2009

Finland



PI: Auvinen

- Matched research and industry funds
- Contracts with 2 operators for subscriber sample stratified by age/sex/use and to obtain traffic data for cohort participants
- 1st phase of invitations to 35,000:
 - December 2009
- Annual invitations to 35,000 for 3 years



Netherlands

PI: Kromhout

- Funded by the Dutch national EMF research programme
- Use of existing Dutch cohorts (~100,000)
- COSMOS Questionnaire mailings:
 - Spring 2010
- Currently in discussion with consortium of operators re obtaining traffic data

UK Children's Cohort Study

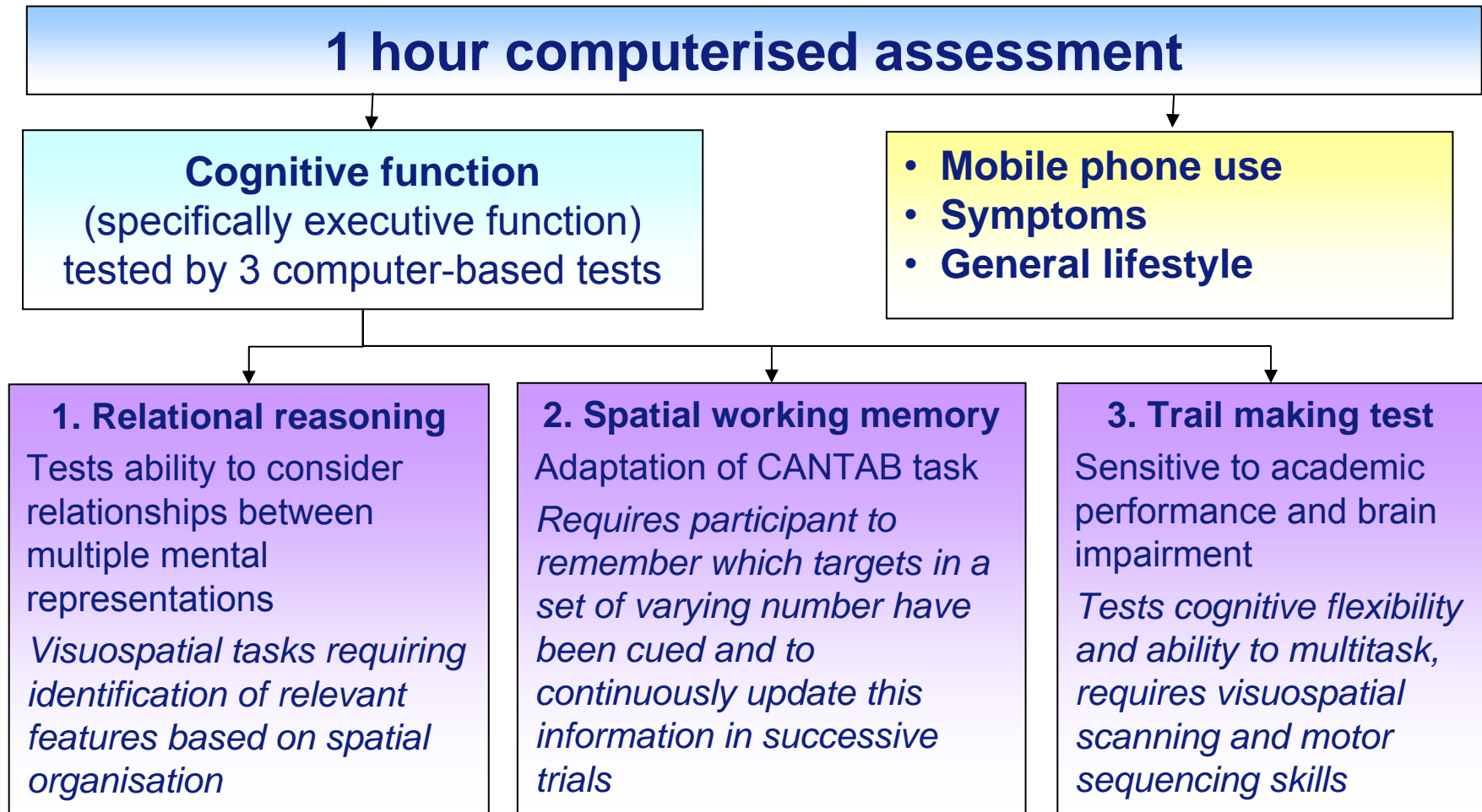
- **24-month pilot study** pending funding decision with MTHR-2
- **5-year study** will establish and follow a cohort of 5-10,000 secondary school children, 11/12 years old, across south-east England
- **Aim** to assess whether mobile phone use is related to changes in occurrence of symptoms and cognitive ability among secondary school children

Objectives

- To characterize mobile phone use by repeated assessment
 - self-reported information from questionnaires
 - linkage with traffic data records from UK network operators
- To obtain baseline information on cognitive functioning, symptom reporting, & potential confounding factors
- To repeat assessment of the cohort after 3 years follow up
 - cognitive functioning
 - symptom reporting

Computerised assessment

To be designed, developed and tested during years 1-2



Acknowledgments

- UK Network Operators (Orange, O2, T-Mobile, Vodafone)
- UK funding: Mobile Telecommunications & Health Research Programme - 2