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## *MetaHealth – Towards a Swedish Cohort Consortium*

A Swedish cohort study collaboration for the exploration  
of risk factors for uncommon diseases

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## Progress of the pilot study

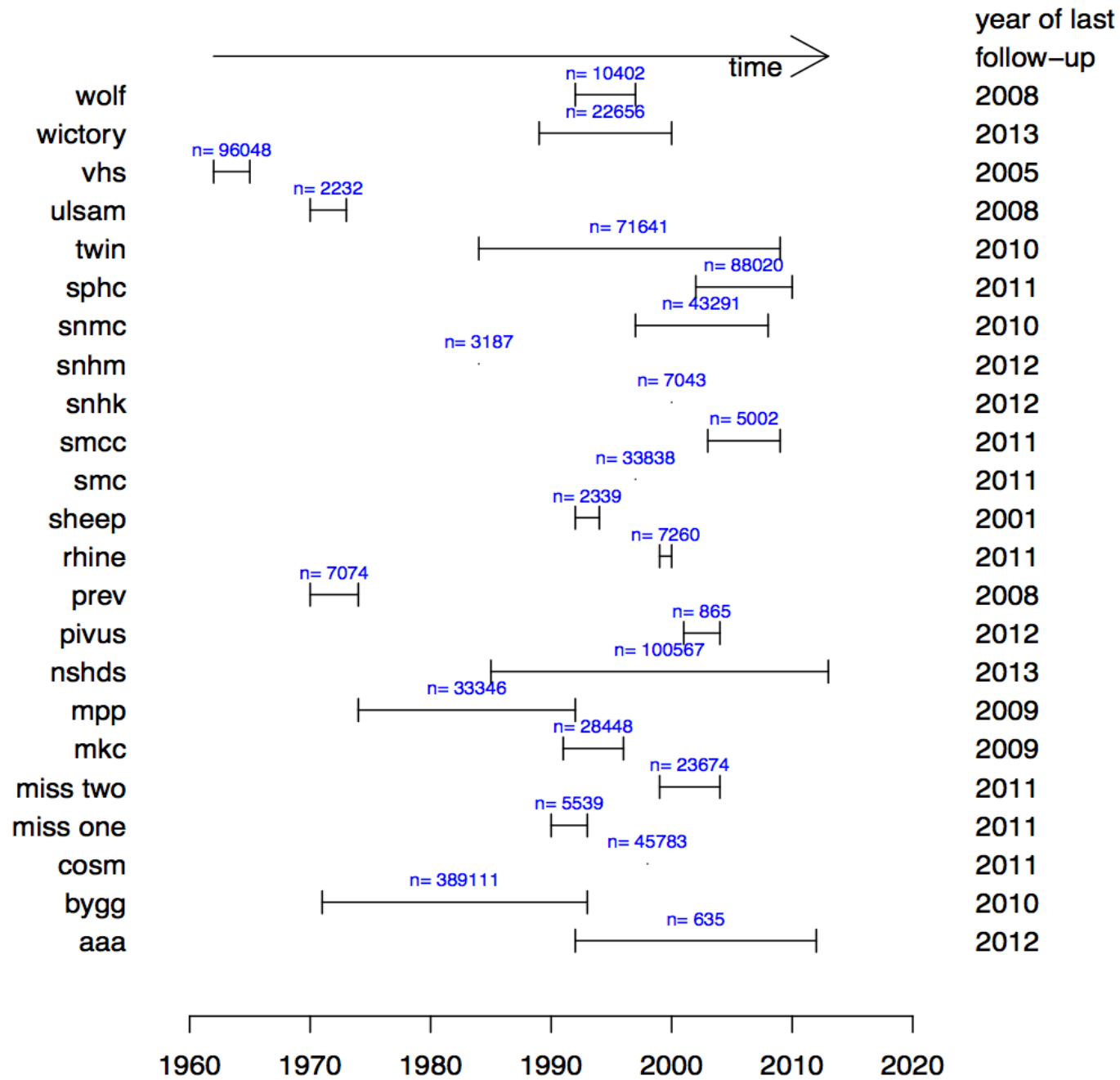
- 2010  
2011  
2012  
2013  
2014  
2015
- MetaHealth proposed at EpiHealth meeting in Skanör in May 2010  
Development of subarachnoid hemorrhage research proposal in 2010  
Identification and invitation of cohorts during 2011  
Ethics application and approval during Q1+Q2 2012  
Data collection from cohorts during 2012-2013  
Linkage to SoS & SCB for 5 cohorts during 2013-2014  
Data harmonisation during 2013-2014  
Statistical analyses during Q3+Q4 2014  
Drafting of manuscripts during Q1+Q2 2015  
Evaluation of pilot study Q1+Q2 2015  
Planning of new infrastructure Q2 2015

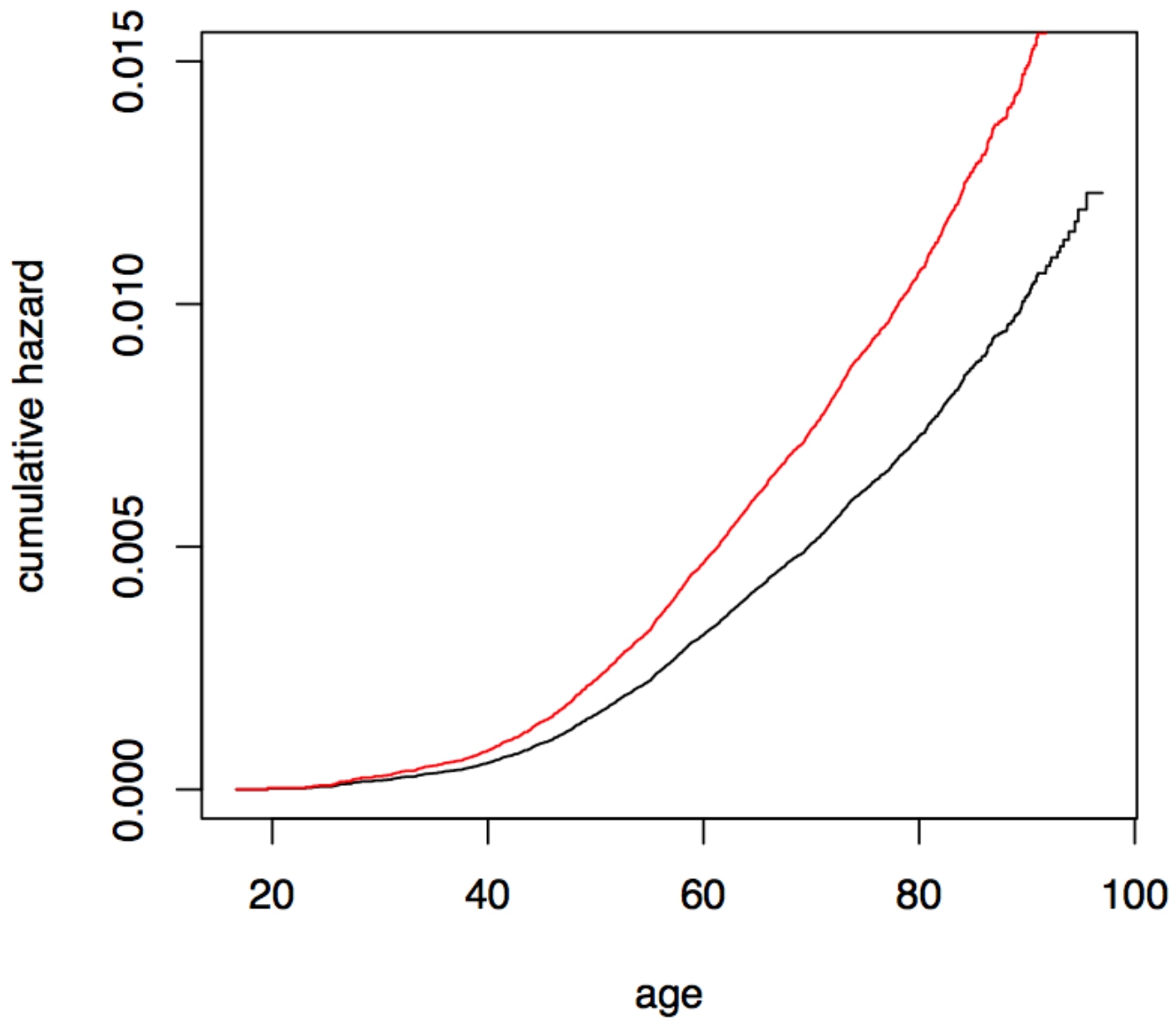
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2 000 timmar  
3 000 000 kr  
Hittills...



cohort	n	person years	no of SAH	mean indexAge	no of women
aaa	635	1736	0	66.56	0
bygg	389111	10795801	1243	34.66	19418
miss one	5539	98200	31	46.76	5539
nshds	100567	1414429	173	46.76	50574
pivus	865	8117	2	69.97	411
rhine	7260	91250	12	40.92	3801
sheep	2339	19239	8	59.9	797
snhk	7043	86258	14	45.9	7043
snmc	43291	543705	99	50.26	27819
ulsam	2232	63625	28	49.63	0
mkc	28446	404990	83	58.1	17203
prev	7074	189142	50	51.58	7074
vhs	96048	2676429	517	49.21	48402
miss two	23674	250020	54	54.96	23674
wictory	22656	411796	63	43.82	11618
snhm	3187	79030	11	46.15	0
mpp	33345	842462	166	45.64	10902
sphc	88020	422196	67	49.6	48677
wolf	10402	137032	18	42.68	3241
twin	71641	481355	115	51.76	38968
smc	33838	439378	147	62.85	33838
cosm	45783	572691	125	60.84	0
smcc	5002	24158	8	67.59	5002
Total	1027998	20053049	3034	52.01	364001





### 4.3.3 Smoking

[1]

Call:

```
coxph(formula = as.formula(model), data = DB)
```

n= 835385, number of events= 2270

	coef	se(coef)	se2	Chisq	DF	p
genderwoman	0.1902	0.07719	0.07263	6.07	1.00	1.4e-02
smokeyes	0.5089	0.05394	0.05376	89.01	1.00	0.0e+00
frailty(kohort)				48.20	12.14	3.2e-06
genderwoman:smokeyes	0.4652	0.08818	0.08796	27.83	1.00	1.3e-07

	exp(coef)	exp(-coef)	lower .95	upper .95
genderwoman	1.209	0.8268	1.040	1.407
smokeyes	1.663	0.6012	1.497	1.849
genderwoman:smokeyes	1.592	0.6280	1.340	1.893

# VR 2015: *Swedish Cohort Consortium* infrastructure application

## **Possibilities**

Enable ground-breaking research that is otherwise impossible

Decrease resource waste (time, costs, data, biomaterial)

Facilitate true collaboration

## **Challenges**

Increase availability without decreasing integrity

Secure representation from all cohorts and all universities

Secure ethicolegal aspects

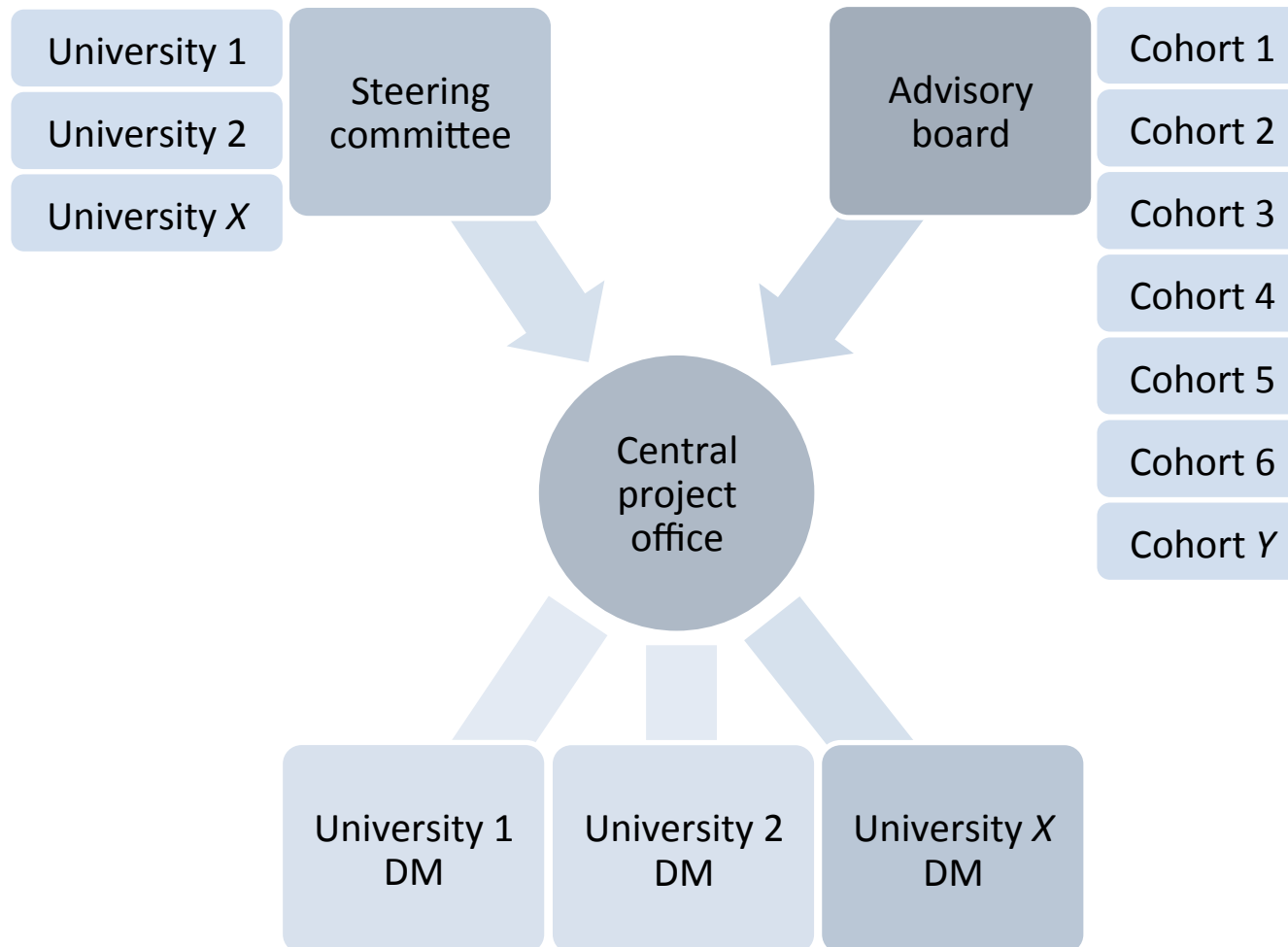


## VR 2015: Possible *Swedish Cohort Consortium* technical platform



**Figure 2** Schematic representation of the structure of DataSHIELD. The computer controlling analysis (heavily shaded circle) is sited at the analysis centre (MP: master process). The data computers (lightly shaded circles) are each sited at one of the study centres involved in the collaborative analysis (SP: slave process). The arrows indicate the flow of analytic instructions and summary statistics. All potentially disclosive individual-level data are secured on the local data computers

## VR 2015: Possible organization of the *Swedish Cohort Consortium*





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