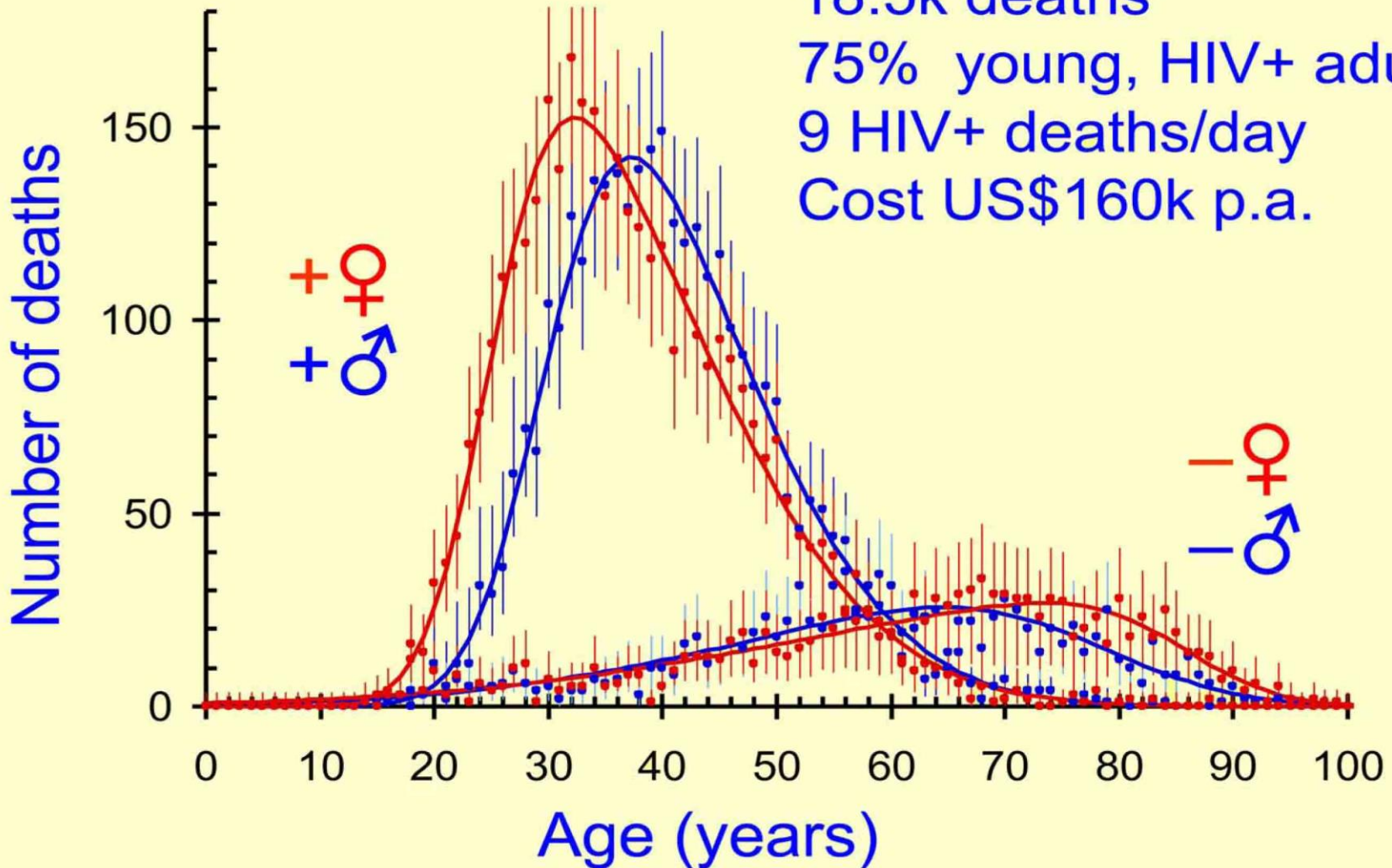


Death in Baragwanath: The impact of HIV

Brian Williams

18.5k deaths
 75% young, HIV+ adults
 9 HIV+ deaths/day
 Cost US\$160k p.a.



HIV+ Deaths in Baragwanath 2006–2009

ICD	Numk	Condtion		Negative	Positive	Unknown	Suspected
A09	509		Infectious gastroenteritis and colitis, unspecified	19	366	61	63
A15	685	Certain infectious and parasitic diseases	Lung	18	565	48	54
A16	736	Certain infectious and parasitic diseases	Lung without confirmation	38	557	64	77
A17	364	Certain infectious and parasitic diseases	Meningitis	10	295	25	34
A18	473	Certain infectious and parasitic diseases	Bones	17	394	23	39
A19	95	Certain infectious and parasitic diseases	Milliary	4	82	3	6
A31	17	Certain infectious and parasitic diseases	Pulmonary mycobacterial	0	16	0	1
A32	1	Certain infectious and parasitic diseases	Listeriosis	1	0	0	0
A35	2	Certain infectious and parasitic diseases	Tetanus	0	0	2	0
A39	3	Certain infectious and parasitic diseases	Meningococcal meningitis	0	2	1	0
A40	4	Certain infectious and parasitic diseases	Streptococcal sepsis	0	1	2	1
A41	889	Certain infectious and parasitic diseases	Other sepsis	152	454	194	89
A49	2	Certain infectious and parasitic diseases	Bacterial infection, unspecified site	0	2	0	0
A52	1	Certain infectious and parasitic diseases		0	0	1	0
A81	6	Certain infectious and parasitic diseases		0	6	0	0
A85	1	Certain infectious and parasitic diseases		0	1	0	0
A86	1	Certain infectious and parasitic diseases		0	0	0	1
A87	1	Certain infectious and parasitic diseases		0	1	0	0
B01	20	Certain infectious and parasitic diseases	Varicella (chicken pox)	1	11	4	4
B02	1	Certain infectious and parasitic diseases	Herpes zoster	0	1	0	0
B10	7	Certain infectious and parasitic diseases	Herpes virus	0	4	2	1
B16	9	Certain infectious and parasitic diseases	Acute hepatitis	2	5	2	0
B17	2	Certain infectious and parasitic diseases	Acute hepatitis	0	1	1	0
B18	1	Certain infectious and parasitic diseases	Chronic hepatitis	1	0	0	0
B21	4	Certain infectious and parasitic diseases	HIV	0	4	0	0
B22	6	Certain infectious and parasitic diseases	HIV	2	3	0	1

- 18.5 k deaths with 355 different codes
- Group them into important AIDS related diseases
- We need a control group
- Work out odds for each condition

$$\Omega_{\text{TB}} = \frac{N(\text{HIV+|TB})}{N(\text{HIV-|TB})} \quad \Omega_{\text{C}} = \frac{N(\text{HIV+|C})}{N(\text{HIV-|C})}$$

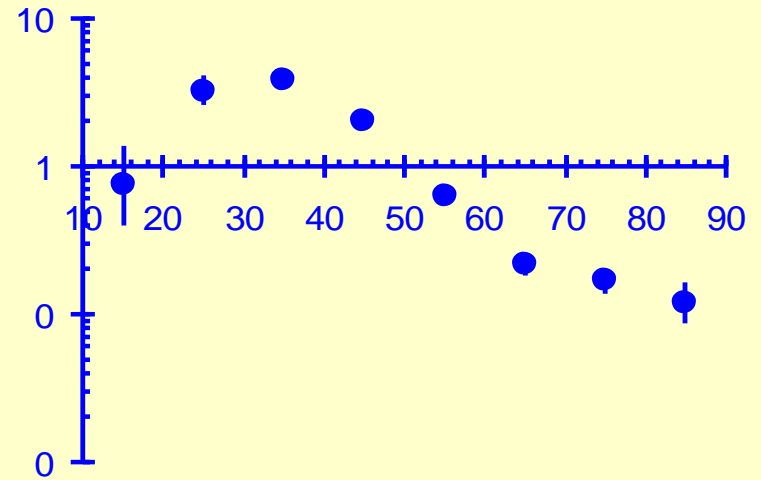
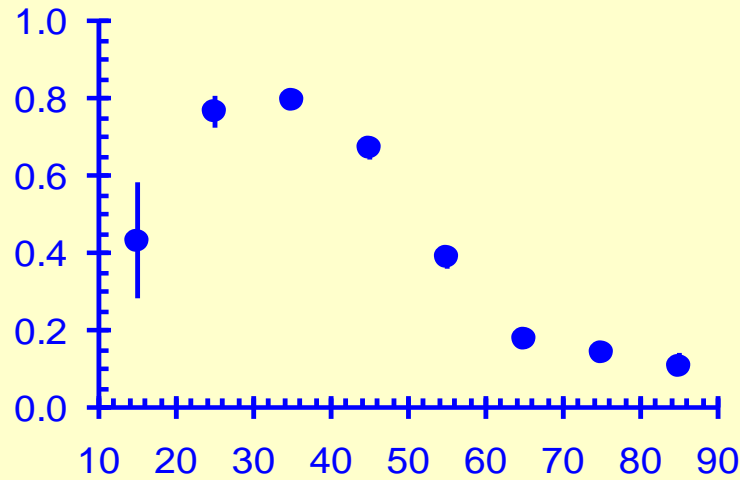
and then the odds ratio

$$\text{OR} = \frac{\Omega_{\text{TB}}}{\Omega_{\text{C}}}$$

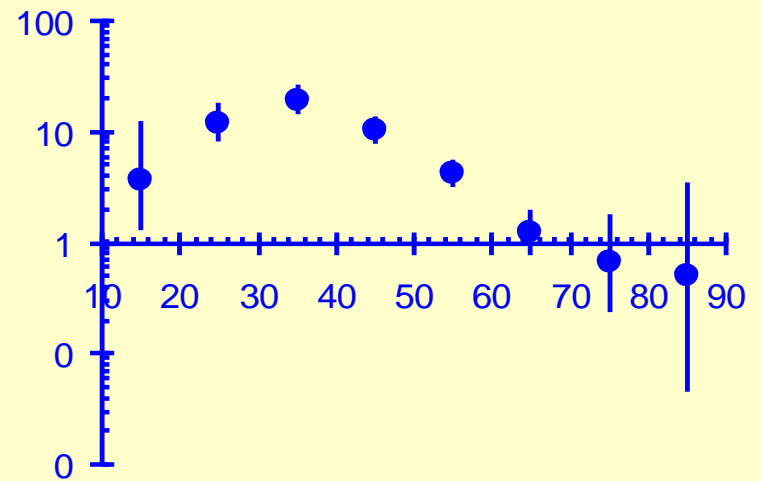
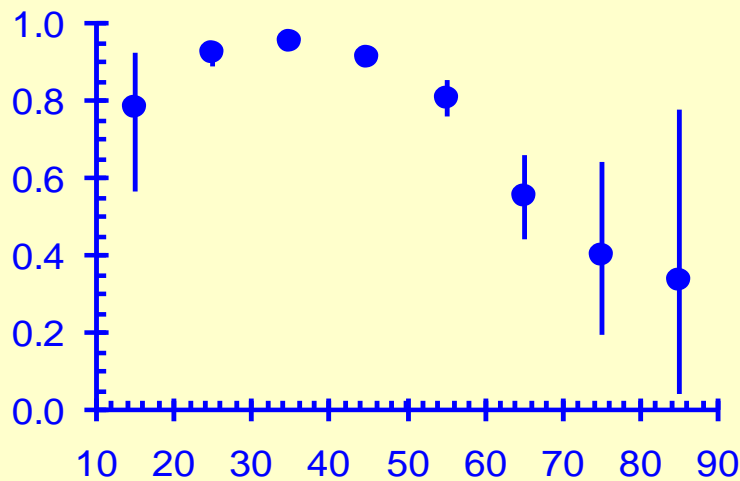
Prevalence

Odds

Heart and
respiratory

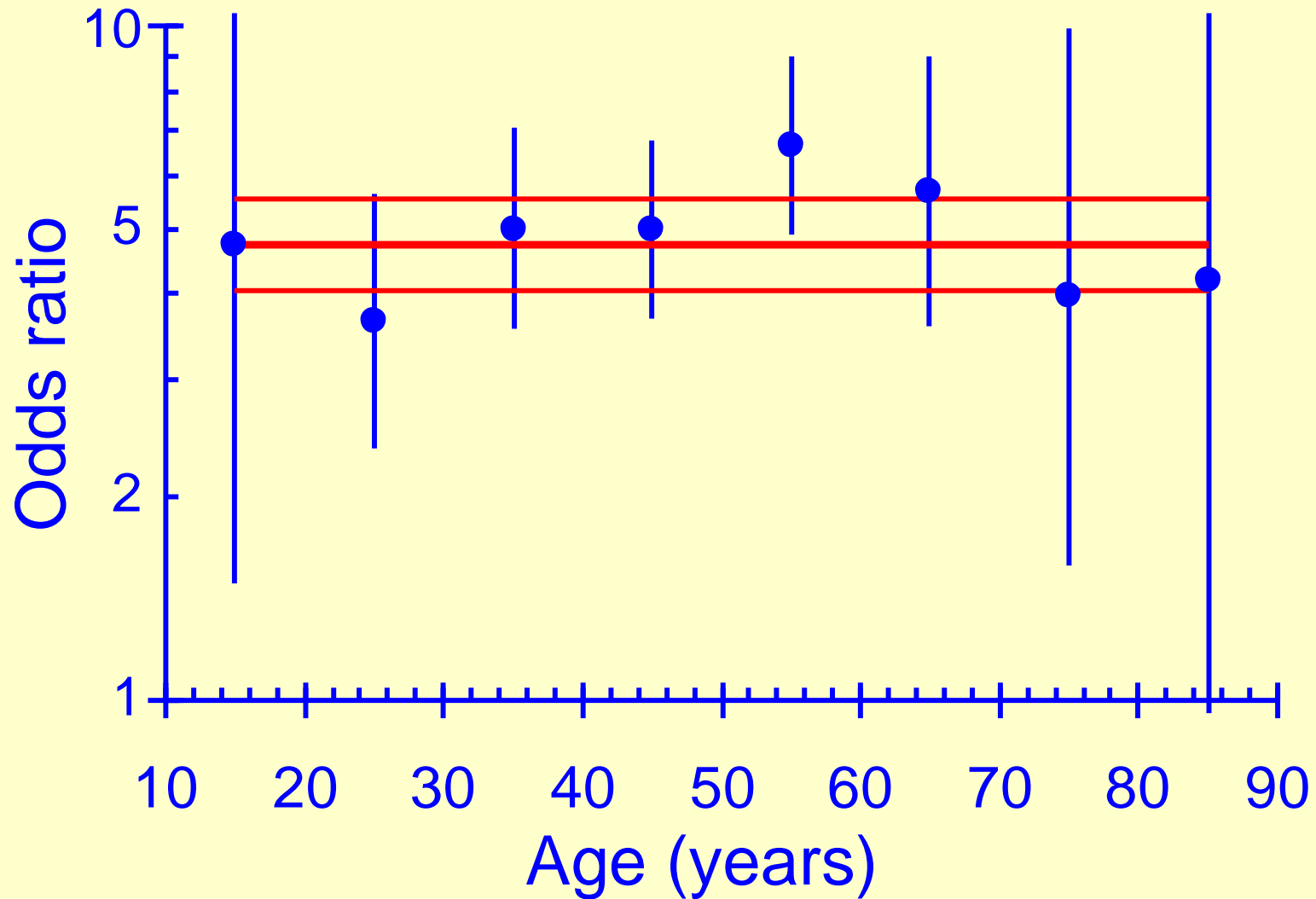


Tuberculosis



Age (years)

Age (years)



Odds of having HIV 5.5 (4.1-4.7) times greater than if you have TB compared to heart and respiratory conditions

Problems

- Decide how to group the data into conditions associated with HIV
- Decide on the control conditions
- Need reasonable numbers in each group
- Have to control for age
- We would like to control for sex