

39. **Source: Ahlbom & Norell, 1990.** A group (group A) of 6000 people participated in a program for prevention of disease. Another group (group B) of 5000 people did not participate and serve as a reference group. During the course of a year there were 36 cases of the disease in Group A and 35 cases in group B. Results are shown in the table below according to two age categories. Calculate age-specific rates within the two groups. Then, make a direct age adjustment (standardization) by using equal weights for the two age groups (i.e., $w_1 = w_2 = 0.5$) to compare the two groups.

Age	Group A		Group B	
	Cases	P-yrs	Cases	P-yrs
Younger	4	2000	20	4000
Older	32	4000	15	1000
Total	36	6000	35	5000

40. **Source: Ahlbom & Norell, 1990, p. 45, #12.** Random samples of men between the ages of 30 – 69 are taken from the catchment area of two hospitals. The occurrence of chronic bronchitis was recorded using a validated questionnaire about current symptoms. Results are shown in the table below. Perform a direct age-adjustment between the two population with equal weights for the different age groups (i.e., $w_1 = w_2 = w_3 = w_4 = 0.25$).

Age	Population A		Population B	
	No. w/ bronchitis	No. in sample	No. w/ bronchitis	No. in sample
30 - 39	5	1000	25	5000
40 - 49	20	2000	40	3000
50 - 59	50	4000	20	1000
60 - 69	50	3000	20	1000
Total	125	10000	105	10000

References

- Ahlbom, A., & Norell, S. (1990). *Introduction to Modern Epidemiology (2nd ed.)*. Chestnut Hill, MA: Epidemiology Resources.
- Fraser, D. W., Tsai, T. R., Orenstein, W., Parkin, W. E., Beecham, H. J., & Sharrar, R. G. (1977). Legionnaires' disease: description of an epidemic of pneumonia. *New England Journal of Medicine*, 297, 1189-1197.