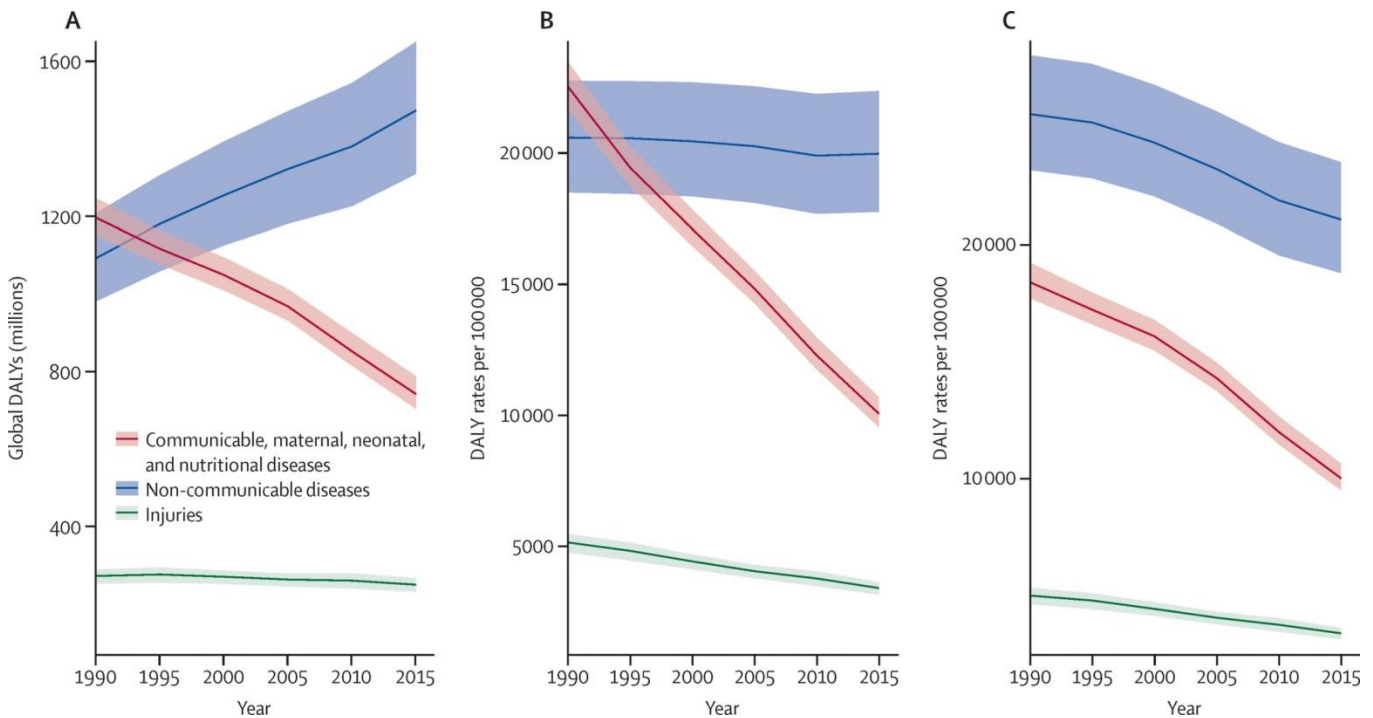


Social epidemiology

Practical exercise 3

1. We have already seen this graph (output from the Global Burden of Disease project) in the lecture when I tried to explain to you the difference between panels A, B, and C.

Trends in global DALYs from 1990 to 2015 by major group of diseases.



(A) – Global DALYs; (B) – Crude DALY rates; (C) – Age-standardised DALY rates

- 1.1. Briefly explain the term DALY
- 1.2. Briefly explain the difference in trends for the various disease groups between panels A and B
- 1.3. Briefly explain the difference in trends for the various disease groups between panels B and C
- 1.4. If it were a situation in our country, which of the graphs would be more suitable for:
 - 1.4.1. Assessment of the health status of the population
 - 1.4.2. Assessment of the possible influence of population risk behavior (e.g. obesity, smoking, etc.)
 - 1.4.3. Estimation of the necessary capacity of the healthcare system for the treatment of these diseases

2. What data/indicators can be used for evaluation

- 2.1. Changes in the health status of the Czech population since 2000?
- 2.2. Comparison of the health status of the Czech and Austrian populations?

3. What indicators can be used in determining the goals of an intervention in:

- 3.1. General health?
- 3.2. The health status of the elderly?
- 3.3. The health status of the elderly, including morbidity?
- 3.4. The abilities of the elderly to lead an active life?

4. Several recent studies have published results showing that living near major roads is associated with the risk of respiratory disease. This relationship is mostly attributed to air pollution from traffic. Can socio-economic factors also apply in this relationship?

5. The effectiveness of the vaccine is an indicator that you have not yet become familiar with.

A hypothetical example

	Total	Disease	Incidence
Vaccinated	23500	470	
Unvaccinated	31200	9360	

Relative risk =

Attributive risk (risk difference)=

attributive % =

Risk in exposed – risk in unexposed

attributive %=

Risk in unexposed

Vaccine efficacy is calculated as

- Attributable risk %
- 1-RR

The efficacy of the vaccine in this case is: