

Random reflections on competition and solidarity

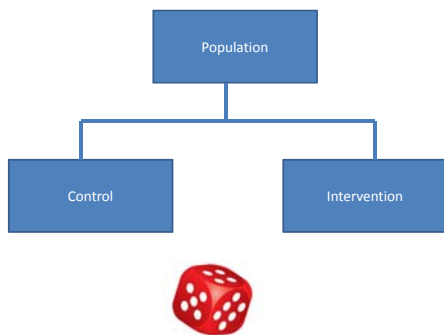
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Cause and effect



A fair experiment



Koch's Postulates

- The microorganism must be isolated from a diseased organism and grown in pure culture.
- The cultured microorganism should cause disease when introduced into a healthy organism.
- The microorganism must be reisolated from the inoculated, diseased experimental host and identified as being identical to the original specific causative agent.

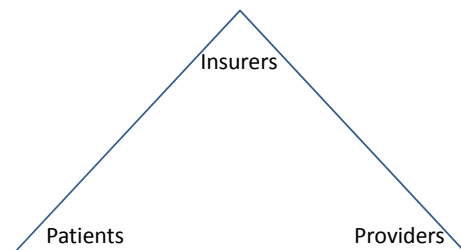
Bradford Hill's criteria of causality

- Strength of association
- Consistency
- Specificity
- Temporal relationship
- Biological gradient
- Experiment
- Analogy
- Biological plausibility
- Coherence

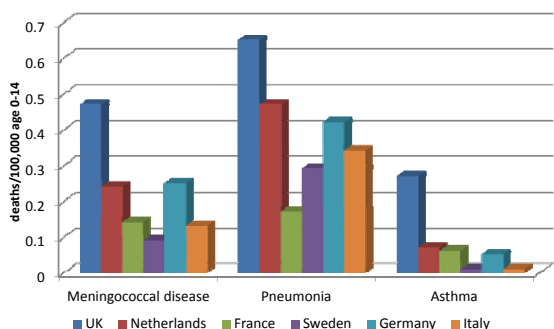


Sir Austin Bradford Hill

Competition among....



Outcomes of common childhood illnesses in Europe



Source: Wolfe et al. BMJ

Pre-requisites for perfect competition

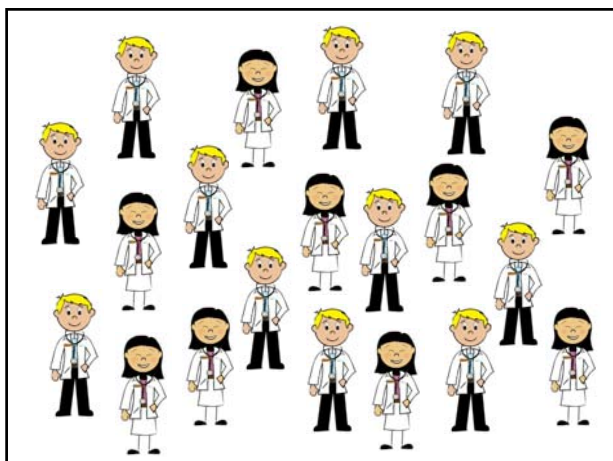
- Infinite buyers and sellers
- Zero entry and exit barriers
- Perfect factor mobility
- Perfect information
- Zero transaction costs
- Profit maximization
- Utility maximisation
- Homogeneous products
- Non-increasing returns to scale

The case for solidarity

- Altruism
 - You are a nice person
- Self-interest
 - It could be you
 - You don't want:
 - Mad people to kill you
 - Infectious diseases to afflict you

An increasingly typical patient

- Angina
- Hypertension
- Chronic airways disease
- Arthritis
- Parkinson's disease
- Diabetes
- Renal impairment
- Hepatic impairment
- Cognitive decline



Mortality from diabetes in the US and Europe

