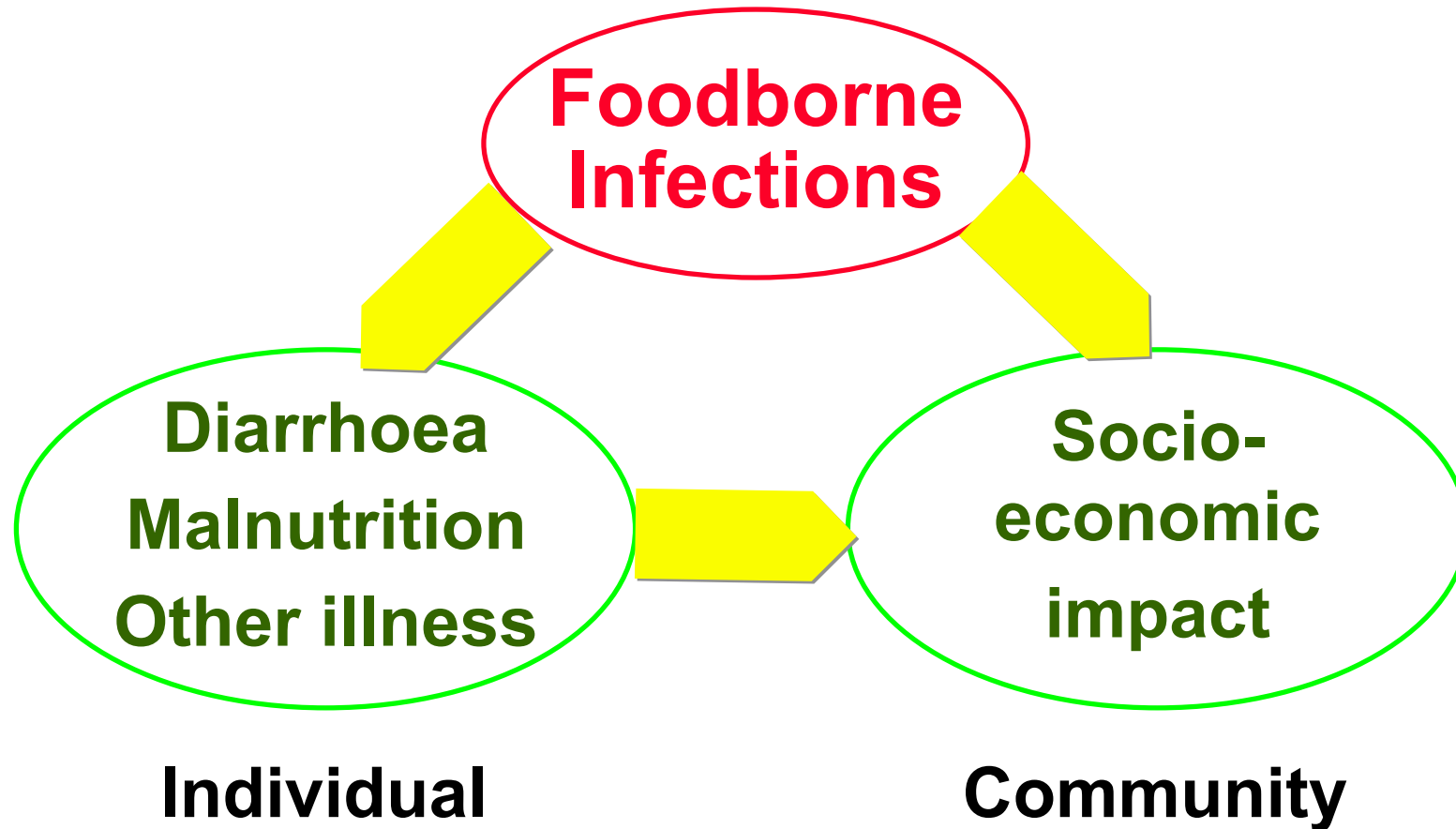


Module 03 Lecture 02

Impact of foodborne disease health, social and economic implications

Consequences of foodborne infections



Impact of foodborne disease

	<i>Number of Cases / year</i>	<i>Costs ↑(US)</i>	<i>Source</i>
USA	99 mio	23 bio	Garthwright (1988)
CAN	33 mio	7.7 bio	Kvenberg and Archer (1987)
USA	12.6 mio	8.4 bio	Todd (1989)
USA	6.3 mio	4.8 bio	Roberts (1989)

Annual morbidity and mortality from diarrhoea

Estimates for global morbidity

2.6 episodes / child / year 1980 - 1990 Bern et al (1992)

2.2 episodes / child / year —————> 1982 Snyder and Merson (1982)

Estimates for global mortality

3.3 million 1990 Bern et al (1992)

4.6 million 1982 Snyder and Merson (1982)

Impact of foodborne disease - socio-economic costs

to individuals

- medical costs
- income loss
- pain and suffering
- lost leisure time
- child care costs
- risk aversion costs
- costs of averting behaviour
- home modifications
- rehabilitation costs
- legal costs

to food industry

- product recall
- plant closure
- clean-up
- loss of market
- loss of image
- insurance administration
- legal costs

to state

- surveillance costs
- outbreak investigation
- loss of national productivity in endemic areas
- reduced exports
- social security and medical care cost
- unemployment
- loss of tourism
- loss of human resources

Foodborne infections and associated pathologies (1)

Disease

Associated pathologies

Brucellosis

aortitis, orchitis, meningitis, pericarditis, spondylitis

Campylobacteriosis

arthritis, carditis, cholecystitis, colitis, endocarditis, erythema nodosum, Guillain-Barré syndrome, haemolytic-uraemic syndrome, meningitis, pancreatitis, septicaemia

E. Coli infections

erythema nodosum, haemolytic-uraemic syndrome, seronegative arthropathy

Listeriosis

meningitis, endocarditis, osteomyelitis, abortion and stillbirth

Toxoplasmosis

foetus malformations, congenital blindness

Foodborne infections and associated pathologies (2)

Disease

Associated pathologies

Salmonellosis

aortitis, cholecystitis, colitis, endocarditis, orchitis, meningitis, myocarditis, osteomyelitis, pancreatitis, Reiter's syndrome, rheumatoid syndromes, septicaemia, splenic abscess, thyroiditis.

Shigellosis

erythema nodosum, haemolytic-uraemic syndrome, peripheral neuropathy, pneumonia, Reiter's syndrome, septicaemia, splenic abscess, synovitis.

Yersiniosis

arthritis, cholangitis, erythema nodosum, liver and splenic abscesses, lymphadenitis, pneumonia, pyomiasis, Reiter's syndrome, septicaemia, spondylitis, Still's disease.

Impact of foodborne diseases - Key messages

- **Foodborne diseases have significant social and economic costs.**
- **Foodborne diseases may have complications.**
- **The situation is a vicious circle that can be attacked at many points by preventive measures.**