



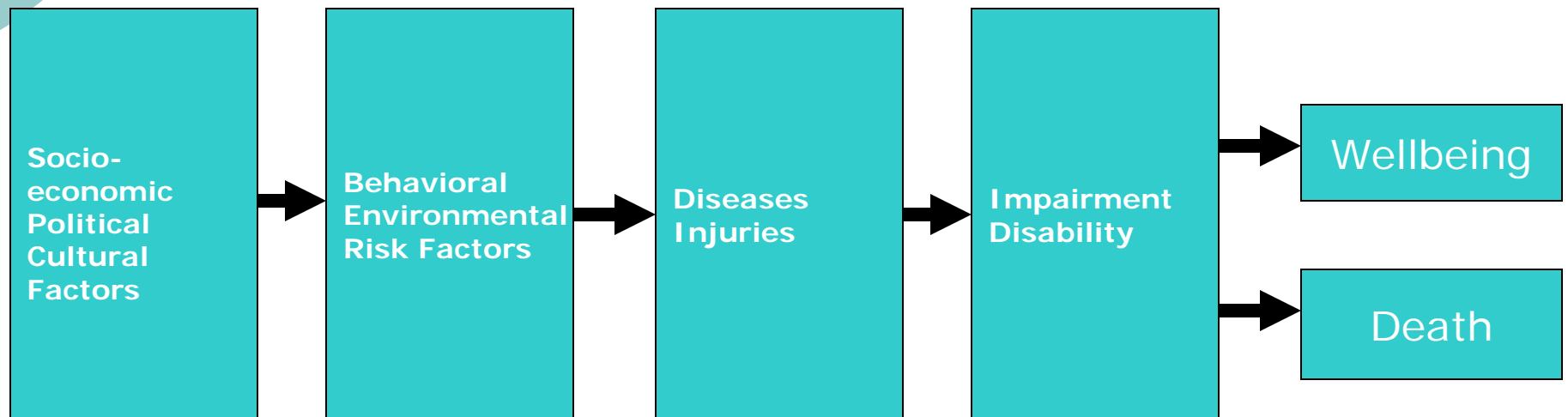
Health and Wellbeing:

Behaviors, Communicable Diseases, Chronic Disorders

Suzanne Bennett Johnson

ICSU Workshop, Vienna, January 24-25 2008

Presentation Framework



Modified from Lopez et al, *Global Burden of Disease and Risk Factors*, 2006



Socio-
Economic
Political
Cultural
Factors



Behavioral
Environmental
Risk Factors



Diseases
Injuries



Impairment
Disability



Wellbeing

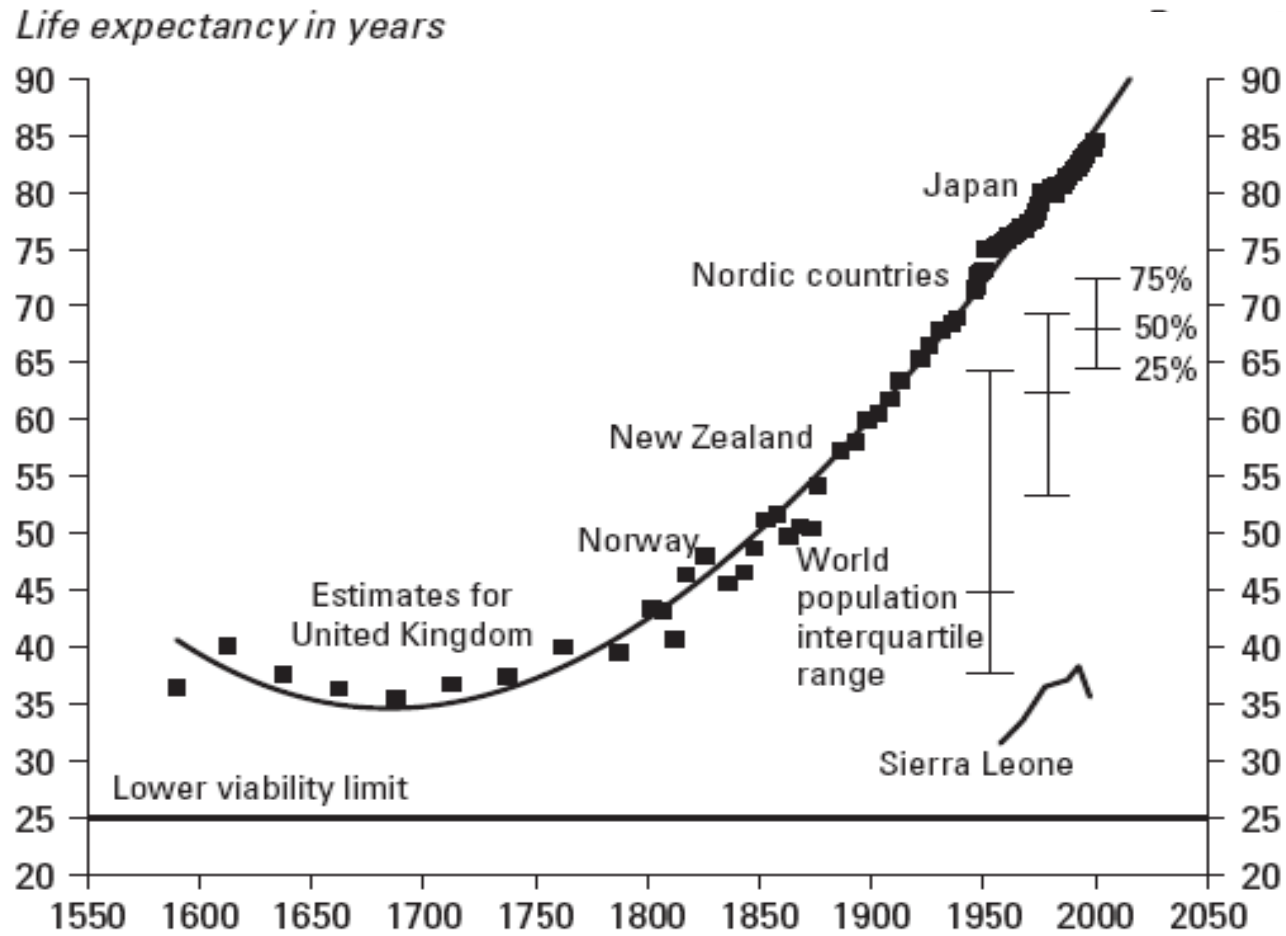


Death



Life Expectancy

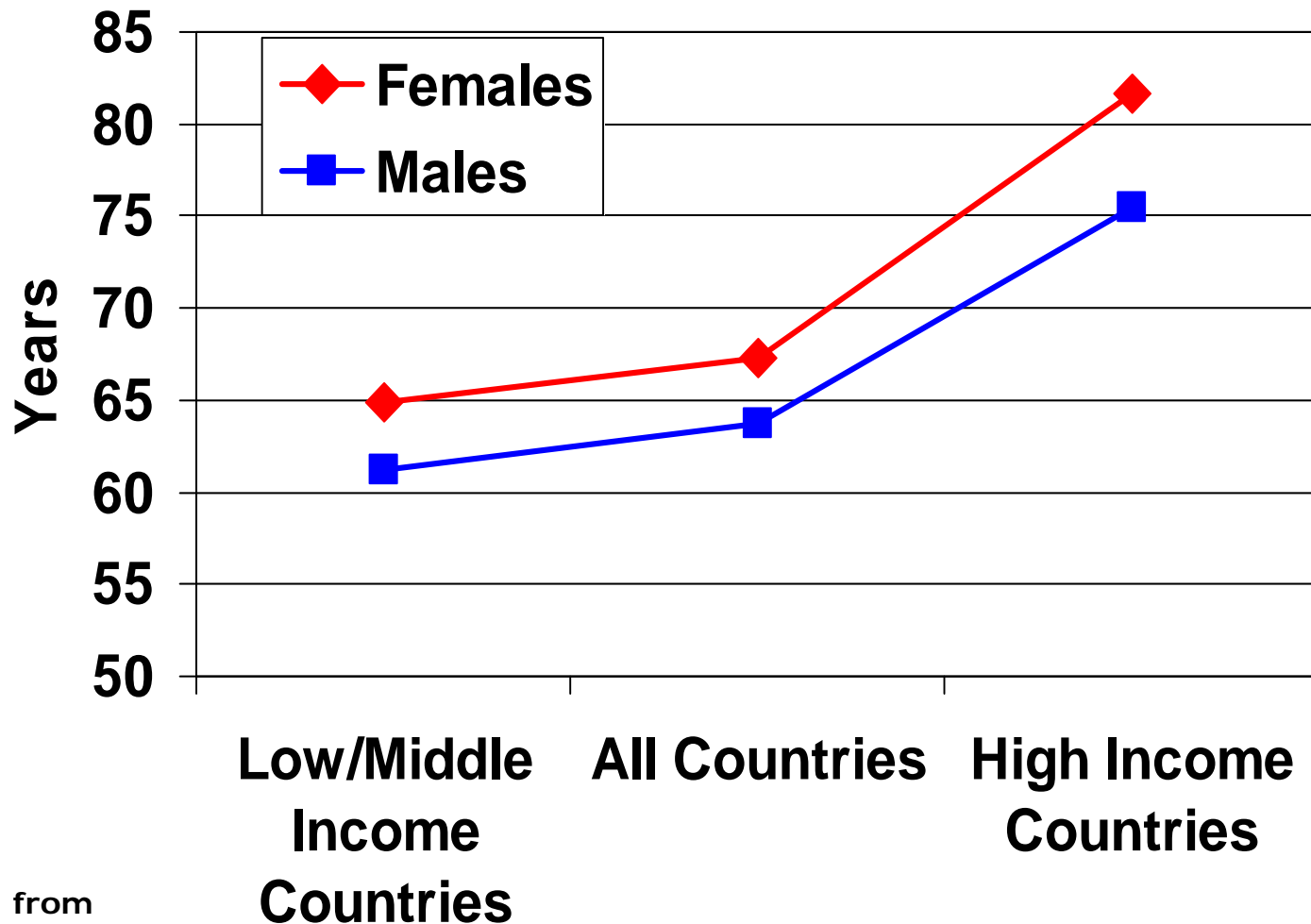
Maximum Female Life Expectancy: 1600-2000



Source: Oeppen 1999.



Life Expectancy at Birth by Country Income and for the World – 2001 GBD Study



Socio-
Economic
Political
Cultural
Factors

Income

Behavioral
Environmental
Risk Factors

Communicable

Noncommunicable

Diseases
Injuries

Injuries

Impairment
Disability

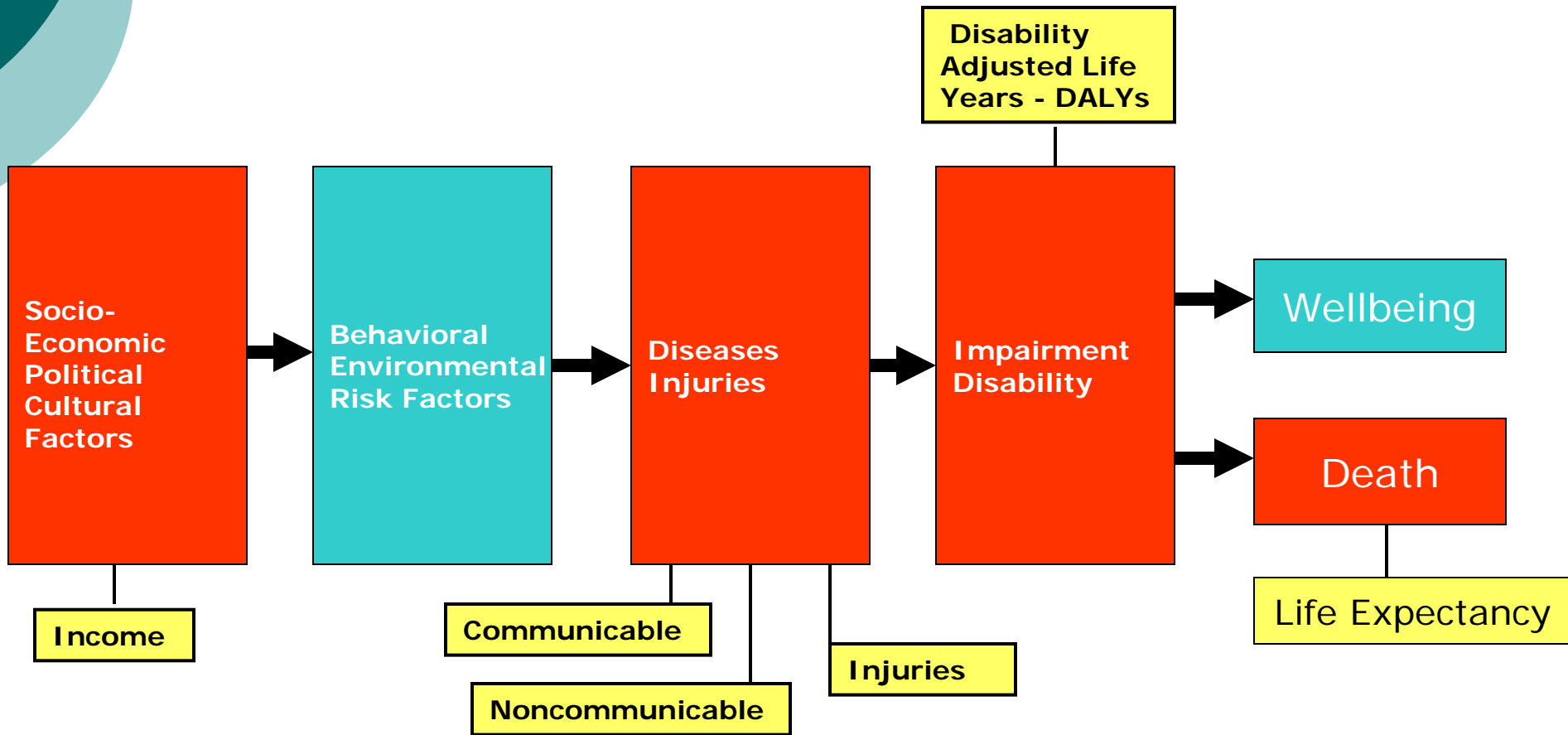
Wellbeing

Death

Life Expectancy

Percent of Deaths by Condition and by Country Income – 2001 GBD Study

Cause of Death	Low/Middle Income Countries	High Income Countries	All Countries
Communicable (Infectious) Perinatal Conditions Malnutrition	36.4	7.0	32.3
Respiratory Infections	7.0	4.4	6.7
HIV/AIDS	5.3	0.3	4.6
Perinatal Conditions	5.1	0.4	4.5
Diarrhea	3.7	0.0	3.2
Tuberculosis	3.3	0.2	2.9
Malaria	2.5	0.0	2.1
Noncommunicable (Chronic) Disease	53.5	87.0	58.5
Heart Disease	13.4	18.9	14.2
Cerebrovascular Disease	9.5	9.9	9.6
Cancer	4.7	12.6	5.9
Chronic Obstructive Pulmonary Disease	4.9	3.8	4.8
Diabetes	1.6	2.6	1.7
Alzheimer and other dementias	0.4	2.6	0.7
Injuries	9.8	6.0	9.2
Traffic Accidents	2.2	1.5	2.1

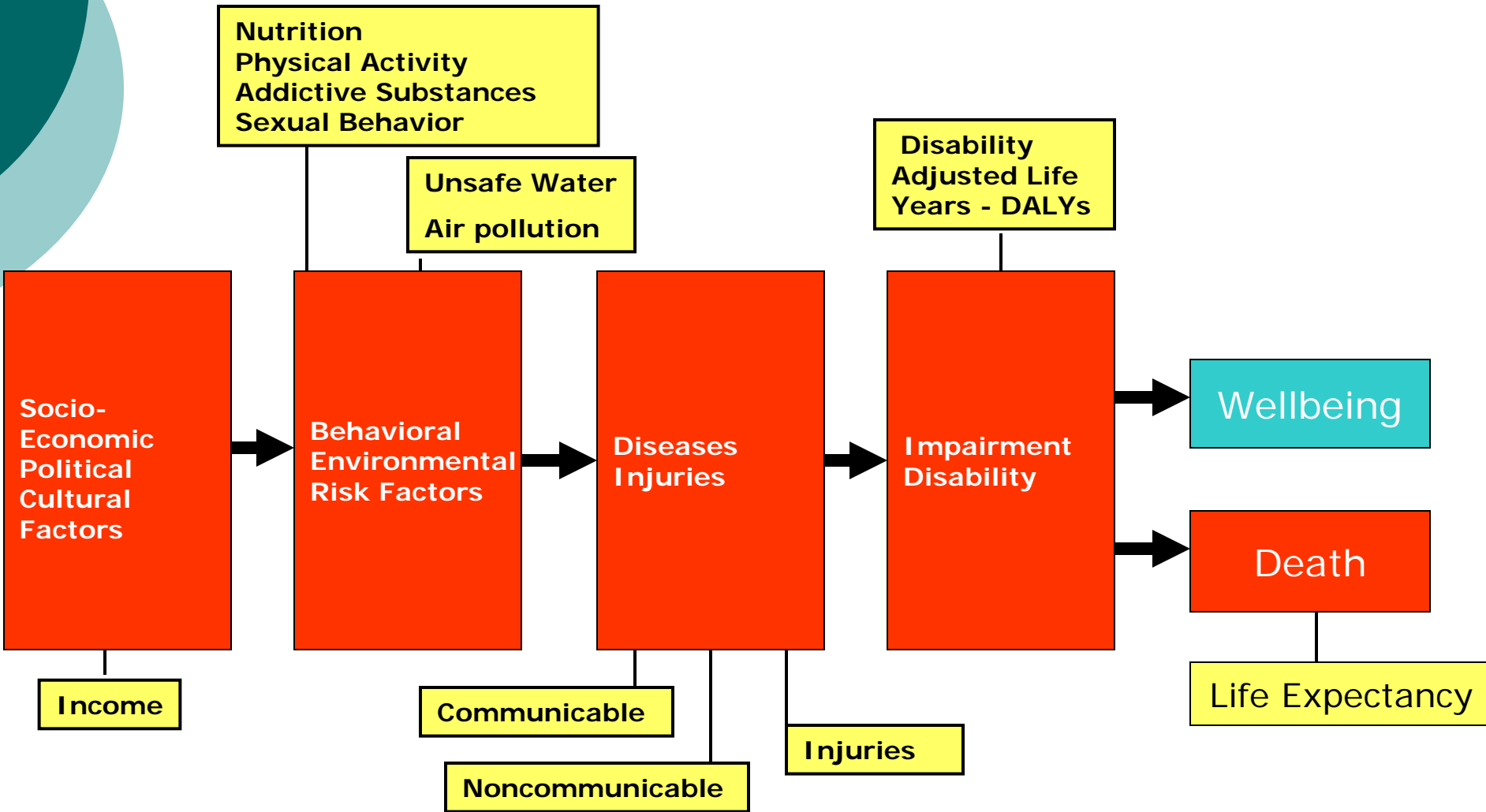


Percent of Deaths by Condition and by Country Income – 2001 GBD Study

Age-standardized Rate per 1000	Low/Middle Income Countries	High Income Countries	All Countries
Deaths	11.4	5.0	10.0
DALYs	281.7	128.2	256.5

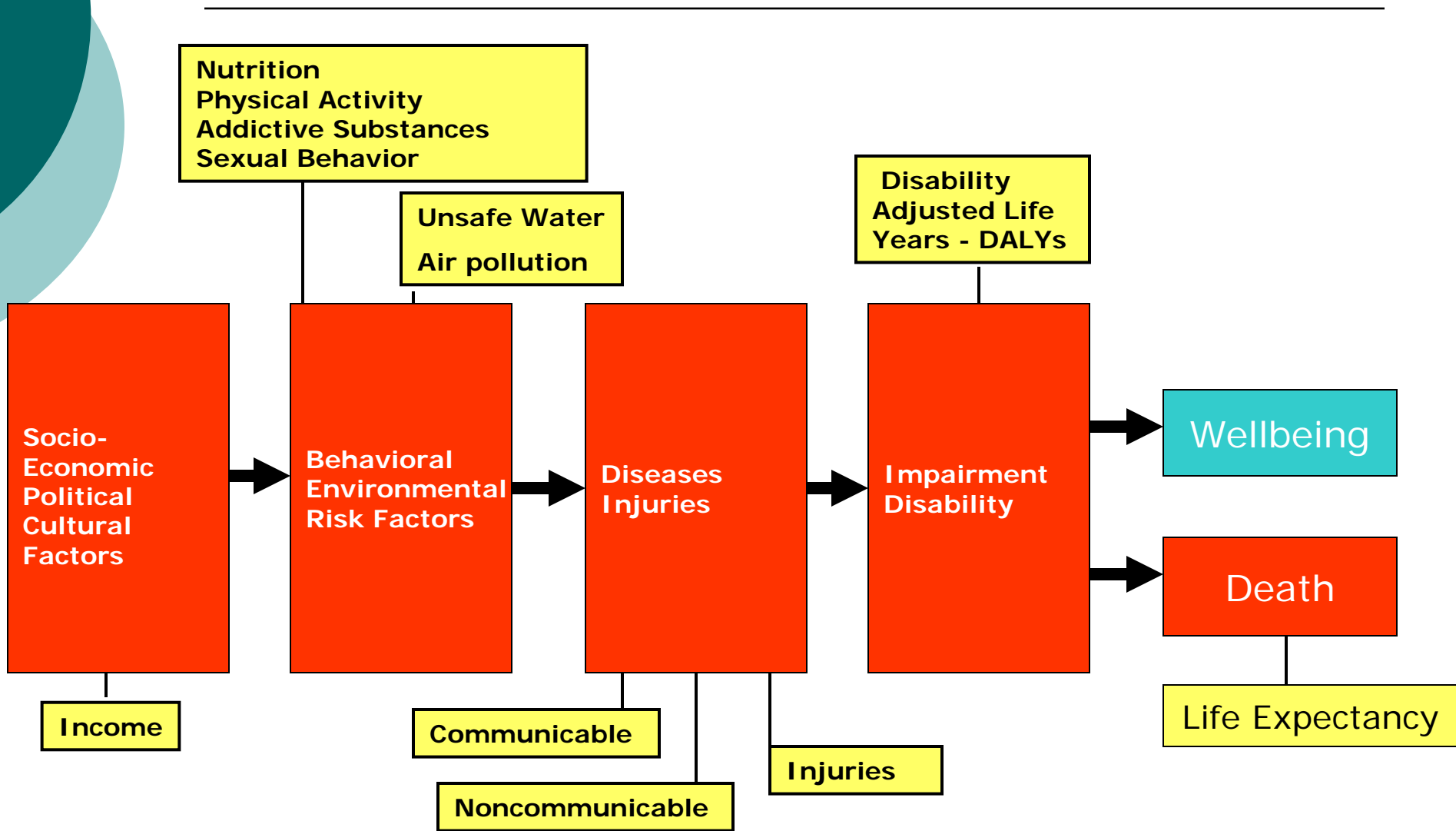
Percent of DALYs by Condition and by Country Income – 2001 GBD Study

	Low/Middle Income Countries	High Income Countries	All Countries
Communicable (Infectious) Perinatal Conditions Malnutrition	39.8	5.7	36.5
Respiratory Infections	6.0	1.6	5.6
HIV/AIDS	5.1	0.4	4.7
Perinatal Conditions	6.4	0.9	5.9
Diarrhea	4.2	0.3	3.9
Tuberculosis	2.6	0.1	2.3
Malaria	2.9	0.0	2.6
Noncommunicable (Chronic) Disease	48.9	86.7	52.6
Heart Disease	5.9	9.1	6.2
Cerebrovascular Disease	4.5	6.3	4.7
Cancer	2.5	7.6	2.8
Chronic Obstructive Pulmonary Disease	2.4	3.5	2.5
Diabetes	1.1	2.8	1.3
Alzheimer and other dementias	0.7	5.0	1.1
Unipolar depression	3.1	5.6	3.4
Hearing loss	1.8	3.6	2.0
Injuries	11.2	7.5	10.9
Traffic Accidents	2.3	2.0	2.3



Percent of Deaths and DALYs by Selected Risk Factor and Country Income – 2001 GBD Study

Selected Behavioral Environmental Risk Factor	Low/Middle Income Countries	High Income Countries	All Countries
Childhood Underweight			
Deaths	7.5	0.0	6.5
DALYs	8.7	0.0	7.9
Overweight/Obesity			
Deaths	3.6	7.8	4.2
DALYs	2.3	7.2	2.8
Smoking			
Deaths	6.9	18.5	8.5
DALYs	3.9	12.7	4.7
Unsafe sex			
Deaths	5.8	0.4	5.1
DALYs	5.8	0.6	5.3
Unsafe water			
Deaths	3.2	0.0	2.8
DALYs	3.7	0.2	3.4
All Selected Risks			
Deaths	45.6	44.0	45.3
DALYs	36.1	34.1	35.9



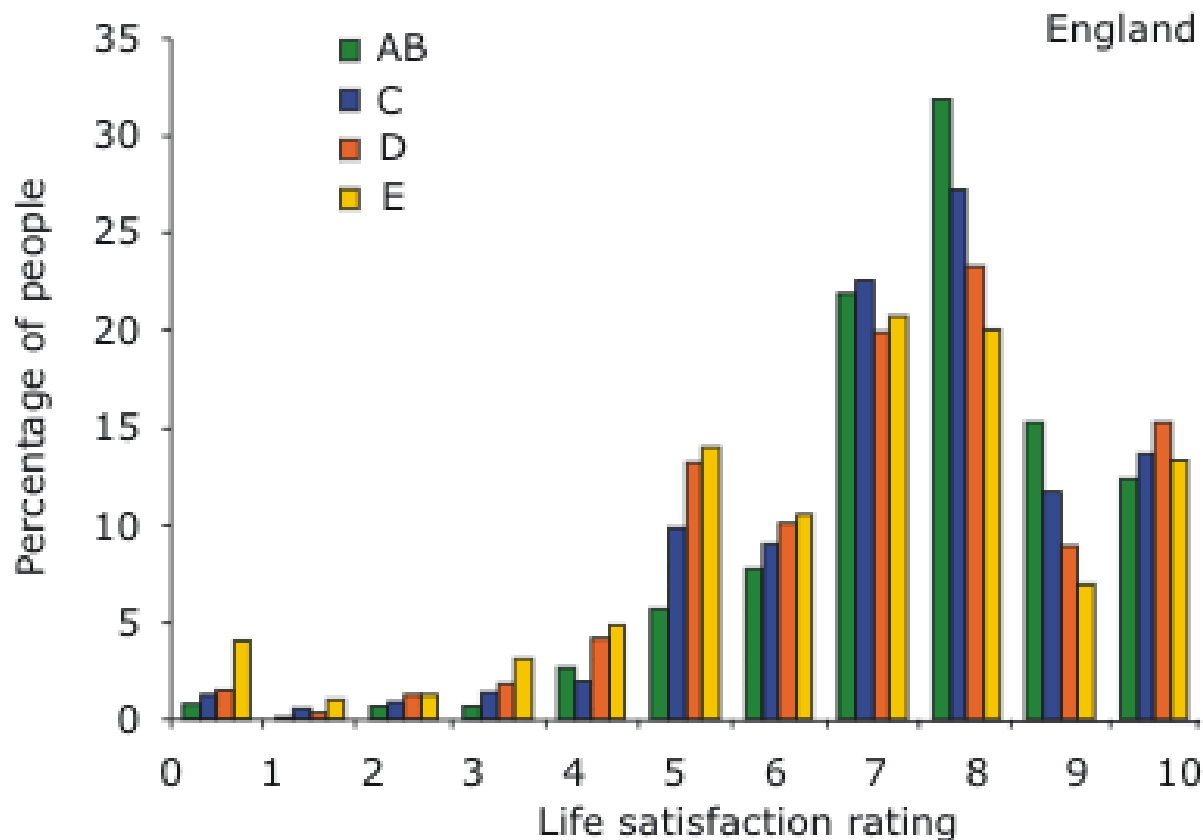
Wellbeing: What Is It?

- A good or satisfactory condition of existence; a state characterized by health, happiness, and prosperity
Dictionary.com
- Critical components:
 - Broad
 - Subjective
 - Physical, psychological, social
 - Positive (more than the absence of pain or disability)



Wellbeing: How to Measure It

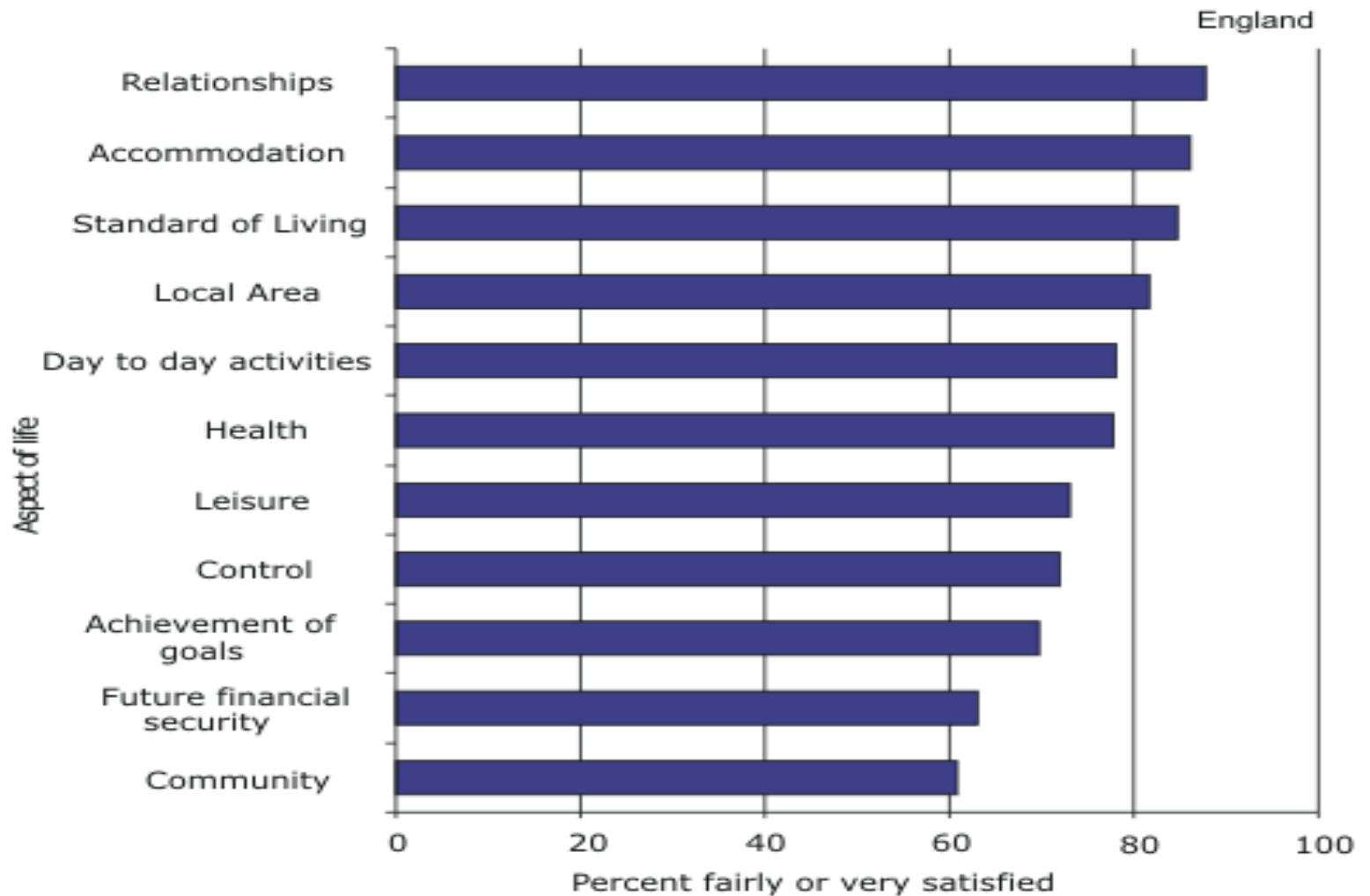
- Life satisfaction (happiness) measures
 - Single indicator
 - Multidimensional
- Quality of life measures
 - Often very health oriented
 - Typical domains:
 - Physical functioning
 - Social functioning
 - Emotional functioning
 - Symptoms/Pain
 - WHOQOL added environmental domains



Notes: Social grade is a classification based on occupation developed from the National Readership Survey. Examples of occupation in each grade include:
 AB: Doctor, solicitor, accountant, teacher, nurse, police officer;
 C: Junior manager, student, clerical worker, foreman, plumber, bricklayer;
 D: Manual workers, shop workers, apprentices;
 E: Casual labourers, state pensioners, unemployed.
 Separate grades A and B, and C1 and C2, have been joined (to AB and C) due to very similar distributions.

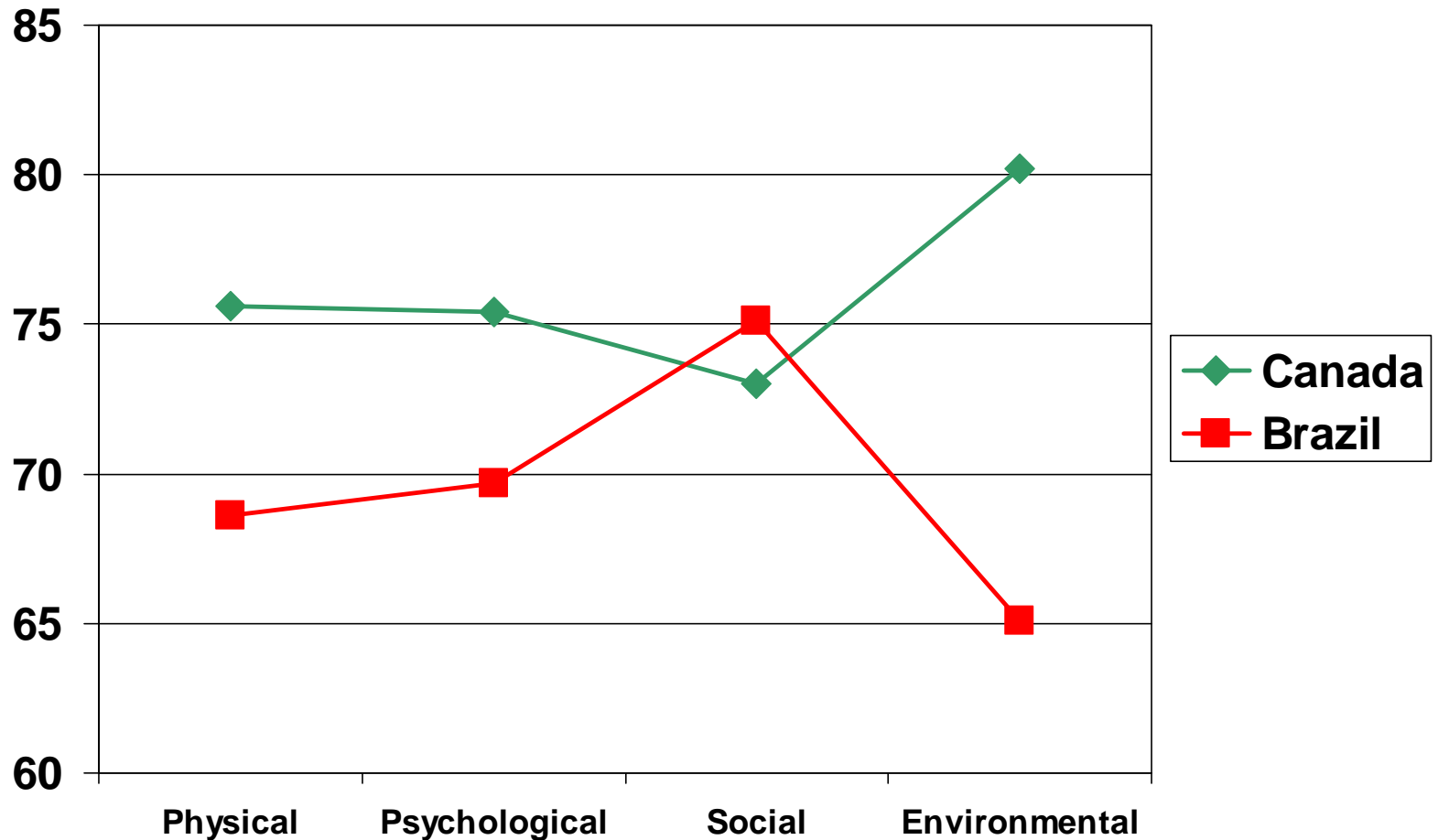
Source: Defra

Life Satisfaction: Multiple Indicators

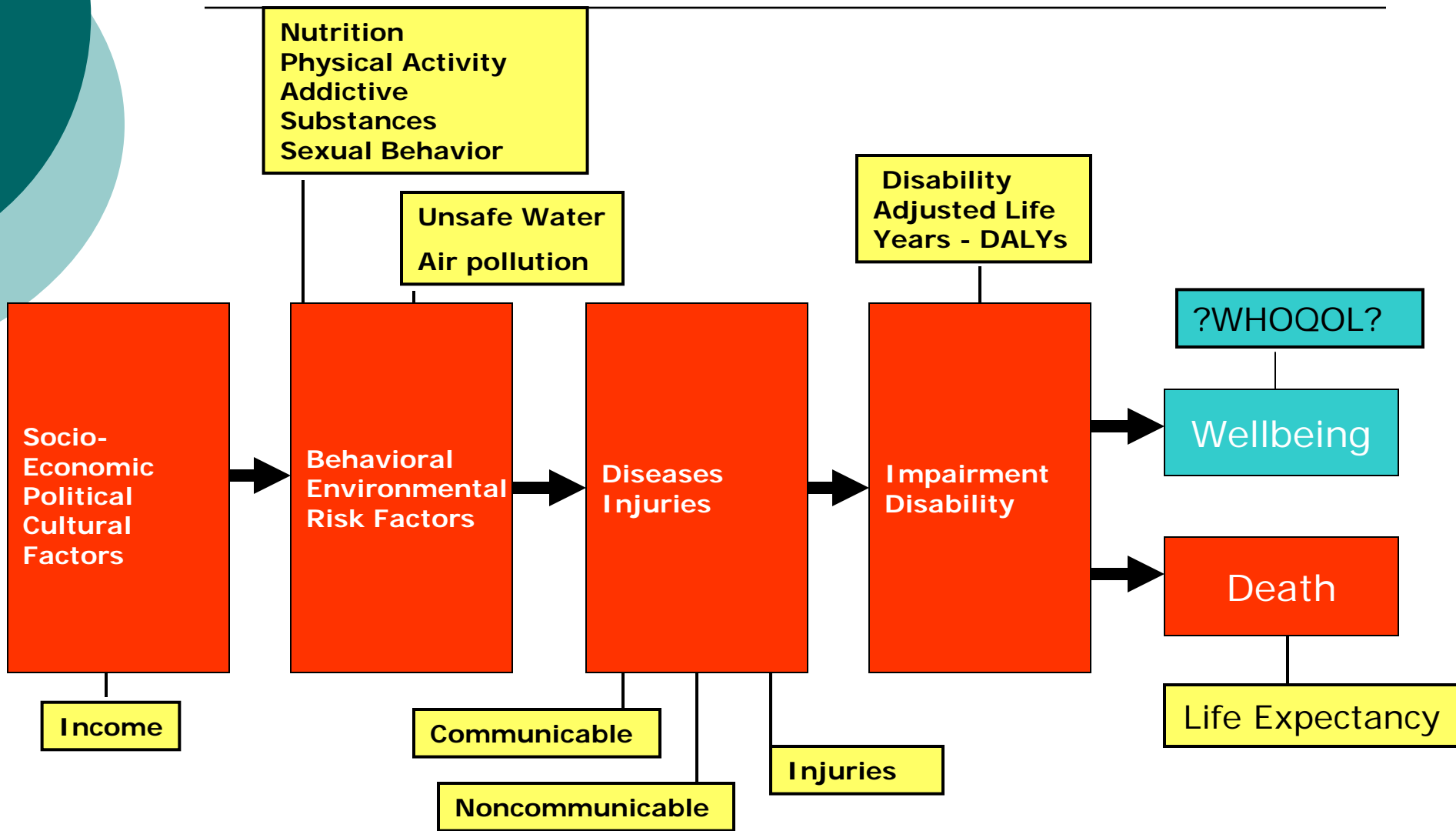


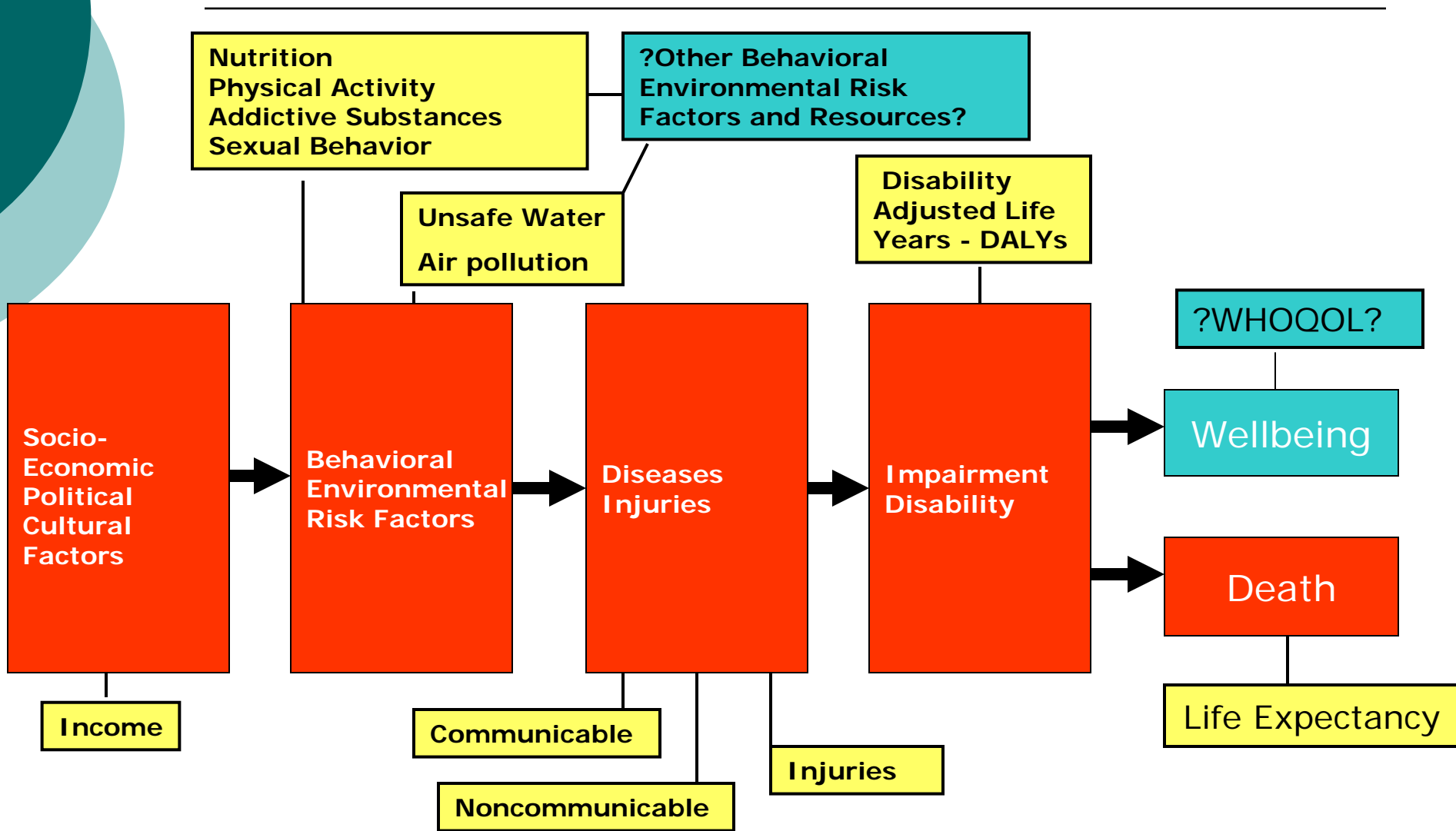
Source: Defra

WHOQOL in Canadian and Brazilian Older Adults



Lisiane et al, 2007







Other Behavioral Risk Factors

○ Stress

- Major life events
- Unemployment
- Crime
- Homelessness
- Community wide disasters/violence

○ Psychosocial Resources

- Social Support
- Self-esteem
- Coping

Predictors of Health Two Years after the World Trade Center Disaster

Predictors	Physical Health	Mental Health
Age	-	
Education	+	
Female		-
Minority	-	+
Children < 18		-
Income	+	+
WTCD exposure	-	
Negative life events	-	-
Panic attack	-	
Alcohol abuse		-
Social Support		+
Self-esteem	+	+

