

Working Together to Advance Cancer Control: Essential Principles, Challenges & Opportunities

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Renewed Collaboration: A Modern Paradigm for Cancer Surveillance

And so, when I took a job in 1980 at the Harvard School of Public Health, I looked around for something to count that could give me an understanding of the public's health. It had to be something that could be measured accurately: therefore, it could not be "health". So it had to be "death". If I wanted to find out what determines when we die, then I would first have to study the history of mortality.

Cairns, J. *Matters of Life and Death*
1997. Princeton University Press

Organization of the Presentation:

- **About health and human development**
- **Cancer and population mortality**
- **Principles of cancer control**
- **Knowledge translation / transfer**
- **Data, registries and surveillance in relation to usage and utility**
- **Conclusion**

A Definition of Health

(as proposed by European region of WHO)

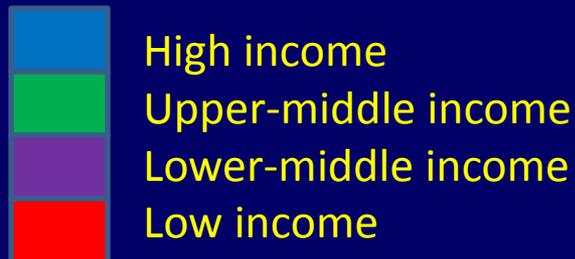
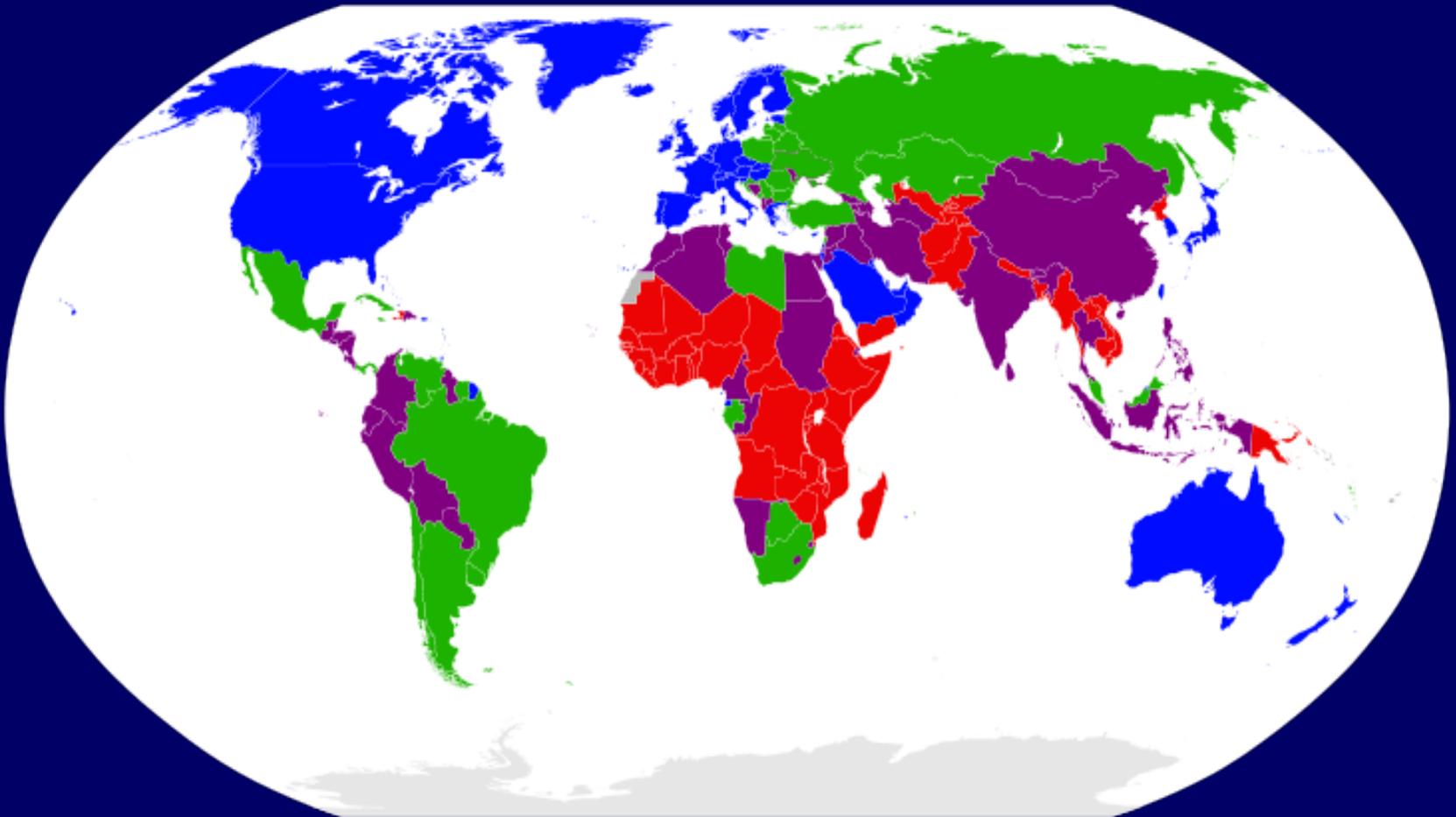
Health is the extent to which an individual or group is able, on the one-hand, to realize aspirations and satisfy needs, and, on the other hand, to change and cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources as well as physical capacities.

Young, TK, 1998. Population Health: Concepts and Methods, New York; Oxford University Press

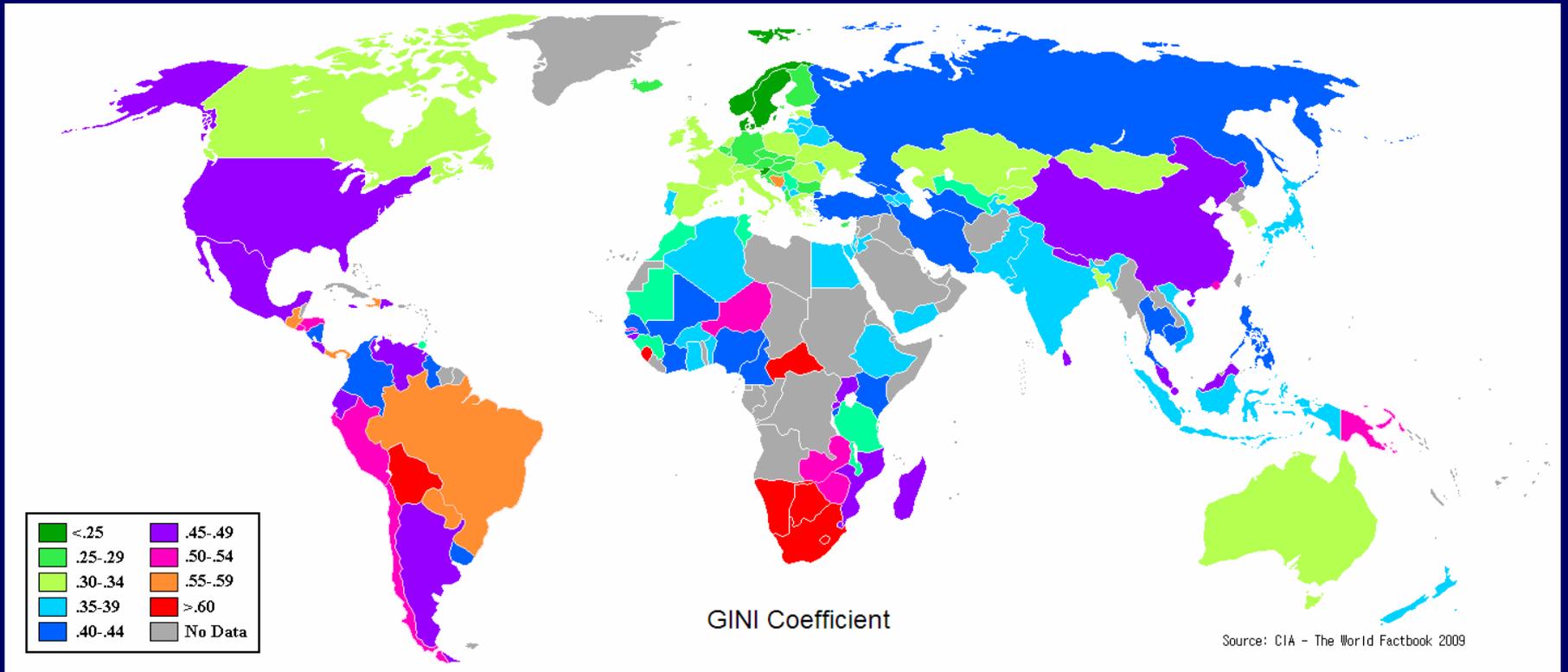
International Declaration of Health Rights

- Enjoyment of the highest attainable standard of health ...
- Health is more than the absence of disease ...
- Health care should be based on dialogue and collaboration between citizens, professionals, communities and policy makers (affordable, accessible, effective, efficient and convenient)
- Health begins with healthy development ...
- Health care for the elderly ... Dignity and respect ... Not merely the extension of life
- Health requires a sustainable environment ...
- Health depends on availability of basic essentials ...
- Health depends on protection from exploitation ...

Human Development Index



GINI Coefficient



ABOUT CANADA



Key Statistics

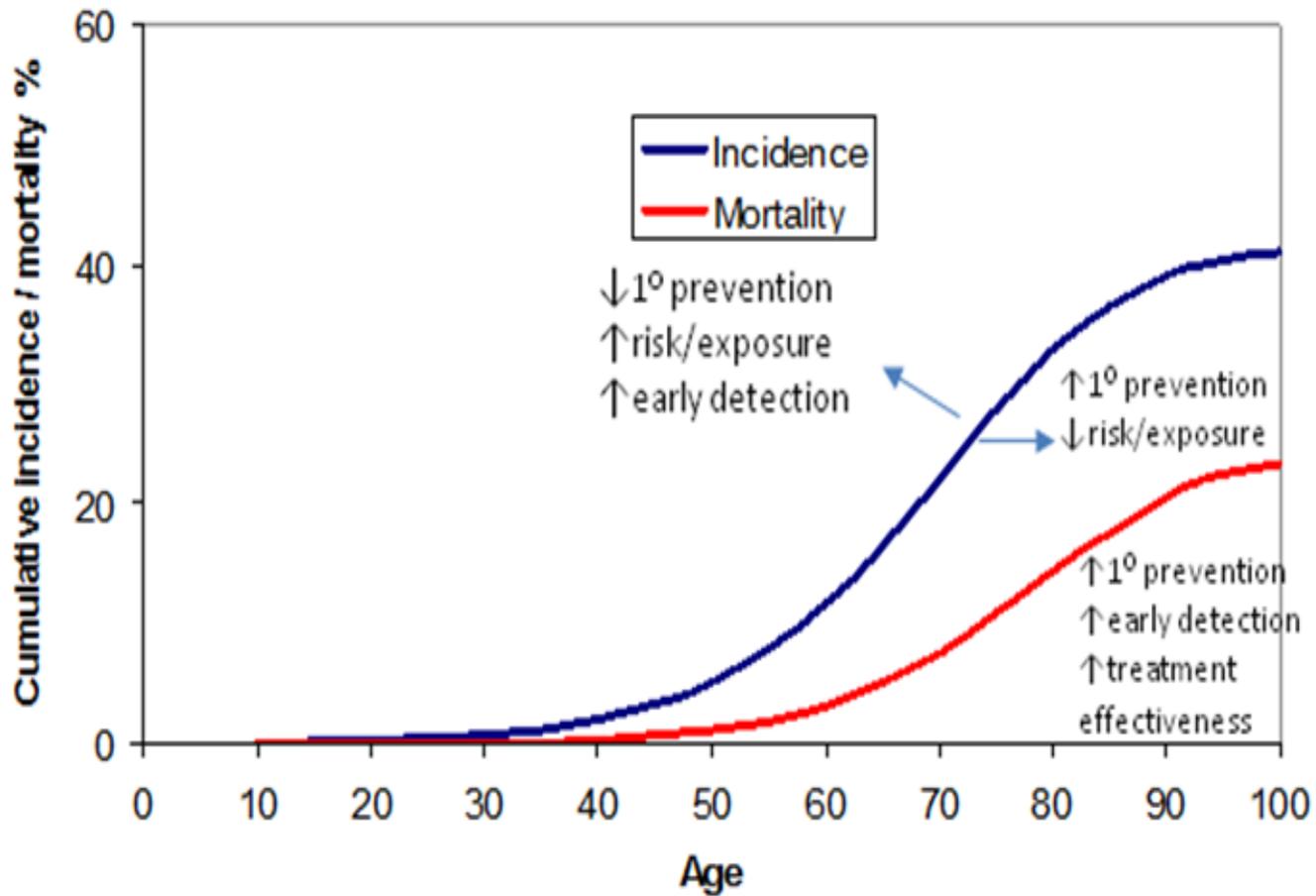
Area (km²)	9,985,000
Population (million)	33.9
Life expectancy at birth	81 years
GDP (PPP) Total (\$)	1.3 trillion
GDP (PPP) per Capita (\$)	39,098
Health spending per capita	3,900
Largest cities (million)	
Montreal	3.6
Toronto	5.1
HDI	0.966
GINI coefficient (after tax)	0.32

The Nature of our World

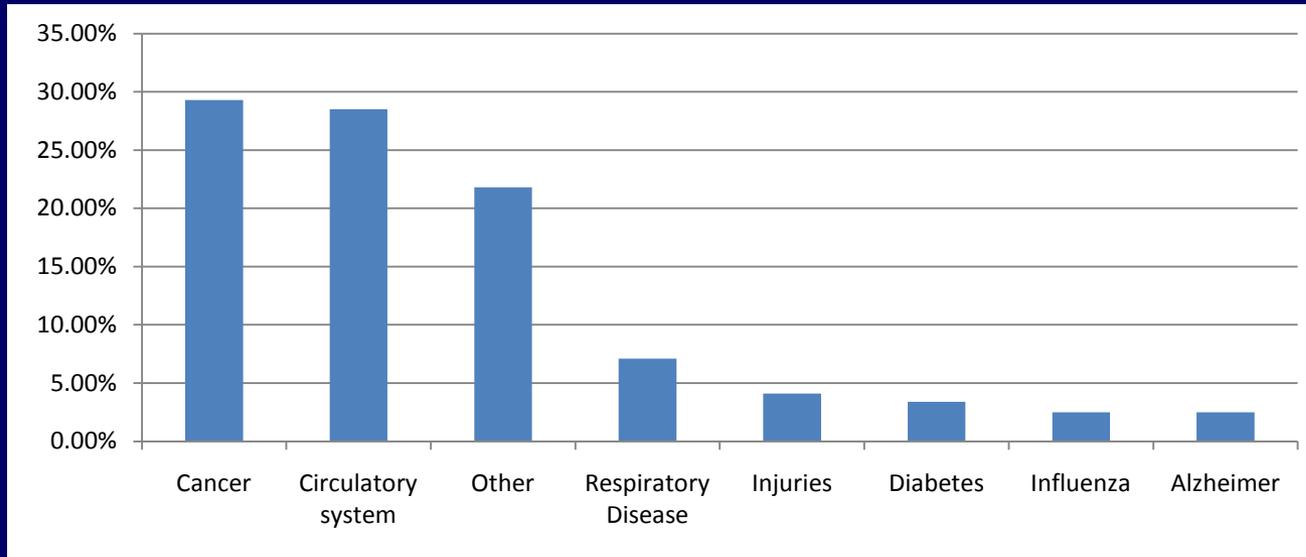
If the entire population of the planet is represented by 100 people:

location and growth	57 live in Asia; ↑
	21 live in Europe; ↓
	14 live in America; ↓
	8 live in Africa; ↑
wealth	6 people have 57% of the world's wealth
literacy	70 people cannot read or write
	1 person has a college or university education
malnourished	50 people
unsafe drinking water access	35 people
substandard accommodation	80 people

Lifetime Risk of Cancer (%)

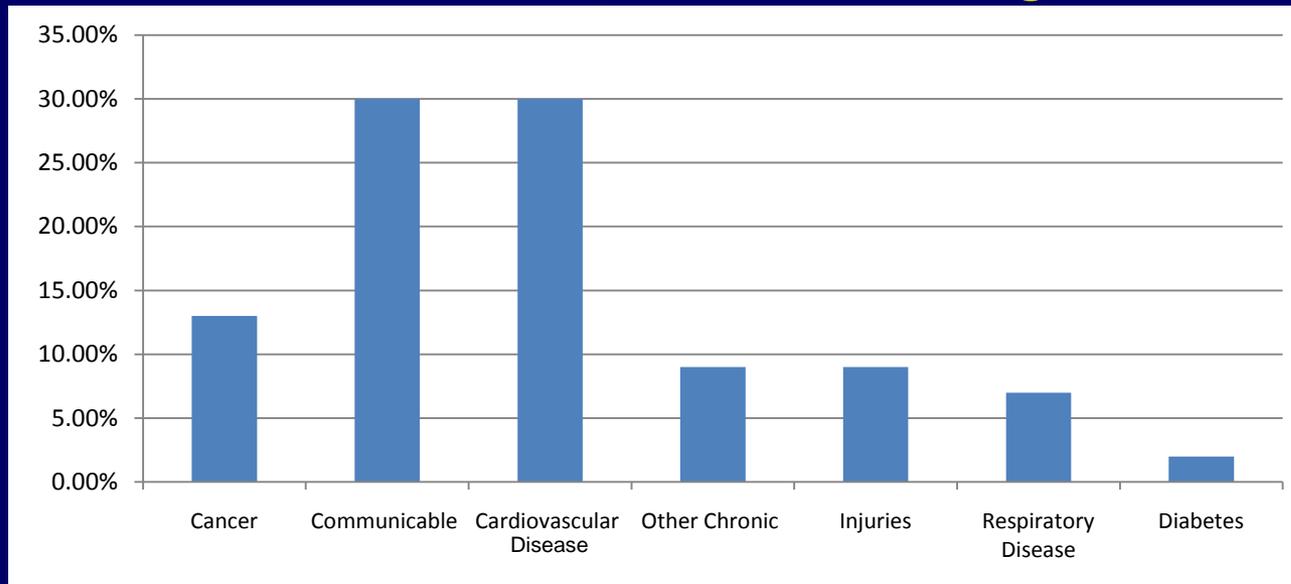


Causes of Death, Canada 2005



Circulatory system includes heart & stroke

Projected Main Causes of Death, Worldwide. All Ages 2005



Communicable diseases, includes maternal and perinatal conditions, and nutritional deficiencies

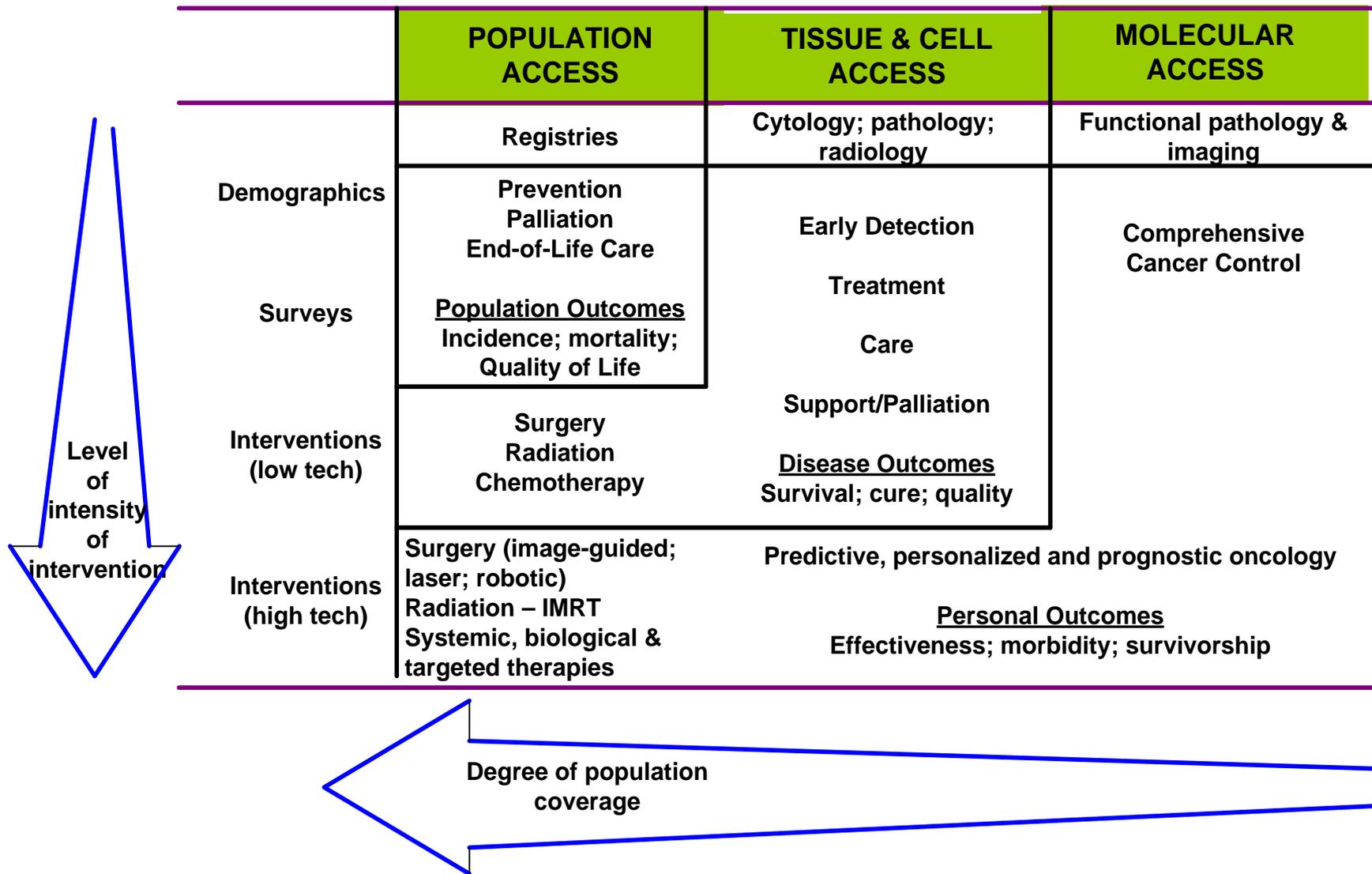
Comprehensive (population-based) cancer control:

- *Aims to reduce the incidence and mortality of cancer, and to enhance the quality of life of those affected by cancer, through an integrated and coordinated approach directed to primary prevention, early detection, treatment, rehabilitation and palliation.*

Principles of a Population-Based Cancer Plan

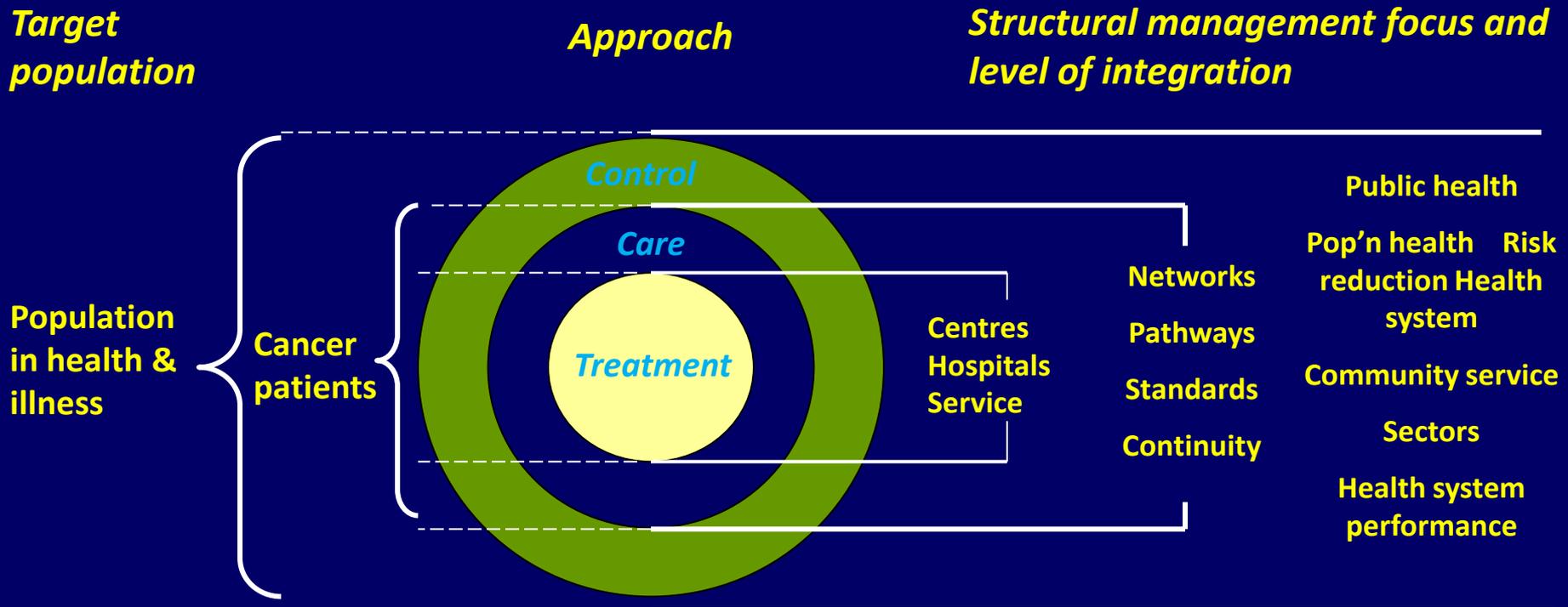
- **Meets the needs of the population**
- **Comprehensive to spectrum of cancer control**
- **Equitable, fair, reliable and safe**
- **Addresses and mitigates disparities (of process of outcome)**
- **Based in evidence for benefit**
- **Explicit standards of practice and care guidelines**
- **Integrated and coordinated**
 - **Within disease** ~~across professionals~~
 - **Across diseases** ~~across health sectors~~
- **Evaluable, evaluated and reported**
- **Sustainable**
- **Appropriate governance and management**

Population-based Cancer Control – Level of ‘Preparedness’



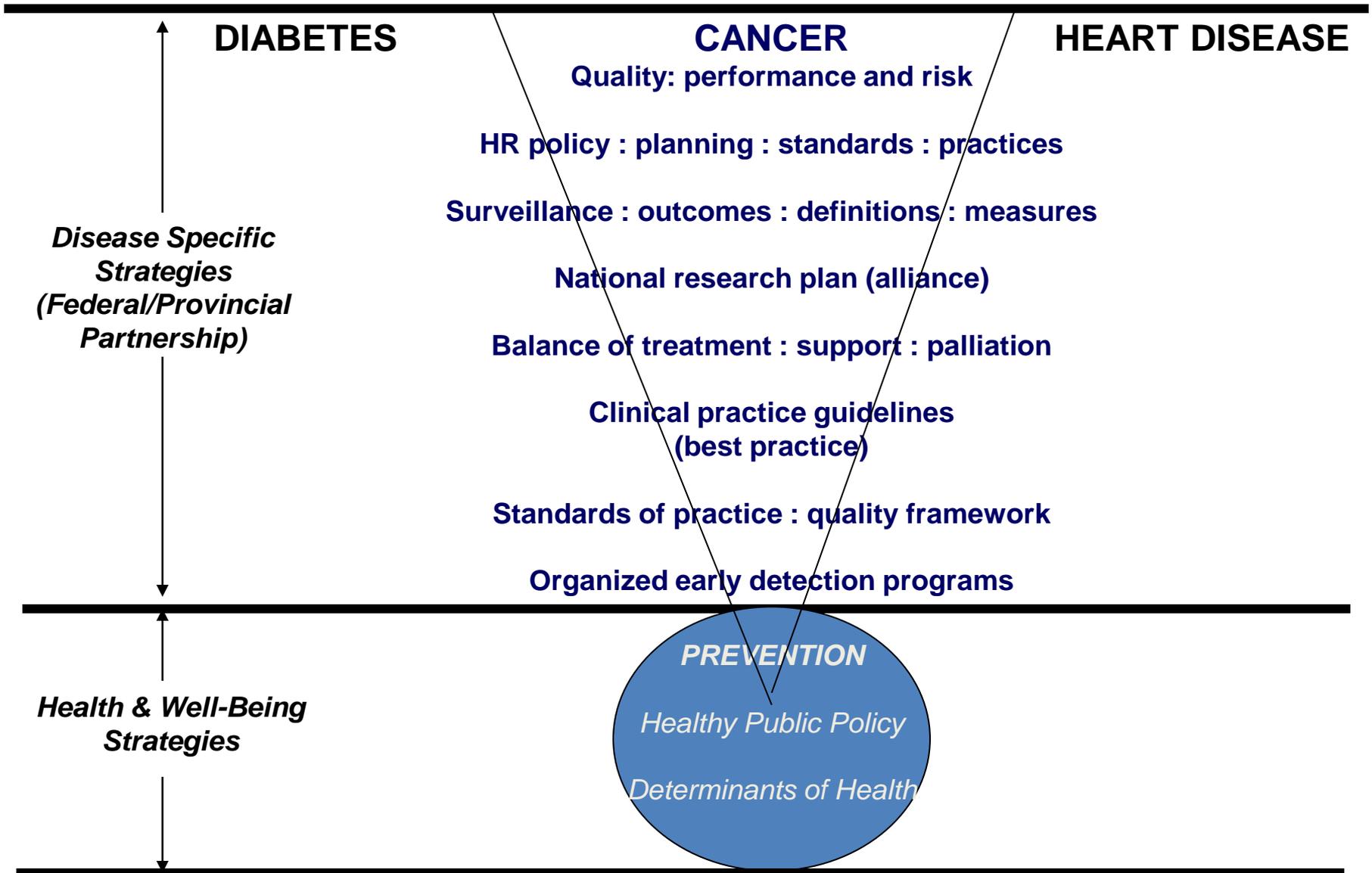
Cancer Control in Relation to Cancer Care and Cancer Treatment

Cancer Treatment, Care and Control

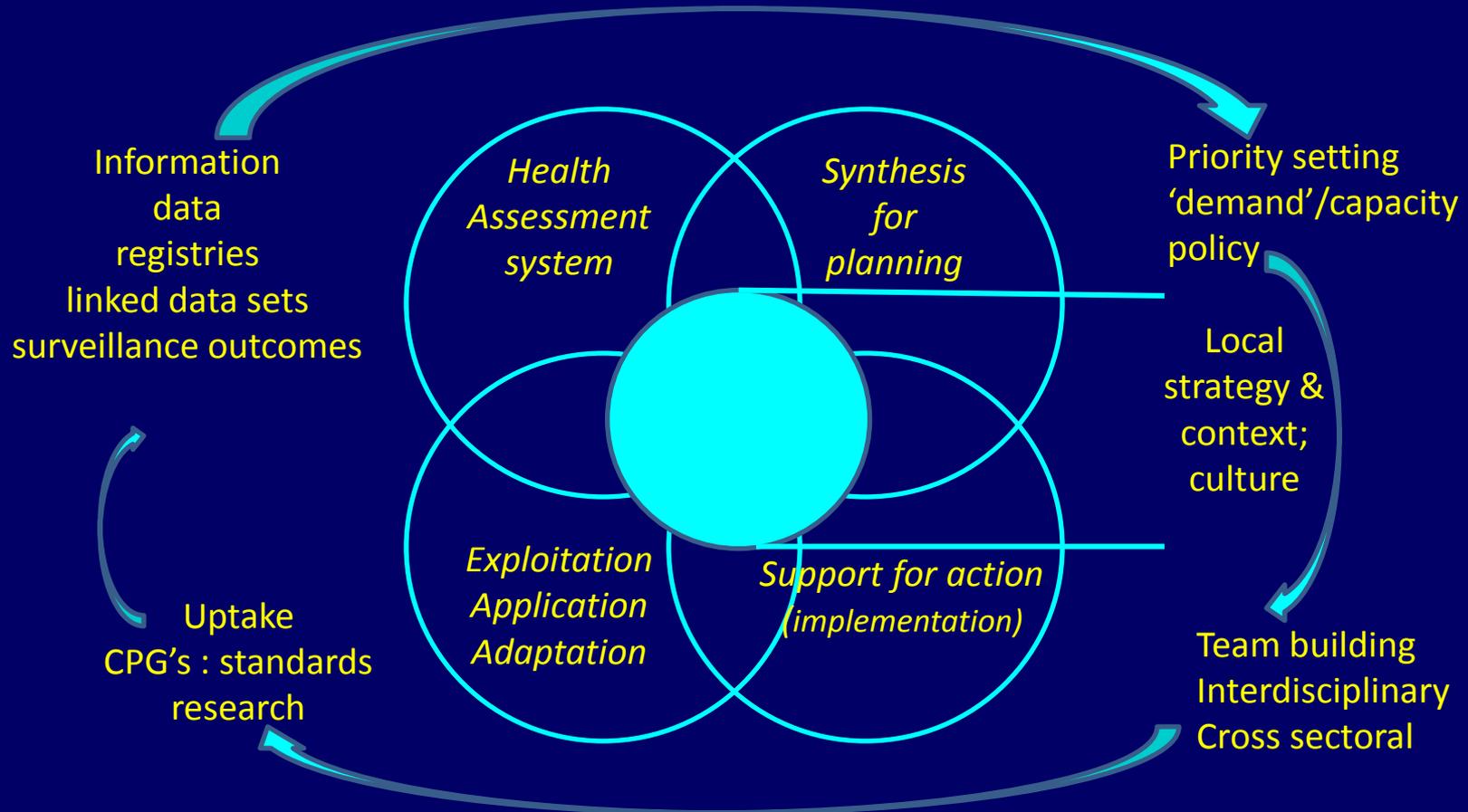


Adapted from: Caron, L., *Cancer Control Interventions in Selected Jurisdictions (AETMIS) 2008*

Relationship of Control Plans for Cancer & Other NCD's



Building Capacity



- Strengthened relationships – research : policy : practice
- Infrastructure capacity building – self-sufficiency : sustainability
- Creations of platforms – integration across geography : diseases, populations

What underlies the ability to 'build capacity'?

Attributing the 'need'

- Current burden of cancer
- Future burden of cancer
- Current resources
- Future resources
- Priorities
- Performance standards
- Comprehensiveness
- Evaluation/effectiveness of use
- Allocation/reallocation of resources

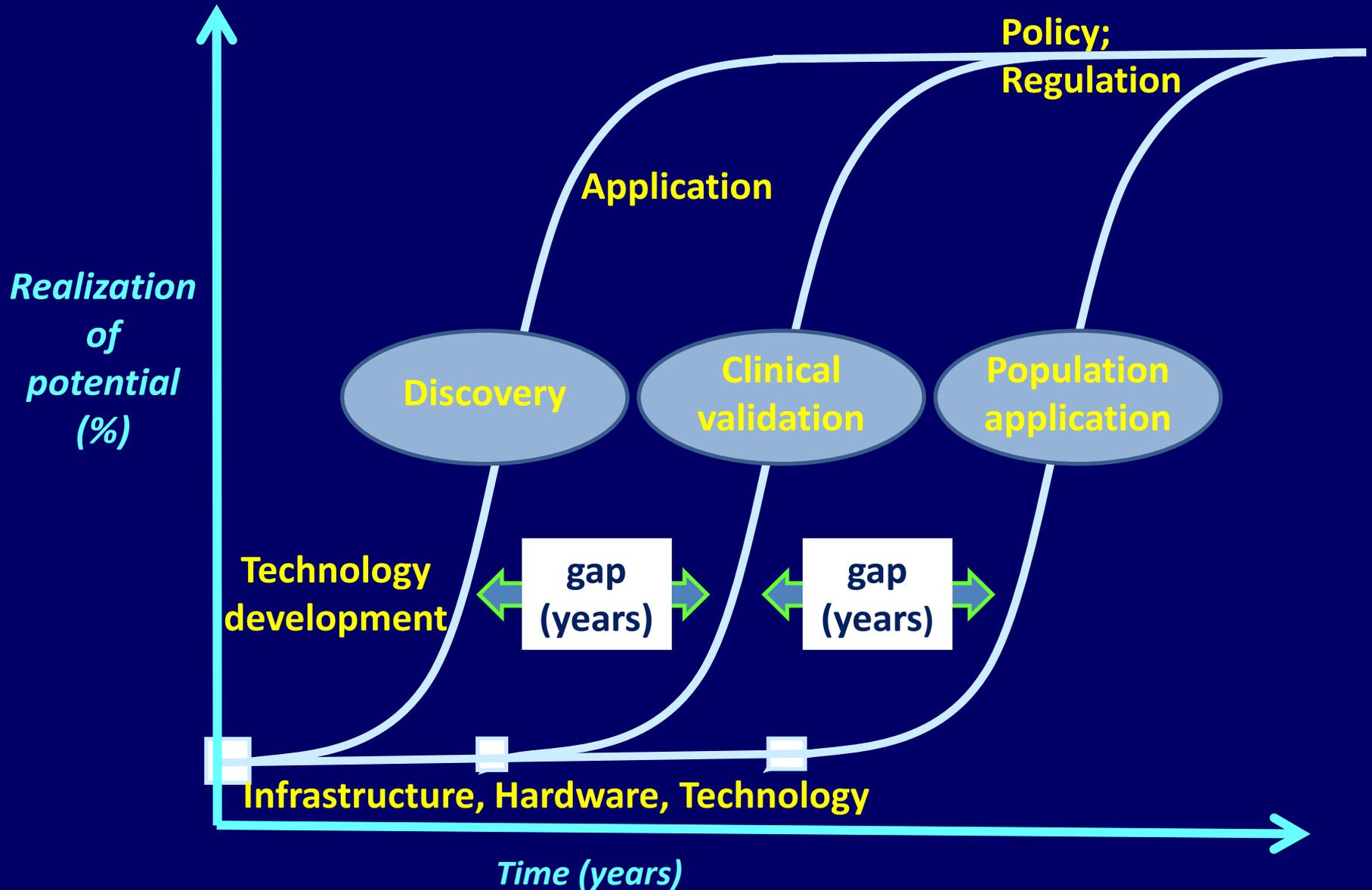
Quantifying the 'need'

- Registry & surveillance } Epi/stats
- Projection } Burden
Resources
- Standards (performance)
- Quality & safety
- Level of self-sufficiency



'Preparedness' – context & culture

Knowledge application – ‘preparedness’



**Steepening the
'slope'**



**Speed of subject
development within
the constituency of
interest**

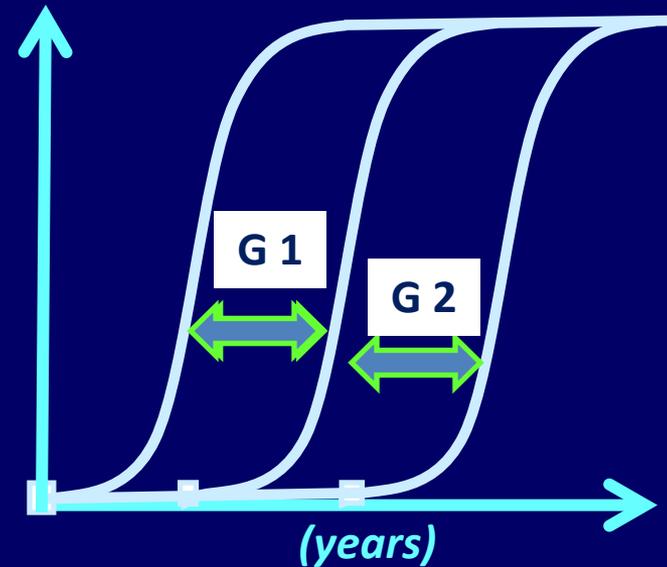
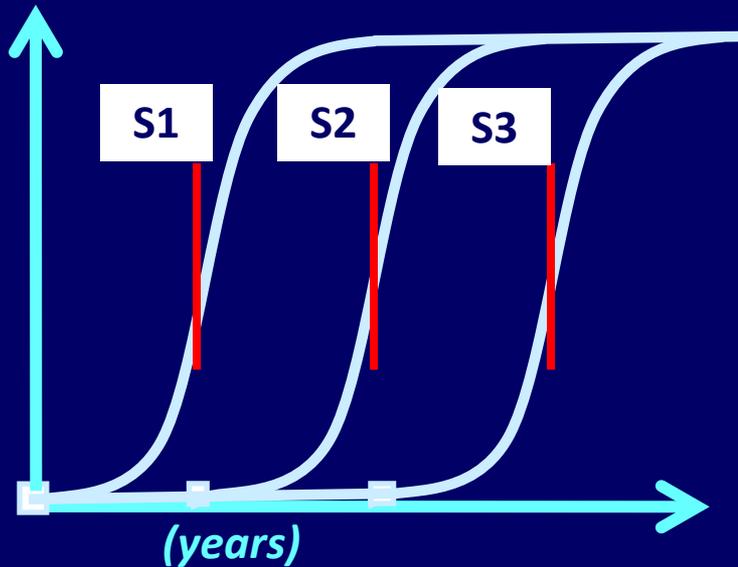


**Shortening
the 'gap'**



**Preparedness &
receptiveness of
constituencies to
receive, adapt &
adopt**

A 'Synthesis' of Translational Research



Slope Attributes:

- Vision
- Leadership – subject/content
- Technology development
- Applications & awareness
- Evidence generation
- Investment; funding

Gap Attributes:

- Awareness; recognition; receptiveness
- Leadership – cultural change
- Culture – shared; team; social change
- Business case; health priorities
- Communication; marketing
- Incentives

How can the 'system' respond to need and opportunity?

The 'system'

Govt/HA's

*Foundations/
charities*

*Health
professionals*

Care-givers

Patients

Collective
&
Collaborative
Action

Improved Outcomes

The response/role

Policy; funding

Funding/ advocacy;
support

Coherent care, tx and
research

Care and support

'Voice'

Challenges to Progress:

- Lack of coordination among partners
- Lack of will to unite around a common disease agenda
- Disproportionate resource-centralized (urban) versus communities
- Lack of consensus on priorities, choice and quality of interventions.

Lessons Learned

- 1. Government commitment and national policies**
- 2. Country ownership of projects and plans**
- 3. Country-based, not centre-based**
- 4. Prioritization of selected areas**
- 5. Realistic approach (need : capacity : performance : resources)**
- 6. Coordination of partners (internal and external)**
- 7. Composition of steering groups**
- 8. Secure funding**
- 9. Continuity and sustainability**

INCTR – PAX Program

Collaboration - hospital – community – home
- physician – health professional – care giver



- Standards of care
- Guidelines
- Pain & symptom control
- Morphine access
- Health professional training & development
- Interdisciplinary teams
- Professional exchanges
- Salary support

Non-Communicable Disease Control - Philippines

Collaboration : Public / Population / Community and Medical Services:

NCD Prevention and Control Service

1990's National Prevention and Control Programs –
CVS; Cancer; Diabetes

1990's Campaigns – Anti-smoking; regular exercise; healthy diet

- 2000 Integrated Community-based NCD prevention and control model.
Focus 4 major risk factors - diet; smoking; inactivity; alcohol abuse
Wide network of stakeholders
Collaboration development of guidelines, advocacy, technical expertise
- 2003 External review of NCCP (Australia CDPA)
- 2004 National policy to promote healthy life-style
Demonstration project – replication
Training programs re healthy life styles
QA certification program for local health centres
Base-line population risk factor data
OP benefit package for prevention services for NCD's
Formalization of Alliances
Shared Vision, Mission, Goals, Objectives

Population-Based Cancer Control Collaboration – Interdisciplinary Tumour Groups – Population Health/Cancer Control

Public Health

- Risk factors
- Registry : data
- Prevention
- Early detection

Cancer Treatment and Care

- Interventions
- Facilities
- Education
- Research

Burden of Illness

- Incidence
- Prevalence
- Interventions
- Survival/disability
- Cost : value
- Sustainability

- Information
- System
planning
- Implementati
on
- Evaluation
- adaptation

Collaboration – Interdisciplinary Tumour Groups - Brazil

	Brazil		British Columbia	Collaboration
	<i>Population Health</i>	<i>Cancer Treatment & Care</i>	<i>Cancer Control Burden of Disease</i>	<i>Desired Consequences</i>
<i>Population</i>	Healthy Non-cancer	Cancer	Population	Comprehensive (prevention -> end of life)
<i>Professionals</i>	Public health	Medical specialists	Integration	'Team' – interdisciplinary
<i>Research</i>	Research Institute		Integration into team	Research <->practice
<i>Business opportunity</i>	Salary	Private practice	???	Mission orientation
<i>Orientation</i>	Health/risk	Illness/ treatment	Reduction of burden of illness Improvement in health	Health & functionality orientation
<i>Success description</i>	↓risk ↓incidence	↓mortality	↓incidence ↓mortality ↑quality of life	Individual & societal perspective
<i>Socio-economic perspectives</i>	PYLL/G	↑resources	Cost : benefit Cost : effectiveness	Value – absolute & relative

Knowledge Development and Exchange

1. Population monitoring system -> planning, policy, programs.
2. Synthesis of information -> interventions for implementation
3. Implementation and application -> evidence into action
4. Generate information -> new evidence to guide further action/adaptation

Data & Registries – Past, Present and Future

Then  **Now**  **Tomorrow**

Risk factors

At risk populations (needs)

Prevalence of risk factors

Disparities and inequities
(special needs populations)

Mortality

Burden of illness; disability

Age-specific rates

Biology; physiology; circumstance

Survival

Stage ; impact of interventions;
compliance

Ethnicity

Genetics; environment; equity

Date and Registries – Past; Present and Future

Then



Now



Tomorrow

Description & quantification of mortality

Health & illness stats

Intervention

- risk
- early detection
- treatment

Societal impact of illness (absolute; relative)

Consequence; projection; options

Cost : cost-effectiveness

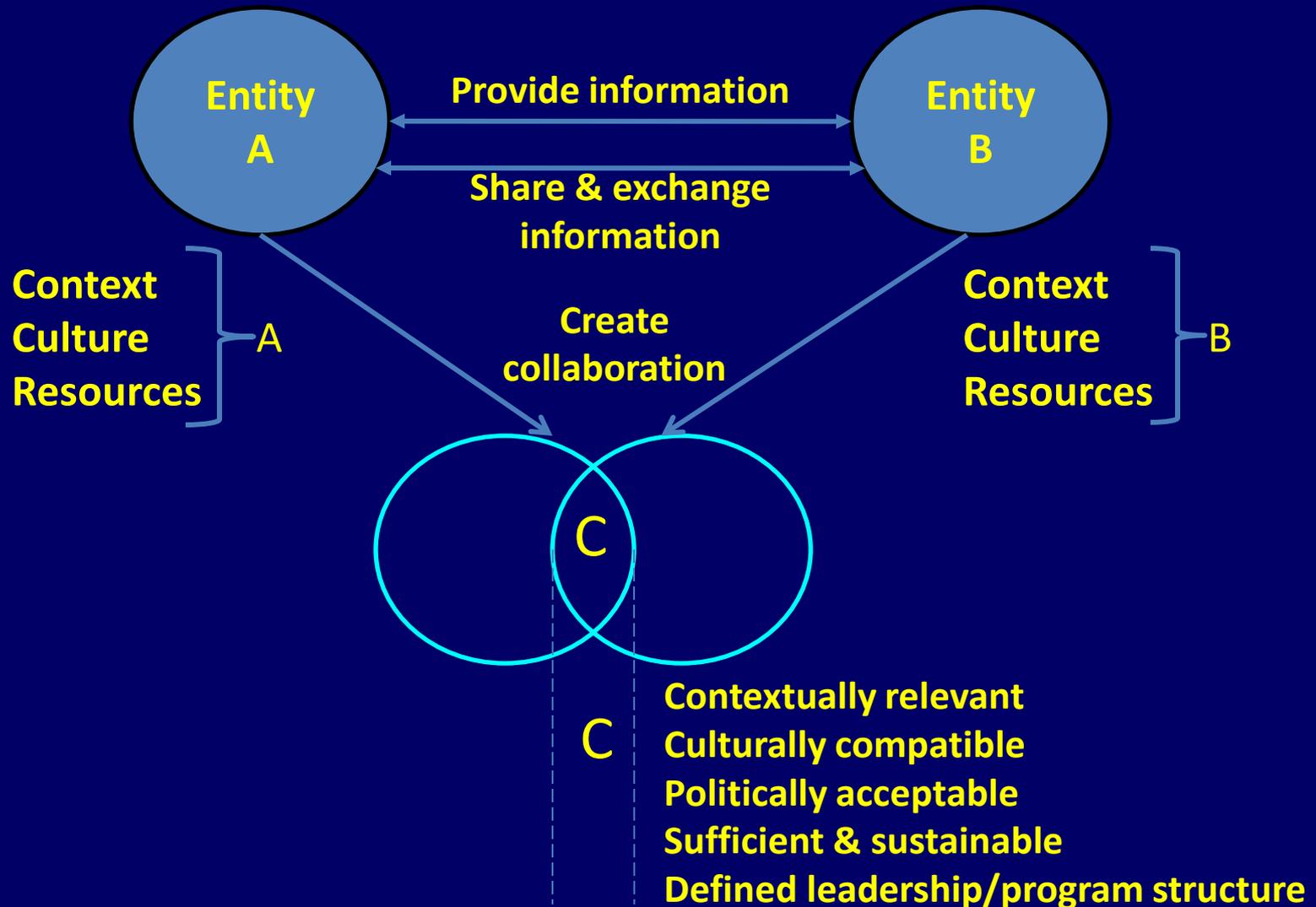
Value : sustainability

Description & Quantification

Application & projection

Planning, policy; management; valuation

The Concept of Collaboration



Conclusions:

What and who impacts health and the risks of dying?

- Systems thinking about health and illness
- Commonality of risk factors for NCD's
- Necessity for collaboration across jurisdictions
- Principles for collaboration:
 - Shared goals
 - Respect
 - Trust
 - Expectation
 - Responsibility
 - Accountability
 - Commitment