A New Perspective on Health Policy:
How to fix the health care system

Simple	Complicated	Complex Wicked
Following a Recipe	**A Rocket to the Moon**	**Raising a Child**
• The recipe is essential	• Formulae are critical and necessary	• Formulae have only a limited application
• Recipes are tested to assure replicability of later efforts	• Sending one rocket increases assurance that next will be ok	• Raising one child gives no assurance of success with the next
• No particular expertise; knowing how to cook increases success	• High level of expertise in many specialized fields + coordination	• Expertise can help but is not sufficient
• Recipes produce standard products	• Rockets similar in critical ways	• Every child is unique
• Certainty of same results every time	• High degree of certainty of outcome	• Uncertainty of outcome remains
• Optimism re results	• Optimism re results	• Optimism re results

In Health Care Nothing is Simple

- In health care we might distinguish between "complicated" and "complex" problems
- Although some aspects of health care systems are complicated others are best viewed as complex
- Dealing with complex problems as if they are merely complicated is like looking for your car keys in the lamplight
- The advantage of the distinction is that intractably complicated problems can be viewed more optimistically and unraveled when they are seen as complex

Complicated *Complex*

Acute Diseases

- Abrupt onset
- Often all causes can be identified and measured
- Diagnosis and prognosis are often accurate
- Specific therapy or treatment is often available
- Technological intervention is usually effective: cure is likely with return to normal health

- Profession is knowledgeable while laity is inexperienced

Chronic Diseases

- Gradual onset over time
- Multivariate cause, changing over time
- Diagnosis is uncertain and prognosis obscure
- Indecisive technologies & therapies with adversities
- No cure, pervasive uncertainty: management, coaching & self care over time is needed to improve health
- Profession & laity must be reciprocally knowledgeable to improve health

Adapted from: Halstead Holman, MD (Stanford)

Problems about health care systems are complex

- The Canadian Case Study: Case 1
- How the Canadian system was viewed before reforms
- How things changed
- Why We don’t understand the system

How the Canadian system was seen before reforms

- Canadian Health Care as infra-structural
  - Kept the country connected and together
  - Container evolves but does not reform
  - Compared to the railroad in the 19th Century
  - Other metaphors apply elsewhere
    - in Britain - Government Service
    - in USA - Commodity
    - in Germany - Social Security Blanket?
- Canadians among most satisfied with system up to 1990s: Ranked as no 1
- Canadians accepted fairness of a one-tier system
- Federal transfers administered by a staff of 23
- Values of Canada Health Act entrenched

The problems of the early 90s

- High level of government debt
- Recession
- High costs of technological innovation
- Aging population
- Globalization
- Move to the right

Responses to the Problems

- Cost reductions federally and Provincially
  - Transfer payments reduced
  - Provincial funding reduced
- Less Resources
  - Bed closures
  - Hospital closures
- Changing organizational boundaries
  - Regionalization
  - Forced mergers
- Changing human resources
  - Nurse layoffs
  - Fewer places in medical schools

Results

- Michael Decter “Smug no More” by 1994
- A steady decline In public confidence
- Five principles of CHA threatened
- Economic problems remain
- Tensions remain despite many interventions
- Everyone is more unhappy
- The system is destabilized

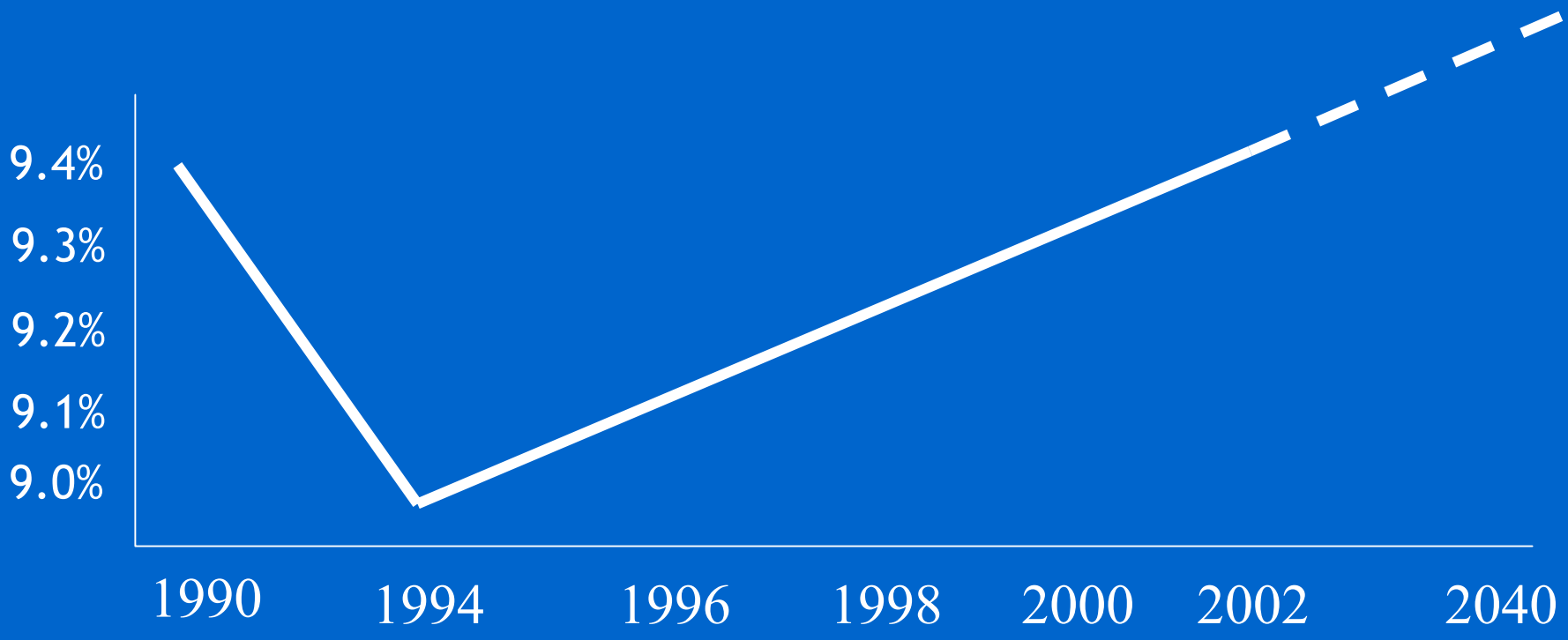
Five Principles of CHA Threatened

- *Accessibility* - reduction of services, long waits in ER
- *Comprehensiveness* - reduced scope of coverage
- *Portability* - growing disparity among provinces
- *Universality* - cost shifting to individual citizens
- *Public Administration* - contracting out to private

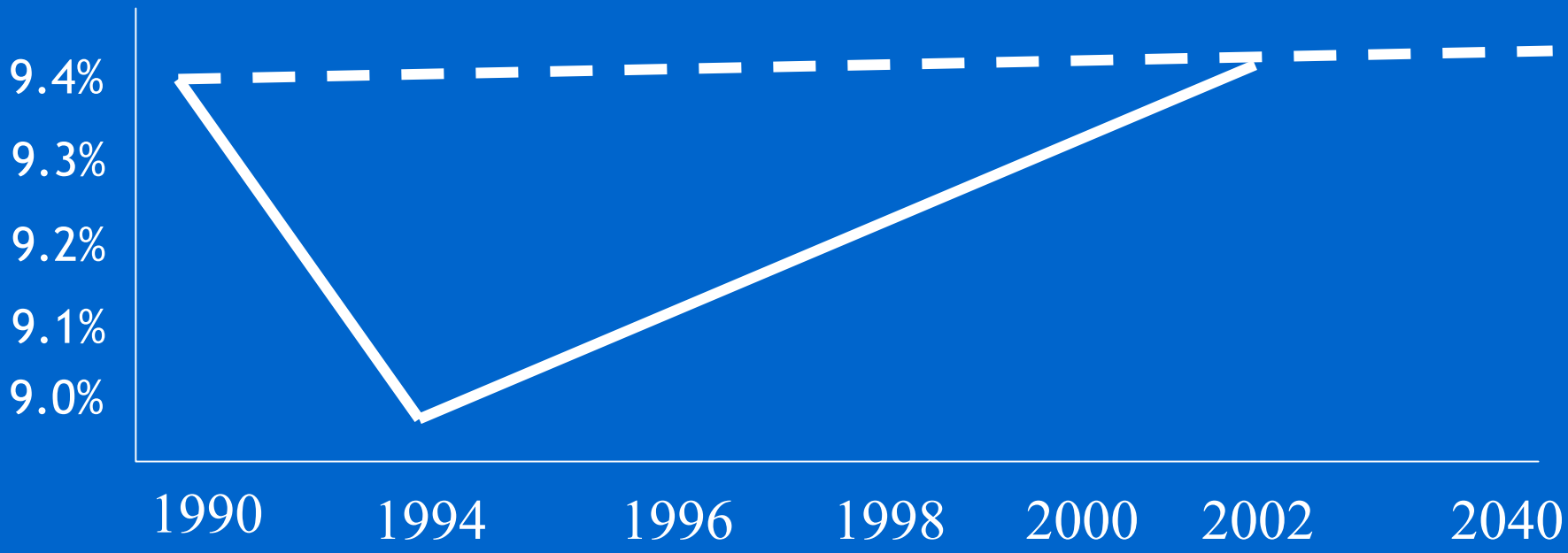
Four Clusters of Tensions

- Knowledge Tensions
  - Specialized vs General Knowledge
  - Professional vs Lay Knowledge
- Economic Tensions
  - Public vs Private Funding
  - Leading Edge Treatment vs Population Health
  - Quality vs Efficiency
  - The economic and corporate elite vs the rest of us
- Governance Tensions
  - Centralization vs Decentralization
  - Strict Accountability vs Clinical Governance
  - Federal vs Provincial
- Institutional Tensions
  - Institutions vs Community
  - Standardization vs Customization
  - Primary vs Acute Care
  - Geriatric vs Adult

The Right Wing View



The Left Wing View



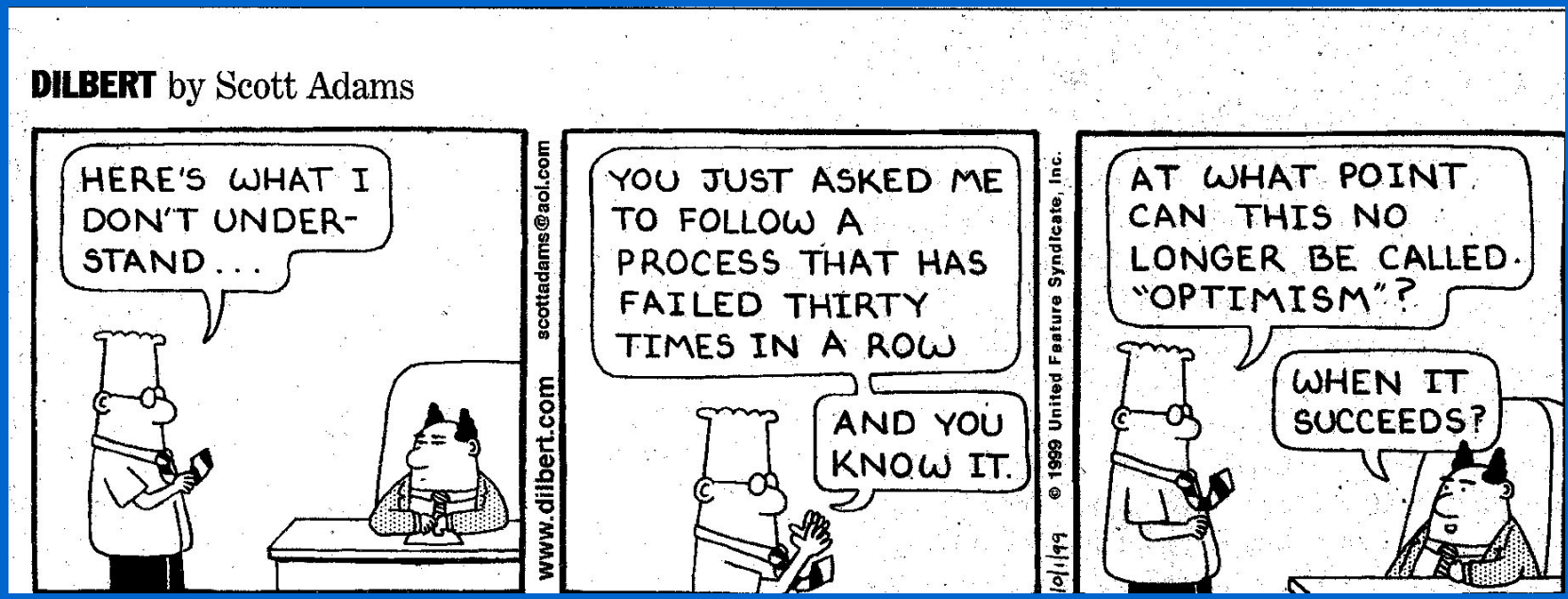
A System is Destabilized When..

- People outside the field are unhappy
  - Politicians, media
- Health Professionals are unhappy
  - Doctors, nurses and others
- Others in Health Care are unhappy
  - Administrators, government officials, researchers
- Canadians are unhappy
  - Earl Berger's Polls
    - Suggest a steady downward trend in concern
    - Question will the system be there should they need it

A Failure to Understand Health Care Systems

- Complicated solutions to complex problems
- Expert technical "rational" advice
  - On opposite sides of the tensions
  - The recipes are often not implemented
  - Externalities like "irrational political will" impeded the "rational solutions" proposed by experts
  - The system would not stand still long enough for evaluation
- Unforeseen consequences when implemented
  - Mergers increase costs
  - Increased "efficiency" led to higher costs
  - New arrangements slowed down patient transfers
- Most experts did not give up their preferred solutions
  - "They were never fully implemented we should try again"

A failure to Understand Health Care Systems



A Failure to Understand Health Care Systems

- If there is a complicated structural solution then it should be universal but:
- Opposite "complicated" solutions to the same "complicated" problems also appear internationally
  - 1990 While Canada regionalizes, UK which was regionalized creates independent organizations
  - 1992 While US vertically integrates insurance and provider organizations, UK separates purchasers and providers
  - 2000 While Canada considers increased privatization, US considers increased public funding
- All of this suggests a fundamental failure of understanding
- Conclusion: Maybe its time to consider a shift in perspectives on the problem

New perspectives are possible

- Theoretical frames for identifying and dealing with complex problems are emerging and used in other fields
- Applications to health care include publications on health policy, management and medicine are occurring
  - BMJ- Paul Plsek and Tim Wilson
- There is even some Canadian Experience
  - Romanow 1 asks different questions
  - Mazenkowski Report has greater recognition of complexity
  - *Edgeware* -in second printing
  - *Towards a New Perspective on Health Policy - 10,000 downloads*
- Our hope is that applying these new ideas may help to resolve or reduce some of the tensions

An overview of what we know about complex systems

- 5 groups of characteristics and examples of them can help us understand the different perspectives
  - Theory Cluster
  - Causality Cluster
  - Evidence Cluster
  - Planning Cluster
  - Structure Cluster

Theory Cluster

Complicated Systems

- Linear
- Noise, tension and fluctuations suppressed
- Asymptotic stability towards an ideal
- External to system
- Adaptation is to a static environment

Complex Adaptive Systems

- Non-linear
- Opportunity and risk seen in tension, noise and fluctuations
- Structural stability at the edge of chaos
- Part of system
- Interaction with the rest of a dynamic environment

Example: History of medicare (Taylor)

Marble Cake Policy

It would be comforting to believe that the governmental process follows ...[a]... neat and logical course, but, obviously, it does not. Unforeseen obstacles appear, unpredictable events (such as an election defeat) occur, and feedback from the environment warns of the need for changes in policy or strategy. ....The more one examines the roles of interest groups and national and provincial political parties in the formulation of policies, ...the less the two-tier federal system resembles the traditional "layer-cake" concept and the more it exhibits the idiosyncratic confusion of a marble cake.

Taylor, M. G. (1978). *Health Insurance and Canadian Public Policy*. Montreal, McGill-Queen's University Press. Page xvi

Structure Cluster

Complicated Systems

- Highly structured closed systems
- Objective: Smooth running with clear accountability
- Sustainability: Equilibrium as an end state
- Reversibility in time

Complex Adaptive Systems

- Interactive open systems
- Discontinuous change at tipping points
- Sustainability: Inevitable Change in a stable context
- Irreversibility (time's arrow)

Example: Aging

Two Views on Aging

- The body is a closed system
- Smooth running maintains status
- Efforts to return to non-aging equilibrium when ill
- Aging is a curable illness

- Aging is accelerated or retarded by numerous factors
- Illness and health interact
- Graceful Aging
- Aging is inexorable

Causality Cluster

Complicated Systems

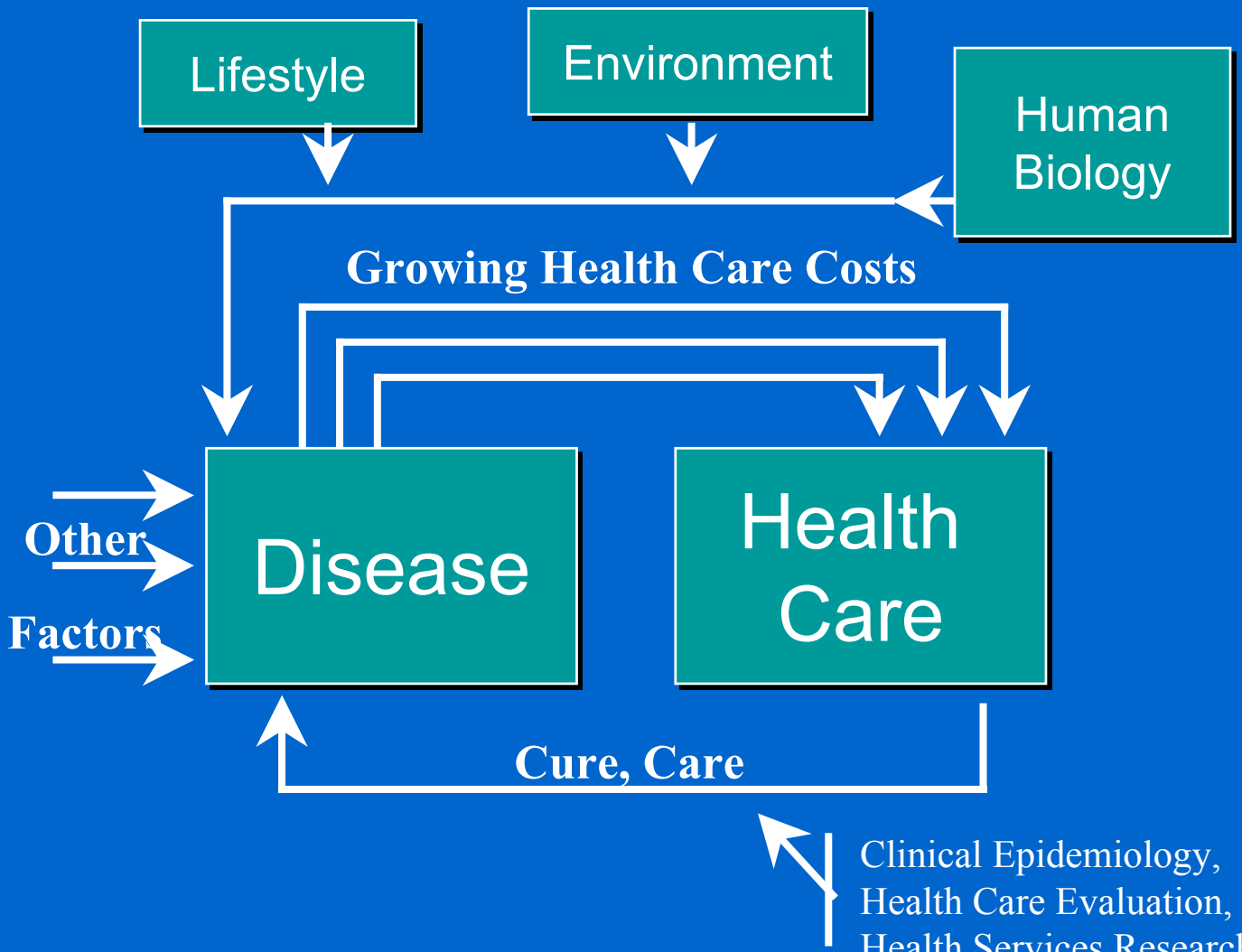
- Simple causality
- Designed and intended outcomes
- Deterministic
- Certainty
- Assumed predictability
- Focus on boxes
- Structures determine relationships

Complex Adaptive Systems

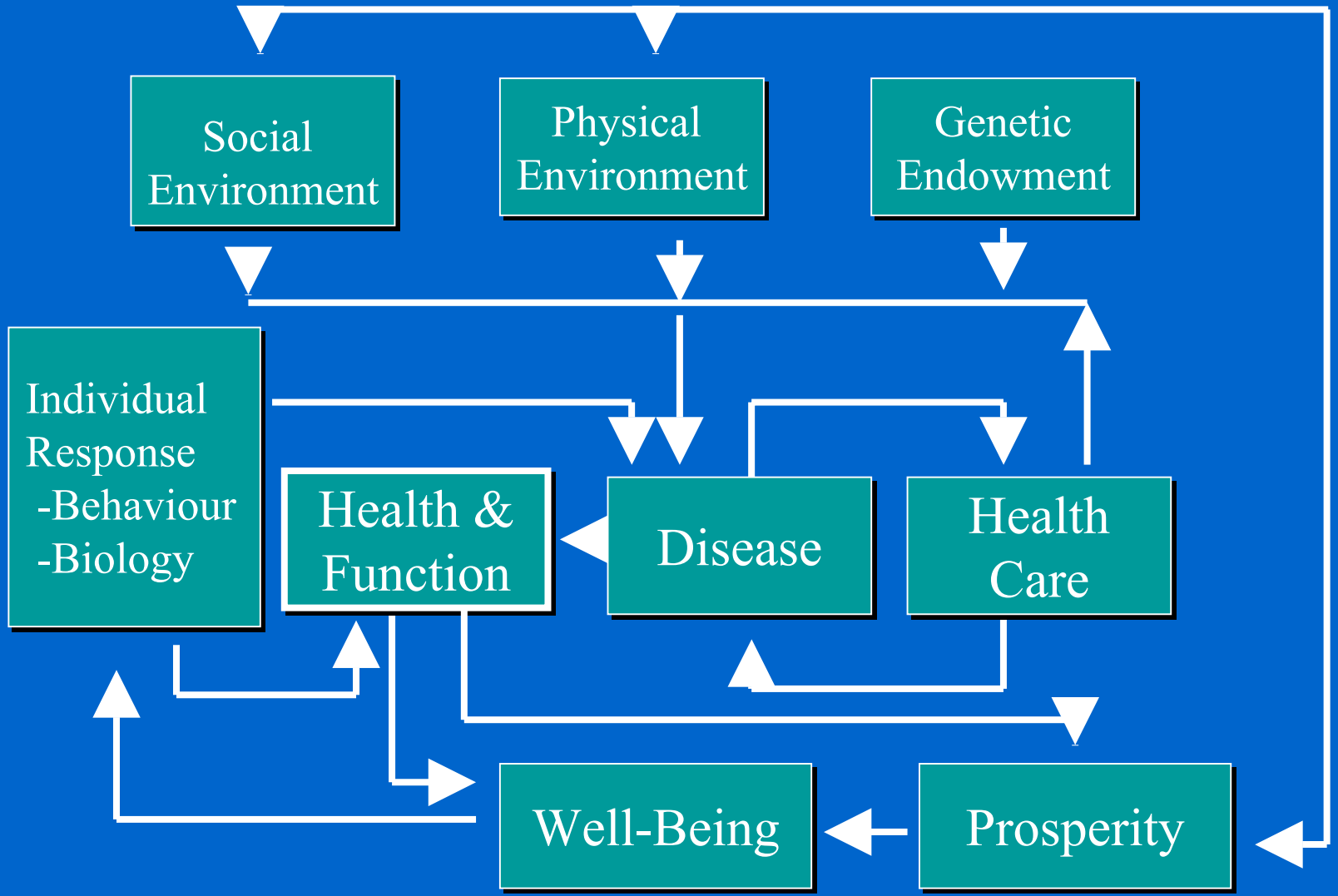
- Mutual causality
- Adaptive and emergent
- Probabilistic
- Uncertainty
- Anticipation in changing context
- Focus on Arrows
- Structures and relationships are interactive

Example: Determinants of health

Thinking in the Box(es)



More Thinking in the Boxes



Thinking Outside the Box

Social Environments

Built Environments

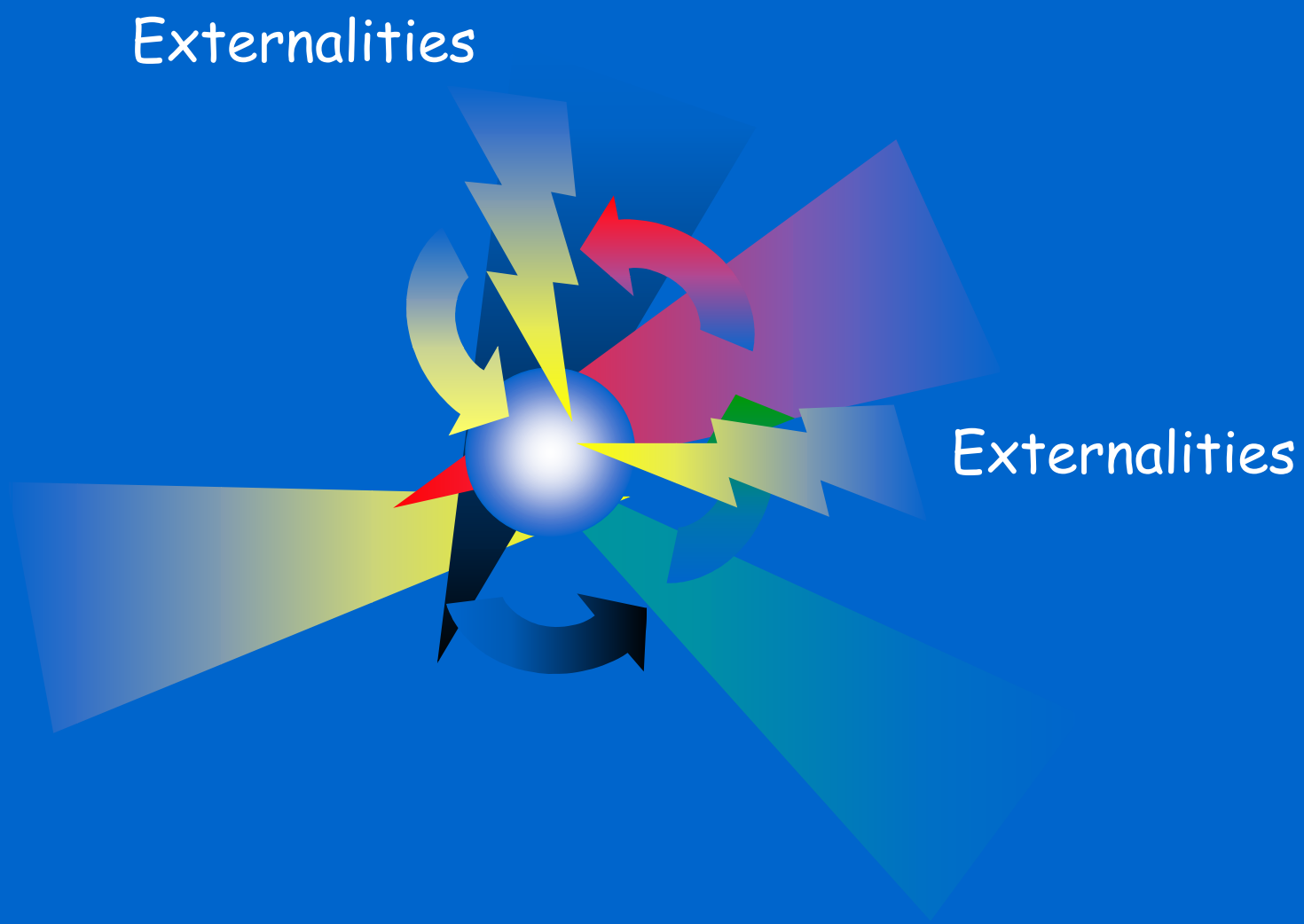
Individual

Complex Interactions
Among Them

Other Factors

Natural Environments

Graphic Representation of Health



Evidence Cluster

Complicated Systems

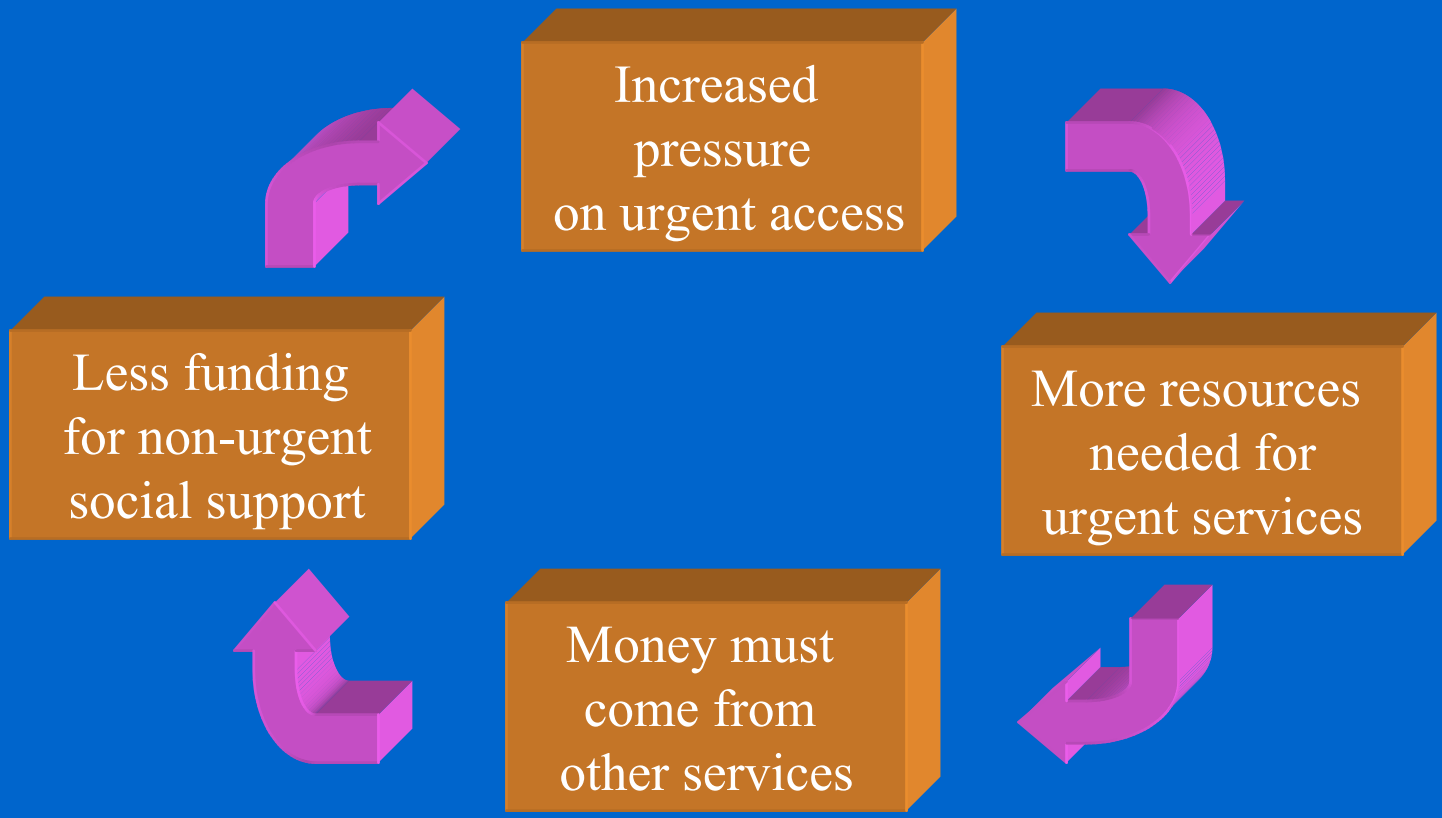
- Reductionism/Analysis
- Averages dominate
  - ignore outliers
- Classical economics ignores historical evidence
- Measures of efficiency fit and best practice
- Search for structural constancy

Complex Adaptive Systems

- Holism/synthesis
- Outliers can be key determinants
- History contains meaning of change
- Feedback loops that affect relationships
- Experience coevolves with the field

Example: Why Emergency Rooms are Overloaded

A Vicious Cycle in ERs



Planning Cluster

Complicated Systems

- Convergent thinking
- Reductive characteristics
- Optimizing
- Environmental scan

- Big issue needs big change

Complex Adaptive Systems

- Divergent thinking
- Emergent characteristics
- Satisficing (Simon)
- Developing insights into own practice
- Butterfly effect

Example: Health Service Restructuring Commission

Ontario HSRC Methodology

- STEP 1: Determine Net Expenses
- STEP 2: Calculate Program & Related Transfers
- STEP 3: Calculate Clinical Efficiency Savings
- STEP 4: Determine Support Service Efficiencies
- STEP 5: Re-allocation of Other Expenses
- STEP 6: Calculate Site Closure Savings
- STEP 7: Determine Administrative Efficiencies
- Step 8: Add back Selected Expenses
- Step 9: Establish the Cost of the Reconfigured System

http://www.olsc.ca/ochip/d_method.htm

Case 2: The French Health Care System

- In 2000 the WHO declared that the French health care system ranked first in the world.
- Canadians were astonished to find that they ranked 30th
- What did this mean?
- How did it come to be?

France and Canada

2000 WHO Ranking

• 1	System Performance	• 30
• 4	Health Performance	• 35
• 3 (73.1)	Health Level (DALE)	• 12 (72)
• 12	Health Distribution	• 18
	Responsiveness:	
• 16-17	Level	• 7-8
• 3-38	Distribution	• 3-38
• 26-29	Fin contrib fairness	• 17-19
• 6	Overall goal att	• 7
• 4 ($2125)	Per capita int $	• 10 ($1836)

France and Canada

2000 WHO Data

France		Canada
59,000,000	Population	30,000,000
20.5%	% 60+	16.7%
9.4%	% GDP on health	9.4%
76.1%	%Public	70.1%
175,431	#Doctors	50,000
347,918	# Nurses	227,000
4.4/M	Infant mortality	5.5/M

OECD Longitudinal Data

	1990		1998	
	Canada	France	Canada	France
Life Expectancy at Birth Females	80.4	80.9	81.5	82.2
Life Expectancy at Birth Males	73.8	72.7	76.1	74.6
Infant mortality, Deaths per 1000 live births	6.8	7.3	5.3	4.6
Total in-patient care beds, Per 1000 population	6.3	9.7	4.1	8.5
Practising physicians, Density per 1000 populatior	2.1	2.6	2.1	3
Average length of stay in in-patient care, Days	13.0	13.3	8.2	10.7
Total expenditure on health, Million NCU	60422	569782	82821	796986
Total expenditure on health, %GDP	9.0	8.6	9.3	9.3
Public expenditure on health, Million NCU	45071	436594	58082	606348
Public expenditure, % GDP	6.7	6.6	6.5	7.1
% Total expenditure on In-patient care	49.0	46	43.1	44.8
% Total expenditure on pharmaceuticals	11.4	20	15	22
Out-of pocket payments, Per capita US$ PPP	270*	207*	392	209
Private insurance, % total expenditure on health	8.9*	10.9*	11.2	12.6

*This data is from 1992

The French System

- Similar Financial Pressures as Canada
- Similar Technical Pressures
- Similar Global Pressures
- Much Less Structural Change
- More resistant to global pressures
- Maintained Broad Social Support
- Constant adjustments while maintaining a stable infrastructure: e.g. La Maternelle

La Maternelle

- Universal Support for mothers and children from pregnancy to nursery school
- Parenting Education to pre-school programs
- Developmental daycare
- Income supplements
- Nutrition supplements
- Constant revision to improve the program

Case 3: Brazil and HIV AIDS

- annual per capita income is less than $5000
- In the 1980s, Brazil's AIDS problem was worse than South Africa's
- Today, South Africa's HIV infection rate is 25% whereas Brazil's is 0.6%
- In 1992, the World Bank predicted that Brazil would have 1.2 million AIDS cases by 2000
- …but the actual count was 0.5 million.

The Brazil Complex Problem

- How do you respond to an AIDS epidemic in a developing country?
- No money for expensive drugs
  - problems of affordability of drugs
- A very iffy health care system
  - problems of treatment
- High levels of illiteracy
  - problems of compliance even if there were drugs
- High levels of poverty and hunger
  - problems of nutritional needs for drugs

Making the Brazil Problem Complicated

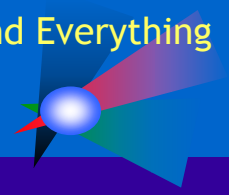
- "What will drug costs be for our infected population?"
- "What resources are needed to manage drug therapies for illiterate patients?"
- "What resources are needed to assure compliance with drug associated nutrition in this population?"
- "What are the resources needed for an effective prevention program?"

World Bank Responses to AIDS as Complicated

- Meaningful solutions require sophisticated, integrated national health care systems
- We cannot provide treatment to all when the drug costs are so high
- We cannot afford resources to manage treatment compliance
- With our limited resources, we should focus more on prevention than treatment
- It will therefore take a long time for the problem to work itself through

Brazil Implicitly Recognized the Complexity

- Began to address the AIDs issue head-on in 1994
- Were unwilling to accept the answers of the World Bank
- Hence – had to change the questions…



The Brazil Questions Assume Complexity

World Bank Questions

- "What will drug costs be for our infected population?"
- "What resources are needed to manage drug therapies for illiterate patients?"

Brazil Questions

- **"How can we reduce costs so that we can provide treatment to all who need it?"**
- **"What methods of communication will work to convey the drug therapy routine to a patient – even a homeless, illiterate patient?"**

The Brazil Questions

World Bank Questions

- "What resources are needed to assure compliance with drug associated nutrition in this population?"
- "What are the resources needed for an effective prevention program?"

Brazil Questions

- **"If food is an issue, how can we ensure greater compliance with the routine by linking up with charities that can provide food at the right times of day?"**
- **"How can we achieve our prevention goals while treating all of those currently infected?"**

The Brazil Conclusions

World Bank Conclusions

- Meaningful solutions require sophisticated, integrated national health care systems
- We cannot provide treatment to all when the drug costs are so high
- We cannot afford resources to manage treatment compliance
- With our limited resources, we should focus more on prevention than treatment
- It will therefor take a long time for the problem to work itself through

Brazil Conclusions

- Find ways to use the resources we have to respond to the problem
- Provide drugs to all by finding ways to reduce drug costs
- Use our informal system to train people to care for themselves
- Prevention will be part of the treatment
- Seek short and long term results

The Brazil Responses

- A stable container: Brazil built on existing infrastructure
  - A somewhat shaky health system of hospitals and clinics
  - Added to by 600 NGOs
- Free drugs to all AIDS patients: faced down drug companies in pursuit of national interest
- Patients managed their own drugs
  - Illiterates were taught by nurses (and those trained by nurses) who did whatever was needed including nutrition
  - Compliance matched that of San Diego
- Free treatment spread prevention ideas
  - No labelling of those affected
  - Prevention information readily available

Lessons from France and Brazil

- Stability – stability – stability!
- Stable relationships, trust – key part of context for risk taking/innovation
- Changing questions – changes answers
- Local context key – for deriving solutions and implementing ideas
- What works already? –start there

How Ideas About Complexity Might Be Applied in Canada

- The Complex Problem
- Examples of Four Complicated Q&As
- Staying with the Complexity
- Some Canadian ways forward
- Discussion from Audience – reactions/further suggestions of questions and answers
- Conclusion

A Return to the Canadian Case

- There has been a steady decline In public confidence
- Five principles of CHA threatened
- Economic problems remain
- Tensions remain despite many interventions
- Everyone is more unhappy
- The system is destabilized

The Kirby Romanow Divide

- Reports are somewhat similar in detailed recommendations
- Kirby sees system as more complicated than complex
- Kirby mostly asks questions appropriate for complicated problems

- Reports are different in approach
- Romanow sees system as more complex than complicated
- Romanow largely asks questions for complex problems

Some of Kirby's Complicated Questions

- What structures and relationships must change to make the health care system sustainable?
- Can we afford increasing care and treatment for an aging population?
- We must make choices. What will we support and what should we ration or give up?
- What is an appropriate public - private mix? How much should Canadians pay for their health care?

Some Kirby Responses to Complicated Problems

- Break down the dysfunctional structures and relationships – i.e. focus on what isn't working and fix it.
- Decide what we will ration.
- We can't afford everything. We should cut out some less critical services.
- We must revise our public private mix to increase costs to those who can afford to pay for extras or who waste services.

Other Questions are Possible

Complicated Problem

- What structures and relationships must change to make the health care system sustainable?
- Can we afford increasing care and treatment for an aging population?
- Should we go for population health or new technology and drugs?
- What is an appropriate public private mix? How much should Canadians pay for their health care?

Complex Problem

- How do we build on current structures and relationships to ***stabilize*** and enhance medicare?
- How can we provide care and treatment that makes everyone feel that the system will be there should their family need it?
- How can we help health care institutions and professionals enhance the ***quality of services and innovation*** in technology and drugs?
- How can a viable medicare system ***contribute even more to the Canadian identity***?

Some Responses to the Complex Problem

- Build on Current Structures and Relationships
- Make the System Available When Needed
- Support Efforts to Improve Care
- Restored Medicare will reinforce Canadian Identity

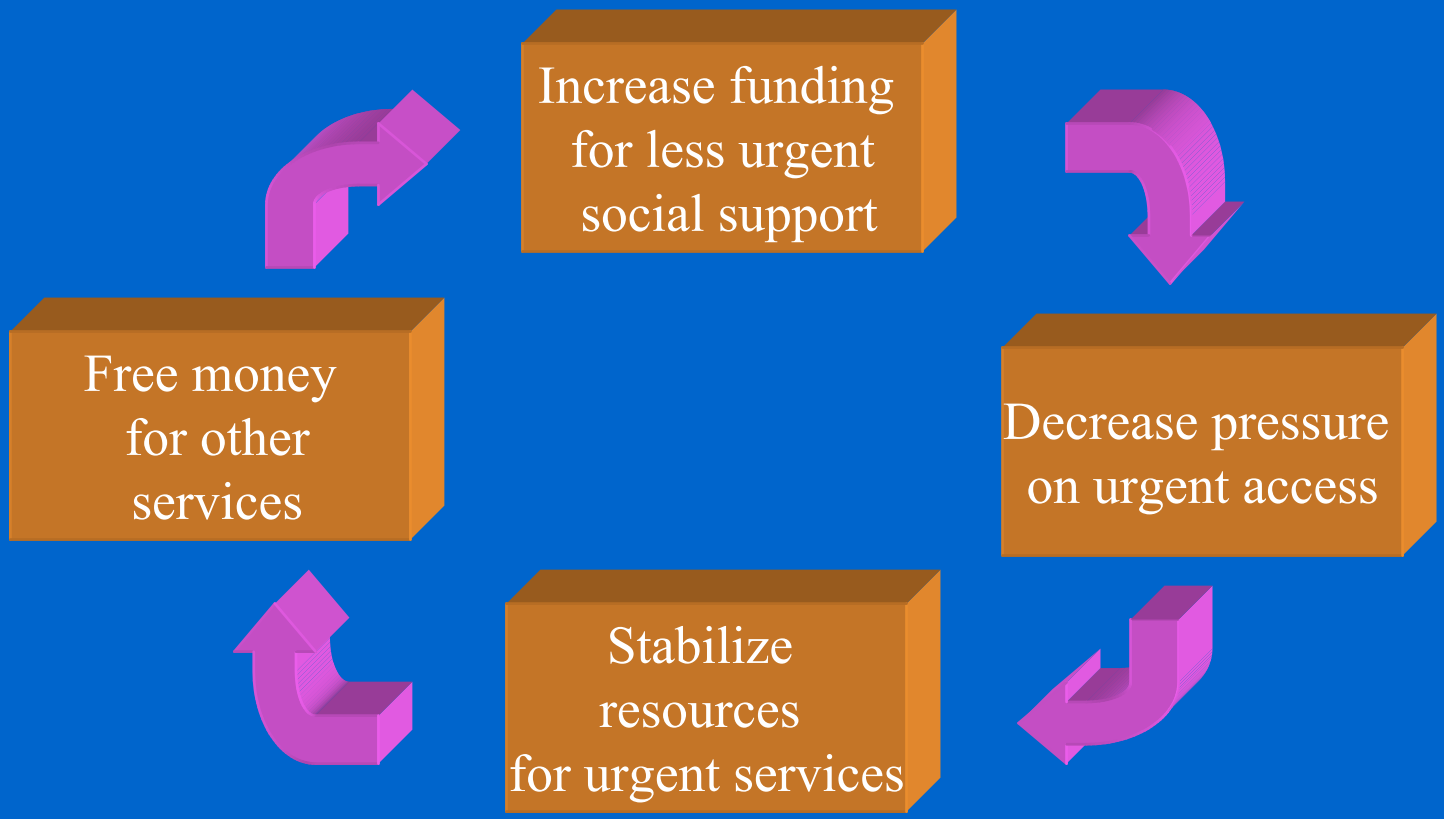
Build on Current Structures and Relationships

- Restabilize the system
  - Provide security of employment for nurses
  - Lengthen budget period for hospitals to 3 years AND reward for innovation
  - Stabilize support for health related organizations
  - Provide Drs with stable level of income
- Recognize the local informal relationships that support flow through the system
  - Local providers and users of the system can identify what makes the flow happen
  - Provide recognition and support for those who make the system work – look for the pockets of excellence and share information on this (report cards are one step in this)
- Do not change structures to disrupt those relationships
  - Consider economic cost of disrupted relationships in planning change

Make the System Available When Needed

- Provide multiple access points
  - increase the number of support points
    - e.g. telecounselling
  - increase information points to the system
    - e.g. Ontario telehealth
    - e.g. Province wide bed availability services
- Make waiting times more transparent and safer
    - e.g. Emergency room clock for non-urgent cases
    - e.g. Clearing hou se of posted waiting time for procedures
    - e.g. Explanation of safe waiting times for procedures
- Provide support for patients and carers
  - Increase support for self carers
    - e.g. tobacco cessation programs
  - Increase support for carers of others
    - e.g. training and support for elder carers

A Virtuous Cycle in ERs



Support Efforts to Improve Care

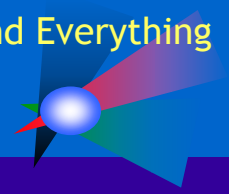
- Recognize and reinforce altruistic motives of providers
  - Increase Respect for the differentiated knowledge they bring to patient care by means of recognition programs
- Give all groups greater freedom and responsibility to do what they do best for patients. (Confucius)
  - Use the natural learning/innovation resources and relationships that exist
- Give everyone increased capacity to monitor and introduce effective innovations to care.
- Allow for many small pilots of innovation
  - Don't wait for the "perfect" answer – evolving, emerging system within stability of values/principles

Restore Medicare to Reinforce Canadian Identity

- Success in answering the first three question will make Canadians more confident that health care will be there should they need it.
- A healed system will contribute to health by reinforcing such determinants of health as social generosity, equity and security
- It will also provide improved care

Conclusion

- We have been trapped into a narrow way of defining and responding to current issues as if they were merely complicated
- There is at least as much expertise and ingenuity in Canada to generate and answer complex questions as Brazil and France
- Canadians can rise to the challenge to mobilize and use those resources
- These are merely sample questions and answers. Similar ones can be applied to other contexts after understanding local conditions



The Romanow Report

- Commissioned in 2000
- Attempt to repair and modernize medicare
- Released in November 2002
- Response largely positive

48 Recommendations in 11 Chapters

- Sustaining medicare
- Health care, citizenship, and federalism
- Information, evidence and ideas
- Investing in health care providers
- Primary health care and prevention
- Improving access, ensuring quality
- Rural and remote communities
- Prescription drugs
- Home care: the next essential service
- A new approach to aboriginal health
- Health care and globalization

Stabilizing Medicare

- **Sustaining medicare**
- **Health care, citizenship, and federalism**
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Regaining Canadians' Confidence

- Sustaining medicare
- Health care, citizenship, and federalism
- Information, evidence and ideas
- Investing in health care providers
- **Primary health care and prevention**
- **Improving access, ensuring quality**
- **Rural and remote communities**
- **Prescription drugs**
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Building a World Class System

- Sustaining medicare
- Health care, citizenship, and federalism
- Information, evidence and ideas
- Investing in health care providers
- Primary health care and prevention
- Improving access, ensuring quality
- Rural and remote communities
- Prescription drugs
- Home care: the next essential service
- **A new approach to aboriginal health**
- **Health care and globalization**

Stabilize Medicare (18)

- Sustaining medicare
  - The issue is not "Is it sustainable?" It is "Do we want to sustain medicare?" And we do!
- Health care, citizenship, and federalism
  - Make a new agreement with Canadians
  - Create a national health care council
  - Modernize the Canada Health Act
  - Stabilize funding
- Information, evidence and ideas
  - Electronic records
  - Technology assessment and investment
  - More research
- Investing in health care providers
  - Address gaps in supply
  - Education investment
  - Role definition

Regain Canadians' Confidence (23)

- Expanding the scope of medicare and making it better
- Primary health care and prevention
  - Investing in primary care reform
  - Local comprehensive primary care services
  - Early detection and intervention
  - Increased health promotion
- Improving access, ensuring quality
  - Managing waiting lists
  - Linking performance indicators with quality

Regain Canadians' Confidence (23)

- Expanding the scope of medicare and making it better
- Rural and remote communities
  - Dealing with disparities in health and access
  - More providers
  - Telehealth
- Home care: the next essential service
  - Developing a national platform \
  - Support for care givers
  - Integration with primary care
- Prescription drugs
  - National drug agency and formulary
  - Connection to primary care

Build a World Class System (6)

- A new approach to aboriginal health
  - Aboriginal health: the shame of Canada
  - Determinants approach
  - Aboriginal partnerships
- Health care and globalization
  - Protect medicare from negative global forces
  - Export our success to developing countries
  - Do not encourage brain drain from third world

- No need to take notes

- This Presentation is available on our web site
  - www.healthandeverything.org
- For more information you can write to me at
  - sholom@glouberman.com