

Determinants of Stakeholder Preferences for Health Resource Allocation

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PhD Dissertation

Background

- We have reached a collective impasse on how best to decide on resource allocation priorities in health care.
- For example, do we invest in young families and children because their health today ultimately impacts the future, or do we support seniors who built the health system and comprise the fastest growing demographic group with the most pressing health needs?

- Do we invest in high-tech research and medical science in the hopes of new cures and innovations that we may not be able to afford, or do we try to address the obvious social inequities, poverty, violence, and self-destructive behaviours that are the underlying determinants of health and illness?

- Health care has a huge sphere of influence but a much smaller sphere of control. How much accountability and responsibility should the health system assume for individual health status, which is caused in large part by genetics and environment?
- Do we invest in vulnerable populations and marginalized groups because they are most at-risk for chronic and disabling illness, or would that be wasting scarce and valuable resources on people with statistically poor physical and social prognoses?

- Is our priority the greatest good for the greatest number, the common good, and the quality of life of the larger group? Or, to provide the best care possible for the relatively few sick individuals who face catastrophic illness and their last chance at survival? The priority for public insurance when it began in the mid-1960's was protection in the event of catastrophic illness...hence most resources were intended for acute care. Has this priority changed?

- Most health care resources are expensed in the last two years of life, so this is an obvious area for scrutiny in an environment of scarce resources. “End of life” is difficult to predict. Should we use science to better decide who will benefit most from intervention near the end of life?
- Does aggregate benefit to the greater masses outweigh the harm incurred to a smaller number? Is society obligated to provide the best care and treatment to all, despite cost?

- What is the proportion of health resources that should go to acute care versus community health? Is it better to give someone who is severely ill a small increase in health status, or a less severely ill person a greater improvement? It is a dilemma of acuity versus health gain. If the most common ailments eg. heart disease, stroke, cancer, arthritis, and mental illness have no ready cures, then maybe resources should be heavily invested in health promotion, prevention, genetic counseling, supported living, and palliative care with a drastic reduction to acute and critical care, diagnostic and treatment services.

- Must everyone live with a minimalist health care system ie. one that redistributes wealth and opportunity to provide for the lowest common denominator of needs...or, should we allow a select and privileged few the right to pay privately for a better standard of care? To what extent should tax dollars be used to subsidize both the public and private systems? What is the value of quality health care and how much are taxpayers really willing to pay?

- Is the operating priority access, quality, or cost? It has been said that Canadians can have any two of these, but not all three, in a publicly funded system. When services need to be rationed should it be via waitlists, prognosis for recovery, or ability to pay?

- What would a sustainable health system look like given recurrent cycles of poor economy, lagging productivity, and a diminished tax base? Local health authorities function within provincial jurisdiction, and the provinces are expected to function within a federally interpreted Canada Health Act, regardless of regional disparities in need and resources.

- Should we avoid the arduous and complex task of decision-making and play it safe by providing a minimum amount to each clamoring cause? Satisficing is a very common management strategy when there are not enough resources to meet all the needs. At the margins, decision-making becomes more political and driven by power agendas than by evidence.
- This is the context within which resource allocation decisions are made in health care.

Problems with Resource Allocation

- When you look at outcome indicators like overall mortality and morbidity, Canada's health system is in better shape than many others around the world. At the global level, extreme poverty is the leading cause of illness and death. Some would say that we don't have a problem.
- Currently Alberta spends ~\$8.5 billion per year on health care, well above the national average of \$3,000 per year per capita. But this is not enough to cover all the "needs" and demands.

- We find the dilemma of tight resources frustrating and painful especially when they impact at a personal level. People can express one opinion about the health system when they are well eg. “we need more efficiency and privatization” and a completely opposite opinion when struck by illness eg. “why is this service not covered when I’ve paid my taxes all these years?”

- The background questions and issues are complex and there is little empirical knowledge to guide decision-making. However, research cannot replace social choice and valuation.
- No one is clear who should be making resource allocation decisions eg. administrators, physicians, politicians, tax-payers, expert panels, etc.
- There is no one-best-way to solicit input or obtain consensus on important decisions. Survey methods are ideal for large groups of people but there are inherent problems with this methodology.
- It is difficult to break historical patterns of resource allocation.
- The underlying assumption of the study was that various stakeholders will have different and competing priorities, values, and expectations for the health system.

Objective of the Study

- The objective was to explore the effects of selected demographic, economic, political, historical, and psychosocial background variables on the health resource allocation preferences expressed by professional, management, governance, client, private and public stakeholder groups in the Calgary Health Region.

In other words....

- Are there predictable factors or determinants that influence an individual's resource allocation decisions about health care? eg. Does stakeholder group, age, gender, past experience with a program, current health status, etc. influence which program you think needs more resources?

Design of the Study

- Mixed exploratory-modeling design. Hypothetical models with independent, intervening, and dependent variables were tested against data collected.
- 1000 randomly selected representatives of 10 stakeholder groups
- Mail questionnaire with 40 questions

Stakeholder Groups

- Stakeholder groups included random samples of:
 - General public (residential)
 - General public (business)
 - Physicians
 - Allied health professionals & private health care providers
 - Health board members
 - Clients & family members
 - Community caregivers & support workers
 - Registered nurses (acute care)
 - Registered nurses (long-term care)
 - Health system managers

Research Methods

- 40 Survey items taken from past Alberta Health and Health Canada questionnaires
- Representative items from economic theory; social values theory; institutional theory; strategic contingency theory & resource dependence theory; game theory; and stakeholder theory
- In total, 1000 surveys, 380 study variables, 23 apriori hypotheses, and 218 structural equation models were utilized.

Structural Equation Modeling

- Primary method of analysis
- Allows testing and estimating of causal relationships among multiple variables
- Variables are not manipulated but observed and recorded as they naturally occur
- Uses a combination of data and qualitative causal assumptions
- Both a confirmatory and exploratory methodology
- Preliminary theoretical hypotheses are tested, refined, and retested for validation by the data.

Determinants Explored

- Opinions on Health System Funding (6 measures)
- Opinions on Health System Priorities (13 measures)
- Level of Confidence in Health System
- Opinions on Ethical Principles (6 measures)
- Opinions for Scarcity in Health System (2 measures)
- Access to Health System in Past Year

- Rating on Quality of Health System
- Rating on Effectiveness of Health System
- Knowledge of Health System
- Family Need for Health Services in Past Year
- Opinions on Competing Health Programs (6 measures)
- Demographics (9 measures)

Sample Models

- Model #1 hypothesizes personal health status and family need as determinants impacting an individual's access to health care, which in turn impacts their perceptions of effectiveness, quality and confidence in the health system.

- Model #2 hypothesizes that knowledge of the health system impacts preferences and opinions on competing programs; managing scarcity; operation of the health system; funding priorities; and ethical principles.

- Model #3 hypothesizes that nurses' beliefs about ethical principles (equity, effectiveness, greater good, last chance of survival, expert opinions, and public will) impact their beliefs about medically necessary care; government funding; use of copayments; capitalizing on willingness to pay; user premiums; and tax increases.

Study Results

- Response rate was 26.5% overall (n=265), ranging from 13.5% for patients and families and 59% for nurses. Sample was skewed to middle-aged females.
- None of the theoretical structural equation models were substantiated by the data collected.
- This means none of the theories predicted stakeholder preferences for resource allocation i.e. self-interest, social values, legitimacy etc.
- Descriptive data allowed the generation of profiles for the stakeholder groups but these showed minimal differences.
- Overall, stakeholders supported resources for heart health, cancer care, and mental illness over 15 other program choices.

Discussion

- Why were the models not supported by the data?
- Maybe stakeholder groupings do not account for variance in decision-making?
- Maybe a different conceptualization of stakeholders is needed? Maybe stakeholders should be studied within the context of individual programs rather than the entire system?
- Stakeholder groups overlapped eg. a nurse could also be a manager and a client. Membership in a stakeholder grouping is situational not permanent. Did this dilute the findings?
- Not all stakeholder groups could be included eg. government representatives, an important group, were excluded.
- Structural equation modeling requires smaller sample sizes, but this limits other methods of data analysis that might have showed findings.

- The underlying theories may not adequately reflect what goes on in the real world. It is not unusual for SEM to refute commonly held beliefs about reality. It is a better method for disproving and calling-into-question than for proving.
- The apriori hypotheses and models may not reflect the underlying theories. The measures of the conceptual variables may be too crude and inadequate for research purposes.

Conclusion

- “Research is a process of going up alleys to see if they are blind”.
- Health care choices are inherently difficult to make and it was a theoretical expectation that it was possible – in reality most people live their daily lives without this responsibility and may not have been able to express preferences via survey items.
- Our journey has taken us full circle to the earlier background dilemmas....