Modelling Home Care Services to Identify Service Shortfalls

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Project Goal

• A model was built to help understand and communicate with other players in the Health sector the reasons why Home Care Employers are having difficulty hiring and retaining workers.

• The model may also serve for future planning that could prevent a severe shortfall in services as the population ages and hospitals discharge patients whose conditions are more complex.
Problem Statement

• The ageing population and shorter hospital stays require more Home Care Services.

• As more home care services are required the ability of service providers to meet service needs by hiring and retaining more workers becomes increasingly difficult.

• The more training workers receive the more able they are to seek better paying employment opportunities.
Key Variables

- Number of available Home Care providers for hire
- Number of Home Care clients requiring services
- Gap in Services delivered
- wage gap between home care and other jobs
- recruitment & retention rate
- job satisfaction & stress
- complexity of services required
- relative attractiveness of home care
Behavior Over Time Graphs

- Number of available Home Care providers for hire
- Number of Home Care clients requiring services
Behavior Over Time Graphs

- job stress
- complexity of services required

months 12 months 12
Behavior Over Time Graphs

• wage gap between home care and other jobs

• relative attractiveness of home care

months 12

months 12
Causal Loops: Feedback

- Stress +
  - Worker productivity -
  - Service hours per client +

- Care delivery gap +
  - Home care delivery entitlement +
  - Global home care budget +

- Quitting rate +
  - Wage gap +
  - Alternative employment opportunities +

- Wage rate corresponding to skill level +
  - Skill level of employee +
  - Investment in training +

- Ability to increase wages +
  - Productivity of home care agency +
  - Complexity of services required +

- Ability of home care worker to move into other higher paying health care jobs +
HomeCare Service Provider
Policy Structure Diagram

- HomeCare Workers
  - Hiring Delay
  - Wage Gap
  - Effect of Wage Gap on Hiring
  - Effect of Wage Gap on Quitting
  - Stress on Worker Productivity

- HomeCare Clients
  - Homecare Entitlement
  - Care Delivery Gap
  - Reduced Assessed HomeCare Entitlement
  - High Demanding Services
  - Job Satisfaction

- Pool of Available HomeCare Workers
  - More Workers Available
  - Availability of Alternate Employment
  - Workers Find Other Jobs

- Fraction of Population Requiring Health Care Services
  - Time
  - Direct Referrals
  - Demand for Hospital Workers

- Demand for Long Term Care Workers
- Wages Paid by Other Health Care Sectors

- Care Delivery Gap Reduces Assessed HomeCare Entitlement
- Adjusted Service Hours per Client
- Complexity of Required Home Care Services

- HomeCare Service Provider Policy Structure Diagram
Leverage points Identified

• The following stresses were identified as requiring attention by Home Health Care providers:
  – wage gap between Home Care workers & others
  – productivity of Home Care workers
  – skill level of Home Care workers
  – competition between Home Care Providers & Long Term Care Facilities for the same workers
  – demographic shifts will continue to increase the fraction of the population requiring Home Care services
  – global Home Care budget
Recommended Interventions

– wages need to correspond to skill level
– do not reduce the time per visit to a point where the worker spends much of her/his time travelling between clients
– coordinate hiring and training requirement with Long Term Care facilities & Hospitals
– increased efficiencies using new technologies & management methods are needed to allow fewer workers to meet the needs of more clients
– the Home Care Budget needs to reflect the demographic population shifts
Conclusion

- The use of Systems Thinking tools will improve communication between the Health Care sectors
- It is hoped this investigation of the interrelationships and feedback processes will allow local Health Care Policy makers deal with stresses on the System