Relationship Between Time of Informal Caregiving and Quantity of Formal Home Care Services

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Purpose of this study

To determine the type of relationship between the quantity of 10 different formal home care services and the time of informal caregiving.
Definition of Home Care

A variety of services that allow people to live at home by preventing, replacing or postponing the need for admission into a long-term care or acute care institution.


10 types of Formal Service

- Home health aides
- Homemaking services
- Volunteer services
- Occupational therapy
- Day Care/Day Hospital
- Nursing
- Meals
- Physical therapy
- Speech therapy
- Social work
Definition of Informal Care

- provided with no formal financial payment
- based on emotions such as love, responsibility and obligation that originates from family or community relationships
- meal preparation, housekeeping, maintenance/repair, grocery shopping, transportation, bills and banking, personal care, checking up and emotional support


Conceptual Framework
Three Types of Relationships

Complementary
Substituting
No-relationship


Substituting Relationship

Informal Care

Formal service

Methodology

- Cross-sectional study
- 2000/2001
- Fourteen CCACs in Ontario
- Convenience sampling
- Trained assessors
- Minimum Data Set–Home Care (MDS-HC)
- Analysed with Logistic Regression Model
**Time of informal caregiving**

**Opportunity costs of informal caregiving**

- $4433 per year per client
  (costing informal caregiving at minimum wage)

- $5491 per year per client
  (costing informal caregiving at average housekeeper wage)
Variables in the regression model

- **Client demographics**
  - Gender, age, marital status, education

- **Client physical/functional characteristics**
  - IADL involvement scale, ADL hierarchy scale, Cognitive performance scale, wandering, resists care, dementia

- **Client/caregiver dyad characteristics**
  - Who client lived with, number of caregivers living with client, relationship between caregiver and client

- **Caregiver characteristic**
  - Caregiver expresses feelings of distress, anger or depression

Logistic Regression Results

Final regression model:

- $N = 5113$
- Chi-square = 3041.92
- $p < .05$
- $R$ squared = .46
Significance of the independent variable

With the addition of the formal home care variables:

Change in model chi-Square = 221.18
Degrees of freedom = 55
p < .05
Change in R-squared = .019
Which services were substituting?

Home Health Aides

Odds Ratio = 0.84
95% confidence interval = (0.78 to 0.91)

For every additional visit by a home health aid per week, the client was 16% less likely to receive more than 20 hours of informal care per week.
Meals Service

Odds Ratio = 0.86
95% confidence interval (0.83 to 0.90)

For every additional hour per week of meals service, the client was 14% less likely to receive more than 20 hours of informal care per week.

Which services were complementary?
**Homemaking services**

Odds Ratio = 1.07
95% confidence interval = 1.02 to 1.13

For every additional hour per week of homemaking services, the client was 7% more likely to receive more than 20 hours of informal care per week.

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**Occupational therapy**

Odds Ratio = 1.62
95% confidence interval = 1.09 to 2.40

For every additional hour per week of occupational therapy, the client was 62% more likely to receive more than 20 hours of informal care per week.
Day care/day hospital

Odds Ratio = 1.28
95% confidence interval = 1.01 to 1.61

For every additional hour per week of day care/day hospital, the client was 28% more likely to receive more than 20 hours of informal care per week.

No-Relationship

Visiting nurses
Volunteer services
Physical Therapy
Speech Therapy
Social Work
How are these results useful?

Implications for
..... case managers?
..... health system managers?
..... health policy makers?
..... health service researchers?
..... health resource allocation/funding?
Conclusions

- Informal caregivers provide a substantial amount of caregiving time and pay a considerable opportunity cost.
- The type of relationship between the quantity of home care services and informal caregiving time varies with the type of home care service.

Conclusions

- Home health aides and meals services have a \textit{substituting} relationship with informal caregiving.
- Homemaking services, occupational therapy, and day care/day hospital have a \textit{complementary} relationship with informal caregiving.
Thank you