Outcomes of a Community-based Clinical Prevention Service

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PURPOSE

To evaluate an innovative new service model for high need/cost individuals/families by providing clinical prevention using advance practice nurses and pharmacists

BACKGROUND

- Improperly aligned incentives are major drivers in health care costs
- Health care financing is biased toward technical services rather than prevention
- Paradox of over and under utilization
  - Consumers may receive service from multiple providers who provide duplicate medications for the same condition. Over utilization of health services occurs in part because people underutilize medications leading to poor symptom control causing more physician visits either for side effects or symptom control.

CLINICAL PREVENTION INTERVENTION

- Nurse/pharmacist team working with families
  - Masters prepared experienced nurses
- Home visit and telephonic consultation
- Consumer demand driven
- Family centered
- Health related decision support through
  - Unbiased information abut health and resources
  - Unconditional support of consumer goals

METHODS

Randomized controlled evaluation of Clinical Prevention Model with high risk Medicaid recipients

Sample

Families of 98 Medicaid recipients from a rural western state who were:

- Receiving two or more state services
- Prescribed 10 or more unique drugs in the year prior to the study
- Not over 65 or receiving Medicare

Measures

Pre-post evaluation over a nine month period

- Cost and service data from an integrated state database
  - Claims data (drugs and treatment) + Service data + Benefits data
- CDC Health Related Quality of Life (HRQOL-4)
  - Four core questions: health rating, days physical health poor, days mental health poor, days daily activities limited
  - Ten questions about symptoms, pain, depression

Table 1: Comparisons of Self-rating of health pre and post for control and study group

Group	Initial Health Rating	Final Health Rating	Difference
Control n = 44	M = 3.38	M = 3.41	0.02 – n.s.
Study n = 54	M = 3.35	M = 2.93	0.42 – p = 0.000**
Difference	0.03 – n.s.	0.48 – p = 0.03*	

Table 2: Comparisons of numbers of days activity was limited by physical or mental health

Group	Initial No. of Days	Final No. of Days	Difference
Control n = 44	M = 8.58	M = 9.67	-0.91 – n.s.
Study n = 54	M = 8.98	M = 4.35	4.63 – p = .001
Difference	0.40 – n.s.	5.23 – p = .01*	

FINDINGS

- Control group (n = 44) and Study group (n = 54) had no pre-test differences in costs, numbers of services or HRQOL
- Self-rated health was markedly lower for both groups than state norms
  - 45% rated health as fair to poor versus 12% of state residents
- Families used approximately 2 to 3 hours of service per month
- Statistically significant improvements in numbers of poor health days (physical or mental) for the study group
- Study group had a 14% decrease in public assistance costs while control group had a 8% increase in costs (not statistically significant but an important trend)

CONCLUSIONS

- Service led to healthier families – increased quality of life
- Service led to increased functioning – decreased number of days with activity limit
- Families relied less on agency services – increased self-sufficiency
- Clinical Prevention Model shows great promise as a model for advanced nursing practice to improve health as human capital and provide market solutions to the healthcare cost and quality problem

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