The Impact of Case Management on Independence and Employment

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Texas has the highest rate of uninsured working adults in the nation (28%)

Large county hospital districts often care for those without insurance

250,000 working age Texans with disabilities receive SSI and 380,000 receive SSDI (2007)

Medicaid expenses for working age Texans = $3.5 billion (2007)
Study Design

- Harris County Hospital District in Houston, TX
- 1,616 participants: 904 intervention and 712 control
- Working adults < 60 yrs. enrolled in Harris County indigent healthcare program

Interventions

- Free health and behavioral healthcare, prescriptions, dental care
- Empowerment-oriented case management by vocational counselors, social workers and nurses
  - Planning, advocacy and coordination
  - Navigation of health system
  - Connection to community resources
  - Employment/vocational supports
Who Is Working Well?

- Female (76%),
- Minority (72%)
- Middle-aged (70% > 45 yrs)
- Divorced / separated (42%)
- High school diploma (33%) or less (30%)
- Low income (48% < 100% of poverty)
- Work on average 33 hours per week
- About 10% have a serious mental illness
- 41% report at least one functional limitation (ADLs and/or IADLs)
- Frequent self-reported health conditions include depression (51%) and anxiety (32%)
Participant Data

- 92% of original sample completed last survey (833 participants)
- Data sources:
  - Surveys covering months 1 to 18 in the study (self-report data)
  - Medical encounters from HCHD records
  - Pharmacy data from HCHD records
  - Employment data from the Texas Workforce Commission
Case Manager Data

- 15 case managers participated
- Average of 56 participants per case manager
- Case managers completed daily activity reports
- Activities were aggregated to three measures of time

<table>
<thead>
<tr>
<th>Case Manager Activity over 6 month period</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
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<tr>
<td>Health Related Hours</td>
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<tr>
<td>Employment-related Hours</td>
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<td>Other-related Hours</td>
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<td>14.1</td>
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Key Questions

- Is there a relationship between case management and participants’ outcomes after adjusting for other factors?
- Are very high levels of case management related to participants’ outcomes?
Analysis

- Results cover the first 18-months period of our study
- Outcomes were adjusted for: Age, Gender, Race/Ethnicity, Serious Mental Illness status, Occupational Group, Health morbidity index (ACG score) and Recruitment Cohort (Mail/Phone versus Clinic In-person)
- Baseline value was included to adjust for initial score
- Were some case managers more effective than others?
- Linear relationships can represent a positive outcome or a potential higher need for assistance
- Curvilinear relationships were added to test whether sufficiently high levels of case management hours were related to positive participants’ outcomes
Health Care Utilization Results

Higher case management hours were related to:
• ↑ outpatient physical health services (*HCHD data*)
• ↑ requests for routine medical appointment*
• ↑ seen in a mental health treatment location (*HCHD data*)
• ↑ utilizing mental health services*

Very high case management was related to:
• ↓ total emergency room visits (*HCHD data and self-report*)
• ↓ outpatient visits (*HCHD data*)
• ↑ urgent care visit*
• ↑ at least one outpatient and emergency visit (*HCHD data*)

*Note: Outcome is based on participant self-report*
Physical and Behavioral Health
Results

Higher case management hours were related to:
• ↓ overall mental and physical health functioning*
• ↓ reporting no difficulties in instrumental activities of daily living*

Very high case management hours were related to:
• ↑ self ratings of physical and mental health functioning*
• ↑ probability of reporting difficulty with depression and activities of daily living*

*Note: Outcome is based on participant self-report
Employment and Earnings Results

Higher case management hours were related to:
• ↓ hours worked over the past six months*
• ↓ months worked over the past six months*
• ↓ household income*
• ↑ percent reporting problems with work due to physical or mental health*

Curvilinear Relationships - Very high case management was related to:
• ↑ Texas Workforce Commission reported earnings
• ↑ number of months worked in the past six months*
• ↑ working the same or more as the previous six months*

*Note: Outcome is based on participant self-report
Summary

Higher case management hours were related to greater:
- HCHD community clinic-based outpatient and mental healthcare utilization which indicates greater access to services
- participant need in health, daily functioning and employment consistently—reflecting case managers spending more time with participants who had higher needs

High levels of case management were consistently related to positive participants’ outcomes:
- increased appropriate usage of healthcare (lower ER usage)
- Increased earnings, and
- Increased mental and physical health functioning
Case Manager Random Effects

- Across all outcomes, variation due to having a particular case manager was not statistically significant.
- Even though case managers had different backgrounds and experience, little impact on participant outcomes was identified.
- High levels of case management were effective irrespective of case manager.
Case Managers Report

- Most CM time was spent navigating the healthcare system—especially obtaining medical and dental appointments
- Significant time was spent counseling participants and teaching greater assertiveness with their healthcare and employment
- Communicating with healthcare providers through electronic medical records was useful

Challenges:

- Maintaining contact with participants (very mobile population)
- Establishing rapport and engaging participants
- Focusing time on participants who are motivated to change
- Balancing offering assistance with promoting self-sufficiency
- Building relationships with community support providers
Case Manager Strategies

- Effective engagement strategies include:
  - Using motivational interviewing, reflective listening, and insight induction;
  - Providing supportive counseling, vocational assistance and referrals to community resources;
  - Facilitating communication with the health care team; and
  - Encouraging participants to be more proactive (empowered) in managing their health and employment.
Participant Intervention Needs

- A survey of the 15 case managers showed that the interventions most needed by participants include (in order of importance):
  - Expedited medical appointments
  - Prescription assistance
  - Dental services
  - Vocational services
  - Mental health care
  - Medical care
  - Specialty care
Participants Speak

- Additional interviews were conducted during the 18-month period.

- Participants report that navigation assistance (via case management), lack of co-payment requirements for services and improved access to specialty services (such as psychiatry) are improving their lives.

  “Access to mental health care was the most helpful service because without the psychiatrist and changes in medications and support from my CM, I don’t think I would be around, or at least not doing as well as I’m doing.”

- Greater access to services has enabled patients to deal with health issues more promptly

  “The expedited appointments was most beneficial. My CM was able to get me appointments that helped get me treated and my health improved greatly because I was able to get the help I needed.”

- Case manager services have helped them

  “The assistance I got from the CM was very important to me because at the present time I am better informed about my medical condition and I am more proactive in my health care.”
Participant Example

Participant had total case management hours greater than the 90th percentile value.
Implications

- Health navigation interventions can improve patient outcomes.
- High levels of case management may be required to have desired impact on patient health and employment outcomes.
- Health navigation will also need to address psycho-social needs.
- Use of case management could be targeted to those with highest healthcare utilization to try to make the biggest impact on reducing inappropriate utilization of health system resources.
- More time for study would better identify long-term disability outcomes.