



SF-12 Responses Indicate Benefit of HRCM Program

Healthcare Research Department

White Paper

February 2016



Executive Summary

Medicaid beneficiaries often experience a variety of obstacles which increase their difficulty in receiving medical care. To mitigate this problem, CareSource, a non-profit managed care company serving Medicaid members, offers a high-risk care management (HRCM) program to coordinate care for members at the highest risk for experiencing a serious medical event. Members who opt-in receive one-on-one attention from a Care Management team to help maintain engagement in their care plan in order to improve the members' health and quality of life. To evaluate the efficacy of the Care Management program toward meeting this objective, members engaged within the program regularly complete a self-assessment of their physical and mental health status, the Short Form 12 (SF-12) Health Survey. Responses to the SF-12, collected over the course of 15 consecutive months, indicated that most members experienced an increased sense of well-being during their involvement in the program. These results, taken in conjunction with research indicating that self-assessed health status correlates with objective measures of well-being, suggest that the Care Management program is playing a role in improving members' health.

Background

The basic task of scheduling and attending an appointment with a physician or medical provider may involve any number of obstacles for many Medicaid beneficiaries. For example, survey results obtained by Cheung and colleagues (2012) found that these barriers to receiving timely care may include lacking transportation, having to wait too long in the doctor's office, or the office not being open when the individual could go. Beneficiaries receiving treatment for chronic and complex health care issues, who are thus classified as being at high-risk for hospital admission, are especially vulnerable. Case management programs enable the beneficiary to have regular one-on-one contact, over the phone or face-to-face, with a team of trained healthcare providers, which may include a social worker, patient navigator, and registered nurse. Available research indicates that these types of care coordination programs are associated with improved health outcomes as well as fewer hospital admissions and consequently lower average medical costs (e.g., Berry, Rock, Houskamp, Brueggeman, & Tucker, 2013; Plant et al., 2013).

One simple means of monitoring the current state of someone enrolled in case management is a health-related quality of life (HRQoL) questionnaire. Among the HRQoL questionnaires available, one of the most commonly used is the Short Form 36 (SF-36) Health Survey (Chapman et al., 2011), which includes a Physical Composite Score (PCS) and a Mental Composite Score (MCS). An alternative to this 36-question survey is the abbreviated variation, the SF-12 Health Survey, which includes 12 of the original questions and takes only 2-3 minutes to complete, yet still provides valid and reliable composite scores for both physical and mental health (Lacson et al., 2010; Müller-Nordhorn, Roll, & Willich, 2004; Pickard, Johnson, Penn, & Lau, 1999).

The SF-12 Health Survey, along with a number of other HRQoL questionnaires, offers an indication of the individual's functional health and general well-being for a wide variety of conditions, including long-term dialysis patients (Lacson et al., 2010), treatment for myocardial infarctions and coronary artery bypass grafting (Müller-Nordhorn et al., 2004), survival following a stroke (Ayis et al., 2015), and for patients receiving treatment for diabetes (Adriaanse, Drewes, van der Heide, Struijs, & Baan, 2016) or HIV/AIDS (Chariyalertsak et al., 2011). Furthermore, several studies have compared objective health outcomes with patients' subjective responses to HRQoL surveys and found strong correlations between the two measures (e.g., Ayis et al., 2015; Neri et al., 2011; Østhus et al., 2012). Collectively, these results suggest that the SF-12 accurately reflects changes in health and well-being and thus a suitable tool for monitoring an individual's overall health.

The purpose of this study was to evaluate the benefits of using the SF-12 as a simple and efficacious tool in monitoring the status of CareSource's high-risk Medicaid members. CareSource, a non-profit managed care company based in Dayton, Ohio, is a Medicaid managed care provider in Ohio serving over 1 million members. CareSource uses the OptumTM SF-12v2 Health Survey to evaluate the benefits of the High Risk Care Management (HRCM) program, examining whether members who choose to participate experience improved health outcomes. HRCM is a voluntary program designed for members who have multiple comorbidities and significant acute illnesses, suggesting that they have the greatest likelihood of needing in-patient care within the upcoming 12 months. Members participating in the HRCM program complete a

baseline evaluation for the SF-12 as part of the initial paperwork, and then complete the same assessment no less than every 6 months throughout their engagement in the program.

Methods

Data included in the present analyses were taken from Ohio members, aged 18 and over, who had been engaged in the HRCM program for no less than 4 months, and had responded to both the initial and re-assessment surveys. Responses from 3,657 members satisfied these criteria and were then analyzed by quarter (CY14, Quarters 3 and 4; CY15, Quarters 1 – 3). T-tests were used to determine whether members' subjective physical (PCS) or mental (MCS) health at the final SF-12 assessment differed significantly from their responses during the initial assessment.

Results

Qualifying members' responses to the SF-12 indicate that nearly all experienced some level of significant improvement in their well-being during their involvement in the HRCM program. Significant improvements from baseline to final assessment were most consistently evident in participants' self-assessments of physical health. This pattern was apparent across all relevant strata of analysis: time frame analyzed; length of time the member had participated in the HRCM program; participant's age and gender; and the level of care needed by the participant. Significant improvements in mental health were only apparent during Quarters 2 and 3 of CY15. This improvement was evident among both males and females, participants who had been enrolled in the program for five or more months, those older than 35, and individuals who needed a higher level of care.

Conclusions and Implications

The data obtained indicates that members engaged in the HRCM program benefit from the increased attention they receive, with the most dramatic improvement observed between baseline and final assessment for physical well-being. In light of previous findings which determined that subjective assessments of well-being can be an indicator of the individual's actual health (e.g., Ayis et al., 2015; Neri et al., 2011; Østhus et al., 2012), these results suggest that a member's level of physical and mental health may have significantly improved while

participating in the HRCM program and support the continuation, and possible extension, of the HRCM program.

References

- Adriaanse, M. C., Drewes, H. W., van der Heide, I., Struijs, J. N., & Baan, C. A. (2016). The impact of comorbid chronic conditions on quality of life in Type 2 diabetes patients. *Quality of Life Research*, 25, 175-182.
- Ayis, S., Wellwood, I., Rudd, A. G., McKevitt, C., Parkin, D., & Wolfe, C. D. A. (2015). Variations in health-related quality of life (HRQoL) and survival 1 year after stroke: Five European population-based registers. *BMJ Open*, 5, 3007101.
- Berry, L. L., Rock, B. L., Houskam, B. S., Brueggeman, J., & Tucker, L. (2013). Care coordination for patients with complex health profiles in inpatient and outpatient settings. In *Mayo Clinic Proceedings* (Vol. 88, pp. 184-194). Elsevier.
- Chapman, J. R., Norvell, D. C., Hermsmeyer, J. T., Bransford, R. J., DeVinte, J., McGirt, M. J., & Lee, M. J. (2011). Evaluating common outcomes for measuring treatment success for chronic low back pain. *Spine*, 36, S54-S68.
- Chariyalertsak, S., Wansom, T., Kawichai, S., Ruangyuttikarna, C., Kemerer, V. F., & Wu, A. W. (2011). Reliability and validity of Thai versions of the MOS-HIV and SF-12 quality of life questionnaires in people living with HIV/AIDS. *Health and Quality of Life Outcomes*, 9(1), 1-9.
- Cheung, P. T., Wiler, J. L., Lowe, R. A., & Ginde, A. A. (2012). National study of barriers to timely primary care and emergency department utilization among Medicaid beneficiaries. *Annals of Emergency Medicine*, 60, 4-10.
- Lacson, E., Xu, J., Lin, S. F., Dean, S. G., Lazarus, J. M., & Hakim, R. M. (2010). A comparison of SF-36 and SF-12 composite scores and subsequent hospitalization and mortality risks in long-term dialysis patients. *Clinical Journal of the American Society of Nephrology*, 5, 252-260.
- Müller-Nordhorn, J., Roll, S., & Willich, S. N. (2004). Comparison of the short form (SF)-12 health status instrument with the SF-36 in patients with coronary heart disease. *Heart*, 90, 523-527.
- Neri, L., Dukes, J., Brennan, D. C., Salvalaggio, P. R., Seelam, S., Desiraju, S., & Schnitzler, M. (2011). Impaired renal function is associated with worse self-reported outcomes after kidney transplantation. *Quality of Life Research*, 20, 1689-1698.
- Østhus, T. B. H., Preljevic, V. T., Sandvik, L., Leivestad, T., Nordhus, I. H., Dammen, T., & Os, I. (2012). Mortality and health-related quality of life in prevalent dialysis patients: Comparison between 12-items and 36-items short form health survey. *Health and Quality of Life Outcomes*, 10(46), 1-9.
- Pickard, A. S., Johnson, J. A., Penn, A., Lau, F., & Noseworthy, T. (1999). Replicability of SF-36 summary scores by the SF-12 in stroke patients. *Stroke*, 30, 1213-1217.
- Plant, N., Mallitt, K. A., Kelly, P. J., Usherwood, T., Gillespie, J., . . . Leeder, S. (2013). Implementation and effectiveness of 'care navigation', coordinated management of people with complex chronic illnesses: Rationale and methods of a randomized controlled trial. *BMC Health Services Research*, 13(1), 1-6.