

Prospective, Matched Cohort Evaluation of the Effectiveness of Tel-Assurance® Heart Failure at a Medicare Advantage Health Plan

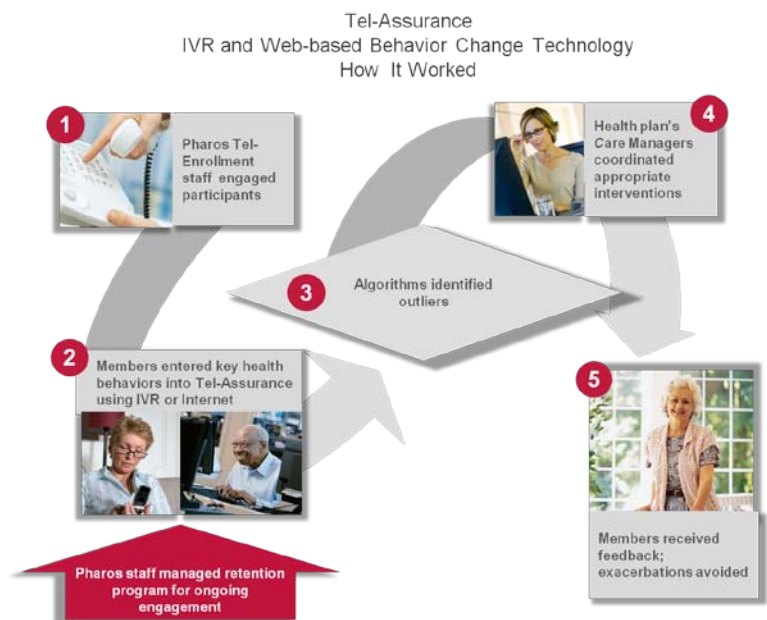
Background: Historically, health plans have under-invested in the management of their medical expense. They are now experiencing high medical losses and are coming under increased financial pressure. Nationally, 10% to 14% of Medicare Advantage members have heart failure (HF), and account for 15% of Medicare Advantage plan hospitalizations. In addition, 25% of those hospitalized are readmitted within 30 days.¹ Better management of these members represents an important opportunity for reducing medical expense and avoidable hospital admissions while improving overall healthcare quality. Tel-Assurance® is member-centric behavior change technology platform that has been proven to dramatically, consistently and sustainably improve the outcomes of members with HF and other chronic conditions. Results include: 1) reduced hospitalization rates of 40-80%, and 2) dramatic cost savings for Medicare Advantage health plans.

Evaluation Setting & Objectives: To examine the clinical and financial impact of Tel-Assurance on the most costly Medicare Advantage HF members, a severity matched concurrent cohort analysis compared those members monitored with Tel-Assurance to those not enrolled in the program. The evaluation took place in a regional health plan's Medicare Advantage (PPO and PFFS) population from January 1, 2008 to May 31, 2009. Analysis also includes a 12 month baseline to assess any secular trends in the cohort.

Methods: All HF members were identified using claims data as defined by the HCC-80 claims grouper. Eligibility was then restricted (by the Plan) to those members with an HCC Risk Score of 3.0-4.0. Exclusion criteria included known hospice or dialysis treatment or no access to a phone or internet connection. The eligible population was recruited for participation in daily self-care monitoring using Tel-Assurance. Members who participated in the program for at least 15 days were included in the analysis.

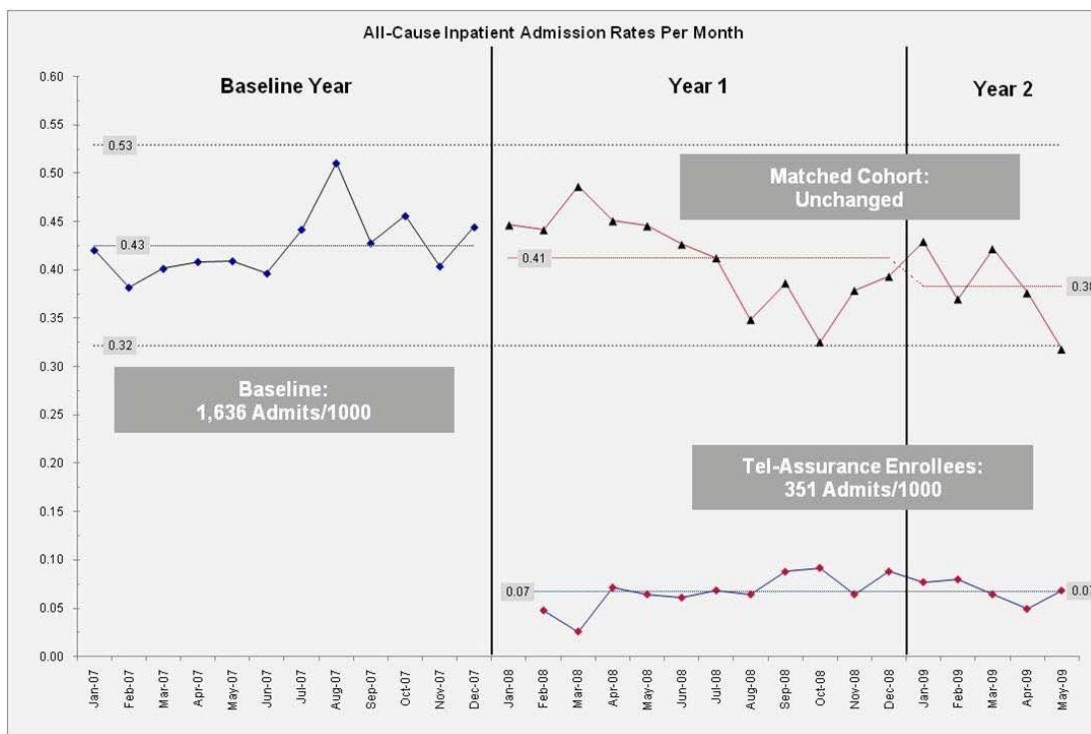
Each member then daily self-reported their clinical symptoms. The health plan's care managers reviewed daily member data through a desktop Internet portal which "flagged" those members who fell outside of prescribed clinical parameters (weight gain/loss or new symptoms of impending clinical exacerbation) and/or who failed to use the Tel-Assurance monitoring program for two consecutive days. Member contact and follow-up were at the discretion of the health plan's care managers according to the plan's standard operating procedures.

To evaluate outcomes in the intervention group, a propensity matched cohort was identified and served as a concurrent control group. Additionally, to evaluate cohort stability over time within the Plan and rule out any impact of secular trends on outcomes, a 12 month baseline period for the target population was also analyzed.



¹ Jencks, S., Williams, M., Coleman, E. Rehospitalizations among Patients in the Medicare Fee-for-Service Program. N Engl J Med. 2009.

Analysis and Key Findings: 5,162 members met the HCC-80 definition of HF. Of those, 2,514 members (49%) met eligibility criteria for the program. Enrollment rates were 40% initially and rose to 54% (mean 47%). Program refusal rates averaged 33%, dropping to 24% over time as process improvement was implemented. The HF cohort experienced 1,639 admissions per 1,000 during the 12 month baseline period. Admission rates per month appeared stable during the base year (mean±3 standard dev. = 0.43±.10). This admission rate remained statistically unchanged during the intervention period for the matched control group. However, during the same period, Tel-Assurance enrollees experienced an all cause hospital admission rate of only 351 per 1,000, a 79% decrease versus the controls. Admission rates were highly statistically improved beginning in the second month and remained so throughout the intervention period. The average costs per member per month for those enrolled in Tel-Assurance during the evaluation period was \$652, compared with \$4,438 for those not enrolled during the same period. Tel-Assurance enrollees saved \$3,785 per member per month.



Conclusions: Based on the results of a large, prospective and risk matched cohort analysis, the Tel-Assurance platform significantly reduces all cause hospital admission rates and generates dramatic cost savings. The impact was highly statistically significant beginning in the second month of intervention, and persisting over the full course of the intervention period (17 months). These results are a function of high enrollment rates, daily engagement of members in better self-care, and early visibility on signs of clinical deterioration for care managers. This evaluation addresses methodology concerns about secular trend and regression to the mean that have limited other models and studies.

Implications: Medicare Advantage, and other health plans, can consistently and sustainably improve HF outcomes and reduce medical losses by monitoring the daily status of members at risk of hospital admissions. Tel-Assurance drives member behavior change, focuses care management resources on those members who need intervention and allows health plans to dramatically impact clinical and financial performance.