Impact of Nurse Practitioner Led Transition Program Through TEAM Approach Reduces Avoidable Hospitalizations In Frail, Multiple Comorbidity High-Risk Community-Dwelling Elderly Patients

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**System:** Elderplan Health Plan – Brooklyn, New York, USA

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### Background & Hypothesis

**Background:** Hospitals are faced with unrelenting pressures to reduce length of stay and care costs. High rate of hospital readmissions has been staggering among elderly with COPD/bronchiectasis/asthma and CHF/ coronary artery disease. The National Population of Home Health Care Patients, 30-day readmission rate was 26% with 42% of patients having cardio-related diagnoses for the rehospitalization. In the USA about 24.8% of the Medicare beneficiaries discharged from a hospital were readmitted within 30 days of discharge. Elderplan, NY non-profit health plan, partnered with MJHS Plus Program which utilizes Nurse Practitioner (NP) home visits in combination with intensive interdisciplinary case management: TEAM approach (Triage, Engagement, Assessment of residual barriers, Maintenance Mode/Discharge) and had significantly reduced avoidable hospitalizations in Elderplan most vulnerable members (frail community dwelling elderly with multiple co-morbidities and complex behavioral/psycho-social needs). In 2015-2016 the interventions above had been successfully impacting avoidable hospitalizations Elderplan most vulnerable members by implementing Chronic Care (6 month) home visiting program. In 2017-2018 the TEAM approach was modified and extended to Transitional Program, a 30-day care episode to address 30 days hospital readmission rate of frail most vulnerable community-dwelling elderly patients residing in greater NYC area.

**Hypothesis:** TEAM approach involving intensive interdisciplinary Case Management combined with NP home visits and utilization of evidence-based disease specific clinical guidelines can reduce 30 days hospital readmission in complex, frail, multiple comorbidity, high-risk, low social economic community-dwelling elderly.

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### Methods

**4 Stage TEAM Approach**

- **Triage** – First 30 days intensive frequency NP home visits (usually weekly): Focus-management of primary group of Dx that caused Hospital admission
- **Engagement** – Next 60 days: Patient/Family education. Focus on co-morbidities and overall health maintenance in addition to primary Dx Interdisciplinary Team Care Coordination. Family and community resource involvement. Disease specific group/mental health referrals, continuity of PCP and specialists care coordination.
- **Assessment of residual barriers** – 4th and 5th month: Focus – Individualized approach. Utilizing disease specific protocols while applying Motivational Interviewing techniques for behavioral changes.
- **Maintenance Mode/Discharge** – 6th month: Focus establishment of appropriate sign out. Provisions for patients who remain to be high risk for decompensation.

**A total of 449 patients admitted from September 2017 - August 2018 to MJHS Plus Transition Program (TP) which applied TEAM approach to each 30-day care episode.**

Most vulnerable population referred to the TP had been discharged from the hospital within 1-7 days. Over 20% of TP patients had multiple hospitalizations within 30 days prior to referral to TP. Real-time data analysis case-control study conducted evaluating 12 months of data. Based on claims analysis 40% of hospitalization prior to referral to the TP were due to following conditions:

- CHF, ASHD, COPD, Pneumonia, Sepsis, UTI, Cellulitis, Dehydration, Uncontrolled Diabetes

Hospitalization analysis included 8 diagnostic categories defined by CMS as avoidable.

**Incorporating TEAM approach Transition Program reduced all cause 30 days readmissions.** With continues process improvement within 12-month period he Transition Program could double its admission capacity while 30 days readmission rate for most vulnerable complex elderly population was decreased to 17% (lower than national average for people over 65). Transition Program 30 days readmission rate had gradual improvement with 6-8% reduction in 30 days readmission compared to initial results of the Transition Program. Most vulnerable members of the plan continue to benefit from a sustainable quality program.

### Results

**DECLINE IN 30 DAYS Hospital Readmission with Transition Program**

**Transition Program Results**

<table>
<thead>
<tr>
<th>Method</th>
<th>Patients Admitted to TP</th>
<th>30 Days Readmission</th>
<th>% of Readmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>449</td>
<td>30%</td>
<td>17%</td>
</tr>
<tr>
<td>Improved</td>
<td>449</td>
<td>30%</td>
<td>17%</td>
</tr>
</tbody>
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### Conclusions

TEAM approach applied to Transition Care program significantly reduced 30 days hospital readmission in frail, multiple comorbidity high-risk, low social economic community-dwelling elderly patients. Over the 12-month period TP doubled its admissions capacity with continues improvement in 30 days readmission rate from 23-25 % to 17%. Gradually TP had achieved 6-8% reduction in 30-days readmission compared to its original implementation. Transition Program quantitative analysis of hospitalizations reduction will be presented.