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| **A. General Information** |   |   |   |   |   |   |   |
| ***Project Title & Project #:*** | Achieving target CHF medication dose using telehealth |
| ***Department/Division/Team:***  | ***ACTION***  |
| ***Population:*** | Patients with moderate or greater systemic LV dysfunction (no maximum age, includes Duchenne patients, excludes patients that were transplanted and in heart failure) |
| ***Brief Project Description (AIM):*** | The goal of this project is to facilitate up-titration of heart failure medication doses among ACTION center patients with moderate or greater systemic left ventricular dysfunction, using telephone, telehealth and in-person visits.Aim: To achieve a 20% increase in patients with moderate or greater systemic LV dysfunction who achieve minimum therapy regimens over a period of 6 months from a baseline of 3% by 9/30/2022. |
| ***Measures:*** | Numerator: Number of pts reaching minimum therapy regimens doses for all three classes of medications.Denominator: Total number of patients with moderate or greater systemic left ventricular dysfunction at each participating center, tracked monthly. Entry points would be those patients meeting inclusion criteria at discharge from hospital or first clinic visit with advanced heart failure team. |
| ***Prepared By:*** | M. O’Connor, R. Gajarski, D. Nandi |
| ***Date:***  | 11/11/2021 |
| **B. Project Background:** |   |   |   |   |   |   |   |
| The ability to deliver care remotely to pediatric and adolescent populations treated with advanced cardiac therapies, provides not only the option to replace some in-person visits, but may be ripe for augmenting care. In particular, remote caregiver interaction may provide avenues to increase access for isolated populations, improve education related to advanced cardiac therapies, and allow for uptitration of goal-directed medical therapies (GDMT) for advanced heart failure. The use of telehealth or remote monitoring has been described in adult populations to increase compliance with heart failure guidelines, both in medication type and in doseage.2 Uniquely, prior reports have also demonstrated the feasibility of uptitration of medications via nurses, nurse practitioners, and pharmacists, working in collaboration with physicians.3 Such collaborative work, including parents & patients, and using telehealth & remote data collection of weights, blood pressure and laboratory monitoring, may be an ideal evolution of telehealth to improve the care of this population.  |
| **C. Project Scope (and exclusions)**: |
| The goal of uptitration is to stabilize function, prevent worsening of symptoms, reduce hospitalizations and/or rea-dmissions, and reduce the frequency of outpatient visits. The working group will review tools to come to consensus on network-wide goals of regimen, dose, cadence and safety monitoring of uptitration; as always, this QI process is a voluntary project. Only ACTION sites who choose to participate in this project will have their data included. Sites choosing to participate will receive tools to help create patient-specific plans for uptitration, with still control over specific medication choice, order of uptitration, but with commitment to undertake the titration and safety checks.A focus will be to use not only in-person visits, but other modes of communication, including telephone and telehealth. patients will be “seen” via telehealth on a regular basis to check in on their clinical status and determine if up-titration is possible until target doses are achieved. We would anticipate these “visits” would occur more frequently than standard in-person clinic visits and thus allow for improved cadence of up-titration of meds. Lastly, an aim will be for each site to consider use of collaborating providers, including pharmacists and nurses alongside prescribing team to facilitate uptitration. Initial data entry will be focused on understanding baseline data in select sites. Upon implementation, we will collect patient-level data of diagnosis, function, initial medications (in relation to goal). At the patient level, initial scope will include data entry for patients with moderate or greater systemic LV dysfunction, although sites may employ tools for any population they see fit to do so. Exclusion criteria will include patient with right ventricular dysfunction as the aim of the medication changes. |
| **D. High Level Timeline/Schedule:** |   |   |   |   |   |   |   |
| The kickoff meeting will be planned for later this spring/early summer in conjunction with the ACTION Heart Failure Committee’s input. Once live, participating sites will enter data summarizing data as detailed above on a monthly basis. |
| **E. Communication & Expectations:** |   |  |   |   |   |   |
| At the initiation of the project, there will be monthly Zoom meetings to review results and design interventions as needed to achieve the aim. The frequency of these meetings may change as the project evolves. At a minimum, participating centers will be expected to enter monthly data from their center into RedCap and participate in regular meetings. There is also an expectation that centers will participate in new initiatives that arise during the course the project. |
| **G. Project Risks & Mitigation**: |
| **Risk** | **Level (high/med/low)** | **Mitigation and Escalation Strategy** |
| Poor participation from centers |  Low | It is possible that there will be little widespread interest from centers in participating due to data entry burden, etc. Given the widely acknowledged need to increase CHF meds in many pts that is slowed by relatively infrequent in-person visits, telehealth may be seen as great stride forward to more efficiently optimize a pt’s med doses  |
| Centers do not keep up with data entry |  High |  Maintaining the initial enthusiasm for a project and sustaining it is always the most difficult. Robust reminder systems will be in place and participant currency with data entry will be regularly audited. |
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| **F. Roles and Responsibilities** |   |   |   |   |   |   |
| **Sponsor/Champion:** Provides overall direction on the project. |
| **Name** | **Title/Role** |
| Angie Lorts |  |
| David Rosenthal  |  |
|  |  |
| **Team Leader:** Leads the team and provides guidance on scope of the project. |
| **Name** | **Title/Role** |
| Matthew O’Connor |   |
| Deip Nandi |    |
| Rob Gajarski |  |
| **Project Support** (**QIC/QOM/Data Analytics/Project Manager Support):** Leads in the planning & development of the project; manages the project to scope and/or provides data analysis and reporting expertise for the project. |
| **Name** | **Title/Role** |
| Paige Krack | Quality Improvement Specialist |
| Chloe Connelly  | Data Analyst |
| Nikita D’Souza  | Program Management Specialist  |
|  |  |
| **Team Members:** Works toward the deliverables of the project. |
| **Name** | **Title/Role** |
|   |    |
|   |    |
| **Family/Patient Representative:** |
| **Name** | **Title/Role** |
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| **H. Signatures** |
| **Sponsor/Champion:** |
| **Name** | **Signature** | **Date** |
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| **Team Leader:** |
| **Name** | **Signature** | **Date** |
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