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Reducing Fluid Overload hospitalizations and readmissions through post-discharge Transitional Care Programmes

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Background

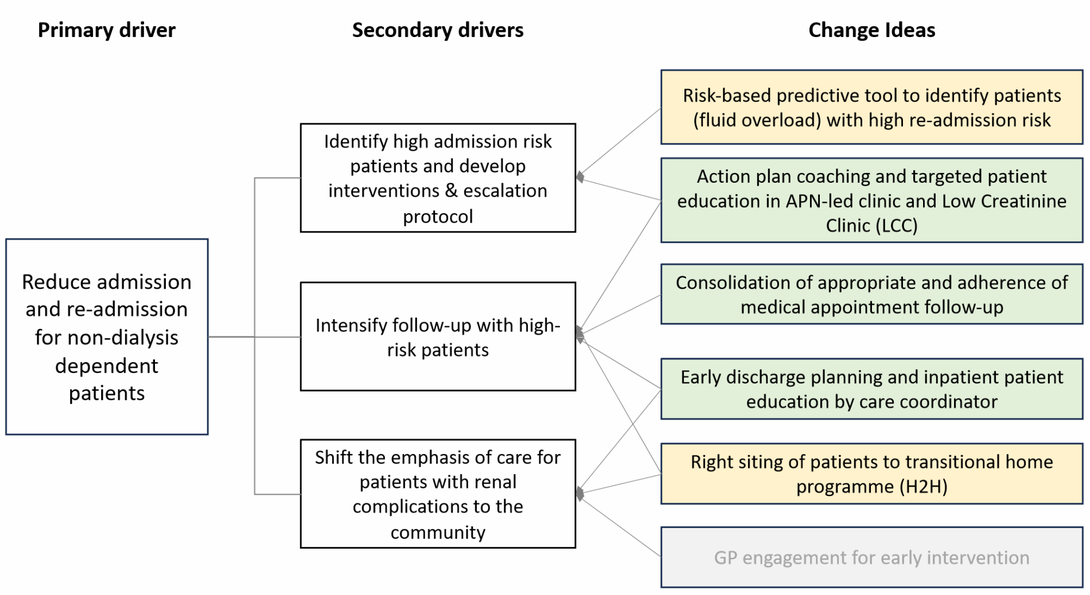
According to the SingHealth Diabetes Registry data, fluid overload accounts for the top 2 diagnosis codes for readmission of patients with diabetes at Singapore General Hospital (SGH) in 2019-2020. Value Driven Care analysis also found that the monthly average number of fluid overload hospitalizations in patients with diabetic kidney disease (DKD) had increased from 64 in 2019 to 100 in 2021.

Aim

1. Reduce fluid overload hospitalizations for non-dialysis dependent DKD patients in SGH from a monthly average of 100 to 85 cases (15% reduction) in 12 months.
2. Evaluate the impact of post-discharge transitional care programmes for these patients

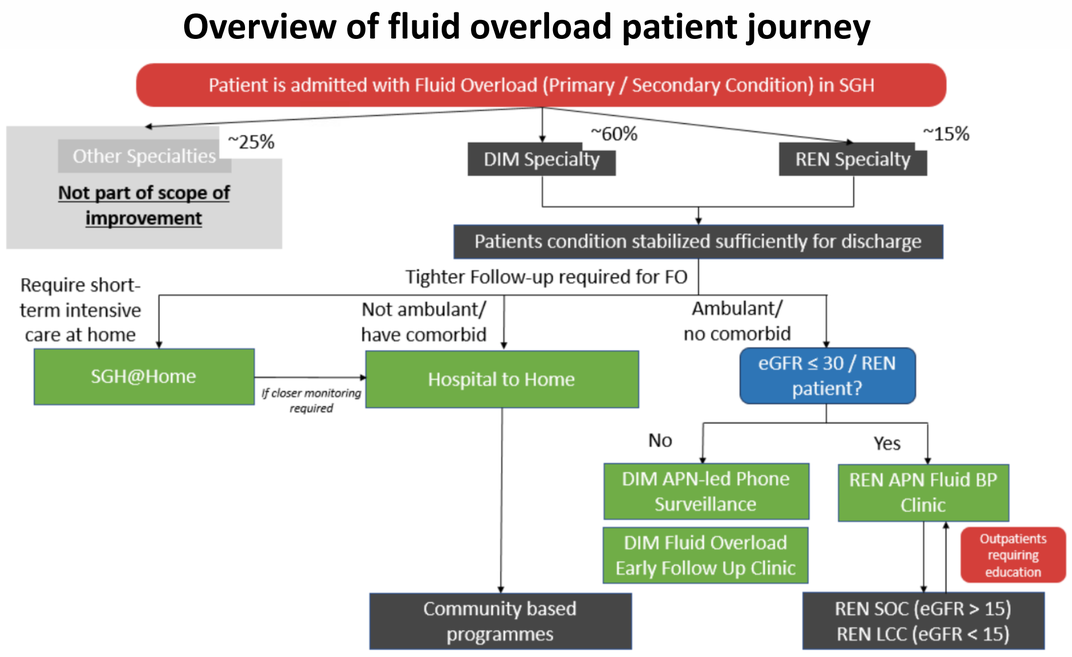
Analysis of the problem

Efforts to reduce fluid overload hospitalizations were part of the National Diabetes Collaborative to reduce the number of DM-related admissions. Drivers to reduce hospitalizations were identified during the various collaborative learning sessions.



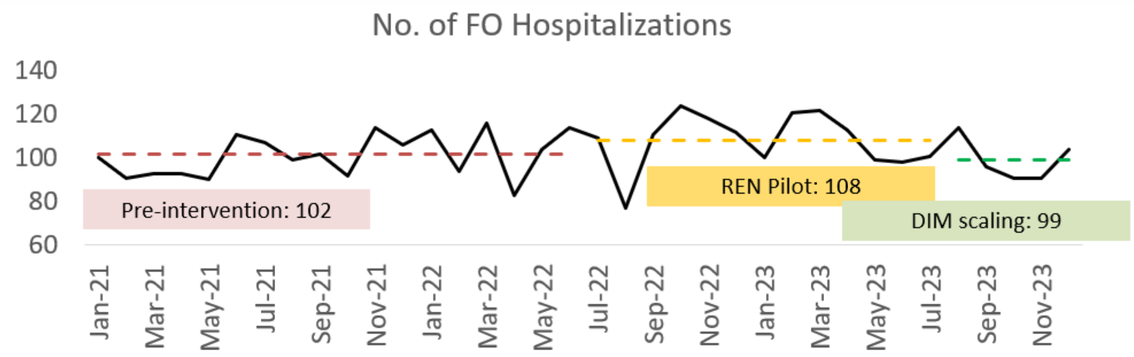
Interventions

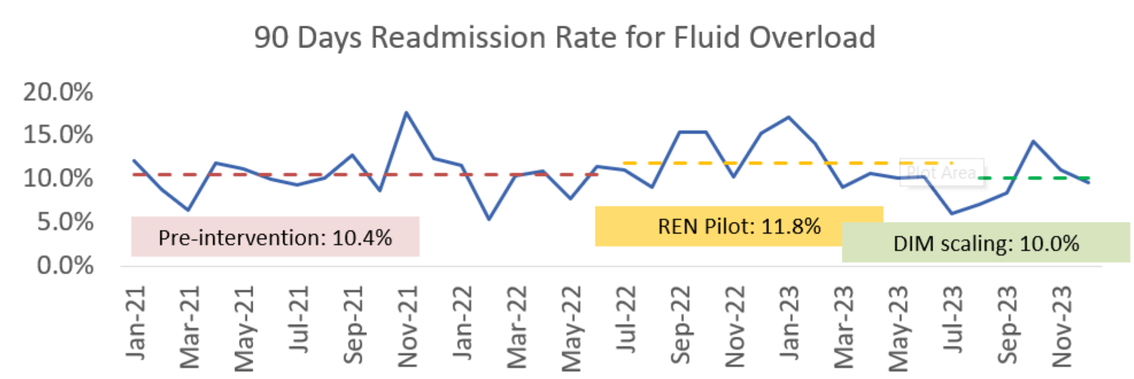
Post-discharge transitional care programmes were piloted by Renal Medicine Department (REN) and Population Health and Integrated Care Office in July 2022 to empower patients to improve self-management and intensify follow-up of patients at high-risk of readmissions. After 12 months, the initiatives were scaled to two wards in Internal Medicine (DIM) between August and December 2023.



Results

Average monthly number of hospitalizations for fluid overload was 102 cases pre-intervention and 99 cases after scaling, while the average 90-day readmission for fluid overload was 10.4% pre-intervention and 10.0% after scaling.





Average number of referrals increased from 5 per month during the pilot to 21 per month after scaling. Among 170 patients enrolled into the programmes, 6.5% had 90-day readmission for fluid overload.

Conclusion

Transitional care programmes with enhanced follow-up and patient education may reduce readmissions for fluid overload among patients with DKD.

While the target reduction in hospitalizations was not met, a longer follow up will be required to ascertain the impact of the programmes when applied to a larger cohort of eligible patients.

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