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Reducing readmission rate of patients presenting with Fluid Overload from Heart Failure and/or Chronic Kidney Disease in Department of Internal Medicine

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Background

- 70% of Fluid Overload (FO) patients with Chronic Kidney Disease (CKD) with/without Heart Failure (HF) are admitted to Singapore General Hospital Department of Internal Medicine (DIM)
- With a readmission rate for FO in Singapore General Hospital at 9.5% between 2021-2022, there is a need for enhanced management strategies and reduce avoidable readmissions

Aim

To evaluate the effectiveness of initiatives on patients presenting with fluid overload with Chronic Kidney Disease with/without Heart Failure at DIM in reducing fluid overload readmission rate at Singapore General Hospital.

Methods

The initiatives were piloted in collaboration with the Department of Renal Medicine in three general wards for DIM patients admitted for fluid overload between August 2023 to March 2024 (Fig. 1)

High risk patients were identified for referral to various programmes which aim to:

- 1) Provide early patient education on fluid overload
- 2) Optimize fluid status through medical management
- 3) Initiate guideline-directed medical therapy for eligible patients to optimize disease control
- 4) Schedule early outpatient follow-ups for closer monitoring of patients

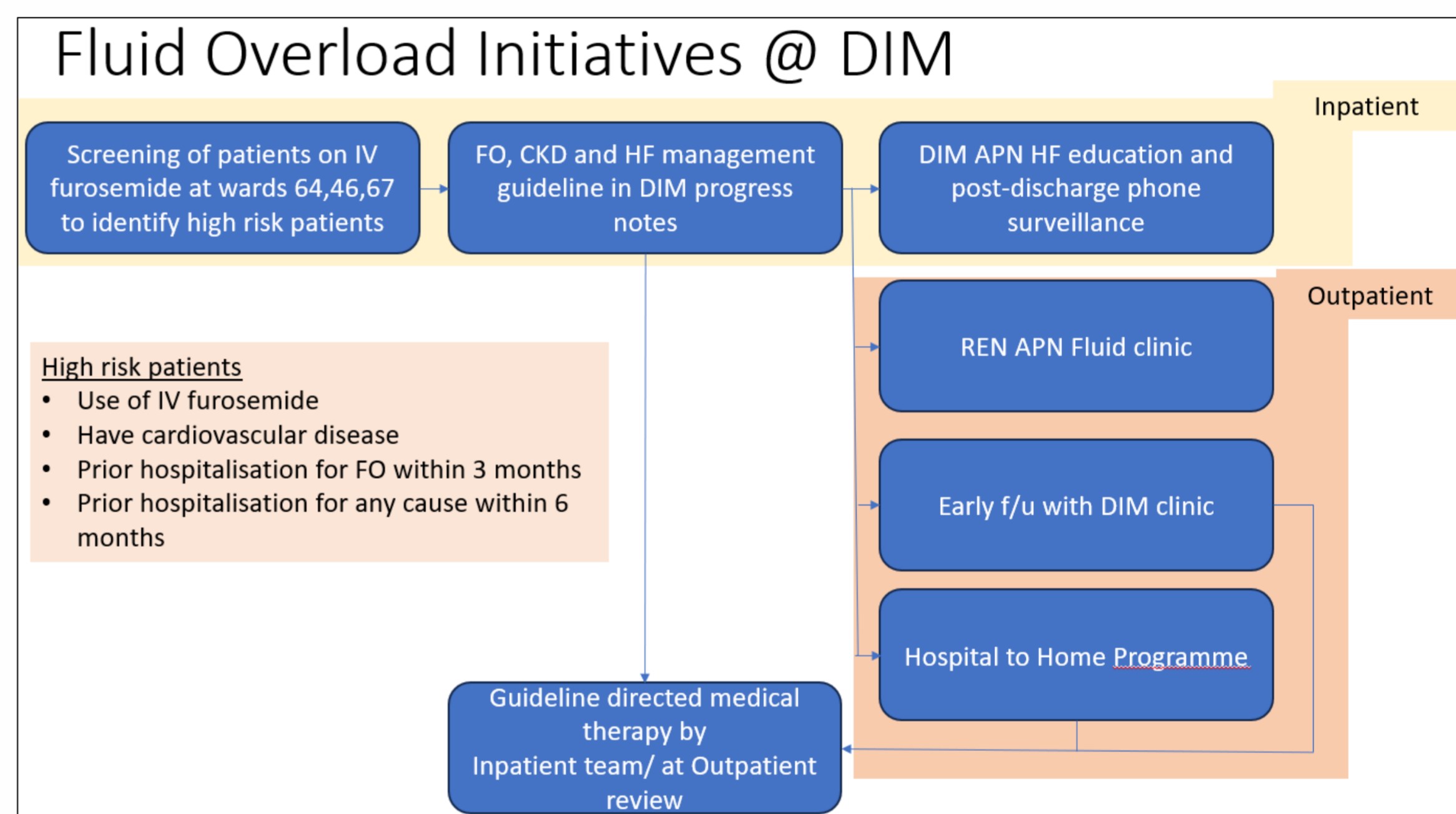


Fig.1

Results

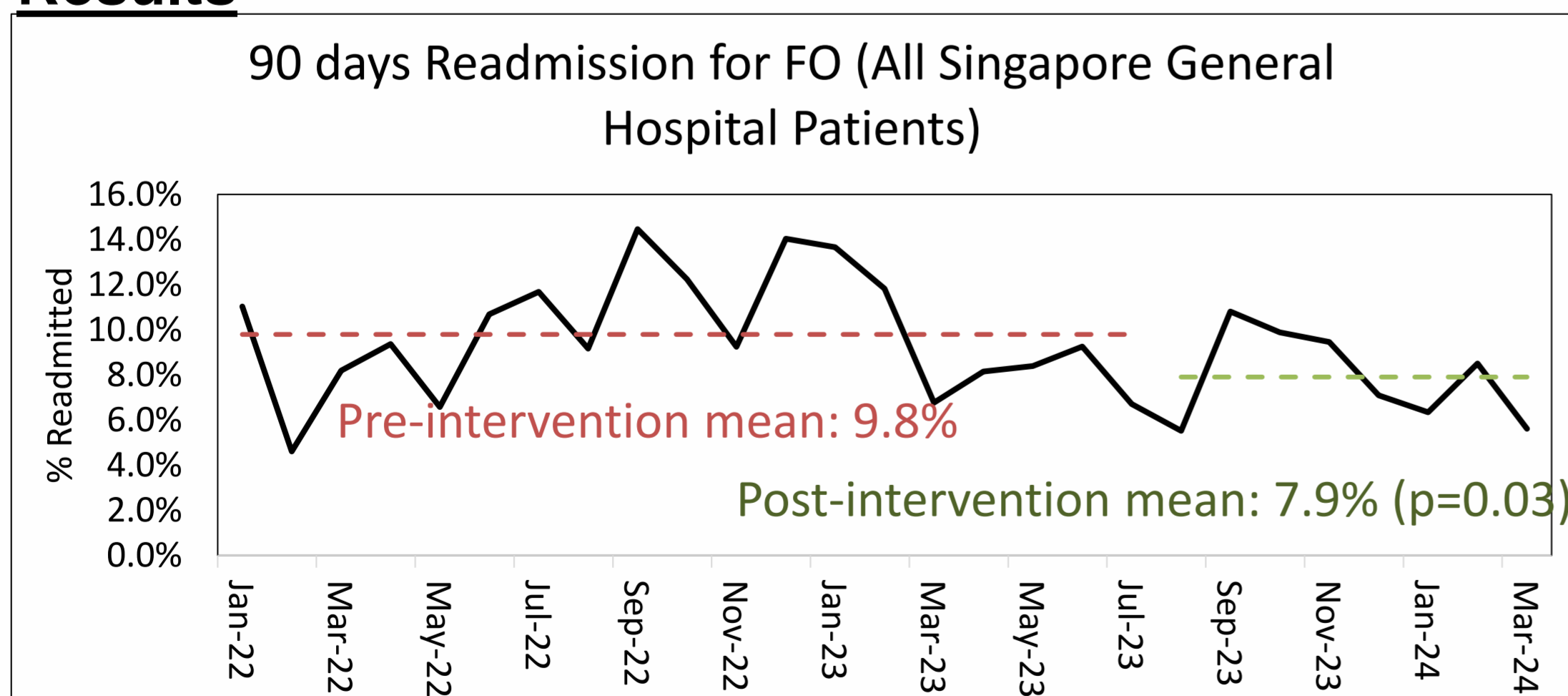


Table 1

Proportion of patients on guideline directed medical therapy at discharge (Table 2)

	Jan 2022-Jul 2023	Aug 2023-Mar 2024
Sodium glucose cotransporter 2 inhibitor (SGLT2i)	23.9%	25.9%
Renin-angiotensin blockers (RAS)	53.3%	52.9%
RAS+ SGLT2i	16.9%	19.8%

Conclusion

- Integrated treatment approaches were effective in reducing readmission, emphasizing the importance of proactive strategies in fluid overload management.
- Expansion beyond the three pilot wards is being considered to benefit more patients.
- Efforts are also underway to further improve uptake of guideline directed medical therapy which will improve long term disease outcomes.