Reducing SABA Monotherapy in Asthma Patients at Toa Payoh Polyclinic

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National Healthcare Group POLYCLINICS

National Healthcare Group — Adding years of healthy life

Mission Statement

To reduce the percentage of asthmatic patients (aged 6 years and above) treated in Toa Payoh Polyclinic who are prescribed with SABA monotherapy from 7.64% to 0% over 6 months.

Team Members

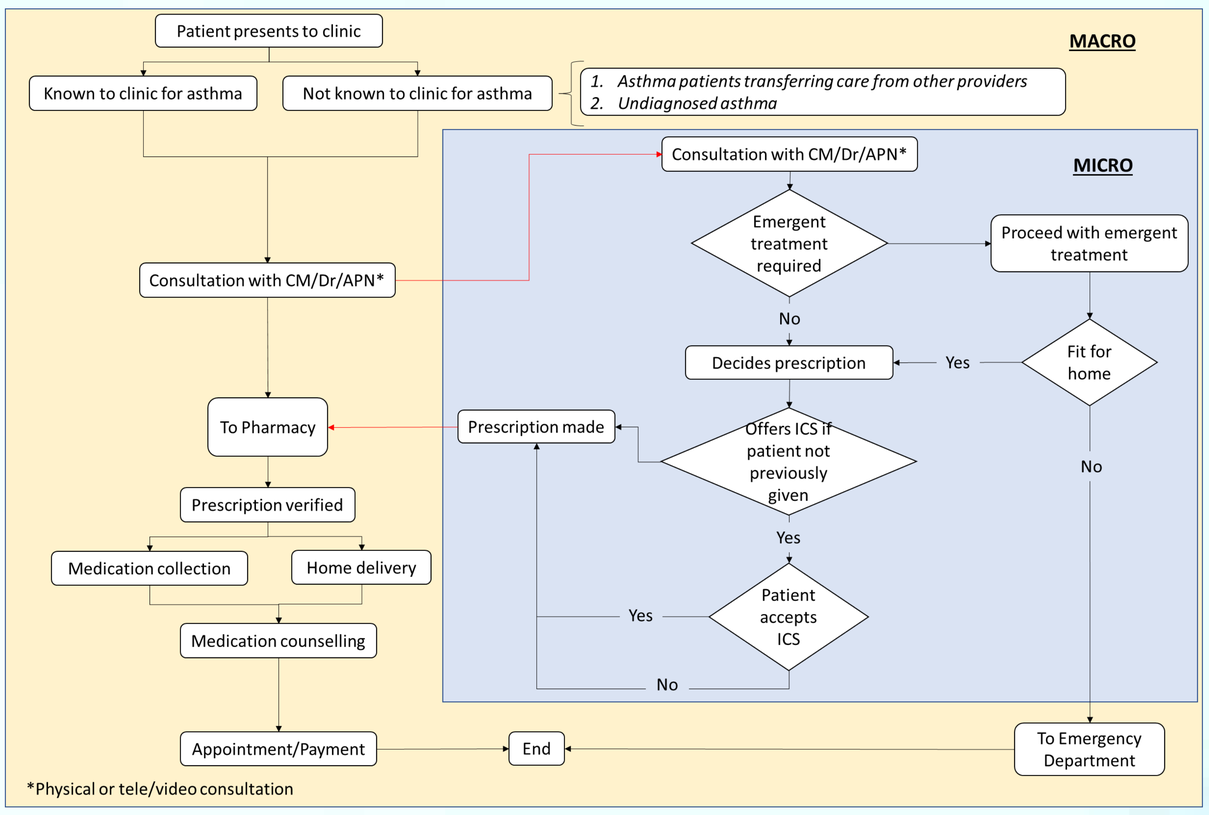
Name	Designation	Department	Role
Dr Randy Cheong	Resident	Medical	Team Leader
Ms Yeo Jia Qi	Pharmacist	Pharmacy	Member
Ms Blessy Kootappal Matthew	Advanced Practice Nurse (APN)	Nursing	Member
Ms Rajwant Kaur	Care Manager (CM)	Nursing	Member
Dr Ian Koh Jan Ming	Associate Consultant Family Physician	Medical	Supervisor

Evidence for a Problem Worth Solving

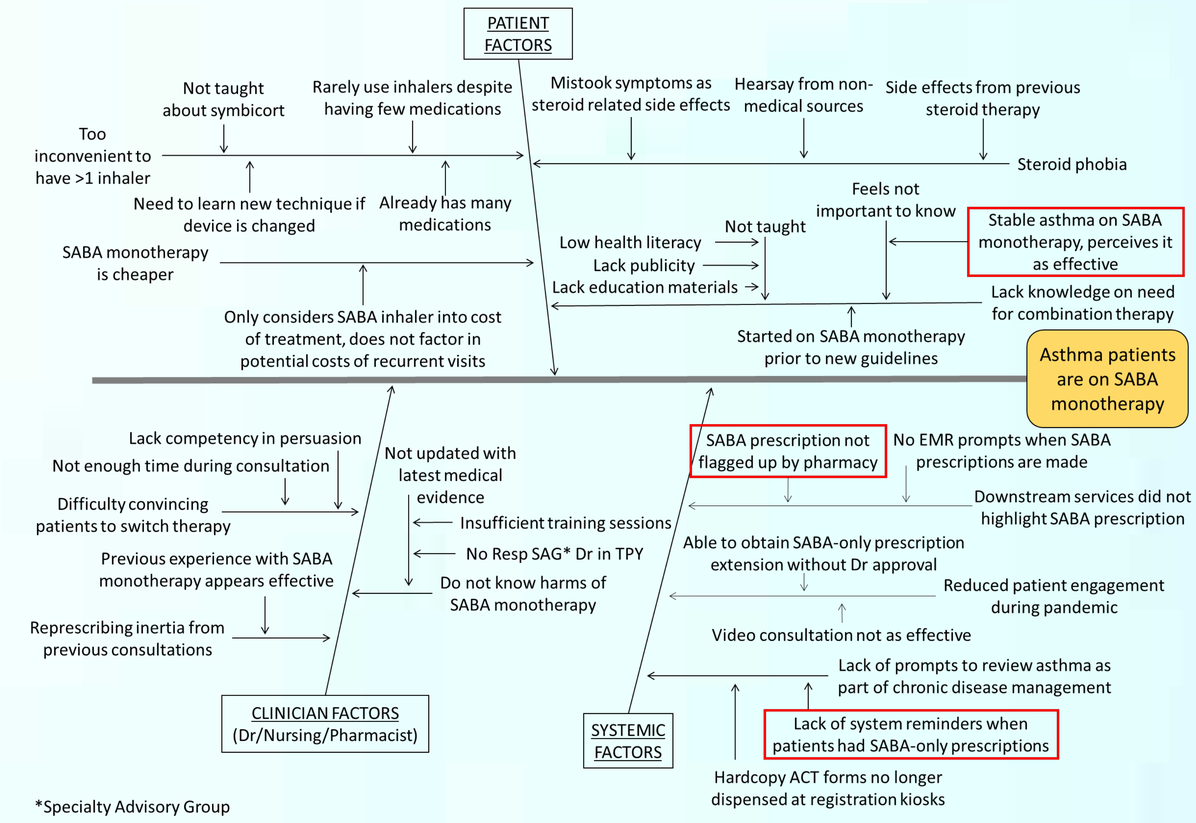
Since 2019, updated guidance by the Global Initiative for Asthma (GINA) and Agency for Care Effectiveness (ACE) no longer recommended the use of short acting beta-agonists (SABA) monotherapy for the management of mild asthma (i.e., Steps 1 and 2) in patients aged 6 years and above. Instead, these patients should be given inhaled corticosteroids (either on a regular basis or as required). This was because SABA monotherapy did not address the underlying inflammatory process in asthma, leading to higher risks of asthma-related death, increased urgent asthma-related healthcare provision, worse long-term outcomes, and increased healthcare costs.

Overseas data from the US and Australia, found that 25-39% of asthma patients were not on preventers in the past year. At Toa Payoh Polyclinic, 7.64% of patients (or 78 patients) with asthma aged 6 years and above were prescribed with SABA monotherapy in a span of 6 months from January to May 2022. Each SABA monotherapy prescription represented one missed opportunity to improve asthma care in these patients.

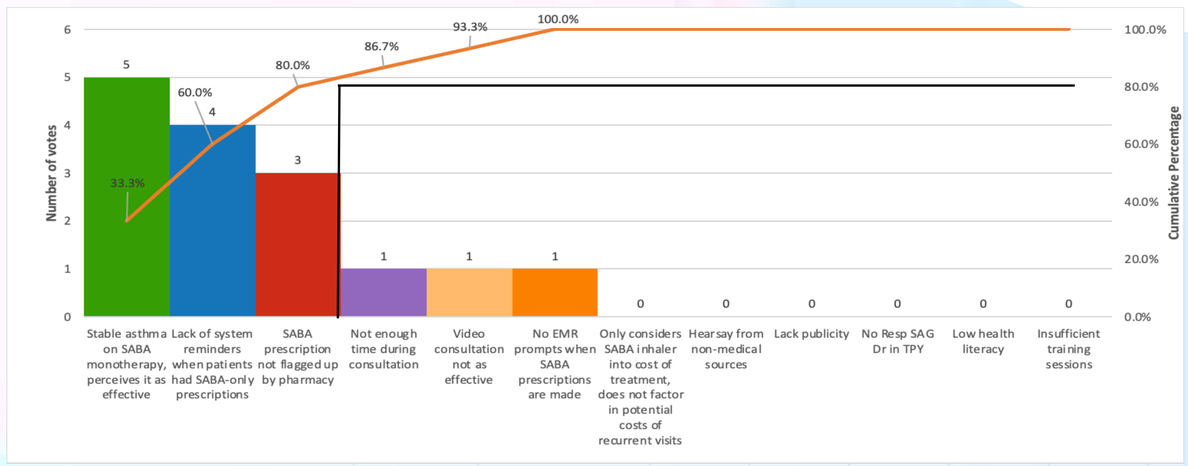
Flow Chart of Process



Cause and Effect Diagram



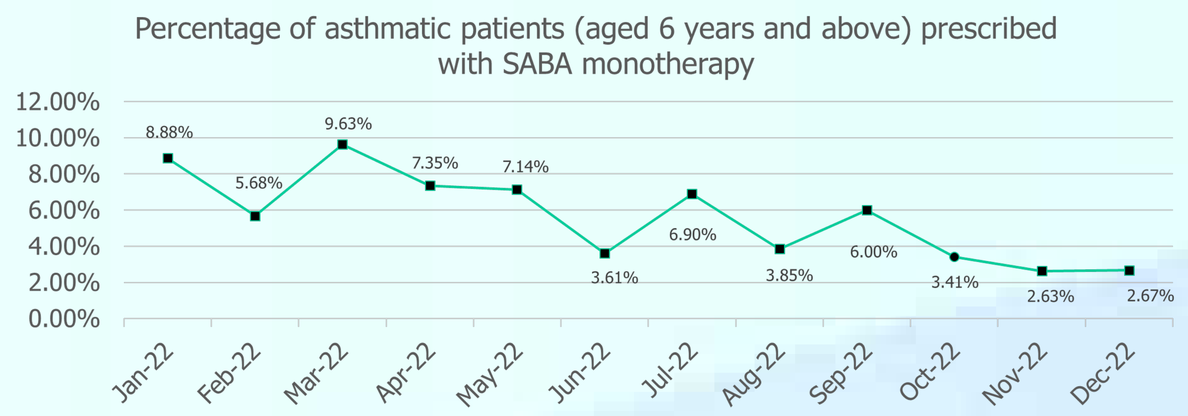
Pareto Chart



Implementation

Root Cause	Intervention	Date
Stable asthma on SABA monotherapy, perceives it as effective 	**Patient education material and clinic-based lunchtime Continuing Medical Education (CME)** 1. CME session organised for clinicians on discussing with patients regarding switching out of SABA monotherapy. 2. Developed patient education material (poster) for clinician use during consultation.	1 Jun 22
	1st PDSA: - 63% of clinic doctors attended the CME session. Of these, 90% were aware that PRN SABA was not the recommended Step 1 treatment for asthma. - 1 month post CME/poster implementation, it was found that cases of SABA-only prescription were mainly from Drs who did not attend CME talk. - Take-home message of CME talk with poster retrieval instructions sent to clinicians who did not attend CME talk.	1 Jul 22
Lack of system reminders when patients had SABA-only prescriptions	**Placing electronic reminders** 1. Electronic reminders in EPIC under 'Care Coordination' notes for patients with previous history of SABA-only prescriptions.	1 Aug 22
	2nd PDSA: - Intervention was very effective for patients with recurrent history of SABA-only prescription (i.e., well controlled asthmatics being followed up for other chronic diseases), working in 83% of the cases. However, it was not effective in patients who were not on routine follow-up (e.g., walk-in requests for salbutamol) as they would not have been picked up through this process. - Current intervention was continued, with the use of other interventions to target patients who were not on routine follow-up for asthma	1 Sep 22
SABA prescription not flagged up by pharmacy	**Phone intervention by pharmacy** 1. Rolled out pilot program for pharmacy to intervene when SABA-only prescriptions were made. Pharm techs would call prescribers if SABA-only prescriptions were made, except when: a. Prescription remarks indicate diagnosis apart from asthma (e.g., COPD, bronchitis) b. Prescription remarks indicate reason for not giving ICS (e.g., patient declined, patient has ICS at home)	1 Oct 22
	3rd PDSA: - Pharm techs were asked if they were familiar with the intervention workflow script. It was found that while most pharm techs were familiar, there were 3 pharm techs who were not. - Intervention workflow script reiterated to these 3 pharm techs. - Subsequent checks found that all 3 pharm techs were familiar with the workflow	1 Nov 22

Results



Cost Savings

While it is challenging to quantify the exact monetary savings derived from our project, the reduction in SABA monotherapy rates would have led to reductions in healthcare utilisation (e.g., for emergency asthma care, frequent repeat visits for poorly controlled asthma) through improving asthma control.

Problems Encountered

1. Data inaccuracies. Our data collection method was prone to either over-estimation (e.g., patients who are already on ICS therapy but wished to collect standby SABA), or under-estimation (e.g., patients prescribed with SABA monotherapy but not tagged with asthma diagnosis). Manual sampling of cases found that the margin of error was <10%. As such, our team decided to proceed with this method of data collection.

Strategies to Sustain

Moving forward, our team plans to sustain the project through the following means:

1. Making pharmacy intervention for salbutamol-only prescriptions a permanent workflow in Toa Payoh Polyclinic.
2. Engaging CMs to place electronic reminders for patients with previous SABA-only prescriptions and subsequently counselling patients on using ICS therapy.
3. Engaging key stakeholders in NHGP (e.g., Respiratory SAG) by sharing interventions, thereby increasing institutional emphasis on tackling this problem.