

# CHI Learning & Development (CHILD) System

### **Project Title**

Increasing Referral Rate to Smoking Cessation Clinic among Asthma and COPD patients

### **Project Lead and Members**

Project lead: Dr Lim Wan Xuan Jessica

Project members:

- Dr Liu Chang Wei
- Ms Tan Sui Ping
- Ms Jasmin Sim Poh Eng
- Mr Lawrence Choo Ren Jie
- Ms Jayalakshmy Aarthi Ananthanarayanan
- Dr Jonathan Ting

### Organisation(s) Involved

National Healthcare Group Polyclinics

### Healthcare Family Group(s) Involved in this Project

Ancillary Care, Healthcare Administration, Medicine, Nursing, Allied Health

### **Applicable Specialty or Discipline**

Smoking Cessation, Pharmacy, Health Promotion & Preventive Care

### **Project Period**

Start date: 01 Nov 2020

Completed date: 30 Jun 2021



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#### **Aims**

To improve the percentage of referrals to pharmacist-led smoking cessation clinic (SCC) amongst identified adult smokers<sup>a</sup> with Asthma/Chronic Obstructive Pulmonary Disease (COPD)<sup>b</sup> from 0% to 15% in Geylang Polyclinic from February 2021 to June 2021.

<sup>a</sup> Smokers are defined as those smoking 1 or more cigarette sticks per day, excluding those with a previous referral in the last 6 months

<sup>b</sup> Patients with diagnosis of asthma/ COPD who were prescribed an inhaler

### **Project Attachment**

See poster attached/below

### **Background**

See poster attached/below

#### Methods

See poster attached/below

#### **Results**

See poster attached/below

#### Conclusion

See poster attached/below

#### **Additional Information**

Accorded the NHG Quality Day 2022 (Category F: Junior Medical Doctors) Merit Award

### **Project Category**

Care & Process Redesign

Access to Care, Referral Rate



# CHI Learning & Development (CHILD) System

### Keywords

Smoking Cessation, Asthma

# Name and Email of Project Contact Person(s)

Name: Dr Lim Wan Xuan Jessica

Email: Jessica WX LIM@nhgp.com.sg



# Increasing Referral Rate to Smoking Cessation POLYCLINICS Clinic among Asthma and COPD patients

Group

Dr Lim Wan Xuan Jessica

Adding years of healthy life

# **Mission Statement**

To improve the percentage of referrals to pharmacist-led smoking cessation clinic (SCC) amongst identified adult smokers a with Asthma/ Chronic Obstructive Pulmonary Disease (COPD) b from 0% to 15% in Geylang Polyclinic from February 2021 to June 2021.

- Smokers are defined as those smoking 1 or more cigarette sticks per day, excluding those with a previous referral in the last 6 months
- Patients with diagnosis of asthma/ COPD who were prescribed an inhaler

Team Members					
Name	Designation	Department	Role		
Dr Lim Wan Xuan Jessica	Resident	Medical	Leader		
Dr Liu Chang Wei	Family Physician	Medical	Facilitator		
Ms Tan Sui Ping	Pharmacist	Pharmacy	Member		
Ms Jasmin Sim Poh Eng	Care Manager	Nursing	Member		
Mr Lawrence Choo Ren Jie	Operations Executive	Operations	Member		
Ms Jayalakshmy Aarthi Ananthanarayanan	Executive	Health promotion & preventive care	Member		
Dr Jonathan Ting	Clinic Head	Medical	Sponsor		

# **Evidence for a Problem Worth Solving**

- Smoking is the single most important preventable cause of ill health in Singapore and all over the world<sup>1</sup>.
- Smoking cessation was associated with a slower decline in lung function, reduced hospitalization risk and total mortality in COPD patients<sup>2</sup>. Cigarette smoking in Asthma is associated with higher frequency of exacerbations, increased number of life threatening asthma attacks, and higher mortality<sup>3</sup>.
- Smoking cessation without professional help is achieved only in 3-5%<sup>4</sup>. Comparatively, local outpatient smoking cessation clinics had managed to achieve immediate quit rate of 33 percent, and the six and twelve month quit rates of both 36 percent<sup>5</sup>.

# **Current Performance of a Process**



**Indicator** 

Percentage of referrals to SCC amongst identified asthma/COPD adult

smokers within a period of 2 weeks

**Numerator:** Number of asthma/COPD adult smokers referred to SCC within a period of 2 weeks

**Denominator**: Total number of asthma/COPD adult smokers seen in polyclinic excluding those who have been referred to SCC previously (in the last 6 months) within a period of 2 weeks

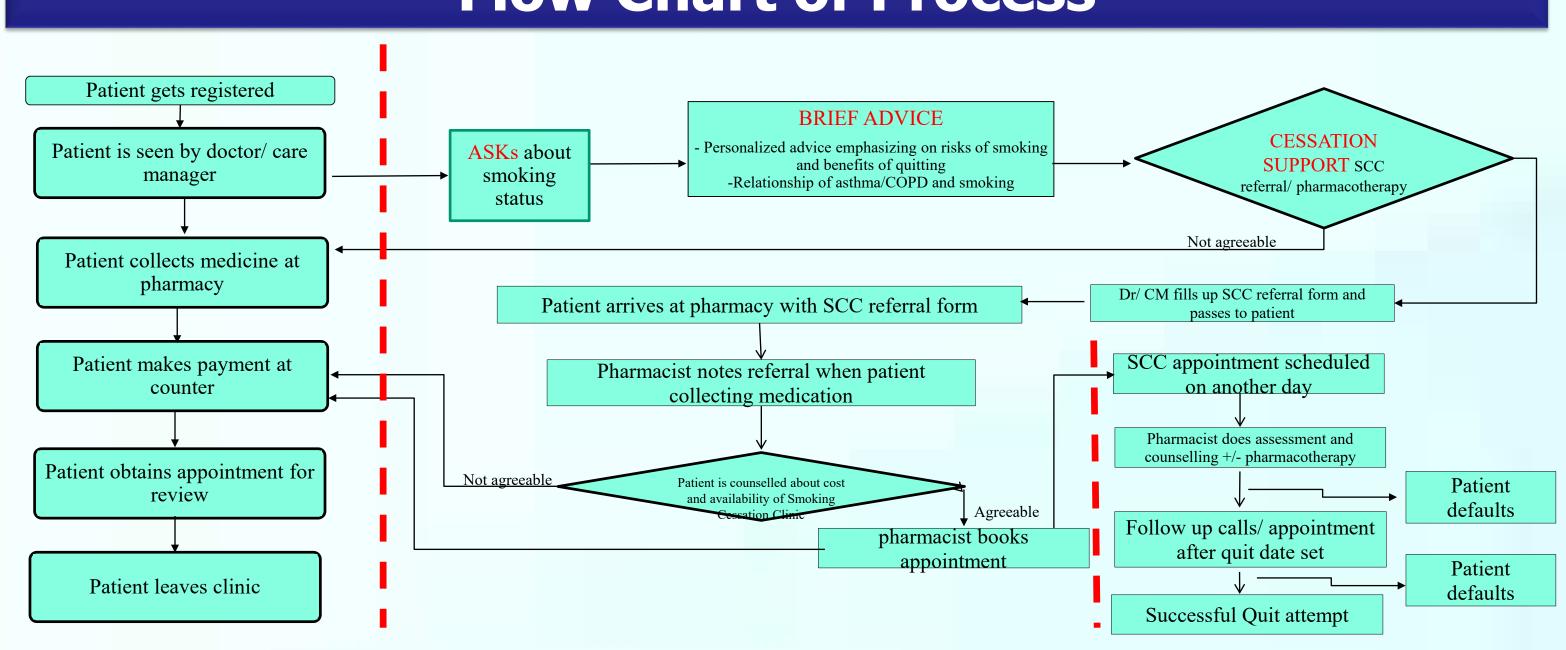
Criteria

**Standard** 

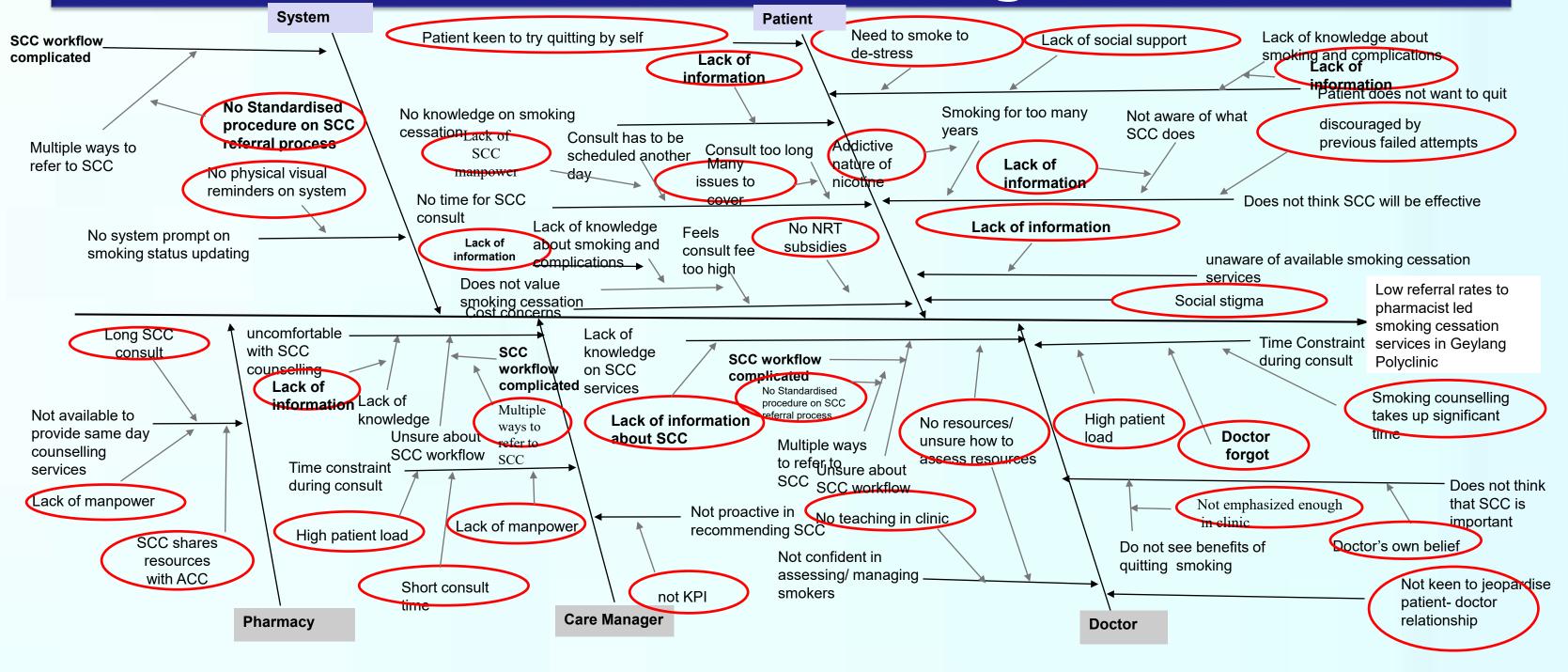
All identified smokers should be referred to SCC

15% of identified smokers should be referred to SCC. As there are no international guidelines on referrals to SCCs, the best practices locally have achieved between 4.9-42% of referrals. 15% was determined to be an achievable, realistic and timely target.

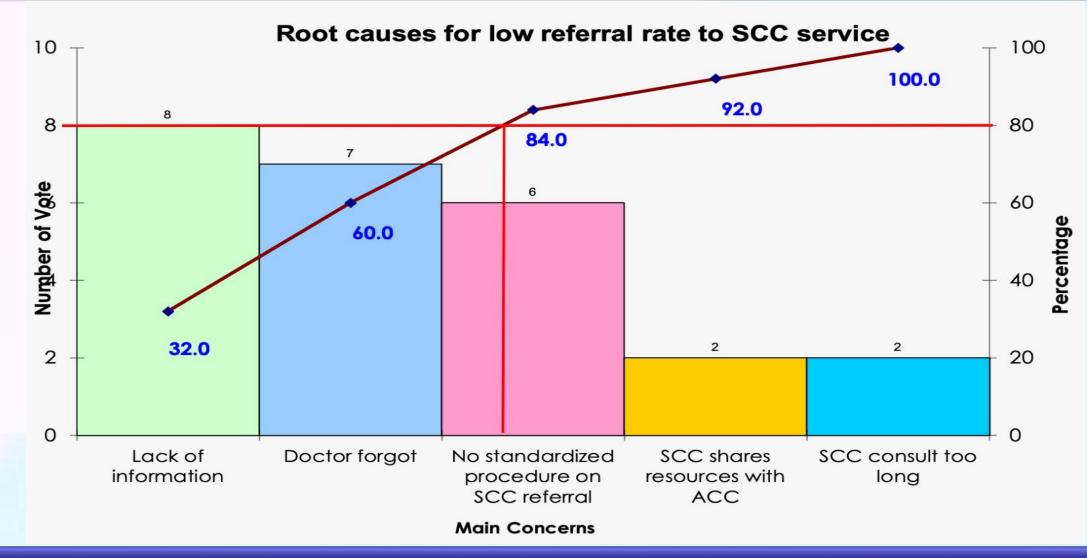
# **Flow Chart of Process**



# **Cause and Effect Diagram**

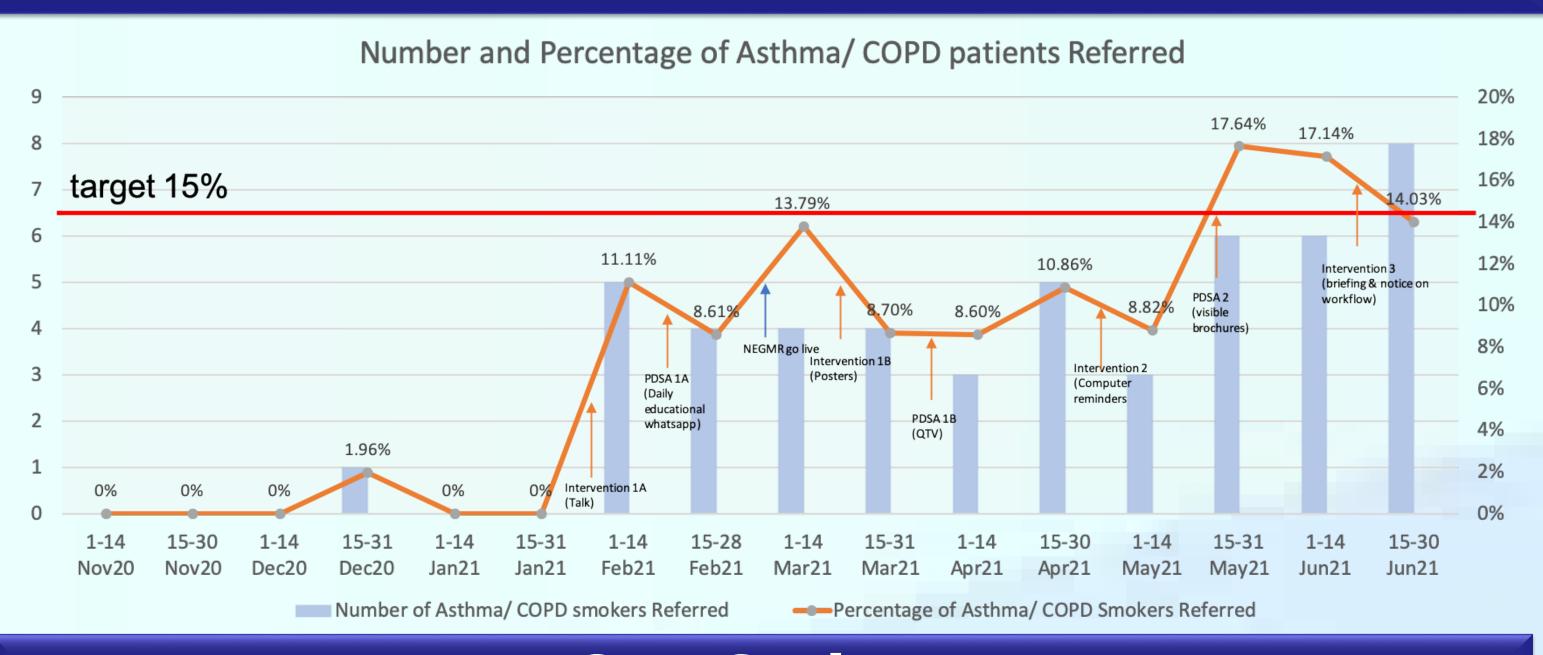


# **Pareto Chart**



Implementation				
ROOT CAUSE	INTERVENTION	DATE	PDSA	
1) Lack of information	<ul><li>1A)Promotion to doctors and nurses</li><li>Organised lunchtime talk</li></ul>	3 <sup>rd</sup> February 2021	<ol> <li>Effectiveness of talk was studied with a post talk survey. There was poor retention of knowledge (e.g. not knowing the ABC of smoking, SCC cost).</li> <li>Daily bite sized information disseminated via a messaging platform was started.</li> </ol>	
	1B)Promotion to Public - Via posters	17th March 2021	2) Posters were not effective. Most were looking at the TV waiting for their queue number. Put up similar publicity on QTV instead.	
2) Doctor forgot	Physical reminders on computers to remind Drs to check smoking status and promote SCC	1 <sup>st</sup> May 2021	<ul> <li>3) Staff Survey: 30% (3 of 10) of doctors/nurses felt the label was not useful (flimsy and tends to drop, blocking screen). Some felt that brochures would help as a physical cue for them to discuss SCC.</li> <li>Put up physical brochures instead.</li> <li>As a surrogate measure, we took the number of patients of whom SCC was offered.</li> </ul>	
3) No Standardized procedure on SCC referral process	3A)Announcement at doctors meeting about workflow 3B)Put up same workflow on all notice boards in consult rooms	15 <sup>th</sup> June 2021	4) Before this intervention was released, only 5 of 10 Drs were sure about how to refer to SCC. After the release of the workflow, all 10 of 10 doctors learnt about the workflow.	

# Results



# **Cost Savings**

- The social cost of smoking (in Singapore) has been estimated to be at least US\$479.8 million (0.2% of the 2014 gross domestic product)<sup>6</sup>.
- Personal: A smoker saves money when he quit smoking; A 20 stick packet of cigarettes in Singapore in 2019 cost \$13.09. For a patient who smokes a pack/ day, the cost of cigarettes a year would be S\$4774. Smoking causes many health problems, which result in higher healthcare expenses (inpatient care and outpatient treatment) as well.

# **Problems Encountered**

- Relying only on doctors/ nurses to actively counsel and persuade patients to quit smoking may not be feasible with time constraints. We need to consider how we can further involve our allied health, operations, and pharmacy colleagues to increase uptake to SCC.
- Patient's readiness for change was even more important, more effort is needed to move a patient from pre-contemplation to contemplation stage.

# Strategies to Sustain

- 1. To include smoking cessation in the orientation training topics for all clinical staff (medical, nursing and pharmacy).
- 2. Identify a "smoking cessation champion" in the clinic as a role model, to encourage other colleagues to recruit more to SCC through ongoing publicities, reminders and workflow reminders as done in this project.
- 3. Ongoing audit to alert the clinic staff of the uptake rates of the SCC service.

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6. Cher BP, Chen C, Yoong J. (2007). Prevalence-based, disease-specific estimate of the social cost of smoking in Singapore. BMJ Open 2017;7:e014377