

Childhood Respiratory Warrant of Fitness

Samantha Tie & Alex Chan

Unichem Russell Street

March 2019



HEALTH QUALITY & SAFETY
COMMISSION NEW ZEALAND

Kupu Taurangi Hauora o Aotearoa



HEALTH SYSTEM INNOVATION AND IMPROVEMENT

Improvement Team

- Community pharmacists - Unichem Russell Street Pharmacy
- Clinical pharmacist facilitator - The Doctors Hastings
- Respiratory nurse champions - The Doctors Hastings
- Clinical nurse manager - Breathe Hawkes Bay
- Social worker/Maori & Pacific Island Liaison - Hawkes Bay DHB
- Consumer Representative



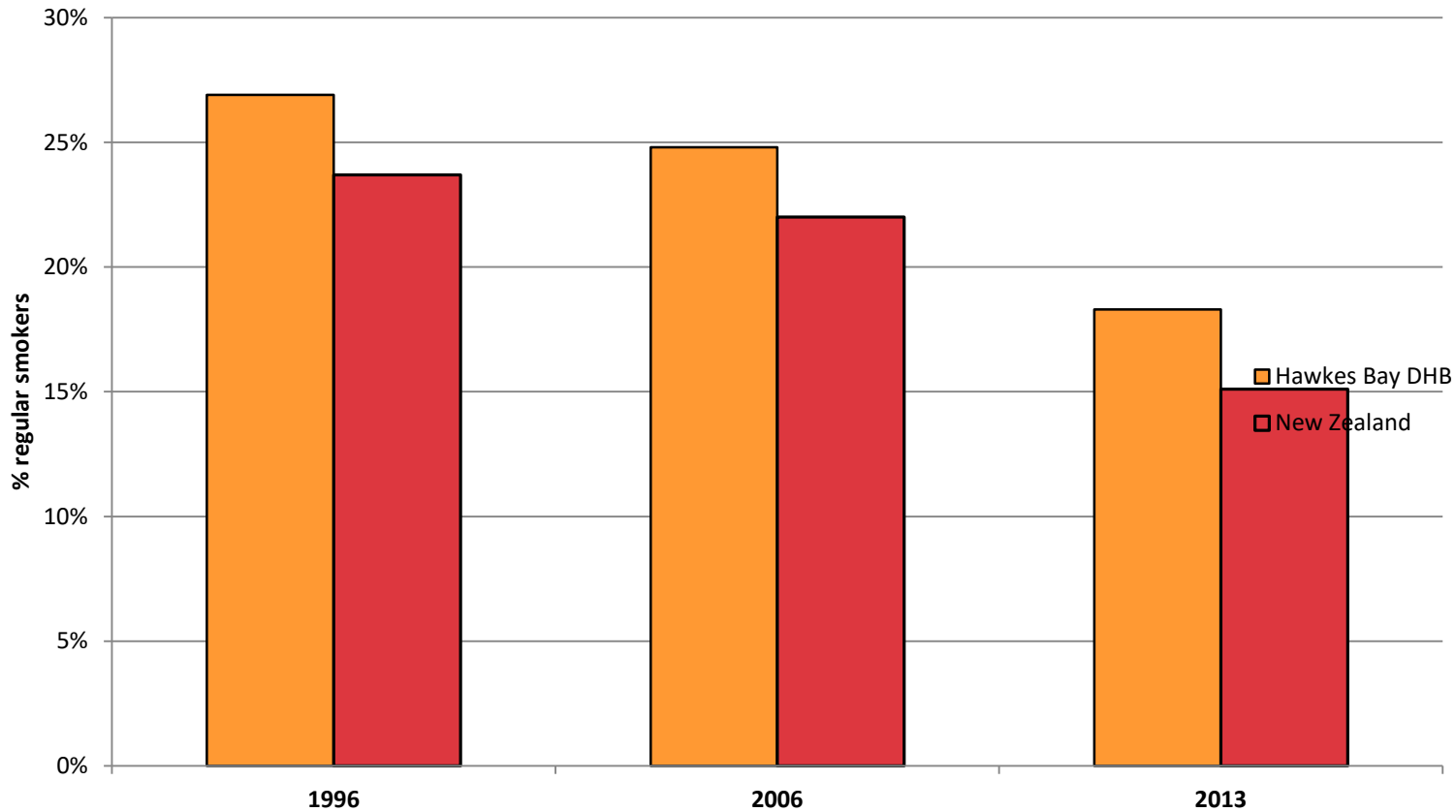
Background/Context

- Hastings – Decile 9/Quintile 5 deprivation index area
- High Maori & Pacific Islander population
- Housing issues – 3.3 times more likely to be in crowded homes
- Smoking prevalence
- Highest ASH rate for 0-4 years old = childhood respiratory disease
- Maori children - 49% higher compared to non-Maori children



Diagnose the problem – data

Change in regular smoking prevalence
1996-2013



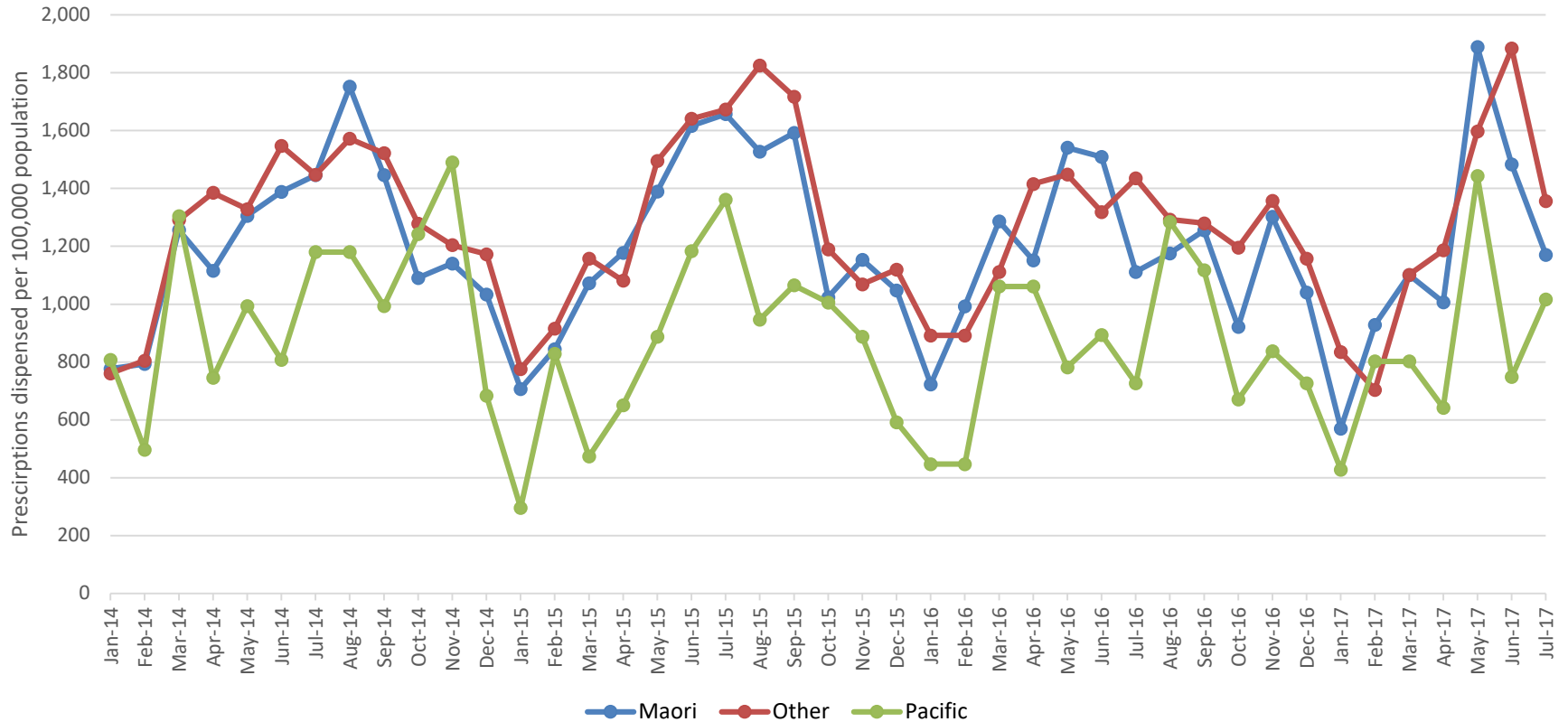
Background/Context

- Admission for childhood respiratory disease -
4.5 (European) vs 7.3 (Maori) vs 10.4 (Pacifica)
per 1000
- Average of 500 avoidable hospitalisation for Maori children
- Pacifica children – highest rate of asthma in Hawkes Bay and poor collection of preventer inhalers



Diagnose the problem – data

Hawke's Bay DHB inhaled Corticosteroid Prescriptions dispensed - 12 years and under - Jan 14 to Jul 17

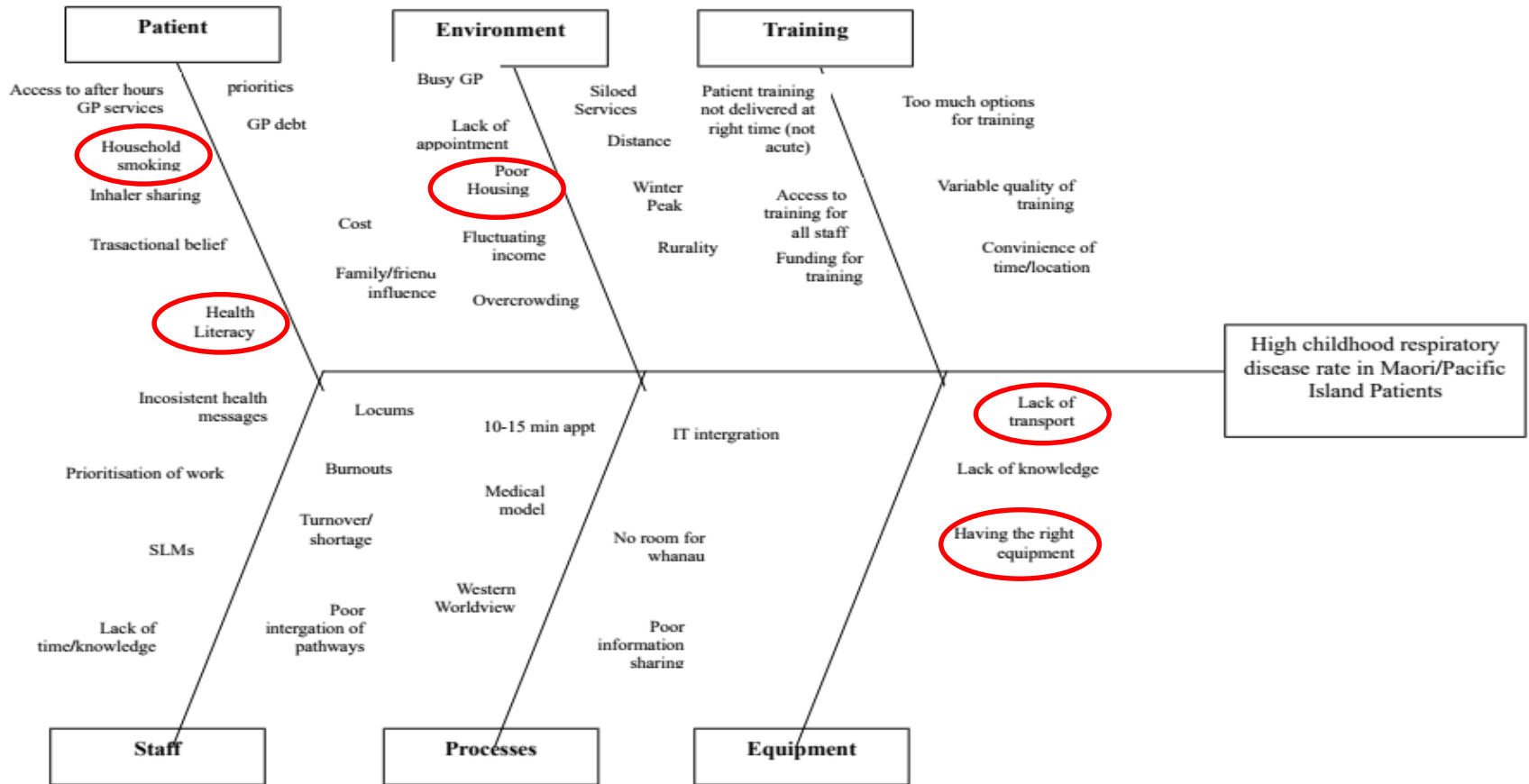


Problem Statement

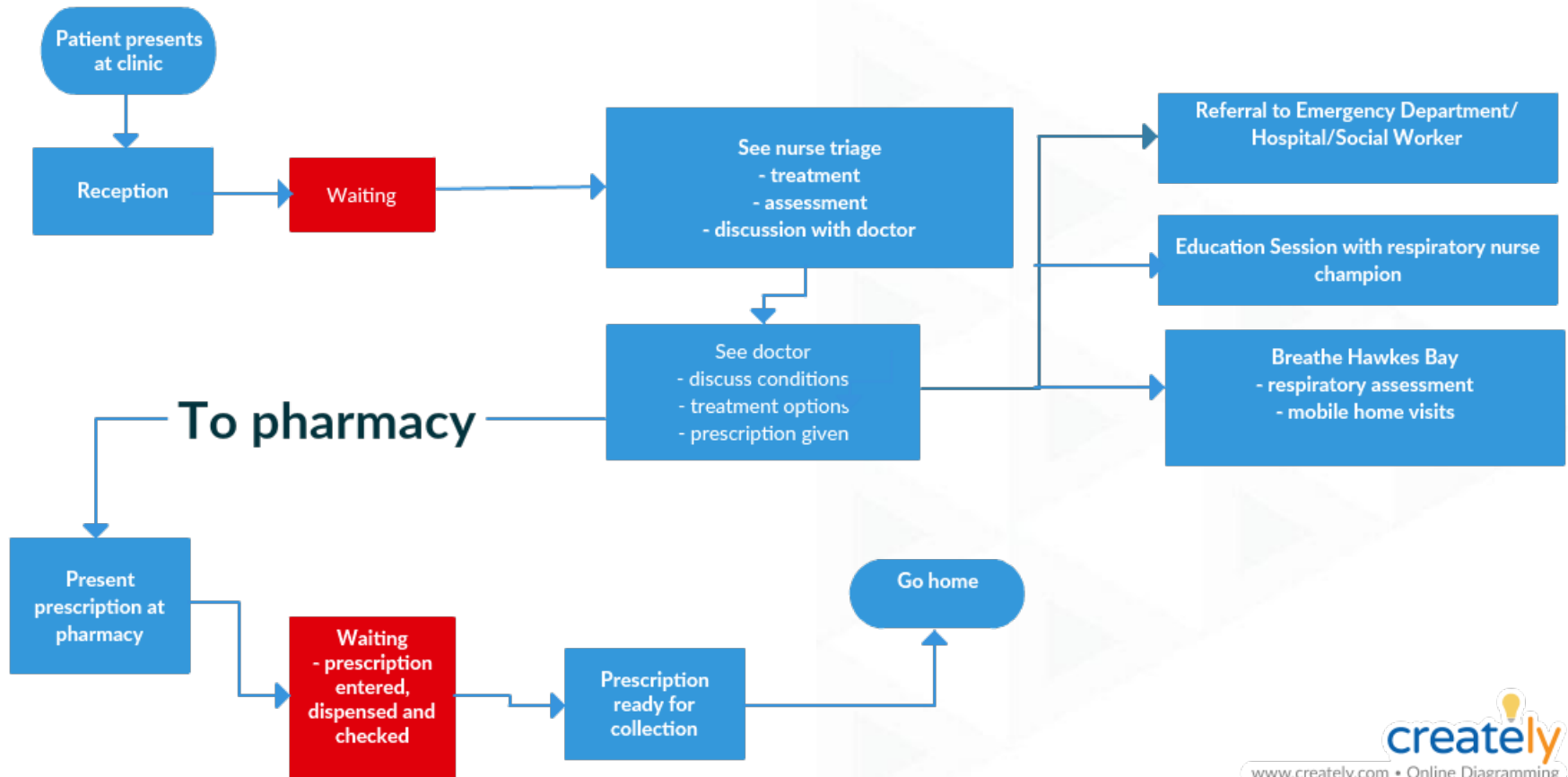
Childhood respiratory disease cause a disproportionate burden of disease, and sometimes lifelong health consequences for the most vulnerable children in Hawke's Bay



Diagnose the problem- tools



Diagnose the problem- tools







Aim Statement





- This project aims for 80% of Maori and Pacific Island children (0-18 years old) to improve their Asthma Control Test (ACT) score from current score to target score by December 2018

The Childhood Asthma Control Test for Assessing Control in Patients 4 to 11 Years of Age





1. How is your asthma today?

 0 Very bad	 1 Bad	 2 Good	 3 Very Good	<input type="checkbox"/>
--	---	--	---	--------------------------





2. How much of a problem is your asthma when you run, exercise or play sports?

 0 It's a big problem, I can't do what I want to do.	 1 It's a problem and I don't like it.	 2 It's a little problem but it's okay.	 3 It's not a problem	<input type="checkbox"/>
--	--	---	---	--------------------------

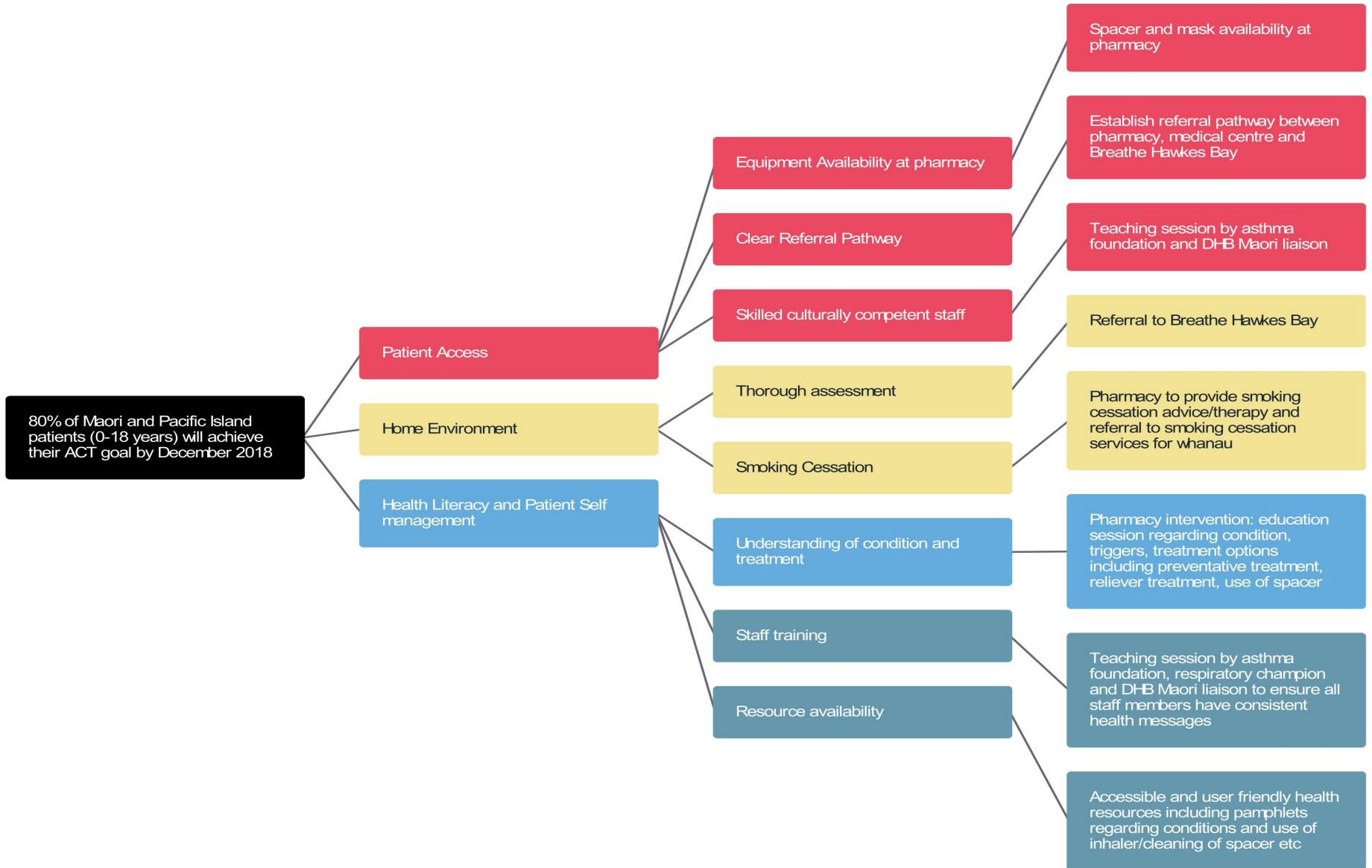
3. Do you cough because of your asthma?

 0 Yes, all of the time.	 1 Yes, most of the time.	 2 Yes, some of the time.	 3 No, none of the time	<input type="checkbox"/>
---	--	--	--	--------------------------

4. Do you wake up during the night because of your asthma?

 0 Yes, all of the time.	 1 Yes, most of the time.	 2 Yes, some of the time.	 3 No, none of the time	<input type="checkbox"/>
---	--	--	--	--------------------------

© NAPNAP 2011



Capturing the Patient Experience

- Inhaler and spacer techniques
- Lack of access to spacers
- Dispensing and repeat systems
- Access to other support systems
- Smoking cessation
- Allergy triggers



Stakeholders & Communication

- Unichem Russell Street Pharmacy
- Patients/consumers
- The Doctors Hastings
- Breathe Hawkes Bay
- Hawkes Bay DHB
- Health Hawkes Bay (Hawkes Bay PHO)



Highlights

- Team assembly
- Voice of patients
- Input from all stakeholders



Lowlights

- Data collection
 - identifying appropriate measurements
 - seasonal fluctuations
 - limited access to patient information



Key Success

- Assembly of team
- Support from pharmacy management, DHB, GP practice, other health professionals and patients



Key barriers

- Time allocation – meetings etc
- Data collection barrier – DHB at capacity
- Limited sample size – impact evaluation



Lessons Learned

- Input from all health professionals and patients
- Data collection – timeframe and measures
- Availability of resources/support



Dashboard of Measures

- Outcome Measure/s

Asthma Control Test (ACT) scores

- Process Measures

Number of spacers provided

Collection of medications (preventer, reliever, emergency steroid)

- Balancing Measures

cost and sustainability of respiratory warrant of fitness (staff time)

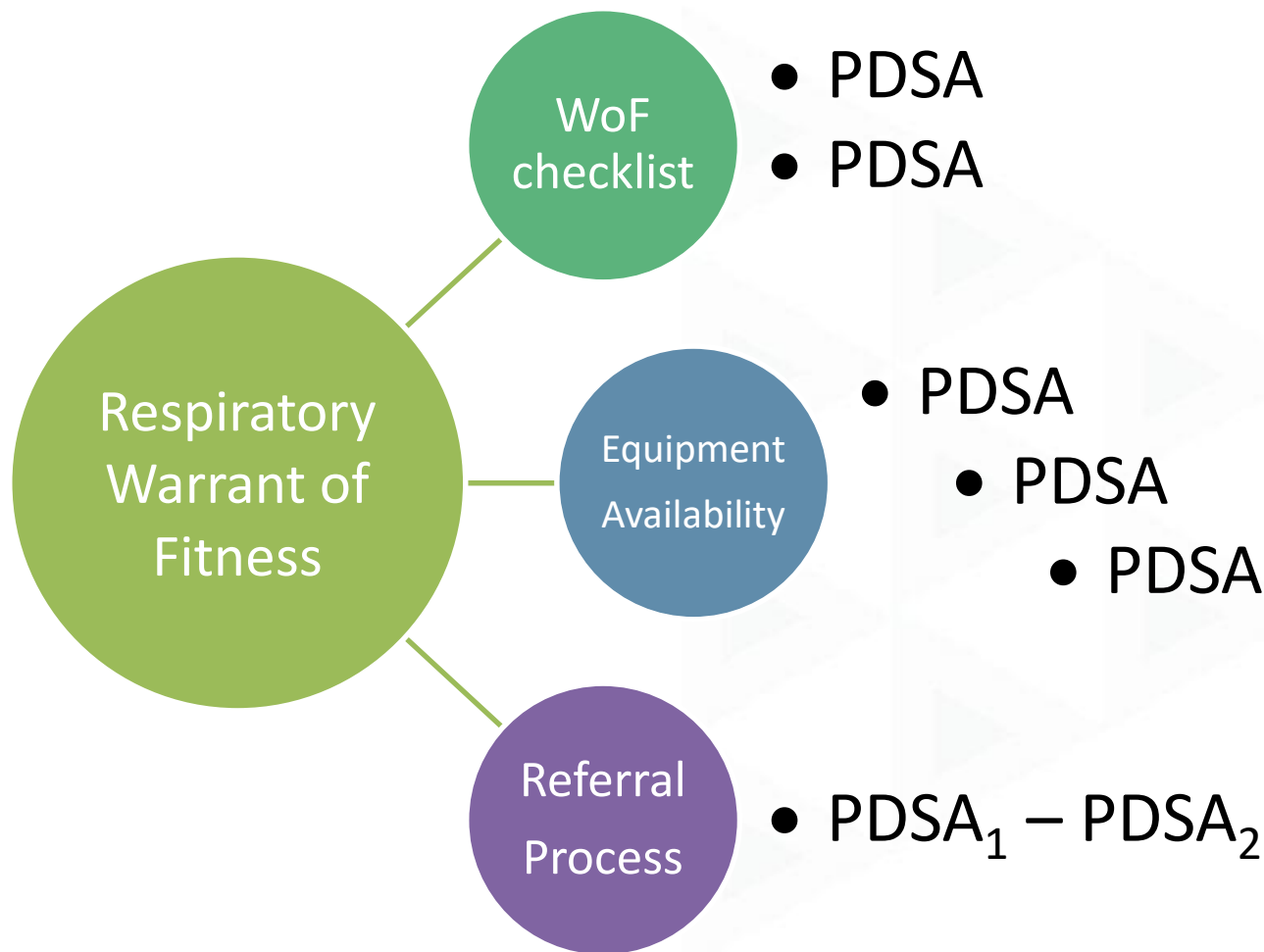
patient satisfaction regarding waiting time (consumer radar)



Generate Change Ideas to Test

- Spacer and mask availability at pharmacy
- Referral pathway between pharmacy and Breathe Hawkes Bay
- Respiratory Warrant of Fitness checklist
 - education session
 - format and contents
- Teaching sessions for staff

Building up a change package



PDSA - Respiratory Warrant of Fitness

- Change idea: Develop a checklist as a tool for conducting patient education session
- Questions: is checklist helpful (staff perspective), is respiratory WoF helpful (patient perspective), length of time for respiratory WoF
- Prediction: feedback from staff and patient to help improve the checklist (addition/removal), length of time will be 20 minutes for respiratory WoF
- Measures: time, patient satisfaction score



PDSA - Respiratory WoF (Version 1)

Respiratory Warrant of Fitness

Patient name: _____
Patient NHI: _____
Patient phone number: _____

- Consent for MUR _____
- ACT completed (current state) _____
- ACT completed (goal) _____
- Monthly phone call follow up _____
- Spacer _____
- Inhaler technique _____
- Preventer usage _____
- Preventer – rinse mouth _____
- Reliever usage _____
- Asthma Action Plan _____
- Sports – remember to bring reliever _____
- Allergy/trigger control _____
- Delivery services _____
- Repeat reminder system _____
- Flu vaccination _____
- Pamphlet for Breathe Hawkes Bay _____
- Referral to Breathe Hawkes Bay _____
- Smoking cessation for whanau _____
- _____



PDSA - Respiratory WoF (Final Version)



Respiratory Warrant of Fitness Checklist & Consent Form

Patient Name:	Address:
Phone Number:	Ethnicity:
DOB:	NHI Number:
GP Name:	GP Address:
GP Phone Number:	

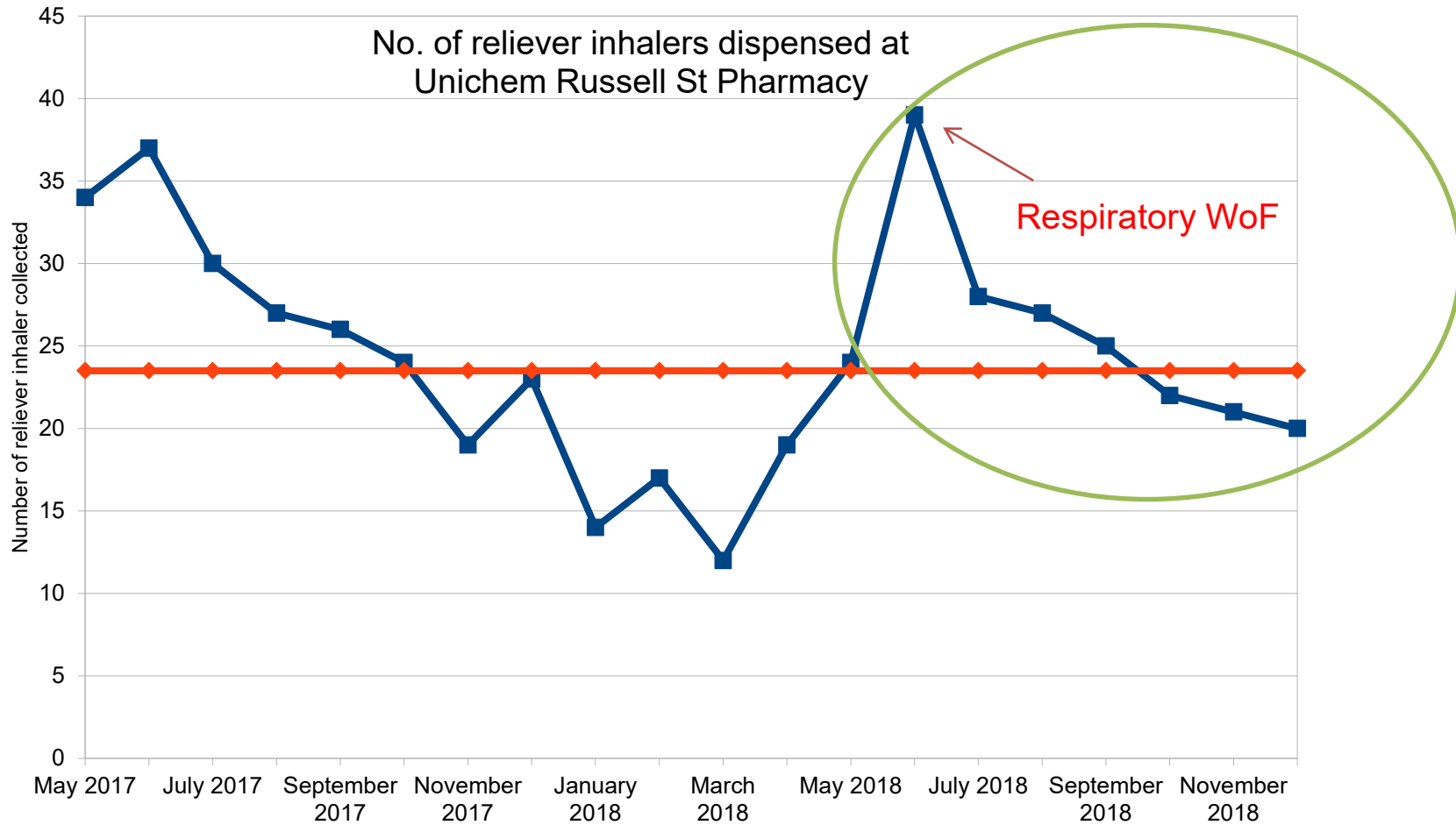
Do you have asthma? <i>If "No" then can still do education but cannot be a part of the project</i>	Y/N
Are you willing to take part in the project? <i>Verbal consent is acceptable</i>	Y/N
Are you happy for one of our staff to follow you up monthly with a phone call? <i>Phone call reminder to collect repeats and quick follow up on progress</i> <i>If "No" then can still do education but cannot be a part of the project</i>	Y/N
What is your current Asthma Control Test score? <i>Explain what the ACT is and if not already completed then complete</i> <i>("ACT gives us an idea of where your asthma control is at right now")</i>	Score =
What is your goal Asthma Control Test score? <i>(your ACT goal is where you would ideally like to see your asthma control at)</i>	Score =
Do you have a spacer to use with your inhaler(s)? <i>If "No" then provide and demonstrate use when discussing inhalers</i> <i>Why a spacer is required – increases effectiveness of medication</i> <i>How to wash spacer – weekly in warm water with mild detergent and air dry</i> <i>Replaces spacer annually</i> <i>How to store inhaler within spacer (caution with valve)</i>	Y/N Spacer provided Y/N
Do you use a preventer inhaler? <i>If "yes" or they should be using a preventer then do education (see next page)</i>	Y/N
Do you use a reliever inhaler? <i>If "yes" or they should be using a reliever then do education (see next page)</i>	Y/N
Have you had the flu vaccination this year? <i>If "No" then encourages to get funded flu vaccination through GP if eligible</i> <ul style="list-style-type: none"> Individuals aged 6 months to under 65 years who have asthma and are on regular preventive therapy Children aged 6 months to under 5 years who have been hospitalised for respiratory illness or have a history of significant respiratory illness 	Y/N
Do you or anyone you live with currently smoke? <i>If "yes" then offer smoking cessation advice</i>	Y/N

Respiratory Warrant of Fitness Checklist & Consent Form

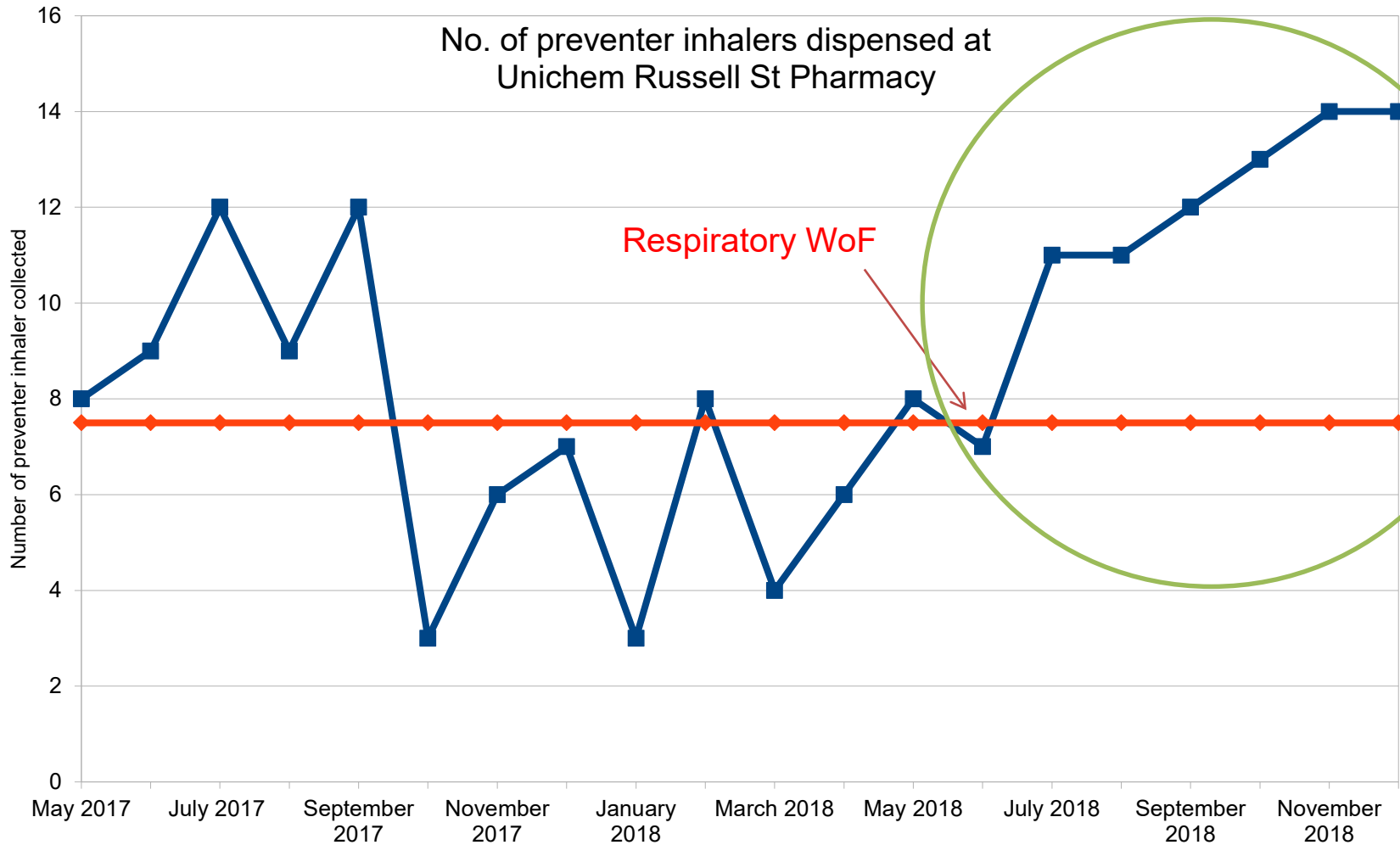
Information checklist for patient	Completed
Preventer <ul style="list-style-type: none"> Explain what preventer inhaler is Adherence/usage Check technique +/- spacer – 1 puff 6 breaths Rinse mouth and spit out Provide written information if needed Wash inhaler weekly - remove cap and metal canister, rinse mouthpiece and cap under warm water, shake off and allow to air dry then put the metal canister and cap back on 	
Reliever <ul style="list-style-type: none"> Explain what reliever inhaler is Check technique +/- spacer Check frequency of use (if using often then discuss review by GP for asthma management) Provide written information if needed Wash inhaler weekly - remove cap and metal canister, rinse mouthpiece and cap under warm water, shake off and allow to air dry then put the metal canister and cap back on 	
Tips (where appropriate) <ul style="list-style-type: none"> Sports – remember to bring inhaler Trigger identification (eg stress, change of environment, animals, cleaning products, Mould spores) Allergy control Ensure have extra inhaler so does not run out unexpectedly Reduce exposure to germs Delivery services Repeat reminder system Offer symptom diary Asthma action plan – encourages appointment with GP/respiratory nurse to complete one if patient does not currently have one 	
Further education (where appropriate) <ul style="list-style-type: none"> Smoking cessation (for patient and/or whanau) Discuss referral to Breathe Hawkes bay or Respiratory nurse champions <ul style="list-style-type: none"> Action: Referral to _____ (tick when completed) 	
Others notes or interventions completed:	
Questions answered by (patient or guardian name):	Date:
Date completed: Completed by - Name of pharmacist: Time taken to complete: Place of conduct (eg pharmacy, via phone):	



Data Analysis & Reporting

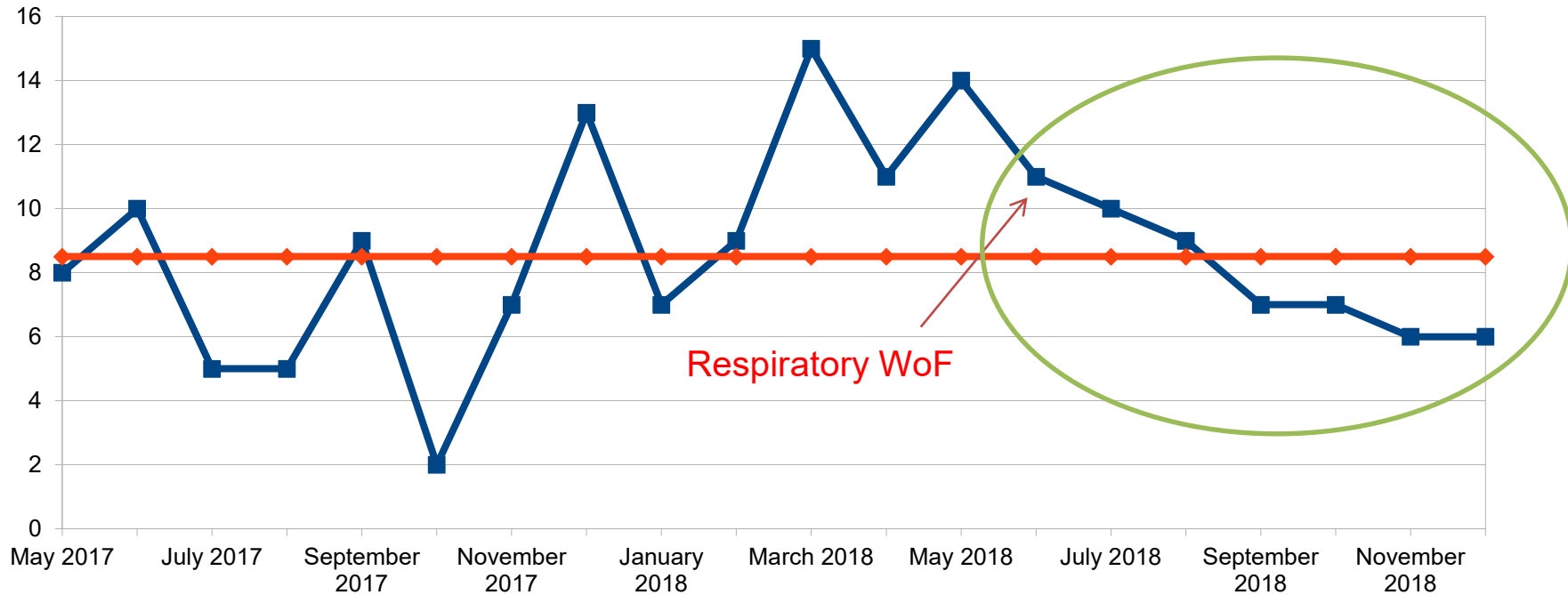


Data Analysis & Reporting

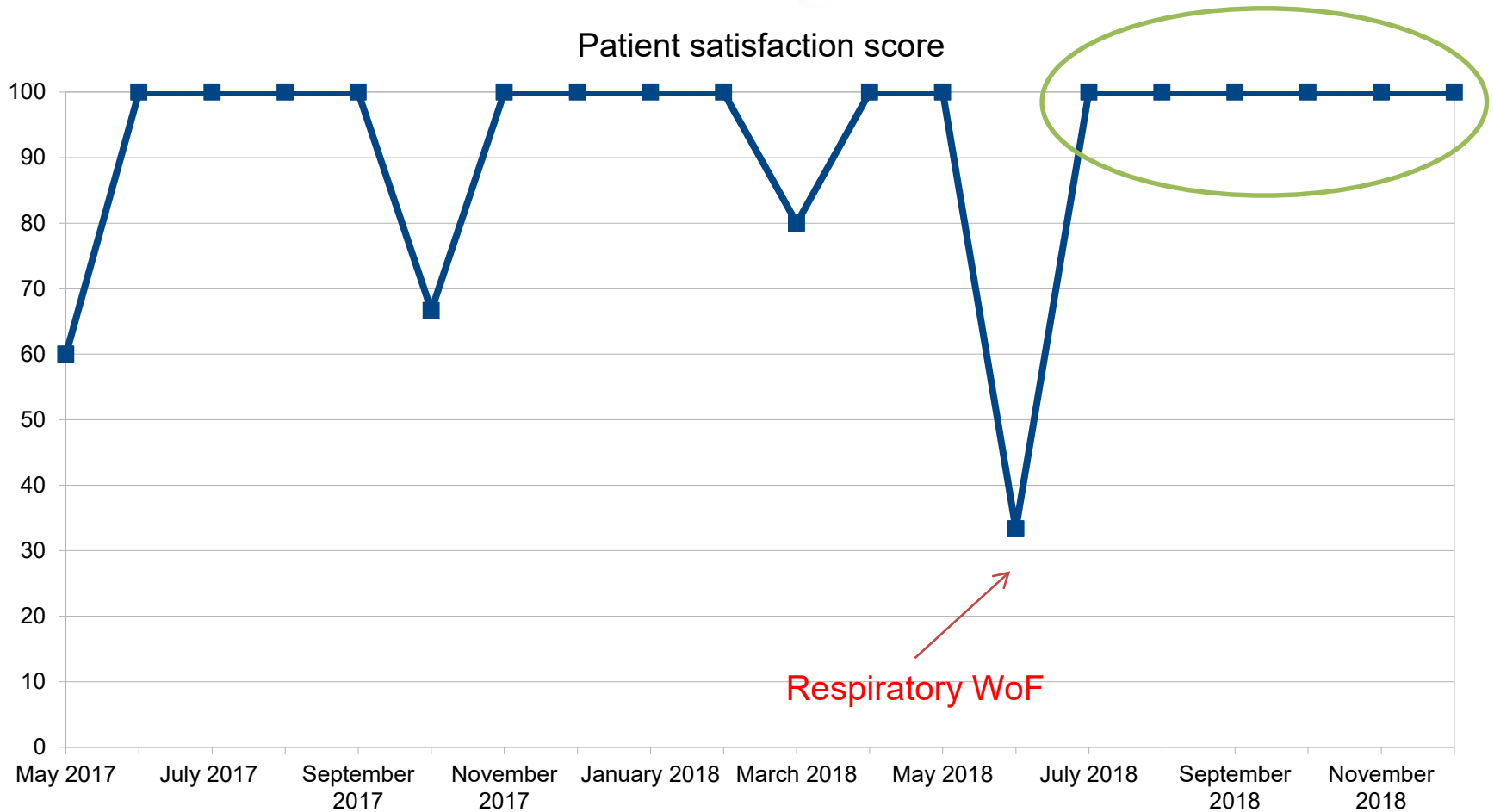


Data Analysis & Reporting

Number of Emergency Steroid Collection at Unichem Russell St Pharmacy

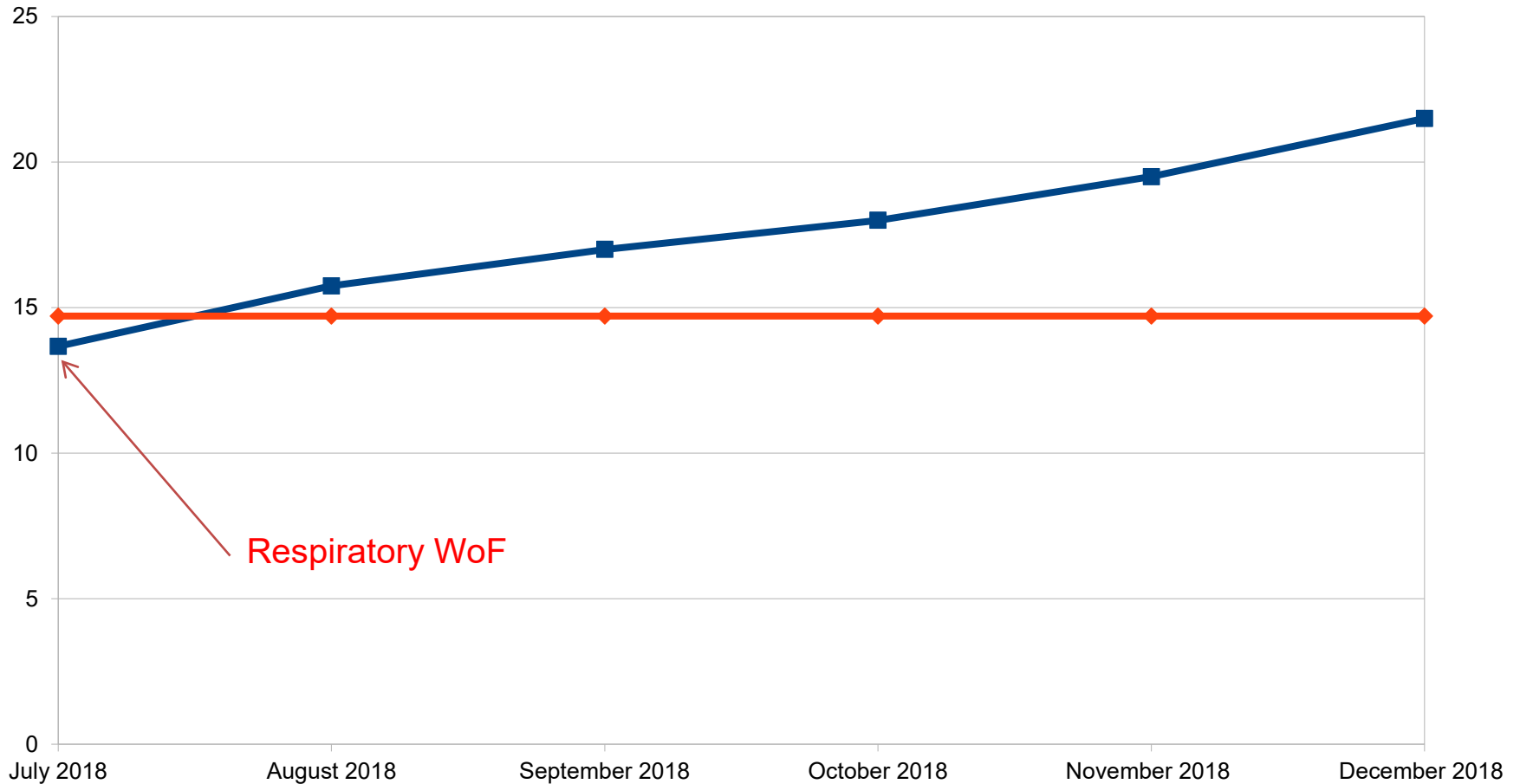


Data Analysis & Reporting



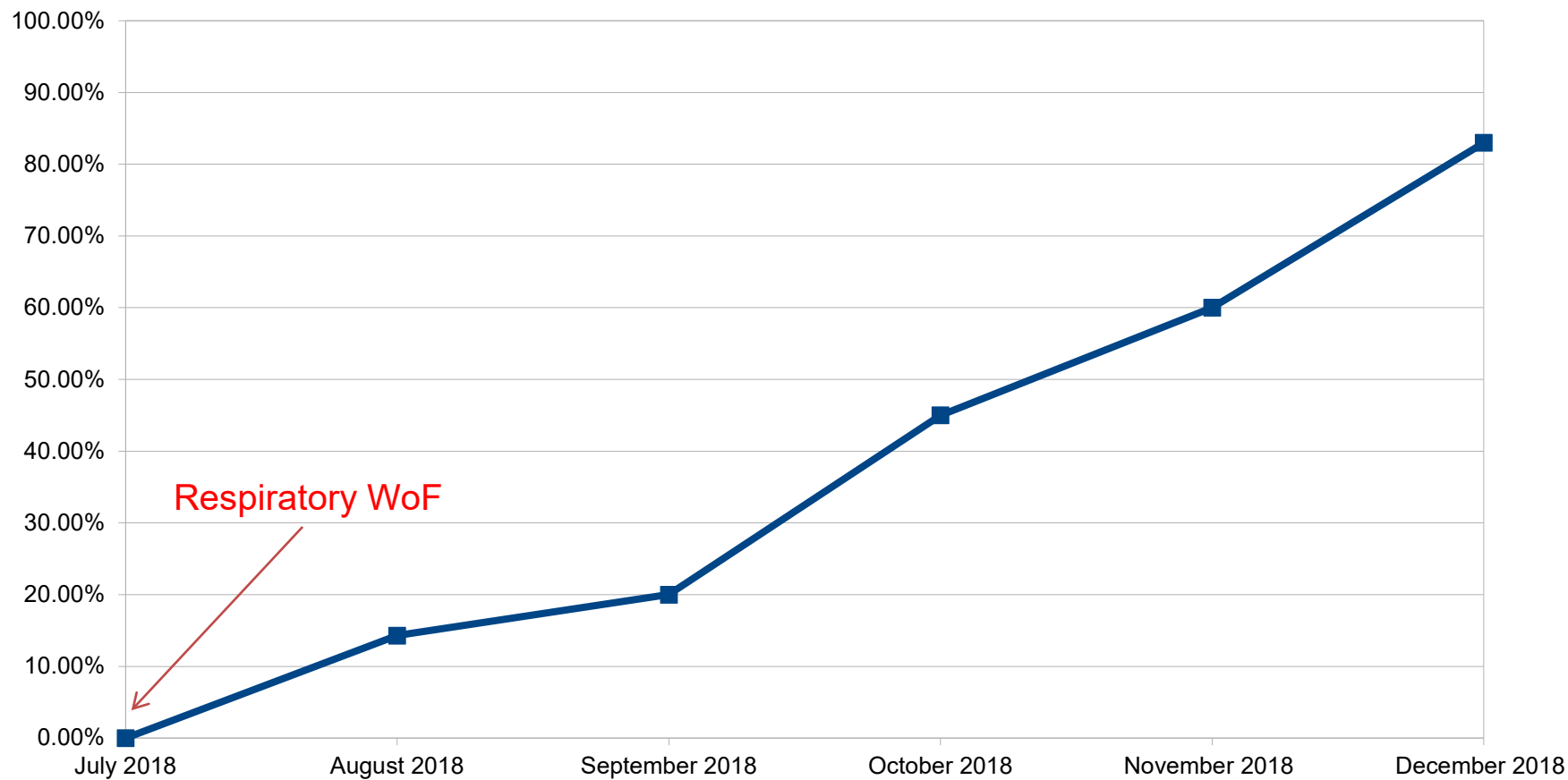
Data Analysis & Reporting

Average Patient ACT Score



Data Analysis & Reporting

Percentage reaching target ACT score



Change Management – Actions and Plans

- Spacer and mask availability at pharmacy
 - Easy to implement and very effective (80% uptake)
 - Referral pathway between pharmacy and Breathe Hawkes Bay
 - Implemented and working well
- Respiratory Warrant of Fitness checklist
 - ongoing funding issue
- Teaching sessions for staff
 - Easy to implement



NHS Sustainability

- Individual scores range from 70 to 90 depending on the level of involvement – average 75
- Continuing work on staff level of engagement, spreading and sustaining the changes
- Ongoing work – system level and process changes
- Ongoing funding issue



A Case Study

- 3 year old Johnny*
- Recently put under the care of Jackie* via CYF - caregiver unfamiliar with asthma
- 3 urgent care visits (within 4 months) with 2 courses of prednisolone and 2 salbutamol inhalers
- Positive outcome from respiratory WoF - improved health literacy and understanding of asthma management

