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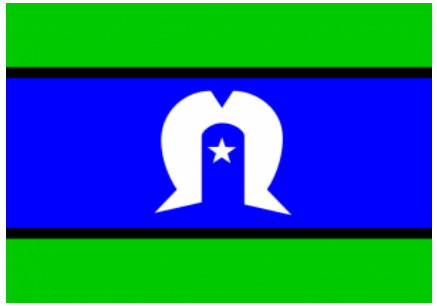
NORTH WESTERN
MELBOURNE
An Australian Government Initiative

Improving Childhood Asthma Management (ICAM) Symposium

Saturday, 7 September 2024

The content in this session is valid at date of presentation

Acknowledgement of Country



Housekeeping

Toilets

- Either side of auditorium, disabled toilets to the right of the elevator

Mobile phones

- Phones on silent
- Phone calls to be take outside the auditorium

In case of an emergency, see Deb (green name tag)

Ensure that you have signed in and have collected your name tag and your resources folder if you have not, please go to the registrations table during the breaks

Photos will be taken throughout the day

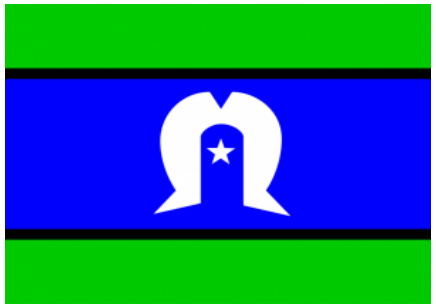
- See the registration table if you don’t wish to be in the photos

Agenda

Time Slot	Activity	Presenter/s
10:00am-10:15am	Open symposium and Welcome to Country	Bianca Bell & Peita Price
10:15am-10:30am	Introduction to ICAM & Western Health GP Integration	Jason Pereira & Skye Spencer
10:30am-10:50am	The current landscape of asthma	Adele Berry & Dr Amanda Wilkins
10:50am-11:50am	Preschool asthma, asthma in 6-11 year olds & asthma in adolescents 12+	Adele Berry & Dr Amanda Wilkins
11:50am-12:30pm	Community Asthma Program presentation and breakout rooms	Community Asthma Program nurses – Libby, Jessica, Kate & Deb
12:30pm-1:15pm	**Lunch & Stalls** Stalls: Asthma Australia Safer Care Victoria HealthPathways Community Asthma Programs nurses	
1:15pm-1:45pm	Consumer presentations	Consumers Facilitated by Dr Kirsty Tamis
1:45pm-2:15pm	Specialised sessions – Thunderstorm Asthma & Sustainable Asthma in Australia	Dr Danny Csutoros and recorded presentation from Mike Forrester
2:15pm-2:30pm	**Afternoon tea & break**	
2:30pm-3:50pm	Facilitated multidisciplinary case studies & Q&A	Dr Kirsty Tamis, Dr Katherine Chen, Libby Spiers, Jarrod McMaugh & Consumer – Anna-Marie
3:50pm-4:00pm	Close symposium	Peita Price

Collaboration

Welcome to Country



Western Health

NORTHWEST MELBOURNE GENERAL PRACTICE LIAISON UPDATE

your Culture | *your* Ability | *your* Identity | **We welcome you at Western Health**

Western Health

GP Liaison Roles and Functions

- **Serve as a central point of contact for GPs** to navigate hospital services and improve communication between hospitals and primary care.
- **Enhance communication and collaboration** between general practice, community healthcare, and hospitals, including addressing communication gaps, supporting community care, and ensuring efficient clinical handover.
- **Support and promote shared maternity care programs**, including clinical governance, quality improvement, and credentialing of Shared Maternity Care Affiliates.
- **Provide education and professional development** for GPs and community healthcare professionals, including RACGP-endorsed activities and continuing professional development seminars.
- **Advocate for the needs of general practice** in planning new services or programs and ensure timely communication of new initiatives to GPs.
- **Improve access to services** and promote continuity of care across health services by optimising resource use and efficiency.
- **Contribute to policy development and hospital accreditation**, including tracking performance indicators, conducting audits, and surveys.
- **Manage quality improvement activities**, such as enhancing discharge and Specialist Clinic correspondence and responding to GP complaints.
- **Facilitate the development of models of care** to better address patient needs, including telehealth services and cancer survivorship care.
- **Collaborate with community partners** on projects to improve the interface between acute and primary care.

GPIU 6-MONTH REDESIGN PLANNED APPROACH

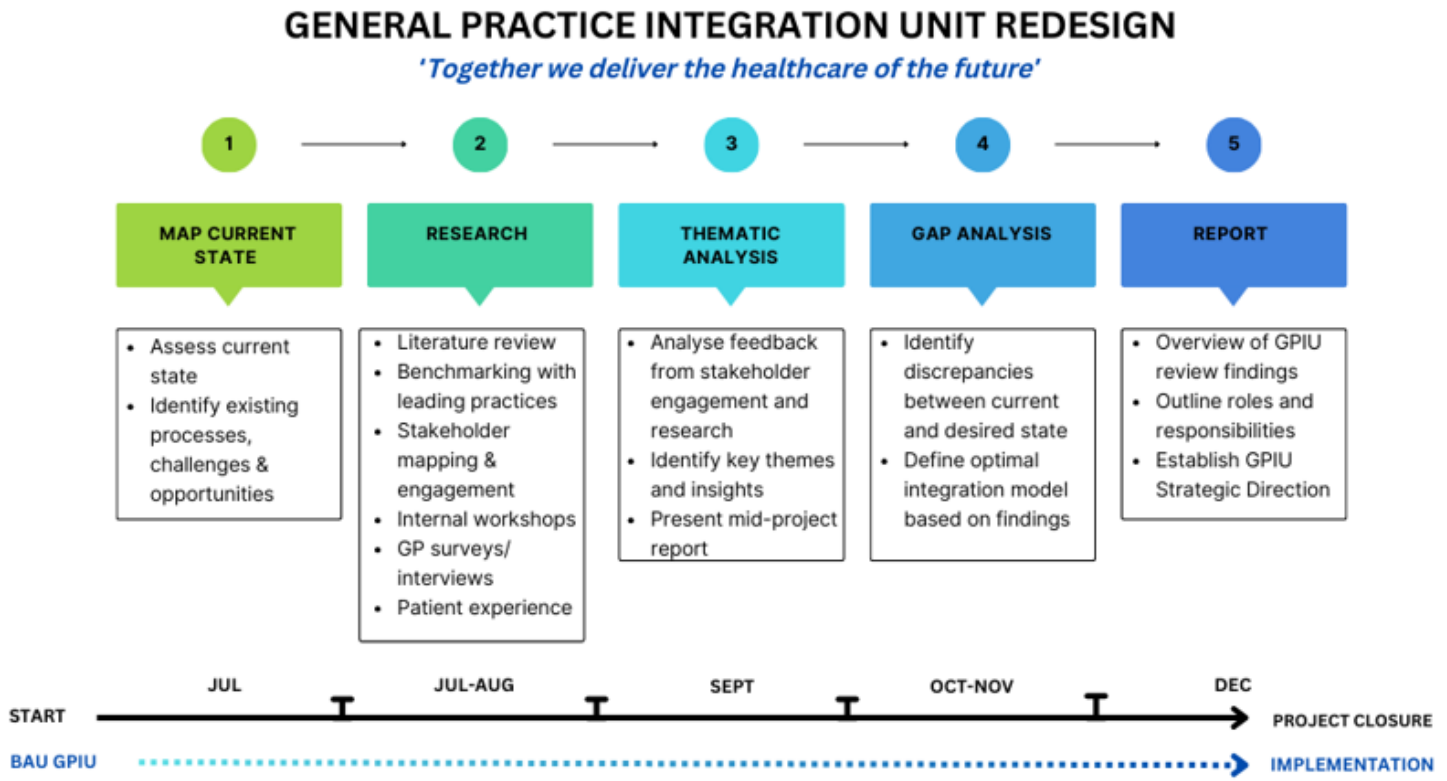


Figure 1. General Practice Integration Unit Redesign

Western Health 2024 GP Survey Launch

This survey is divided into two sections:

Part A

- Questions are routinely included in our GP surveys.
- Implemented every 2 years.
- Data used to benchmark against previous results, identify trends, risks, and opportunities for improvement, and assess the impact of healthcare system changes.

Part B- GPIU REDESIGN

Aims:

- Co-design of the future state Western Health GPIU.
- Create a proactive and progressive GPIU that fosters meaningful partnerships with primary care providers.
- Focus on enhancing collaboration, sharing resources, and expanding care options.
- Evolve the GPIU to better support the health needs of a growing and diverse population.

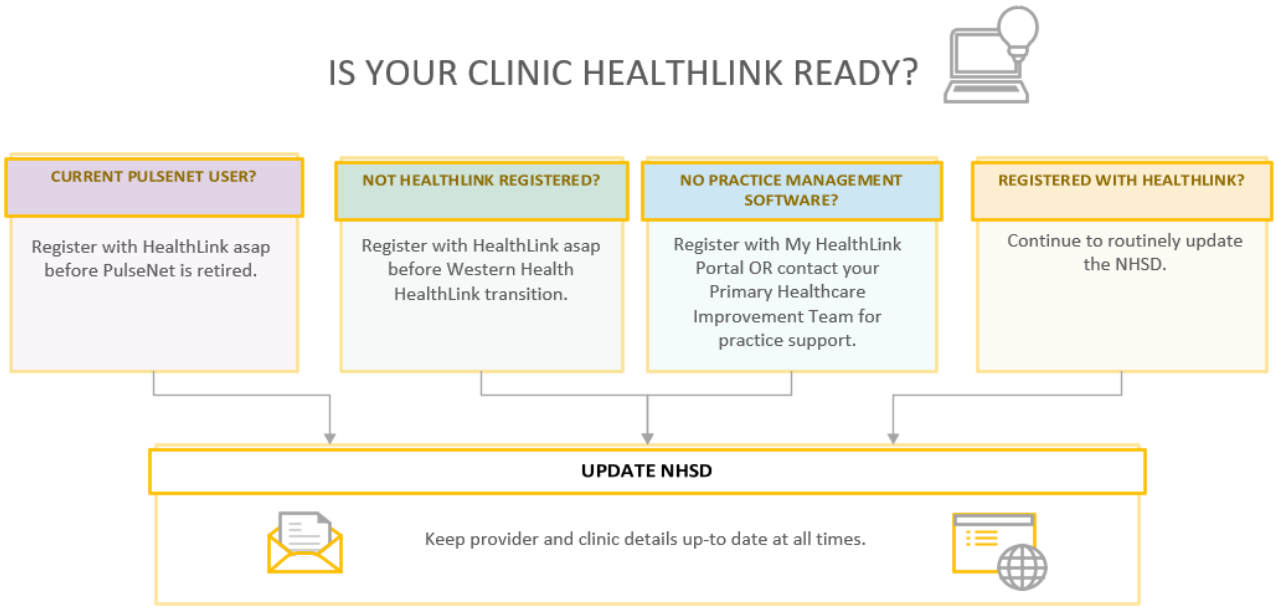
Western Health

Survey link

Help us shape an integrated healthcare service system in the Western suburbs!

Western Health Transition to HealthLink

- Western Health is transitioning to HealthLink as our Secure Messaging Delivery (SMD) provider for clinical documentation.
- Our immediate focus is on testing and supporting GP clinics to ensure they are ready for our transition to HealthLink.
- Our goal is to move all clinical correspondence for GPs to HealthLink by the end of 2024.



Northwest Melbourne GP Liaison Unit Contacts

Western Health

HEALTH SERVICE	ROLE	PHONE	EMAIL
ROYAL WOMEN'S HOSPITAL	A/ Prof Ines Rio Head GP Liaison Unit	8345 2064	Ines.Rio@thewomens.org.au
	Emily Lawson Primary Care Liaison Officer	8345 3070	Emily.Lawson@thewomens.org.au GP.Liaison@thewomens.org.au
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	Sharon Tijssen Primary Care Liaison officer		STijssen@mercy.com.au primarycare@mercy.com.au
NORTHERN HEALTH	Dr Richard Sia GP Liaison Officer		Richard.Sia2@nh.org.au
	Sandra Thompson Primary Care Liaison	8405 8815	Sandra.thompson@nh.org.au nh-primarycareliaison@nh.org.au
WESTERN HEALTH	DR Jo Silva General Practice Advisor	0400 603 967 8345 1180	Jo.Silva@wh.org.au
	Skye Spencer Manager General Practice Integration	0481 094 582	Skye.Spencer@wh.org.au gp@wh.org.au

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Improving Childhood Asthma Management

Jason Pereira
Senior Project Officer, Safer Care Victoria

With acknowledgements to the Department of Health

With acknowledgements

Dr. Danny Csutoros
ICAM Program Sponsor

Kerin Bryant
ICAM Principal Project Officer

Miriam Spano
ICAM Principal Policy Advisor

Jeremy Turnbull
ICAM Senior Project Officer

Rachel Vorlander
ICAM Senior Project Officer

Belinda Phelan
ICAM Senior Project Officer

Project background

July 2018

Inner West Air Quality Community Reference Group established

March 2020

July 2021

VICTORIA State Government

$1.788 million committed to improve childhood asthma over two years. ICAM program established in response

December 2021

Consultation with 25+ organisations, including local clinicians, and consumers in the inner west

June 2022

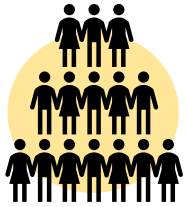
Commencement of ICAM implementation phase consisting of six interlinked projects

June 2023

Evaluation of ICAM program and handover of next phase to SCV

SCV Safer Care Victoria

Melbourne's Inner West



390,000 people+

109 Schools

41% born overseas

150+ GP Practices

100+ different languages

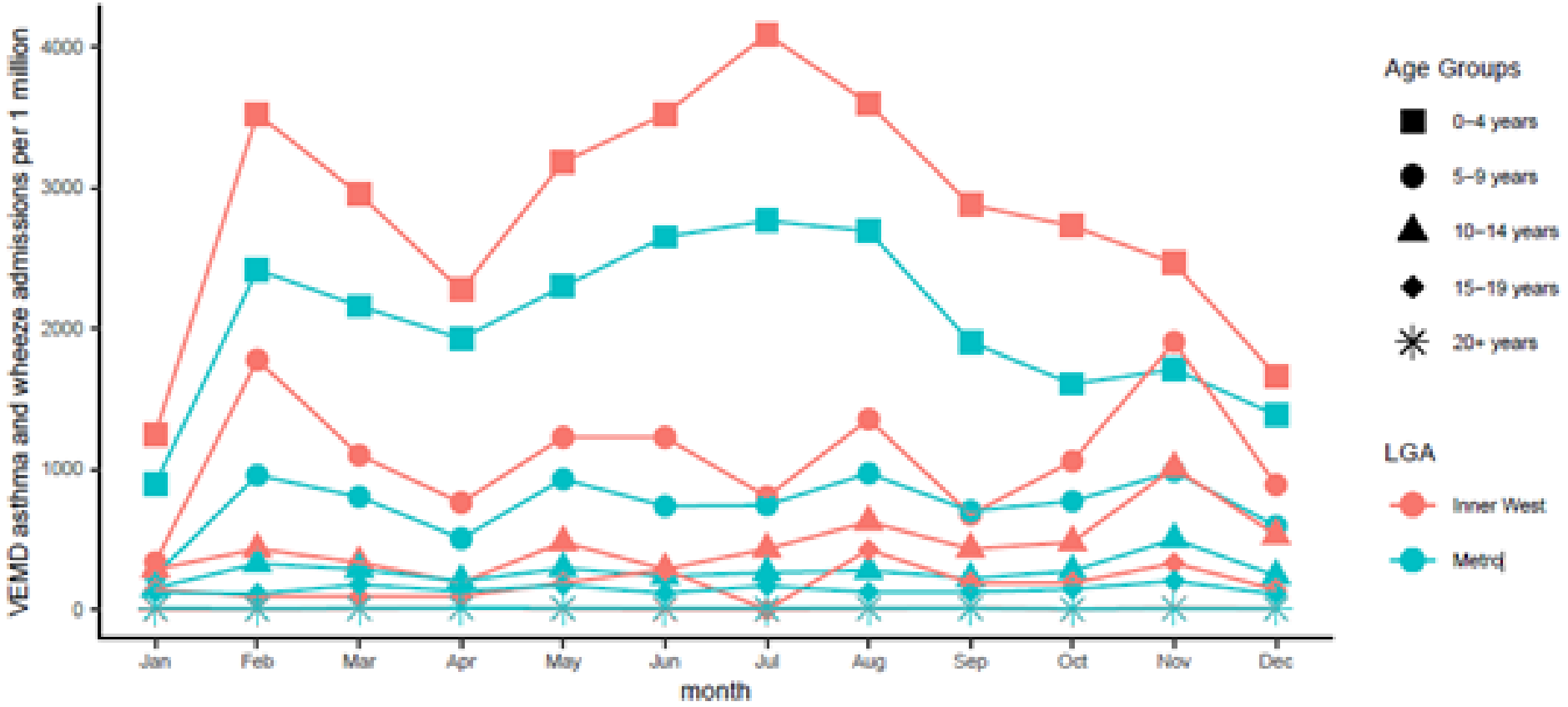
4 Hospitals

2 person is most dominant household size

27 Maternal & Child Health centres

Melbourne's Inner West

VEMD asthma and wheeze presentations (1 million people) in 2019 by age group and local government area



Consultation & engagement

Consulted with +25 organisations, including:

- state government (transport, education, environment authorities)
- hospital providers, GPs, pharmacies, and health networks
- local councils, community health organisations
- peak asthma bodies & organisations
- consumers
- researchers

Listened to what's working well, and what could be improved in the management of asthma in children.

1. Optimise the utility of asthma action plans

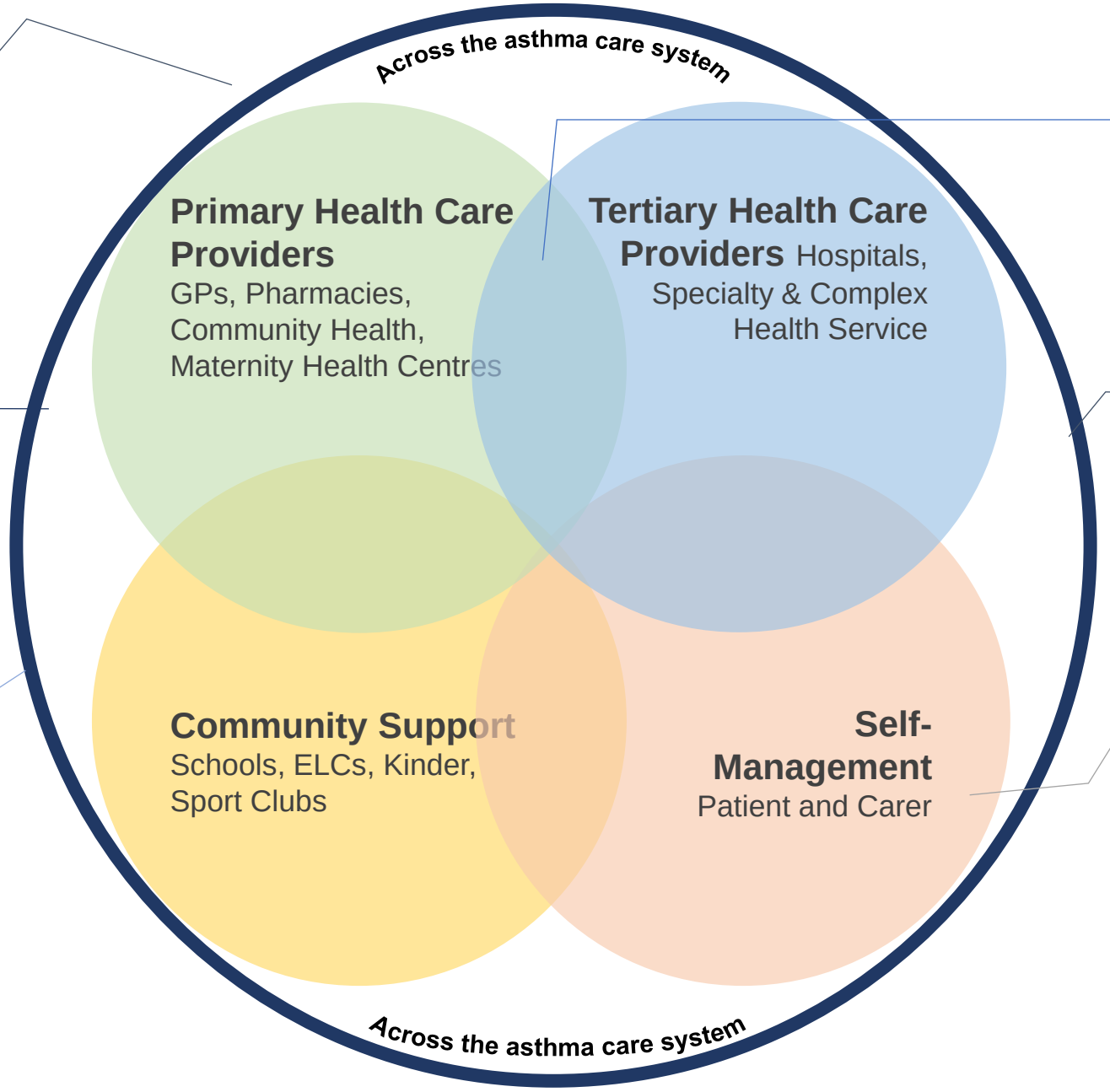
ASTHMA AUSTRALIA

3. Strengthen integrated care pathways for management of childhood asthma

Safer Care Victoria

5. Design and deliver an updated childhood asthma education package to Inner West asthma care providers

National Asthma Council AUSTRALIA



2. Develop a succinct Clinical Practice Guideline for childhood asthma management

The Royal Children's Hospital Melbourne

4. Establish a community of practice for childhood asthma management

Safer Care Victoria

6. Support self-management of childhood asthma in Inner West communities

cohealth

A systems thinking approach to improving childhood asthma management (ICAM) in the inner west (youtube.com)

Community of practice

What was the project objective?

A robust, informative, and sustainable learning and collaboration tool for asthma care professionals to be created, driven by data and a commitment to continuous improvement.

Who is involved?

Hosts and leads

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SCV Safer Care Victoria


Dr. Katherine Chen


Dr. Kirsty Tamis


Dr. Shiv Shanthikumar

"I have found the COP sessions conducive to working collaboratively with a range of stakeholders in the management of childhood asthma. I've learnt a lot during each session and have felt empowered and really positive about discussing clients and less apprehensive about approaching GPs to discuss their patient's asthma."

CoP attendee

ICAM Collaborative

partnering with **7 health services** over **18 months to:**

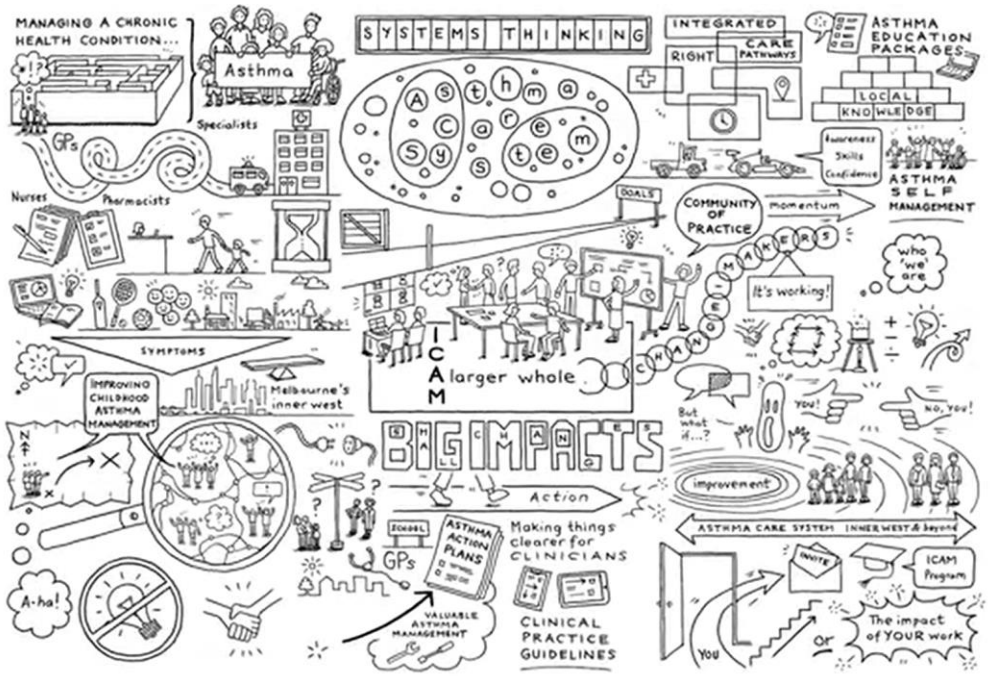
- Reduce asthma related emergency department re-presentations
- Involve children and their families in their care
- Optimise utilisation of community asthma programs

Supporting them to deliver

Visit the SCV table during the lunch time break!

Find out more and get connected

ICAM pilot program:
w: health.vic.gov.au/ ICAM



ICAM collaborative:
e: icam@safercare.vic.gov.au

nwmphn.org.au for future ICAM CoP events

Current state of asthma

Dr Amanda Wilkins

The Royal Children's Hospital Melbourne

Agenda

- High level outcomes
- Quality of Care
- What can we do?

The Royal Children's Hospital Melbourne

High Level Outcomes

Chronic respiratory conditions:

Asthma

Web article | Last updated: 30 Jun 2023 | Topic: Chronic respiratory conditions | Part of Chronic respiratory conditions |

AIHW Asthma Report – Key Points

- Asthma affects 8.5% of all children
- Leading cause of disease burden

Healthcare Utilisation

- Admissions falling
- Readmissions rising
  - 1 in 3 children admitted to hospital
  - 1 in 2.5 children presenting to ED

Table 1. Number of ED presentations & re-presentations for asthma and/or wheeze by age group (index presentation in 2022)

*** numbers in brackets represent % of total asthma ED presentations for the selected health service(s) within that age group*

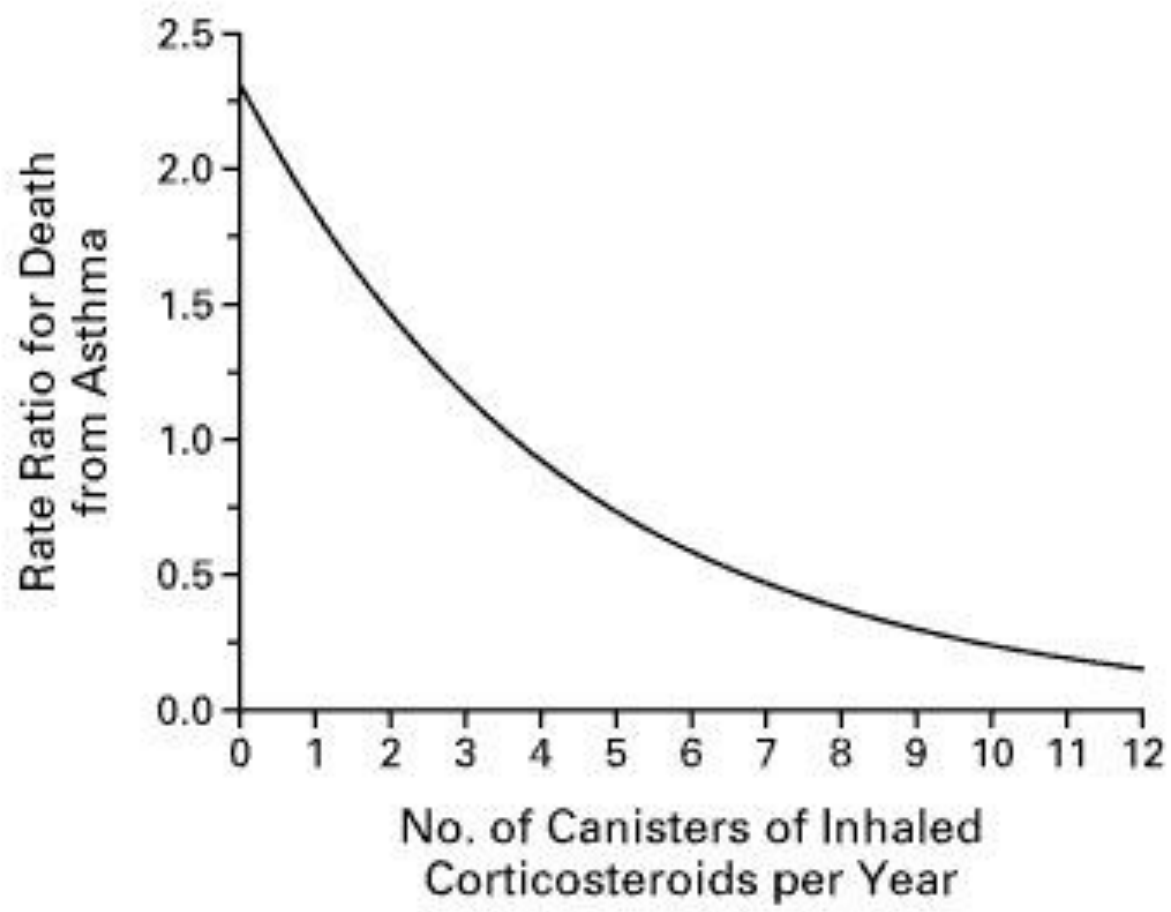
Health service(s)	No. of presentations to ED with asthma or wheeze Ages 1-17	No. of re-presentations within 365 days **Age 1-5**	No. of re-presentations within 365 days **Age 6-11**	No. of re-presentations within 365 days **Age 12-17**	No. of re-presentations within 365 days **Ages 1-17**
Sunshine Hospital	930	253 (45.2%)	111 (37.8%)	16 (21%)	380 (40.86%)
The Northern Hospital	952	294 (54.4%)	101 (33.2%)	26 (24.1%)	421 (44.22%)
The Royal Children's Hospital	4403	1443 (55.9%)	487 (36.1%)	97 (20.6%)	2027 (46.04%)
Werribee Mercy Hospital	418	99 (43.2%)	42 (29.4%)	10 (9.3%)	151 (36.12%)
Four services combined	6703	2089 (53.4%)	741 (35.5%)	149 (21.2%)	2979 (44.40%)
Statewide	10,222	3008 (51.7%)	1134 (34.8%)	223 (19.6%)	4365 (42.70%)

Healthcare Utilisation

- High GP utilization (Chen, 2023)
  - Median number of GP visits in 12 months prior to admission = 9
  - Median number of GP's seen = 5
  - Median number of practices seen = 4

Quality of Care

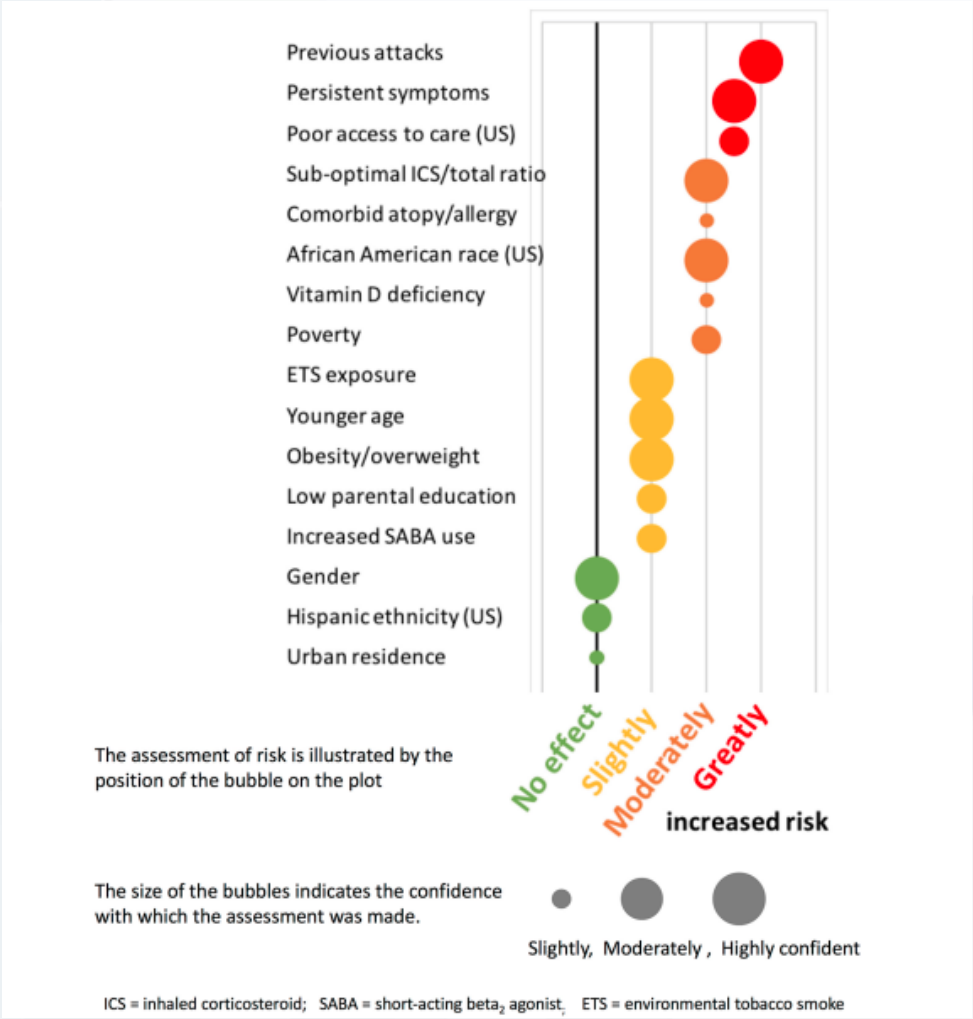
Medications



ORIGINAL ARTICLE

Low-Dose Inhaled Corticosteroids and the Prevention of Death from Asthma

Samy Suissa, Ph.D., Pierre Ernst, M.D., Serge Benayoun, M.Sc., Marc Baltzan, M.D., and Bing Cai, M.Sc.



ORIGINAL ARTICLE

At-risk children with asthma (ARC): a systematic review

Audrey Buelo,[1] Susannah McLean,[1] Steven Julious,[2] Javier Flores-Kim,[1] Andy Bush,[3] John Henderson,[4] James Y Paton,[5] Aziz Sheikh,[1] Michael Shields,[6] Hilary Pinnock,[1] the ARC Group

AIHW Asthma Report – Medications

- 1 in 10 children are reliant on SABA therapy
- 7 in 10 children on a preventer did not dispense adequate amounts

Medications – VIC Data

- Underuse of ICS (both prescription and adherence)
  - Only 16.2% of children admitted to hospital are prescribed a preventer (Chen; 2023)
  - Only 12% commenced during an admission (Chen; 2023)
  - Only 45.6% of prescriptions dispensed (Chen; 2023)

Non-pharmacological

- 1 in 3 children did NOT have an action plan (AIHW)
- Only 1 in 4 families receive asthma education (Chen, 2023)
- Only 1 in 3 children have their inhaler technique assessed (Chen, 2023)

Care Coordination

- High healthcare utilization BUT
  - Poorly connected
  - Focus on management of acute episodes, not chronic condition
  - Guideline discordant care common

So What is the Current State of Asthma?

So What Is The Current State of Asthma??

The Royal Children's Hospital Melbourne

So What Is The Current State of Asthma??

- Focus on acute not chronic management
- Suboptimal use of ICS
- Basics of care frequently not done
- Poorly connected healthcare system

- Result in Poor Outcomes for our Children

What Can We Do?

- We know what works
  - Supporting high quality care
  - Doing the basics
  - Integrated care

Useful References

- Chen KY, Chu W, Jones R, Vuillermin P, Fuller D, Tran D, et al. Modifiable factors associated with pediatric asthma readmissions: a multi-center linked cohort study. J Asthma. 2023;60(4):708-17.
- Homaira N, Wiles LK, Gardner C, Molloy CJ, Arnolda G, Ting HP, et al. Assessing appropriateness of paediatric asthma management: A population-based sample survey. Respirology. 2020;25(1):71-9.
- Chen KY, Aye Tun N, Jones R, Shanthikumar S, Carlin JB, Hiscock H. Effectiveness of asthma preventer dispensing for preventing childhood asthma readmissions: a multisite cohort linkage study. Arch Dis Child. 2023.
- Jones R, Hiscock H, Shanthikumar S, Lei S, Sanci L, Chen K. Exploring gaps and opportunities in primary care following an asthma hospital admission: a multisite mixed-methods study of three data sources. Arch Dis Child. 2023;108(5):385-91.
- Chan M, Gray M, Burns C, Owens L, Jaffe A, Homaira N. Assessment of Variation in Care Following Hospital Discharge for Children with Acute Asthma. J Asthma Allergy. 2021;14:797-808.
- Chan M, Gray M, Burns C, Owens L, Woolfenden S, Lingam R, et al. Community-based interventions for childhood asthma using comprehensive approaches: a systematic review and meta-analysis. Allergy Asthma Clin Immunol. 2021;17(1):19.
- Homaira N, Dickins E, Hodgson S, Chan M, Wales S, Gray M, et al. Impact of integrated care coordination on pediatric asthma hospital presentations. Front Pediatr. 2022;10:929819.

Preschool Asthma

Improving Childhood Asthma Management (ICAM) Symposium

07 September 2024

Adele Berry

The Royal Children's Hospital Melbourne

Outline

- Diagnosis
- Chronic Management
- Acute Exacerbations
- Useful Resources
- Questions

Acronyms – for the day

- **ICS** – Inhaled Corticosteroid (e.g. Flixotide)
- **OCS** – Oral Corticosteroid (e.g. Prednisolone)

- **SABA** – Short Acting Beta Agonist (e.g. Ventolin)
- **LABA** – Long Acting Beta Agonist (given as combination ***ICS/LABA***
  e.g. Seretide/Symbicort)

- **SAMA** – Short Acting Muscarinic Antagonist (i.e Atrovent)
- **LAMA** – Long Acting Muscarinic Antagonist (i.e Spireva)

- **MDI** – Metered Dose Inhaler (i.e blue puffer)
- **DPI** – Dry Powder Inhaler (i.e Turbuhaler)

Diagnosis

- Preschool Asthma
- ~~Viral Induced Wheeze~~

  ~~Preschool Wheeze~~

  ~~Viral Induced Ventolin Responsive Wheeze~~

  ~~Reactive Airways Disease~~

Diagnosis – 3 R's

Diagnosis of asthma involves checking for the three R’s

- Reversibility
- Recurrence
- Response to asthma medications

Preschool Asthma – making a diagnosis

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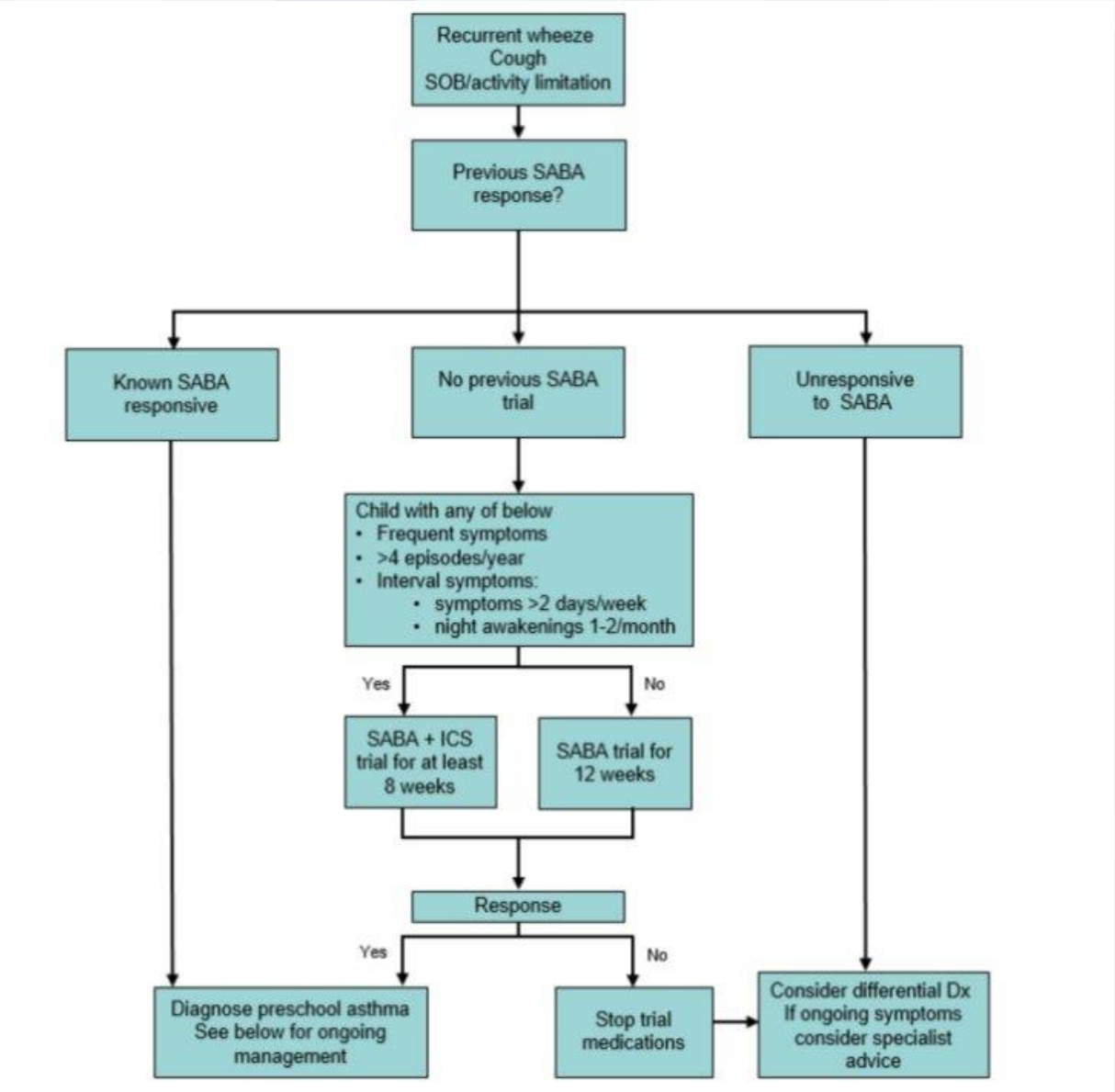
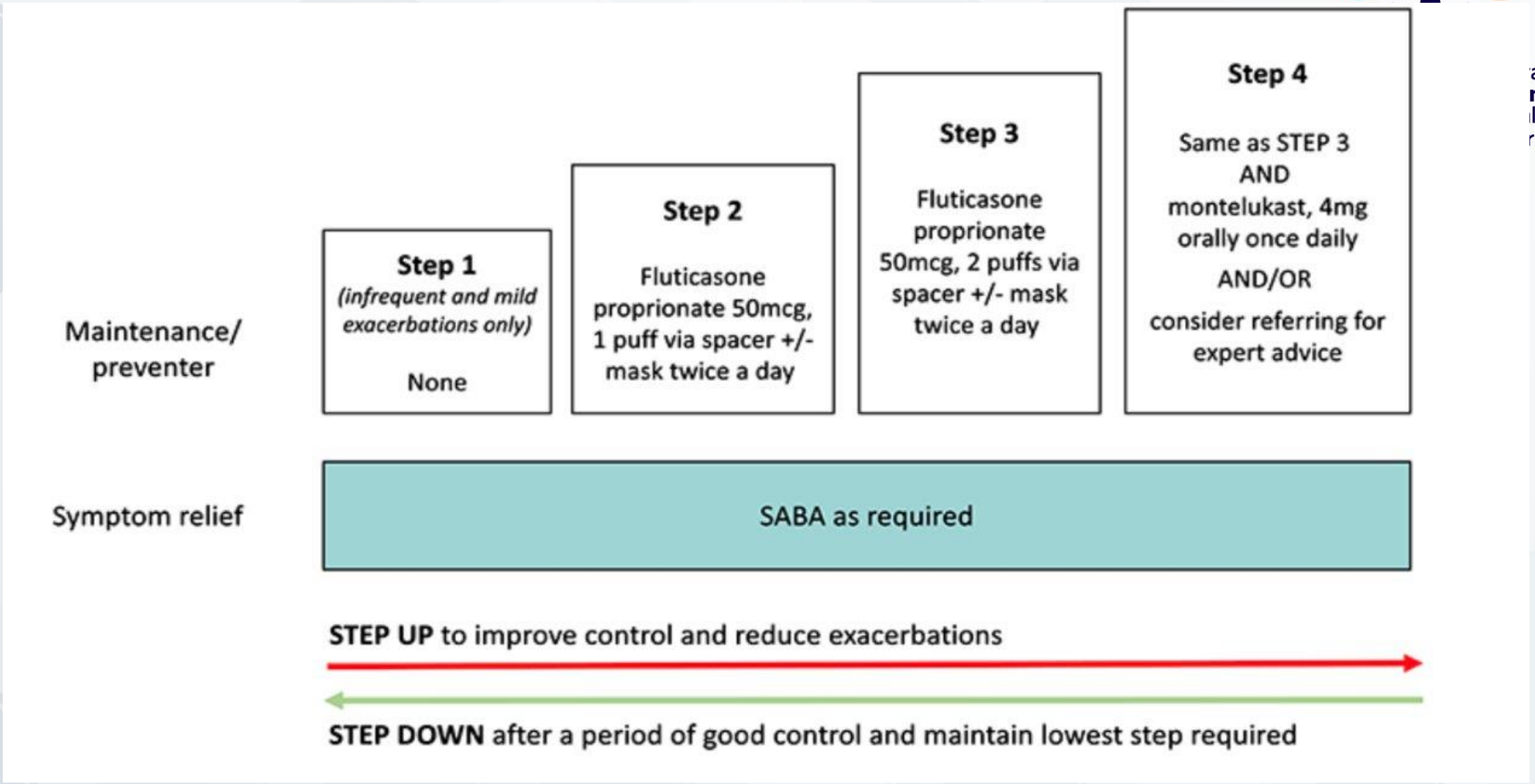


Chronic Management



Indications for commencing preventer

- Frequent daytime symptoms (2 or more times a week)
- Frequent night-time symptoms (2 or more times a month)
- Recurrent hospital presentations requiring asthma treatment
- (2 or more in one year)
- Frequent exacerbations (4 or more episodes per year)

Definition of asthma control

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	Good control (All of)	Partial control (One or two of)	Poor control (Three or more of)
Daytime symptoms	≤2 days per week	>2 days per week	>2 days per week
Need for reliever*	≤2 days per week	>2 days per week	>2 days per week
Limitation to activity	none	present	present
Night-time symptoms (or on waking)	none	present	present

Poor response to treatment?

- Review if asthma is the correct diagnosis
- Review adherence
- Review inhaler technique

Other important points

- Action Plan for Everyone
- Keep vaccinations up to date
- Minimise smoke exposure (including Vaping)
- Asthma education

Acute Exacerbations

Management of acute exacerbations in the community

- See Acute asthma
- In children already taking daily ICS, there is no role for increasing the dose of ICS during an exacerbation
- Prednisolone should not be prescribed for preschool asthma outside of the Emergency Department or hospital setting (unless an exacerbation is being managed in a general practice and a transfer to emergency is being arranged)

Useful Resources

- https://www.rch.org.au/kidsinfo/fact_sheets/asthma-videos/

Asthma – videos

The videos on this page will help you better understand and manage your child's asthma. **If your child shows signs of severe asthma (struggling to breathe, deep sucking movements at their throat or chest), call an ambulance immediately.**

- What is asthma?
- Treating asthma
- Asthma action plan & Asthma first aid
- Asthma in preschool children
- How to use a puffer with a spacer and mask
- How to use a puffer with a spacer
- How to use an turbuhaler
- How to use a rapihaler and spacer
- How to use a nasal spray
- Caring for your spacer
- For more information

	Preschool	Primary School	Adolescent
Acute Exacerbations			
Oral Prednisolone	No	Yes	Yes
Increase ICS dose	No	No	No (although will get more ICS if using Symbicort as Reliever)
Chronic Management			
Preferred Reliever	Salbutamol	Salbutamol	Budesonide/formoterol
Budesonide/ Formoterol as reliever	No	No	Yes
First Line Preventor	Fluticasone 50mcg	ICS	Budesonide/formoterol
Escalation Options	Increase FP dose Add in montelukast	Increase ICS dose OR Add in montelukast OR Swap to ICS/LABA	-

Questions?

Asthma in primary school-aged children (6-11 years)

Dr Amanda Wilkins

The Royal Children's Hospital Melbourne

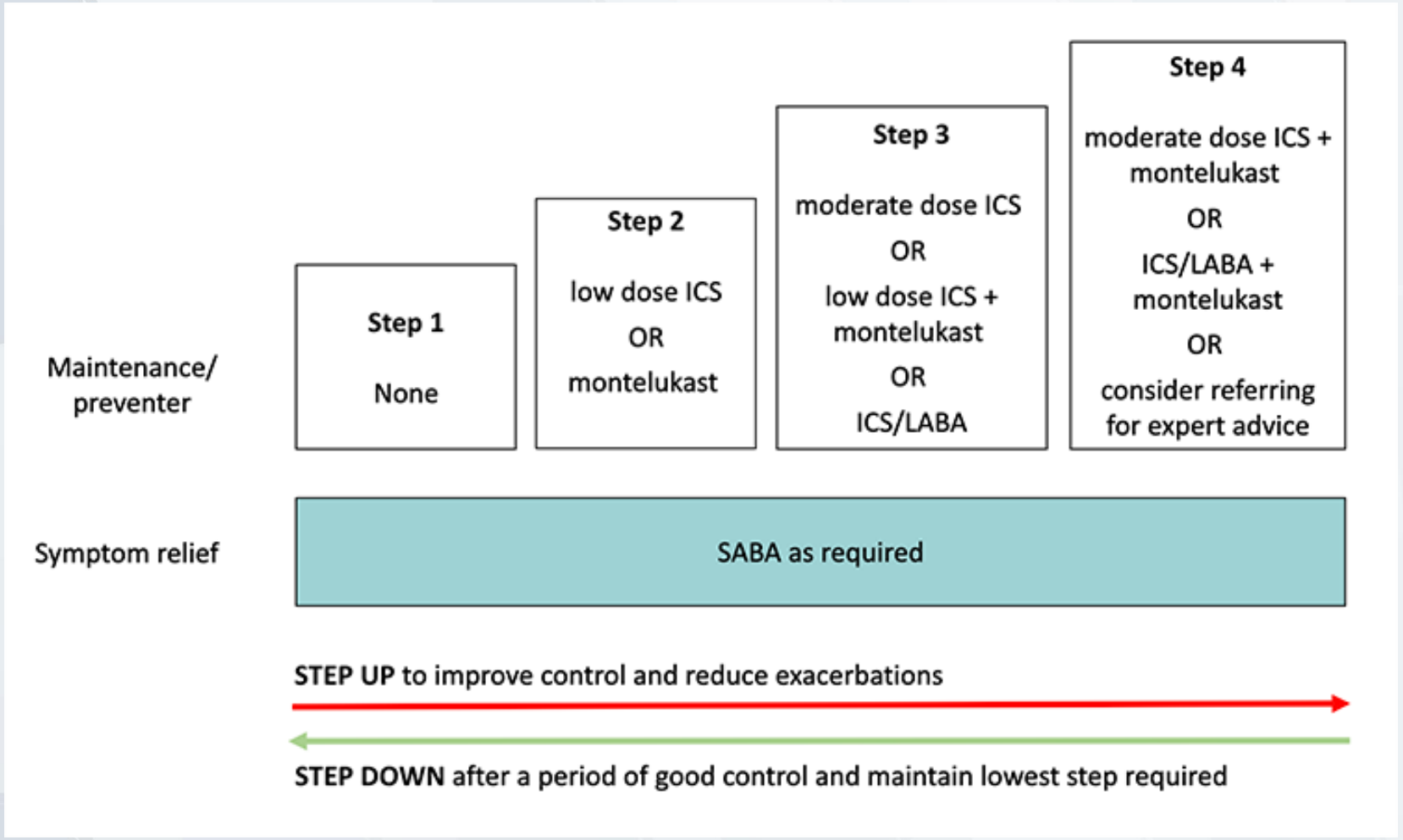
Community management

The Royal Children's Hospital Melbourne

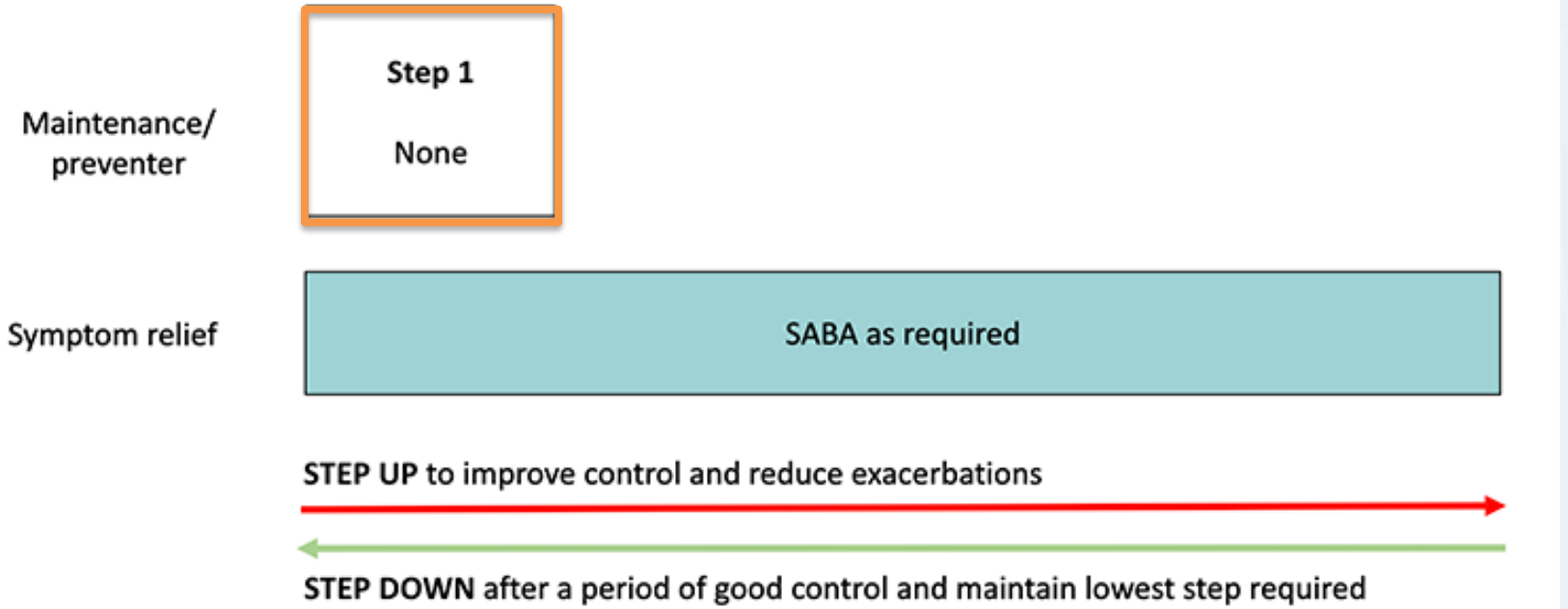
Community management

https://www.rch.org.au/clinicalguide/guideline_index/Asthma_in_primary_school-aged_children_(6-11_years)/

Community management



Step 1: SABA only



SABA only treatment is appropriate for….

- ❑ All primary school aged children commencing asthma treatment
- ❑ Children with no hospital presentation for 12 months
- ❑ Children with no systemic steroid for an exacerbation for 12 months
- ❑ Children in whom symptoms occur infrequently
- ❑ Children with no other comorbidities or contributing factors

SABA only treatment is appropriate for….

- ❑ All primary school aged children commencing asthma treatment
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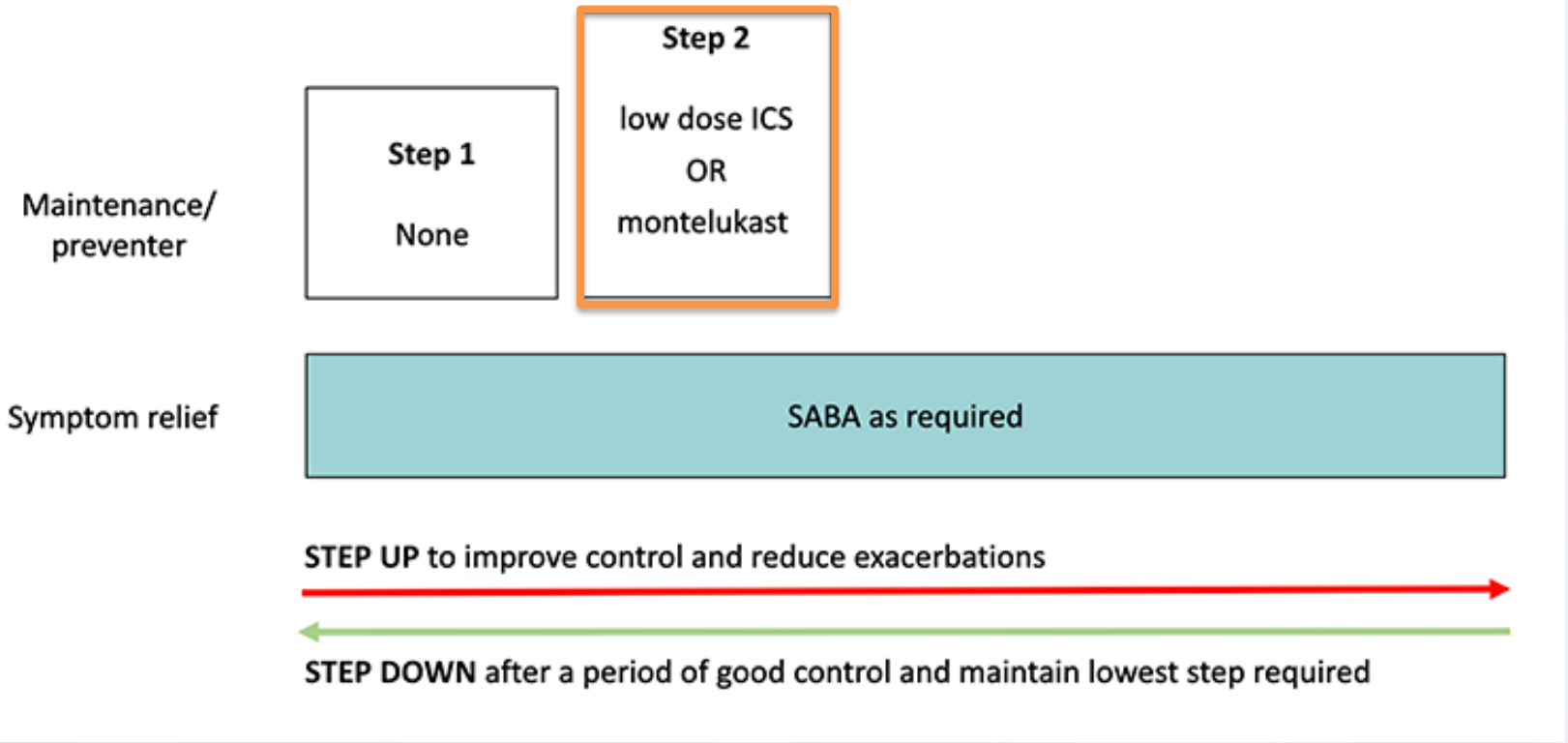
- ❑ Children in whom symptoms occur infrequently
- ❑ Children with no other comorbidities or contributing factors

Step 2: Low dose ICS



What is your preferred ICS?

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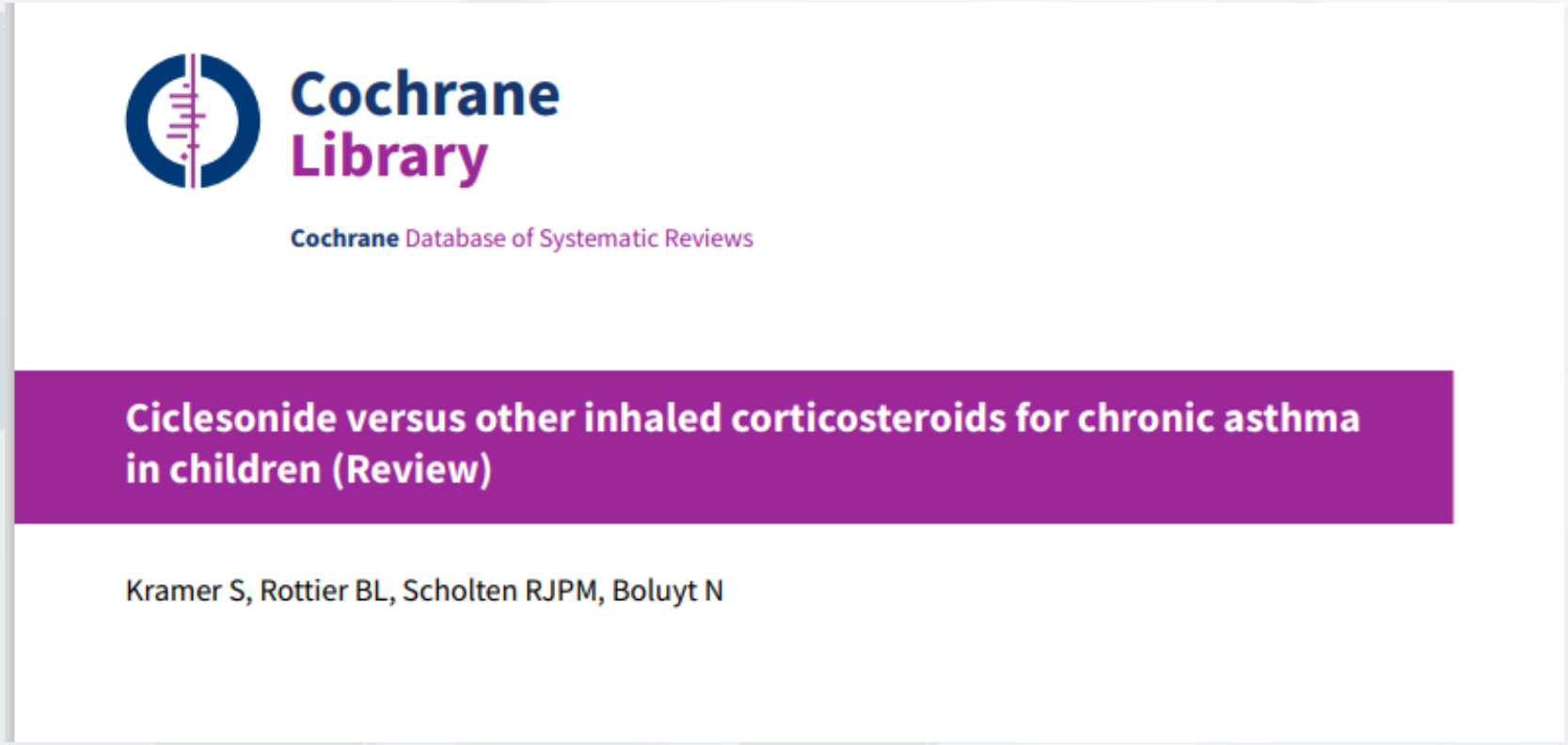
Fluticasone propionate (Flixotide)

Ciclesonide (Alvesco)



The Royal Children's Hospital Melbourne

Kramer S et al. *Cochrane Database Syst Rev*. 2013

Step 2: Low dose ICS

	Fluticasone propionate (Flixotide) 	Ciclesonide (Alvesco) 
Strength	50 mcg 125 mcg	80 mcg 160 mcg
Low dose	50 mcg twice daily	80 mcg daily
Moderate dose	100 mcg twice daily (125 mcg twice daily, ($$, CO2)	160 mcg daily
Spacer	Standard	Specific
Benefits	Widely used	Daily dosing CO2 Lower side effect profile
PBS restrictions	50 mcg: unable to be initiated if >6yo 125 mcg: unrestricted	Unrestricted

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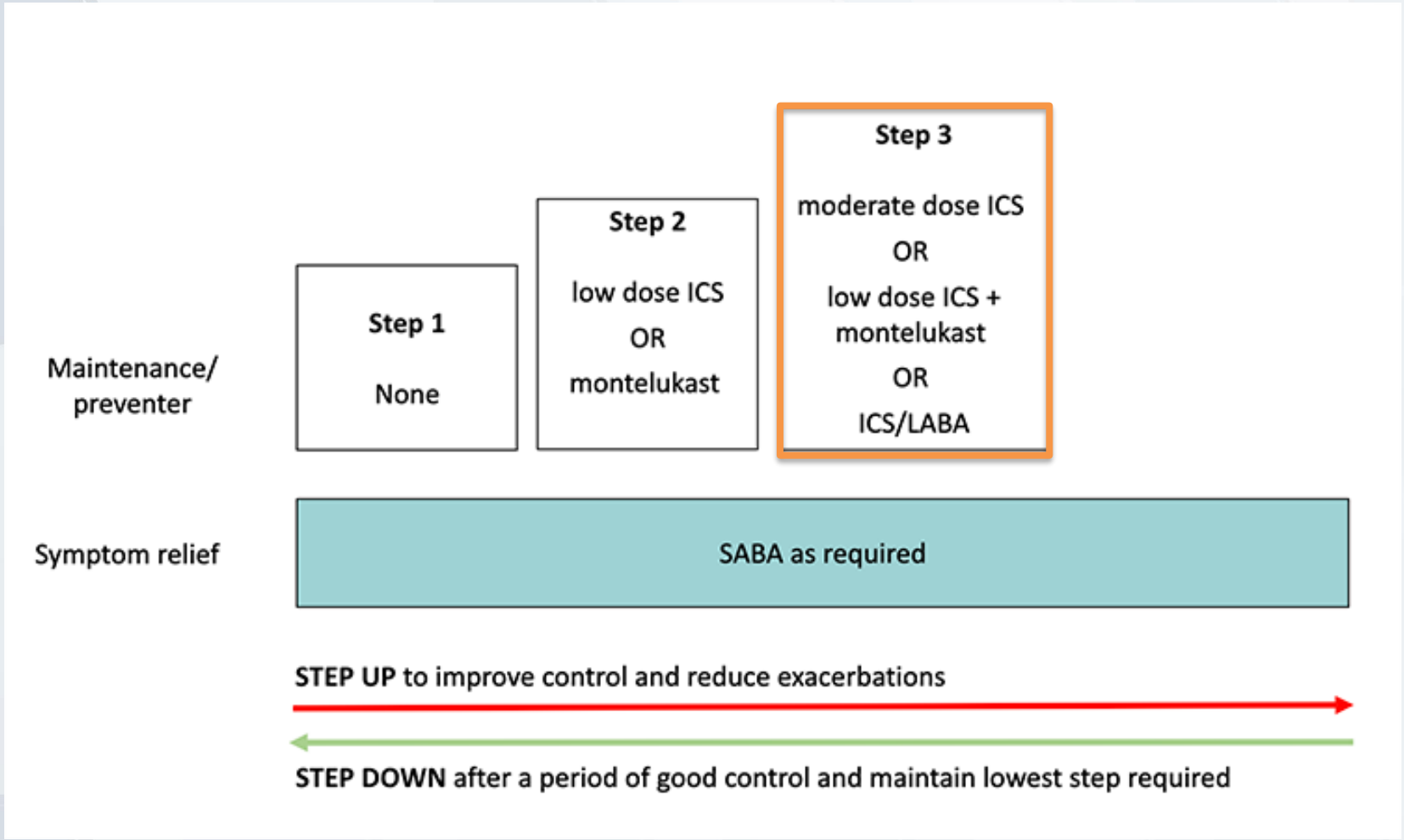
Step 3


Step 3
moderate dose ICS
OR
low dose ICS + montelukast
OR
ICS/LABA
Step 2
low dose ICS
OR
montelukast
Step 1
None
Maintenance/ preventer
Symptom relief
SABA as required
STEP UP to improve control and reduce exacerbations
STEP DOWN after a period of good control and maintain lowest step required

A 7yo child with poorly controlled asthma on low-moderate dose ICS. Which option is most effective step-up treatment?

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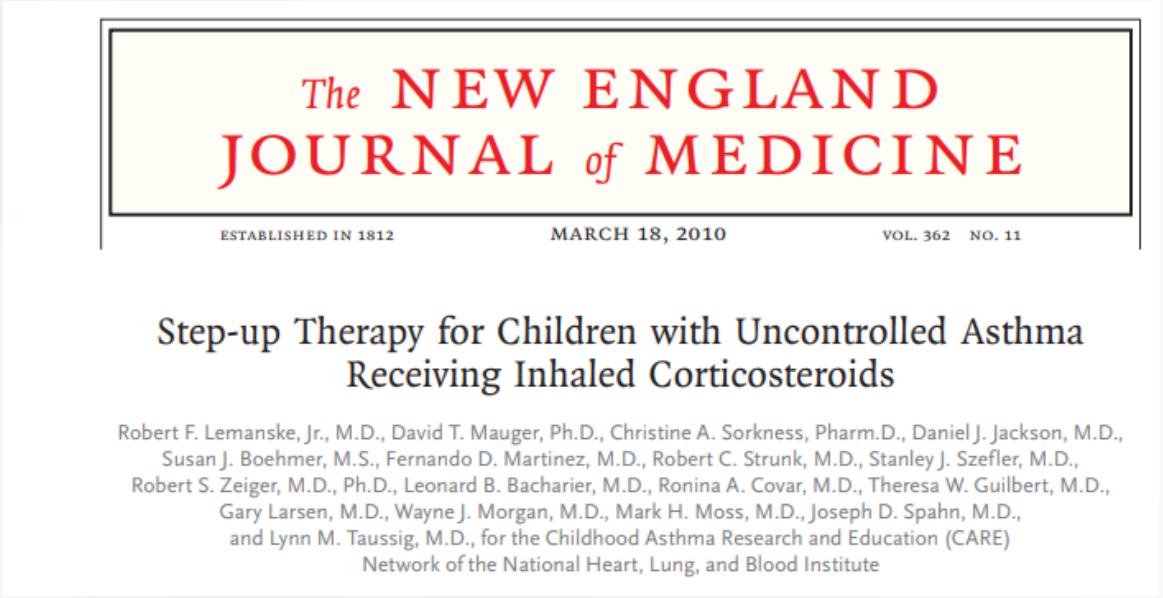
- ❑ Increase ICS dose
- ❑ ICS + montelukast
- ❑ ICS/LABA

Step up therapy


The NEW ENGLAND JOURNAL of MEDICINE

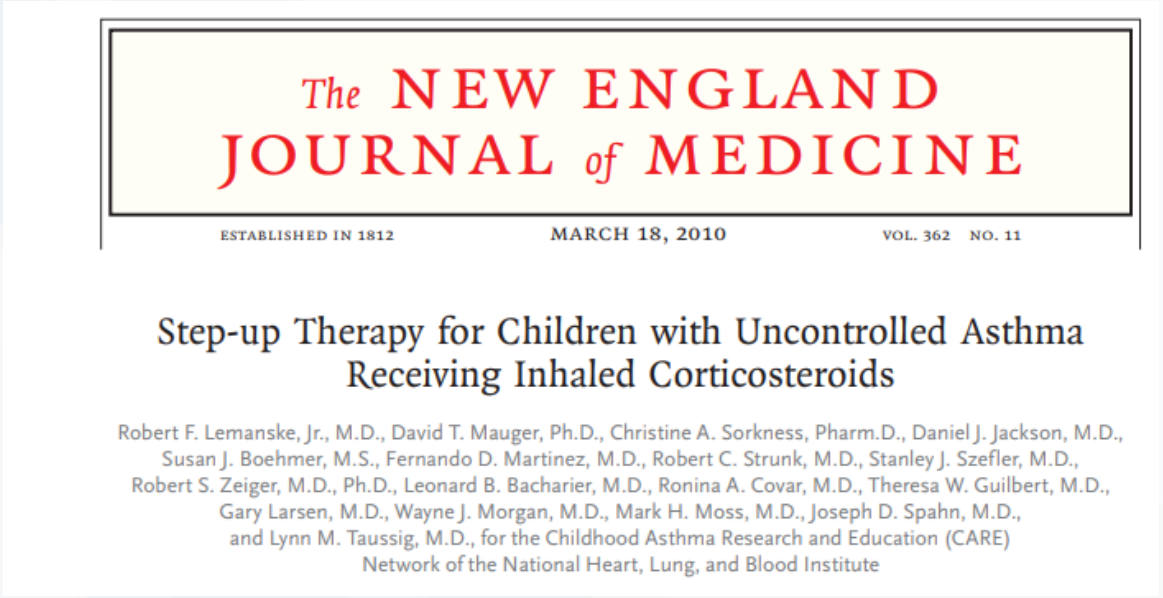
ESTABLISHED IN 1812 MARCH 18, 2010 VOL. 362 NO. 11

Step-up Therapy for Children with Uncontrolled Asthma Receiving Inhaled Corticosteroids

Robert F. Lemanske, Jr., M.D., David T. Mauger, Ph.D., Christine A. Sorkness, Pharm.D., Daniel J. Jackson, M.D., Susan J. Boehmer, M.S., Fernando D. Martinez, M.D., Robert C. Strunk, M.D., Stanley J. Szefler, M.D., Robert S. Zeiger, M.D., Ph.D., Leonard B. Bacharier, M.D., Ronina A. Covar, M.D., Theresa W. Guilbert, M.D., Gary Larsen, M.D., Wayne J. Morgan, M.D., Mark H. Moss, M.D., Joseph D. Spahn, M.D., and Lynn M. Taussig, M.D., for the Childhood Asthma Research and Education (CARE) Network of the National Heart, Lung, and Blood Institute

- 182 children 6-17yo
- Poorly controlled on fluticasone 100 mcg twice daily
- Intervention
  - Fluticasone 250 mcg twice daily (high dose ICS)
  - Fluticasone 100 mcg twice daily PLUS LABA (ICS/LABA)
  - Fluticasone 100 mcg twice daily PLUS montelukast (ICS + montelukast)

Step up therapy



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- Almost all children had a response to each of the step-up therapies
- Difficult to predict which children respond to which treatment

Step up therapy

- Patients 6-17yo
- Uncontrolled asthma on low dose ICS

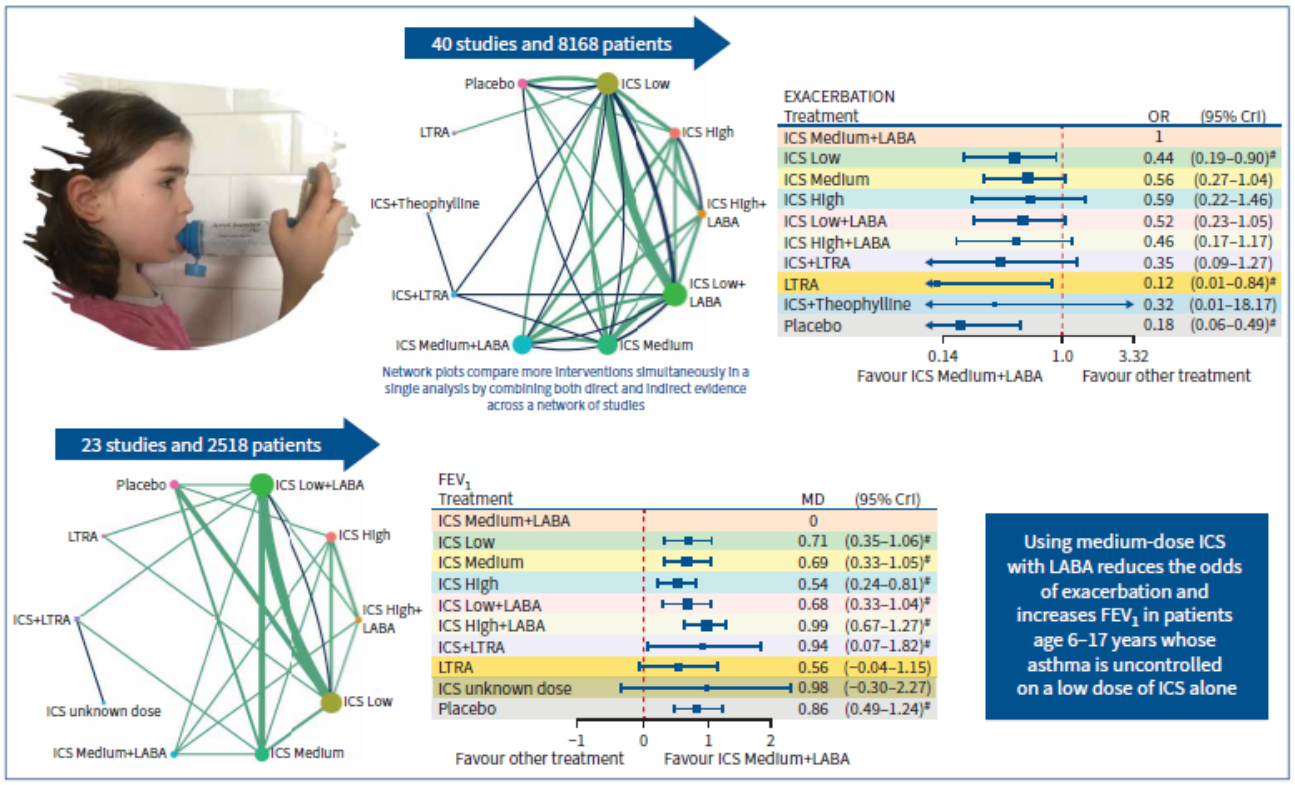
- Medium-dose ICS/LABA
  - Reduces the odds of exacerbation
  - Increases FEV1

EUROPEAN RESPIRATORY JOURNAL
ORIGINAL RESEARCH ARTICLE
S. CIVIDINI ET AL.

Best step-up treatments for children with uncontrolled asthma: a systematic review and network meta-analysis of individual participant data

Sofia Cividini, Ian Sinha, Sarah Donegan, Michelle Maden, Katie Rose, Olivia Fulton, Giovanna Culeddu, Dyfrig A. Hughes, Stephen Turner and Catrin Tudur Smith on behalf of the EINSTEIN Collaborative Group

https://doi.org/10.1183/13993003.01011-2023 Eur Respir J 2023; 62: 2301011



ICS/LABA combination

- Budesonide/formoterol MDI 100 microg/3 mcg, 2 puffs twice daily
  OR
- Budesonide/formoterol **DPI** 200 microg/6 mcg, 1 inhalation twice daily
  ()

ICS/LABA combination

Dry Powder Inhaler Use in Primary School Aged Children with Asthma: A Systematic Review

Stephanie L Kuek, Nicole X Wong, Stuart Dalziel, Lee Hatter, Louise Fleming, Andrew Bush, Richard Beasley, Shivanthan Shanthikumar

ERJ open research — THE BEST IN OPEN ACCESS BASIC, TRANSLATIONAL & CLINICAL RESPIRATORY RESEARCH

Please cite this article as: Kuek SL, Wong NX, Dalziel S, *et al*. Dry Powder Inhaler Use in Primary School Aged Children with Asthma: A Systematic Review. *ERJ Open Res* 2024; in press (https://doi.org/10.1183/23120541.00455-2024).

Conclusion

The majority of primary school aged children have the ability to use a DPI with adequate training, support and practice. Some younger children may have difficulties, and clinician assessment and ongoing review is crucial in determining which children are likely to benefit from a DPI. Consistent correct use and adherence remains a challenge, but this is also an issue with MDI plus spacer and does not appear to be significantly worse with DPI. Evidence of the use of DPI during acute illness is limited, and more studies are required in this setting.

ICS/LABA combination

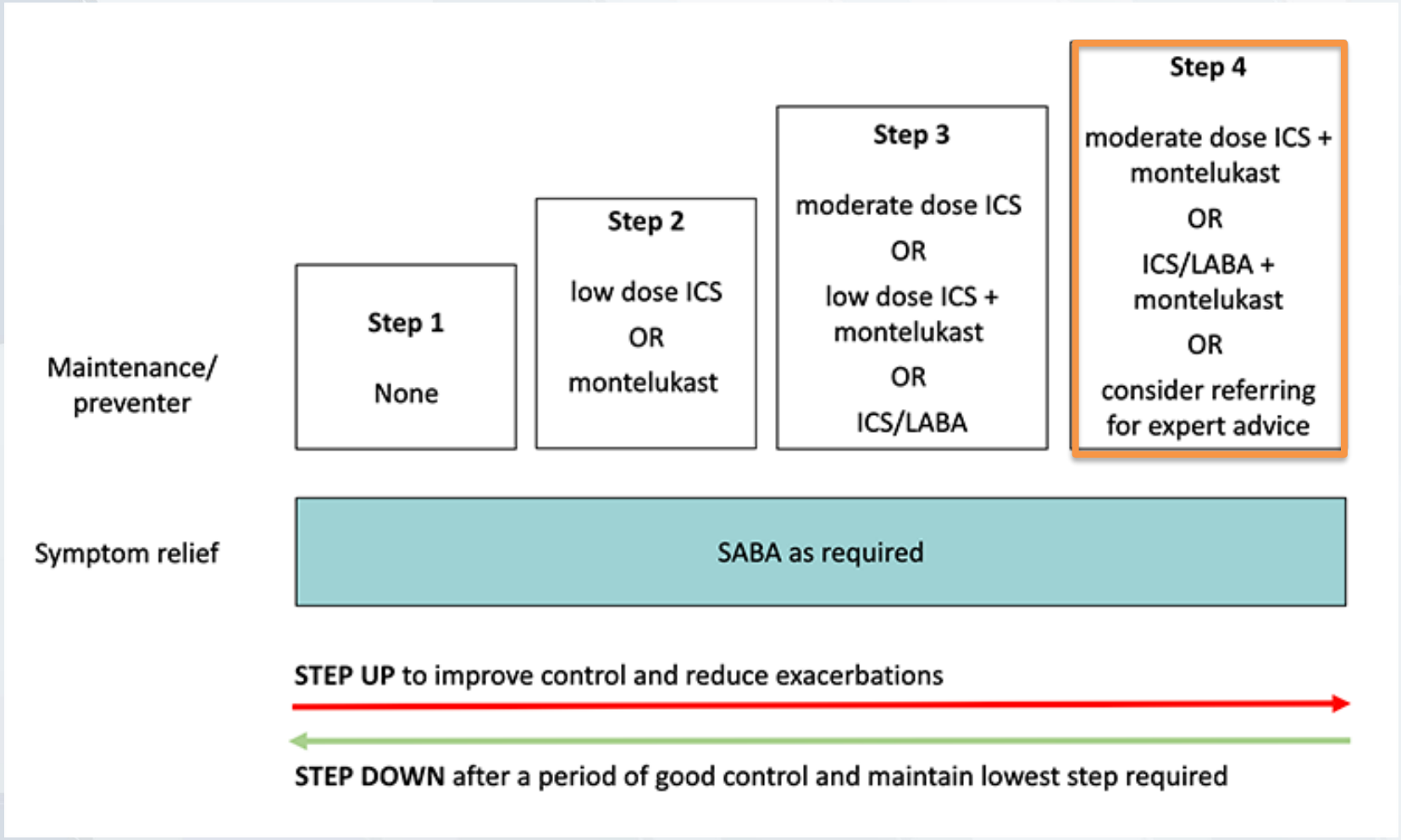
- Budesonide/formoterol MDI 100 microg/3 mcg, 2 puffs twice daily
  OR
- Budesonide/formoterol **DPI** 200 microg/6 mcg, 1 inhalation twice daily
  (

)

Prescribing:

- TGA registered for 12 years and older
- PBS restricted to paediatrican or respiratory physician for <12yo*
  - GP can prescribe ‘off label’ and by private script

Step 4


Step 1
None
Step 2
low dose ICS
OR
montelukast
Step 3
moderate dose ICS
OR
low dose ICS + montelukast
OR
ICS/LABA
Step 4
moderate dose ICS + montelukast
OR
ICS/LABA + montelukast
OR
consider referring for expert advice
Maintenance/ preventer
Symptom relief
SABA as required
STEP UP to improve control and reduce exacerbations
STEP DOWN after a period of good control and maintain lowest step required

Step 4: ICS/LABA combination

- Consider ICS/formoterol maintenance and reliever therapy (SMART) in children almost 12 years with poor adherence or high SABA use

Investigations

The Royal Children's Hospital Melbourne

Investigations: spirometry

- Children ~6-7 years and older are able to complete spirometry

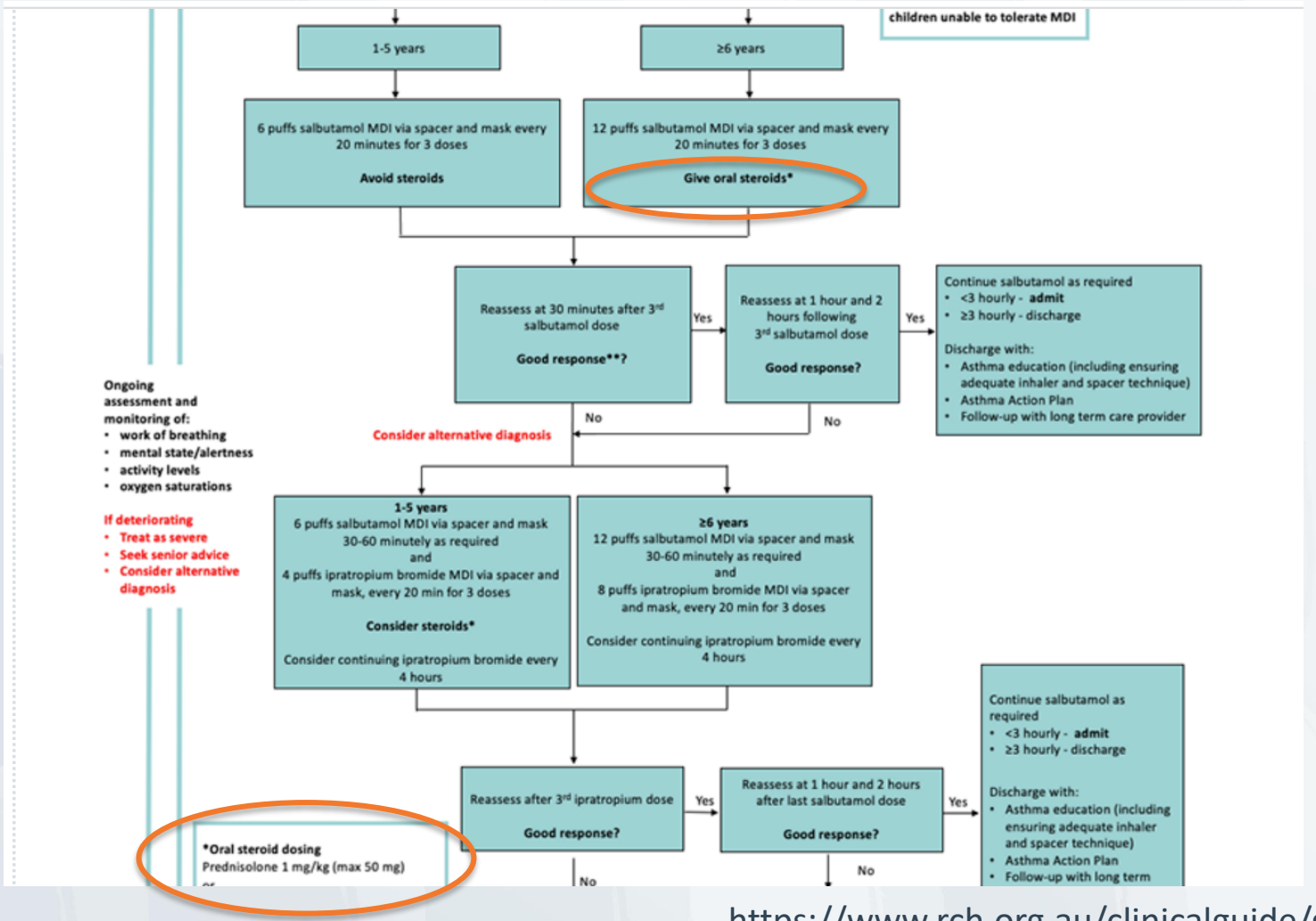
- Consider when
  - Considering alternative diagnosis
  - Severity is uncertain

Management of exacerbations

- Oral corticosteroids for moderate acute exacerbations

- Increasing preventer ICS is not effective in reducing chance of severe asthma exacerbations

Oral corticosteroids in moderate exacerbations



https://www.rch.org.au/clinicalguide/guideline_index/Asthma_Acute/

Increase ICS does not prevent severe exacerbations

'Increasing the inhaled corticosteroid dose did not prevent severe flare-ups, regardless of how soon the increase was initiated after the onset of symptoms or the magnitude of the dose increase (doubling versus quadrupling)' (Cochrane Review)

Table 2. Outcomes.*

Outcomes	Low-Dose Group (N=127)	High-Dose Group (N=127)	Treatment Effect (95% CI)†	P Value
Primary outcome				
No. of exacerbations per year (95% CI)	0.37 (0.25 to 0.55)	0.48 (0.33 to 0.70)	1.3 (0.8 to 2.1)	0.30
Secondary outcomes				
No. of emergency department or urgent care visits per year (95% CI)	0.47 (0.31 to 0.72)	0.64 (0.42 to 0.96)	1.3 (0.8 to 2.4)	0.30
No. of hospitalizations	0	4	—	0.12
Equivalent of hydrocortisone exposure — g/yr (95% CI)				
Fluticasone only	10.6 (10.4 to 10.9)	12.2 (11.9 to 12.4)	1.14 (1.10 to 1.19)	
Fluticasone and prednisone	11.1 (10.6 to 11.4)	12.8 (12.4 to 13.2)	1.16 (1.10 to 1.22)	
Growth — cm/yr (95% CI)				
Mean	5.65 (5.48 to 5.81)	5.43 (5.26 to 5.60)	−0.23 (−0.47 to 0.01)	0.06
Effect per 7-day exposure to high-dose regimen				
Overall	—	−0.07 (−0.17 to 0.03)	−0.07 (−0.17 to 0.03)	0.20
According to age group‡				
5–7 yr	—	−0.12 (−0.22 to −0.02)	−0.12 (−0.22 to −0.02)	0.02
8–11 yr	—	0.02 (−0.21 to 0.26)	0.02 (−0.21 to 0.26)	0.80

Kew, K. M., et al *Cochrane Database Syst Rev*. 2016
Jackson DJ. *N Engl J Med* 2018

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Jackson DJ. *N Engl J Med* 2018

	Preschool	Primary School	Adolescent
Acute Exacerbations			
Oral Prednisolone	No	Yes	Yes
Increase ICS dose	No	No	No (although will get more ICS if using Symbicort as Reliever)
Chronic Management			
Preferred Reliever	Salbutamol	Salbutamol	Budesonide/formoterol
Budesonide/ Formoterol as reliever	No	No	Yes
First Line Preventor	Fluticasone 50mcg	ICS	Budesonide/formoterol
Escalation Options	Increase FP dose Add in montelukast	Increase ICS dose Add in montelukast Swap to ICS/LABA	-

Adolescent Asthma

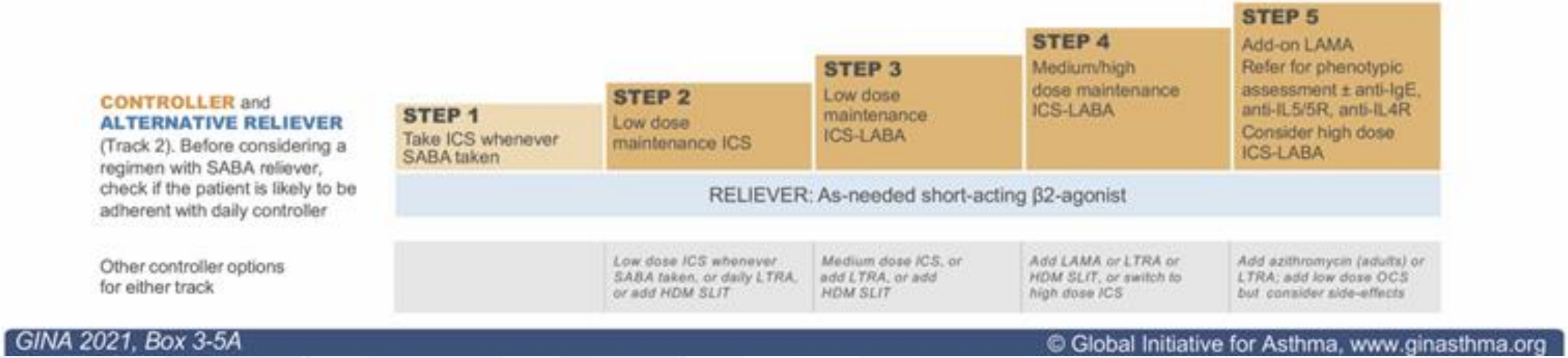
Advancing quality consistent care

Saturday 7 September 2024

RCH Complex Asthma Team and Improving Childhood Asthma Management Symposium

The Royal Children's Hospital Melbourne

Traditional Asthma Management



What is wrong with the traditional asthma management approach?

- Adolescents with asthma still die
- Asthma exacerbations remain a problem
- Under utilisation of ICS
- Over reliance on SABA

Regular SABA use

Is associated with ...

- Airway hyperresponsiveness
- Reduced bronchodilator effect
- Increased allergic response
- Increased eosinophils

This can lead to a vicious cycle encouraging overuse

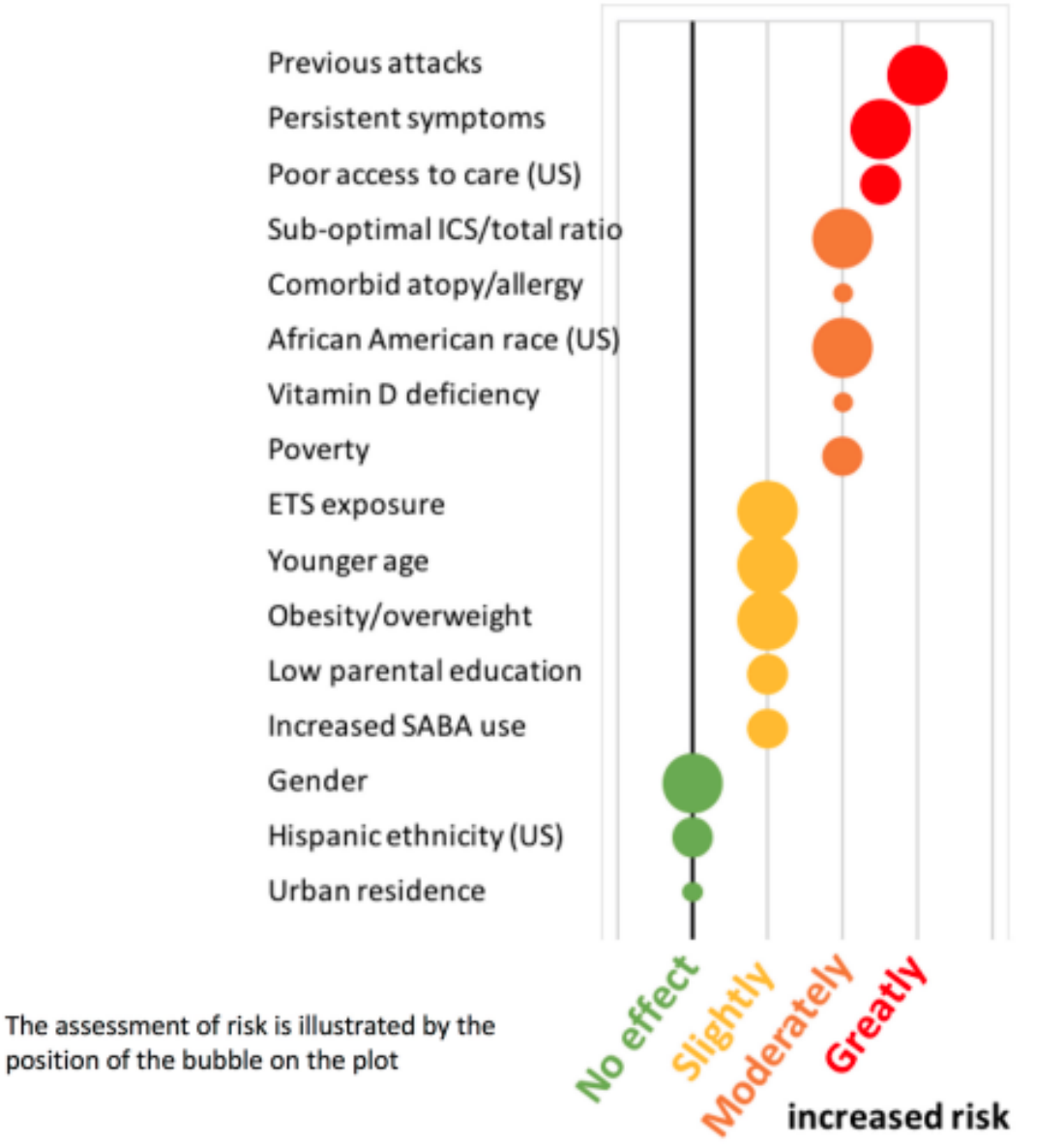
https://ginasthma.org/wp-content/uploads/2024/05/GINA-2024-Strategy-Report-24_05_22_WMS.pdf

Assessment of Risk

ORIGINAL ARTICLE

At-risk children with asthma (ARC): a systematic review

Audrey Buelo,[1] Susannah McLean,[1] Steven Julious,[2] Javier Flores-Kim,[1] Andy Bush,[3] John Henderson,[4] James Y Paton,[5] Aziz Sheikh,[1] Michael Shields,[6] Hilary Pinnock,[1] the ARC Group



The assessment of risk is illustrated by the position of the bubble on the plot

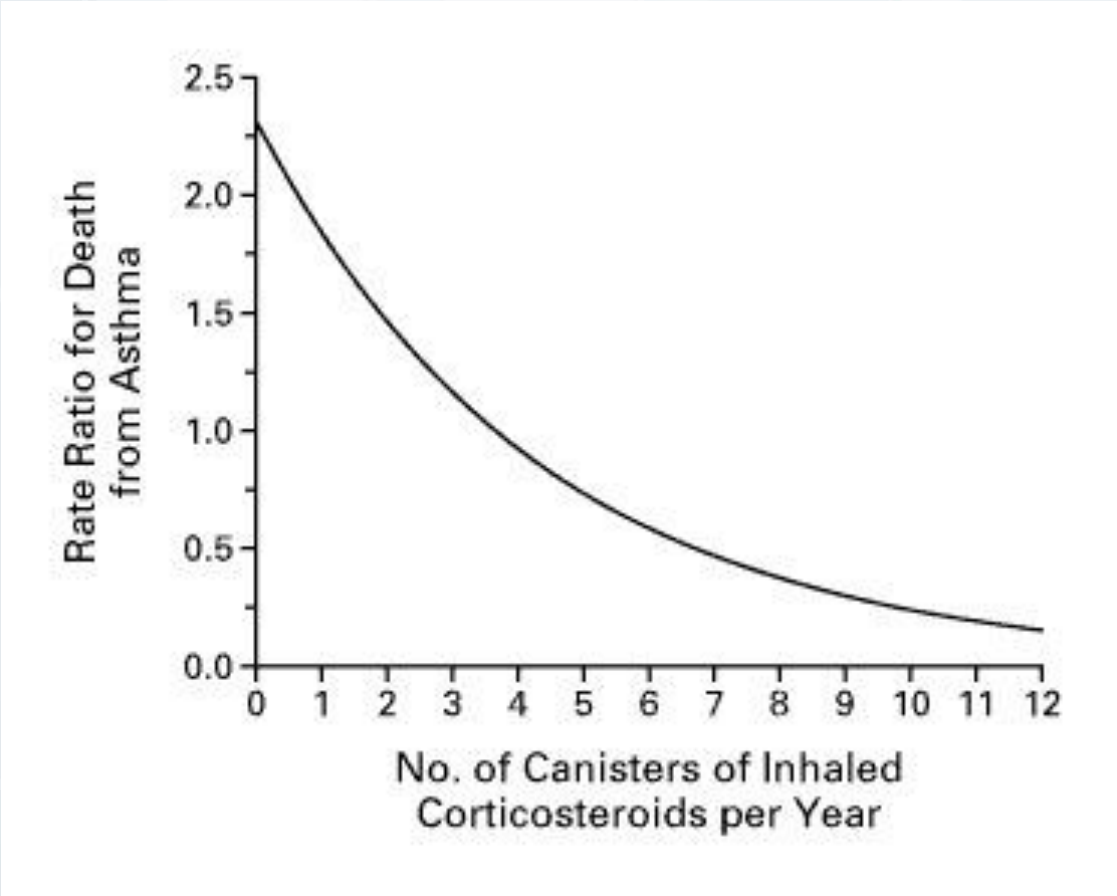
The size of the bubbles indicates the confidence with which the assessment was made.

ICS = inhaled corticosteroid; SABA = short-acting beta$_2$ agonist; ETS = environmental tobacco smoke

ORIGINAL ARTICLE

Low-Dose Inhaled Corticosteroids and the Prevention of Death from Asthma

Samy Suissa, Ph.D., Pierre Ernst, M.D., Serge Benayoun, M.Sc., Marc Baltzan, M.D., and Bing Cai, M.Sc. 2000



Alternative:

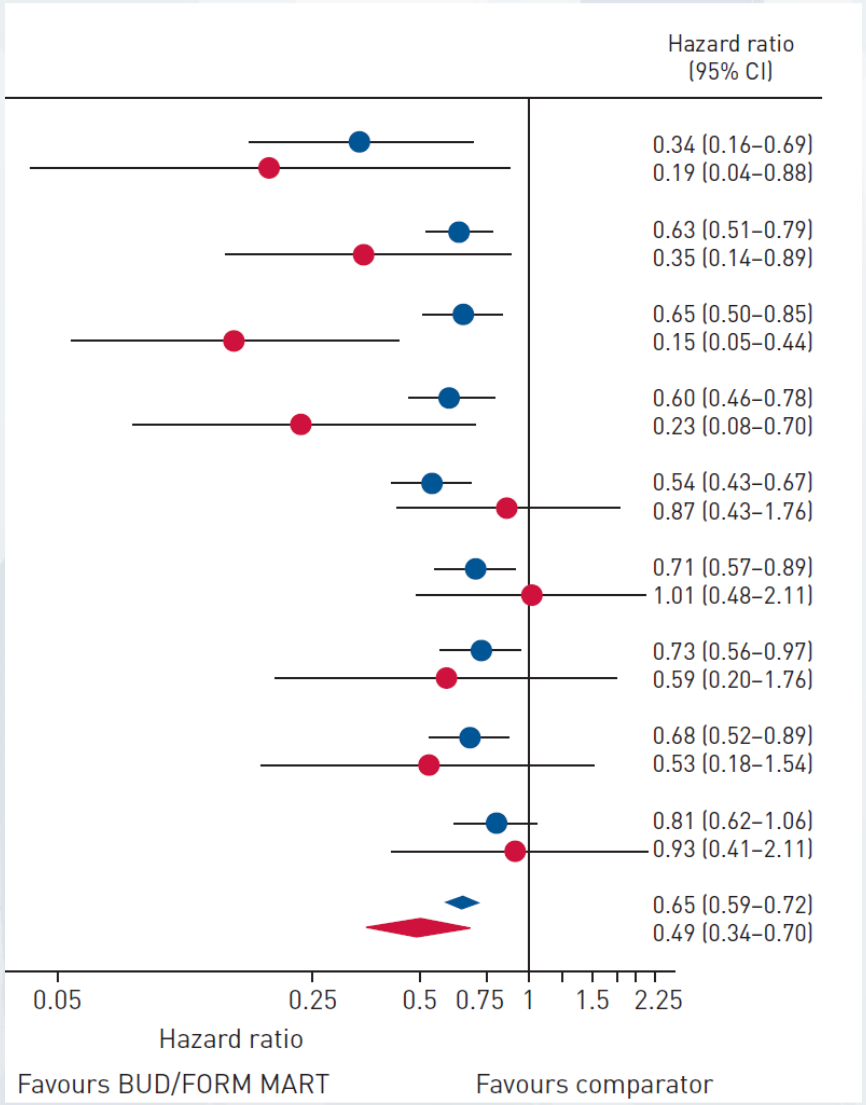
Anti-inflammatory Reliever Approach

Moderate – Severe Asthma

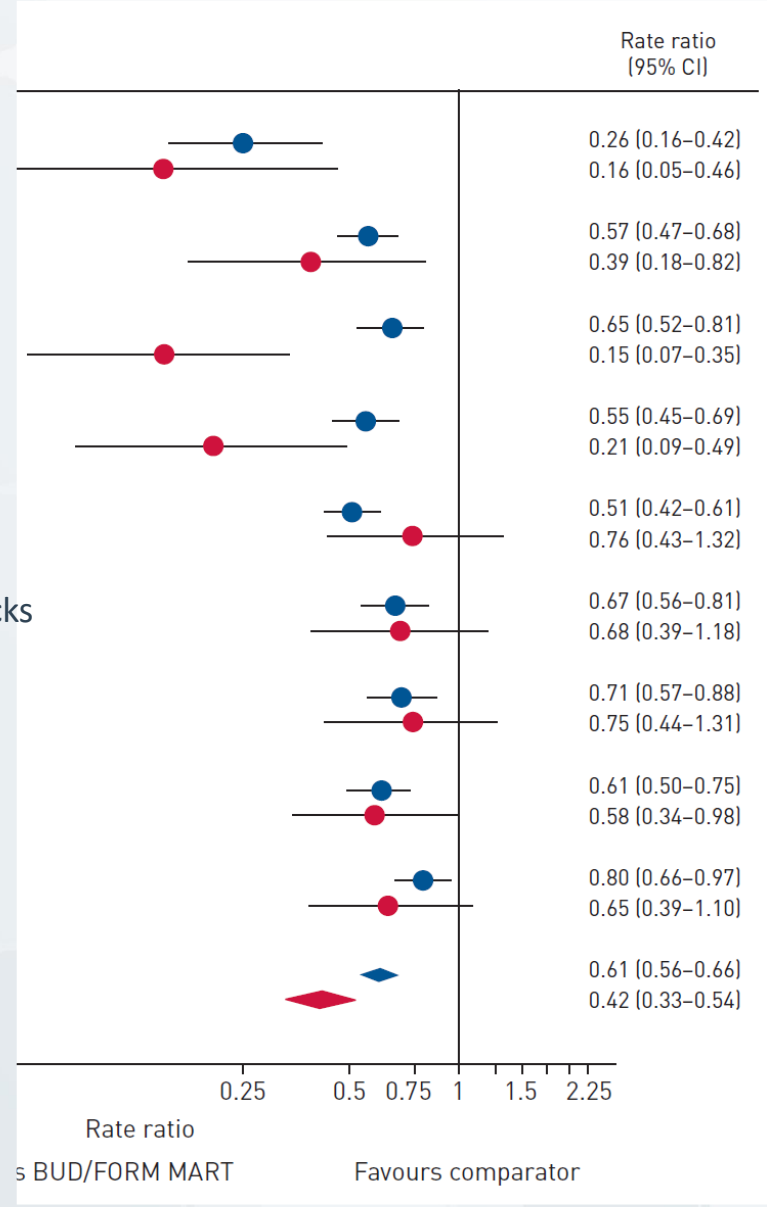
Adults

Adolescents

Time to 1st attack



Number of Severe Attacks



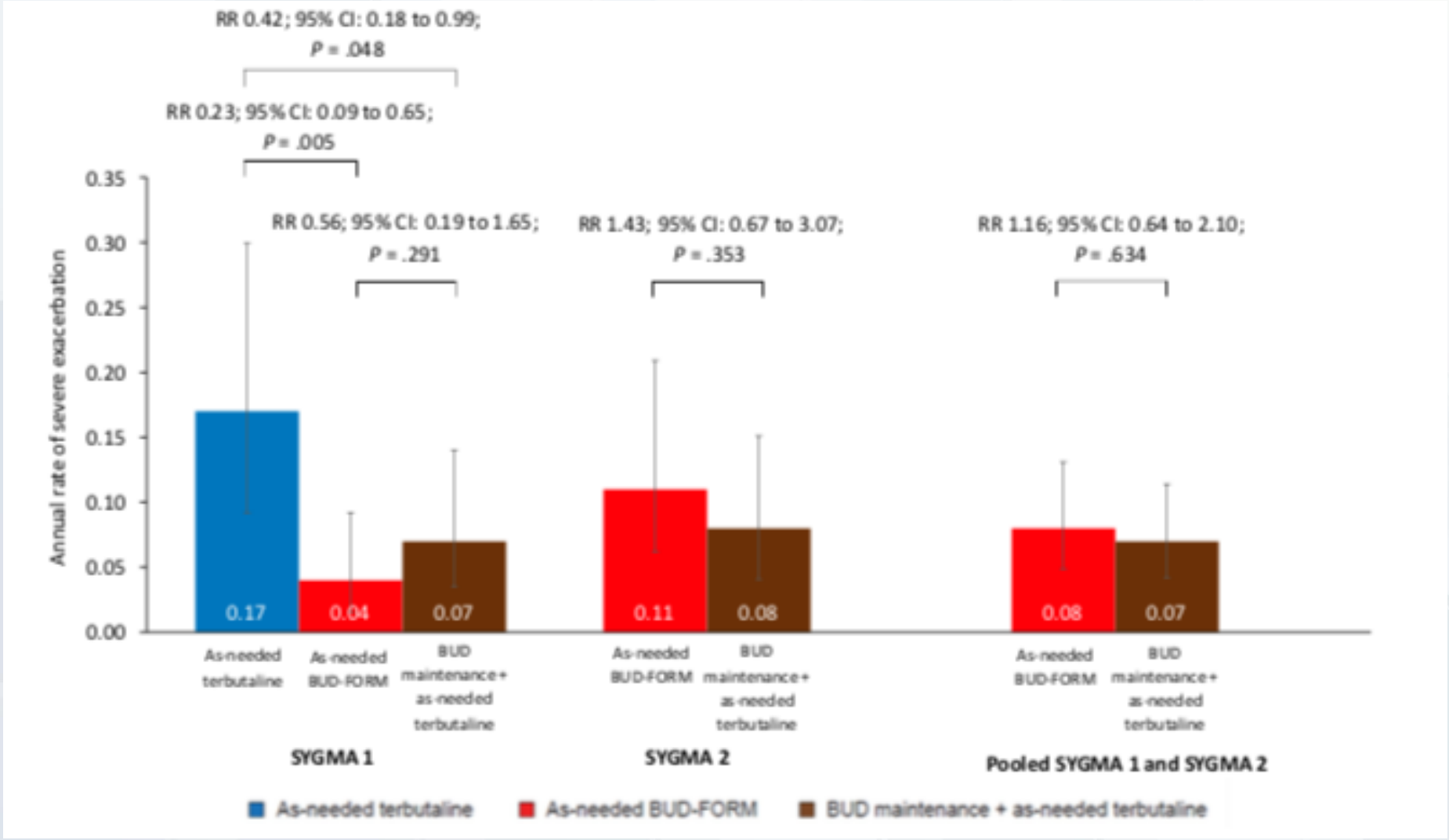
Carin Jorup, Dan Lythgoe, Hans Bisgaard
European Respiratory Journal 2018 51: 1701688; **DOI:** 10.1183/13993003.01688-2017

Mild Asthma

Original Article

Efficacy and Safety of As-Needed Budesonide-Formoterol in Adolescents with Mild Asthma

Helen K. Reddel, PhD[a], Paul M. O'Byrne, MB[b], J. Mark FitzGerald, MD[c], Peter J. Barnes, MD[d], Jinping Zheng, MD[e], Stefan Ivanov, MD[f], Rosa Lamarca, PhD[g], Margareta Puu, PhL[f], Vijay K.T. Alagappan, PhD[h], and Eric D. Bateman, MD[i]



Total ICS exposure in AIR therapy

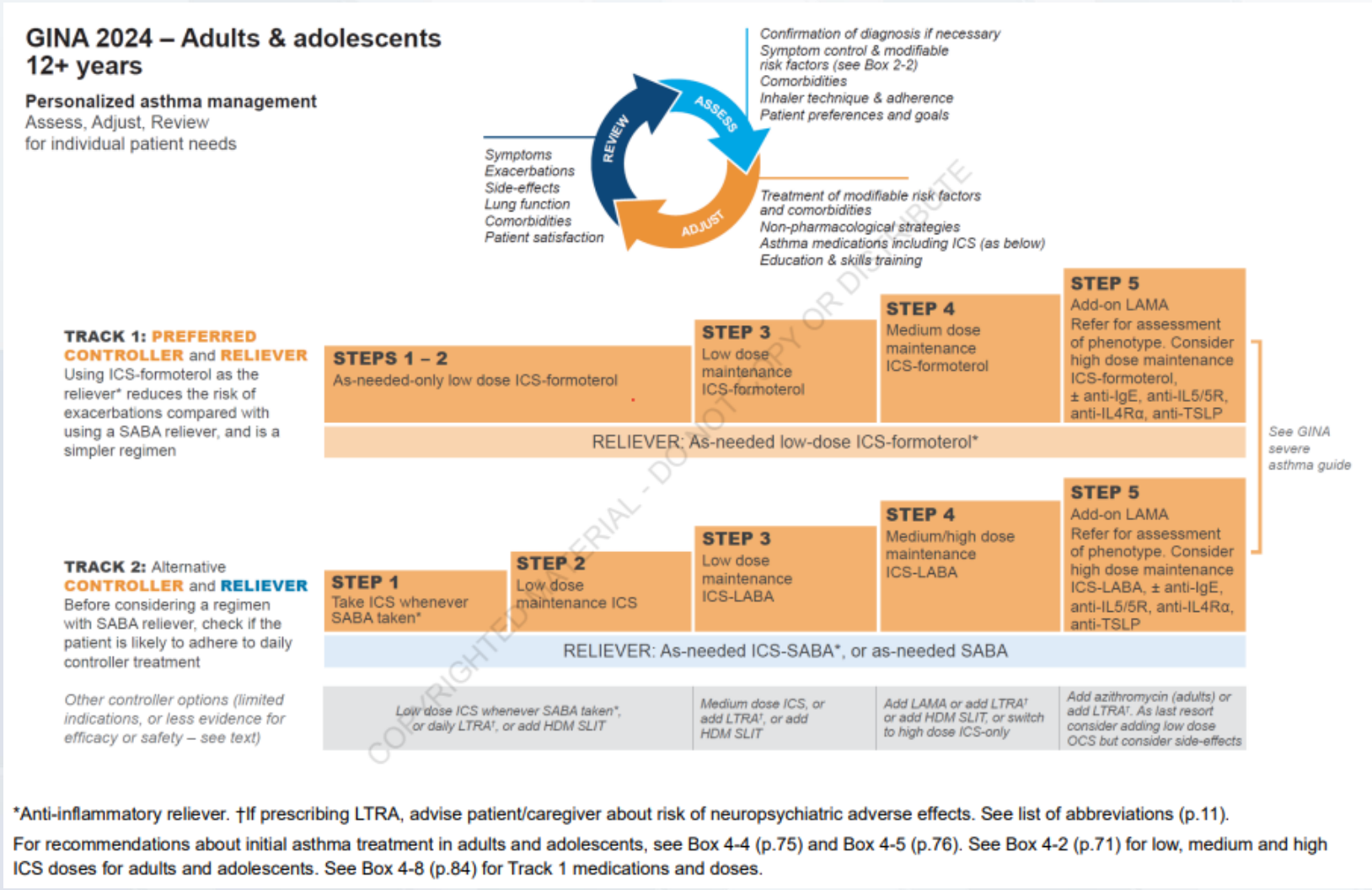
The ICS/Formoterol Reliever Therapy Regimen in Asthma: A Review

Richard Beasley DSc [a b c], Pepa Bruce MBBS [a], Claire Houghton MBBS [a], Lee Hatter MBBS [a c]

The Journal of Allergy and Clinical Immunology: In Practice
Volume 11, Issue 3, March 2023, Pages 762-772.e1

- In mild asthma, the exposure to ICS is between 42% and 83% lower with ICS/formoterol reliever alone compared with maintenance ICS plus SABA (mean difference, −177 µg/d inhaled budesonide).

Current GINA Guidance



*Anti-inflammatory reliever. †If prescribing LTRA, advise patient/caregiver about risk of neuropsychiatric adverse effects. See list of abbreviations (p.11).

For recommendations about initial asthma treatment in adults and adolescents, see Box 4-4 (p.75) and Box 4-5 (p.76). See Box 4-2 (p.71) for low, medium and high ICS doses for adults and adolescents. See Box 4-8 (p.84) for Track 1 medications and doses.

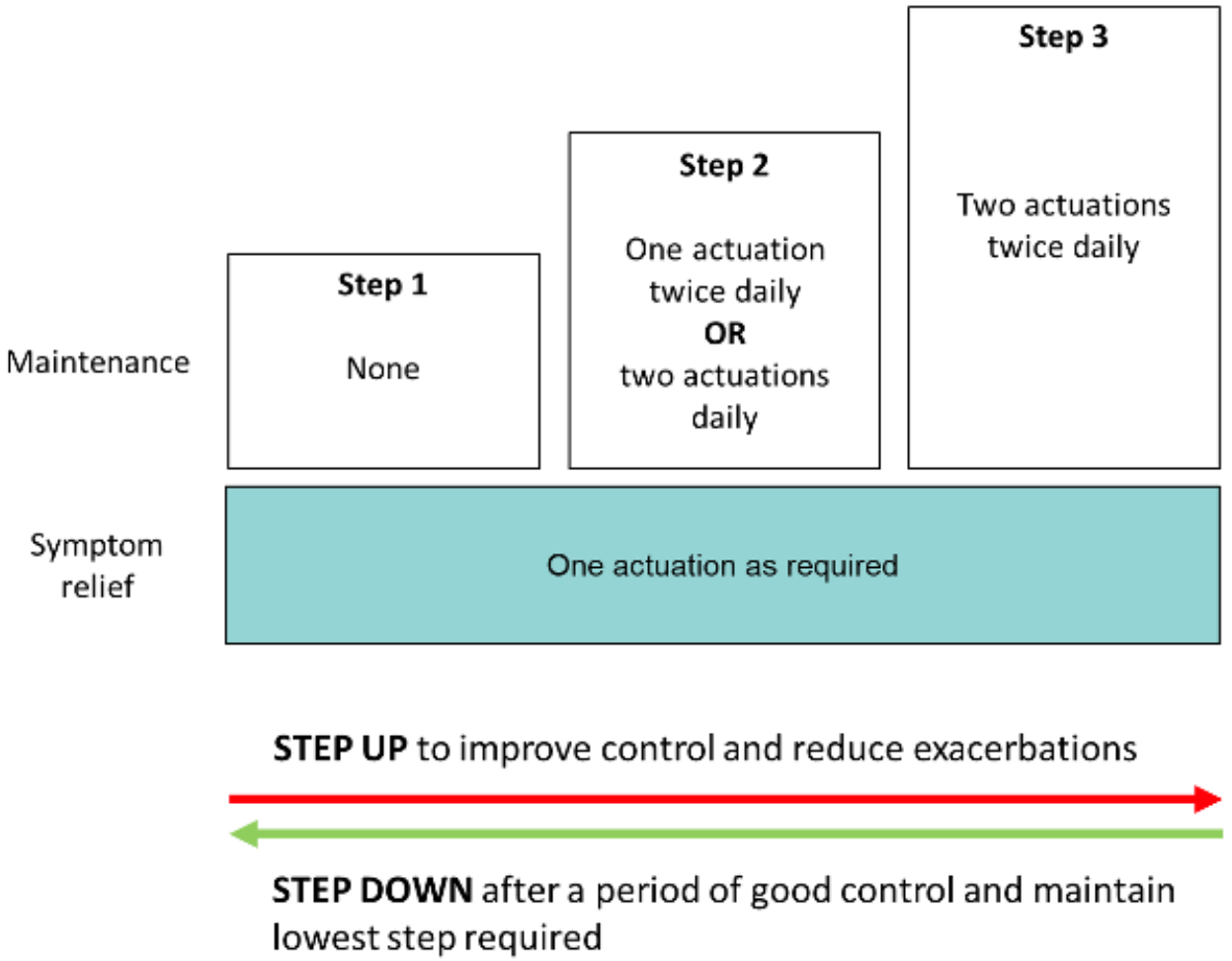
Clinical Practice Guideline

Key points

- Any adolescent with asthma should be on a treatment regimen that includes an ICS. Prescribing SABA treatment (ie salbutamol) alone is no longer recommended
- For most adolescents with asthma, treatment can be started with as-needed combination of ICS / LABA
- Traditional treatment with SABA and inhaled ICS is also effective and should not be changed without consulting the adolescent's care team or a senior clinician
- Treatment can be stepped up and down according to response. Never cease an adolescent's ICS completely *(never give a SABA alone!)*
- Always check inhaler technique and adherence before dose adjustment

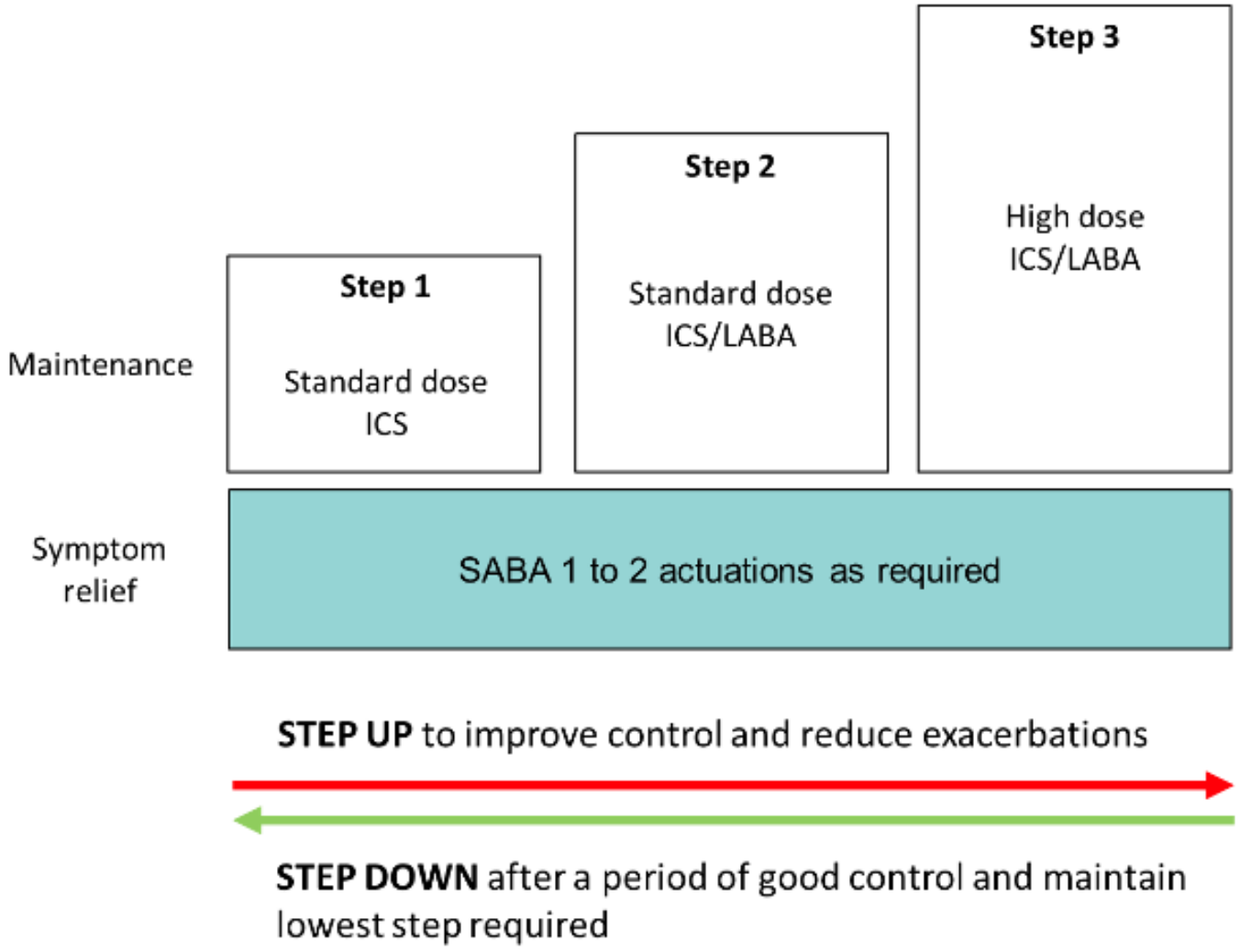
https://www.rch.org.au/clinicalguide/guideline_index/Asthma_in_adolescents_(12_years_and_over)/

Anti-inflammatory reliever-based regimen (budesonide/formoterol 200 mcg/6 mcg)



Adapted from Beasely R, et al[1] and GINA Pocket Handbook 2021[8]

Traditional SABA as reliever plus ICS as preventer-based regimen



Adapted from Beasely R, et al[1] and GINA Pocket Handbook 2021[8]

SMART Asthma Action Plan

My Symbicort (budesonide/formoterol) Rapihaler 100/3 Asthma Action Plan

Anti-inflammatory Reliever
With or without Maintenance

Name: _____

Date: _____

Plan discussed with: (name of health care professional) _____

My usual best peak flow (if used): _____ l/min

National Asthma Council AUSTRALIA

Usual Medical Contact: Name and telephone number _____

NORMAL MODE

MY SYMBICORT ASTHMA TREATMENT IS:

- ☐ Symbicort Rapihaler 100/3 mcg
- ☐ Use with a spacer

RELIEVER

I should take 2 separate puffs (1 at a time) of my Symbicort whenever needed for relief of my asthma symptoms

I should always carry my Symbicort with me to use as a reliever when needed

MY REGULAR MAINTENANCE TREATMENT EVERY DAY IS : *(enter number of puffs or 0 if no regular daily treatment prescribed)*

_____ Puffs in the morning (0, 2, 4)

_____ Puffs in the evening (0, 2, 4)

MY ASTHMA IS STABLE IF:

- I do not wake up at night or in the morning because of asthma
- My asthma has not interfered with my usual activities (e.g housework, school, exercise)

OTHER INSTRUCTIONS
(e.g. what to do before exercise, when to see my doctor)

ASTHMA FLARE UP

IF OVER A PERIOD OF 2–3 DAYS:

- My asthma symptoms are getting worse or not improving
  OR
- I am using more than to 12 Symbicort reliever puffs a day
  OR
- Peak flow below: _____ (delete if not used)

I SHOULD:

- ✓ **Continue to use my Symbicort to relieve my symptoms and my regular daily Symbicort (if prescribed) (up to a total maximum of 24 puffs in a day)**
- ☐ Contact my doctor
- ☐ Start a course of prednisolone

COURSE OF PREDNISOLONE TABLETS:

Take _____ mg prednisolone tablets each morning for _____ days; OR

IF I NEED MORE THAN 24 SYMBICORT PUFFS (TOTAL) IN ANY DAY,

- I must see my doctor or go to hospital the same day

ASTHMA EMERGENCY

SIGNS OF AN ASTHMA EMERGENCY

- My asthma symptoms are getting worse quickly
- I am finding it very hard to breathe or speak
- My Symbicort is not helping

IF I HAVE ANY OF THE ABOVE DANGER SIGNS, I SHOULD DIAL 000 FOR AN AMBULANCE AND SAY I AM HAVING A SEVERE ASTHMA ATTACK.

WHILE I AM WAITING FOR THE AMBULANCE:

- Sit upright and keep calm
- I should keep taking my Symbicort as needed
- If only Ventolin® is available, take 4 puffs as often as needed until help arrives
- Even if my symptoms appear to settle quickly I should seek medical advice right away
- ☐ Use my adrenaline autoinjector

OTHER INSTRUCTIONS

My Symbicort (budesonide/formoterol) Turbuhaler 200/6 Asthma Action Plan

Anti-inflammatory Reliever
With or without Maintenance

Name: _____

Date: _____

Plan discussed with: (name of health care professional) _____

My usual best peak flow (if used): _____ l/min

National Asthma Council AUSTRALIA

Usual Medical Contact: Name and telephone number _____

NORMAL MODE

MY SYMBICORT ASTHMA TREATMENT IS:

- ☐ Symbicort Turbuhaler 200/6 mcg

RELIEVER

I should take 1 inhalation of my Symbicort whenever needed for relief of my asthma symptoms

I should always carry my Symbicort with me to use as a reliever when needed

MY REGULAR MAINTENANCE TREATMENT EVERY DAY IS : *(enter number of inhalations or 0 if no regular daily treatment prescribed)*

_____ Inhalation(s) in the morning (0, 1, 2)

_____ Inhalation(s) in the evening (0, 1, 2)

MY ASTHMA IS STABLE IF:

- I do not wake up at night or in the morning because of asthma
- My asthma has not interfered with my usual activities (e.g housework, school, exercise)

OTHER INSTRUCTIONS
(e.g. what to do before exercise, when to see my doctor)

ASTHMA FLARE UP

IF OVER A PERIOD OF 2–3 DAYS:

- My asthma symptoms are getting worse or not improving
  OR
- I am using more than 6 Symbicort reliever inhalations a day
  OR
- Peak flow below: _____ (delete if not used)

I SHOULD:

- ✓ **Continue to use my Symbicort to relieve my symptoms and my regular daily Symbicort if prescribed (up to a maximum total of 12 inhalations in a day)**
- ☐ Contact my doctor
- ☐ Start a course of prednisolone

COURSE OF PREDNISOLONE TABLETS:

Take _____ mg prednisolone tablets each morning for _____ days; OR

IF I NEED MORE THAN 12 SYMBICORT INHALATIONS (TOTAL) IN ANY DAY,

- I must see my doctor or go to hospital the same day

ASTHMA EMERGENCY

SIGNS OF AN ASTHMA EMERGENCY

- My asthma symptoms are getting worse quickly
- I am finding it very hard to breathe or speak
- My Symbicort is not helping

IF I HAVE ANY OF THE ABOVE DANGER SIGNS, I SHOULD DIAL 000 FOR AN AMBULANCE AND SAY I AM HAVING A SEVERE ASTHMA ATTACK.

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- Even if my symptoms appear to settle quickly I should seek medical advice right away
- ☐ Use my adrenaline autoinjector

OTHER INSTRUCTIONS

Summary

- Anti-inflammatory reliever (AIR) therapy overcomes several issues with current adolescent asthma management
- It is evidence based and hence is the preferred management approach
- There is also an excellent video summarising the evidence and rationale for AIR therapy at the link below
- https://www.youtube.com/watch?v=x5mo4kTfIKk

	Preschool	Primary School	Adolescent
Acute Exacerbations			
Oral Prednisolone	No	Yes	Yes
Increase ICS dose	No	No	No (although will get more ICS if using Symbicort as Reliever)
Chronic Management			
Preferred Reliever	Salbutamol	Salbutamol	Budesonide/formoterol
Budesonide/ Formoterol as reliever	No	No	Yes
First Line Preventor	Fluticasone 50mcg	ICS	Budesonide/formoterol
Escalation Options	Increase FP dose Add in montelukast	Increase ICS dose OR Add in montelukast OR Swap to ICS/LABA	-

Community Asthma Program
Nurse led breakout rooms

Consumer Perspective – Soa Dang

Facilitated by Dr Kirsty Tamis

ICAM
SYMPOSIUM

Now let's hear from our consumer Soa

Disclaimer: This video includes the voice of an interpreter

ASTHMA CARE
CONSUMER PERSPECTIVE

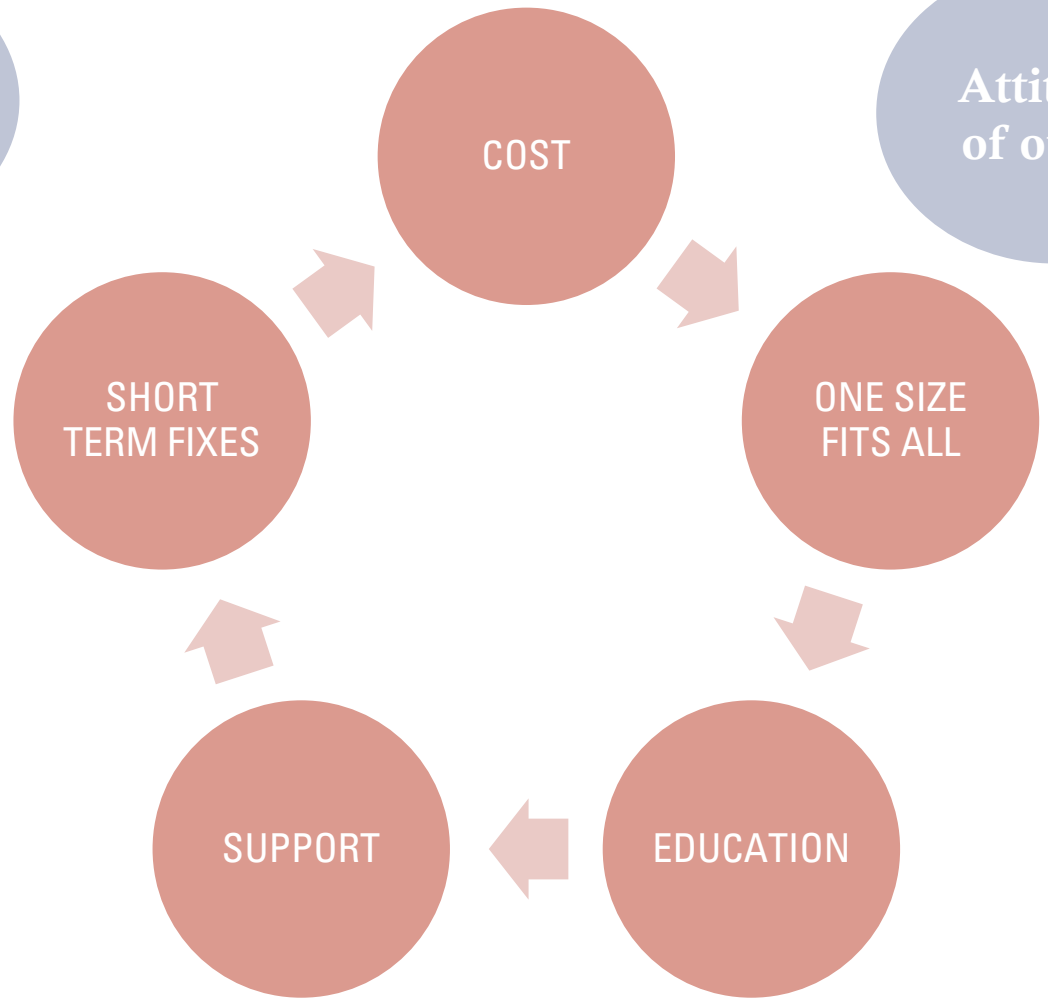
ICAM Consumer Representative
Anna-Marie Restall

Holding onto Mum

GP Visit

Emergency

CHALLENGES



Prematurity

Attitudes of others

Relationship challenges

Career

Does my child still have Asthma?

Mental Health

Financial Stress

Carer's physical health

Holding onto Mum

GP Visit

Emergency

WHAT WORKED?

Understanding that I'm the advocate

Preventor medication

Taking notes

Understanding my child's triggers

Having a GP I trust

THINGS TO CONSIDER

Empower Patients

Language

Bias

Teach back

- a simple yet effective educational tool used to check understanding

Unconscious bias toolkit

Australian and New Zealand College of Anaesthetists & Faculty of Pain Medicine

Afternoon tea & Break

Please be back by 2:30pm

Epidemic Thunderstorm Asthma

Dr Danny Csutoros

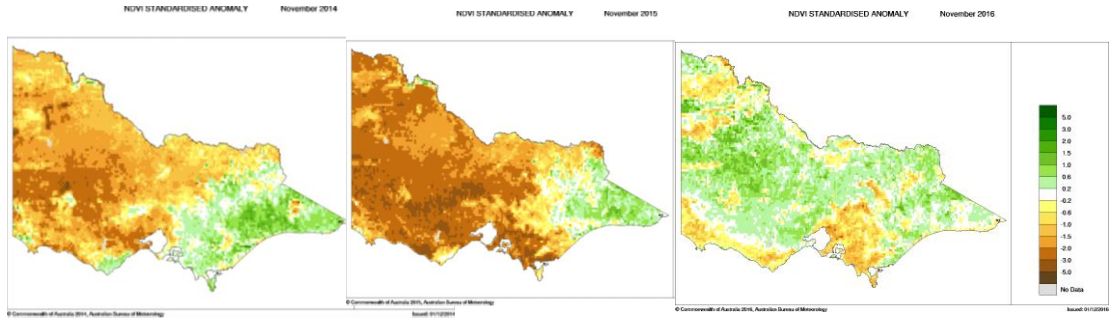
VICTORIA State Government | Department of Health

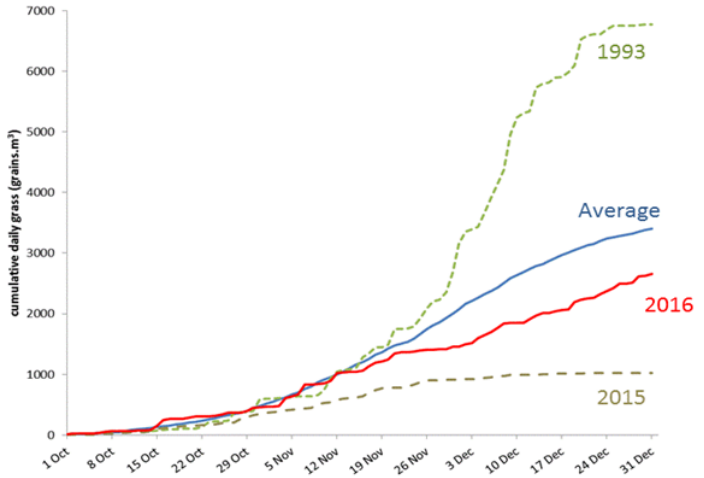
Epidemic Thunderstorm Asthma

- Largest epidemic thunderstorm asthma event occurred in Melbourne, 21 November 2016
- Unprecedented in size, acuity and impact
- Not a scenario that was ever contemplated let alone exercised
- It had impacts across all of Melbourne and Geelong but increase asthma admissions noted in Ballarat and Warrigal
- We now know what can happened and we are preparing for the next one

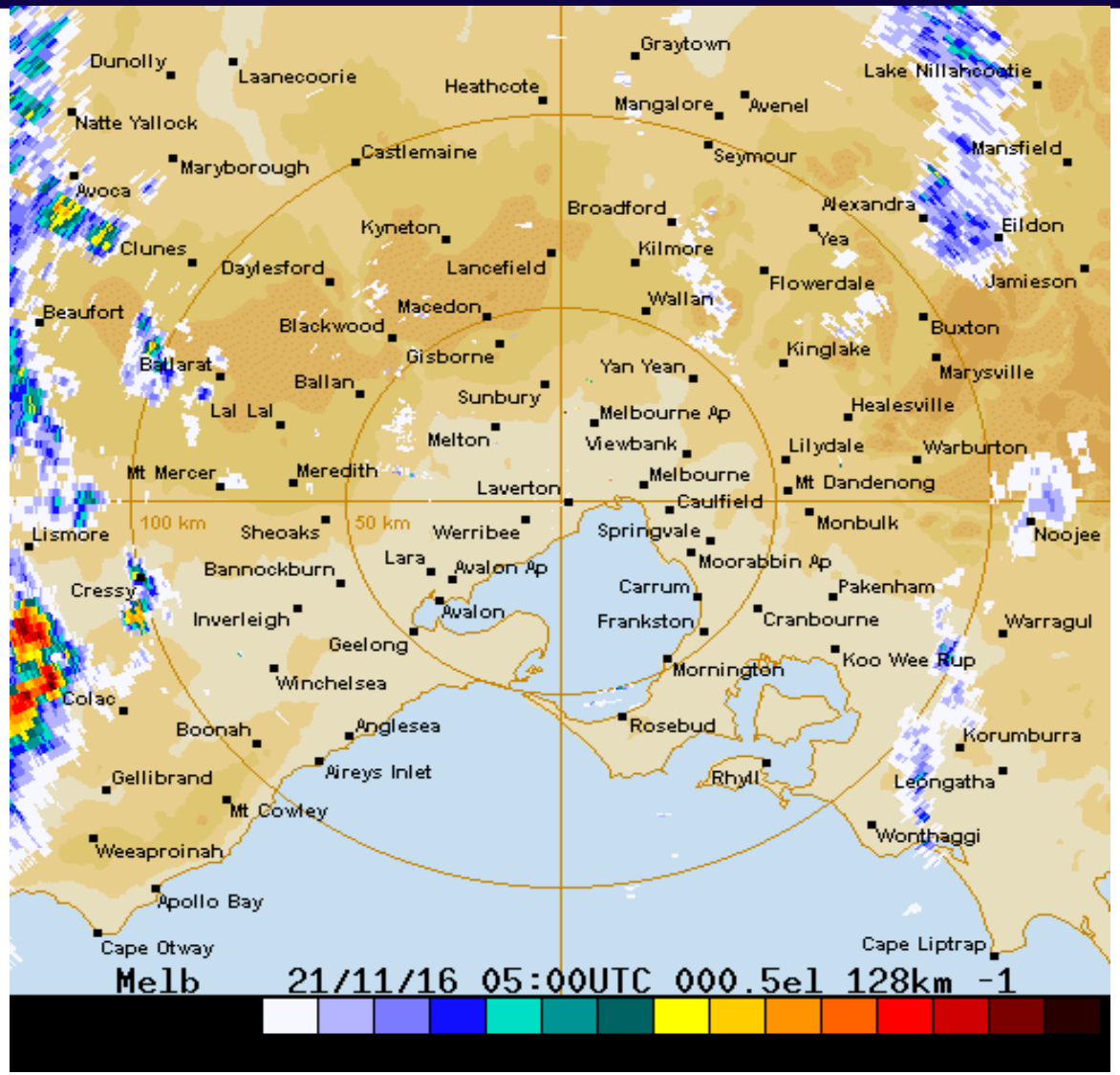
What happened on 21 Nov 2016?

- European grazing animal ate the native grass, replaced with grass from the northern hemisphere - rye grass is largest fodder crop
- 2015 very low pollen season in but 2016 saw the wettest September on record and large grass growth in Spring
- 2016 seemed an average grass pollen season
- Admissions for asthma were a little elevated above average for the early parts November





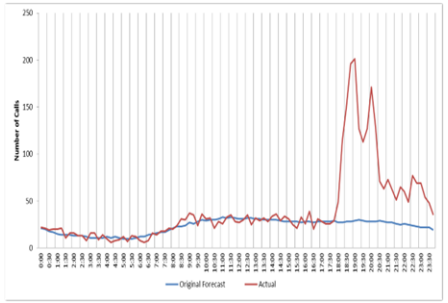
BoM Radar - 21 November 2016

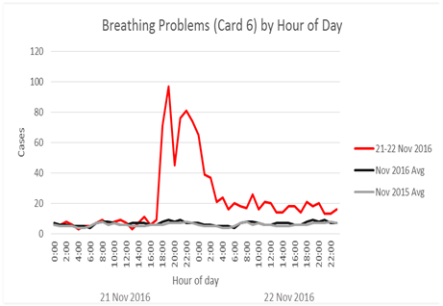


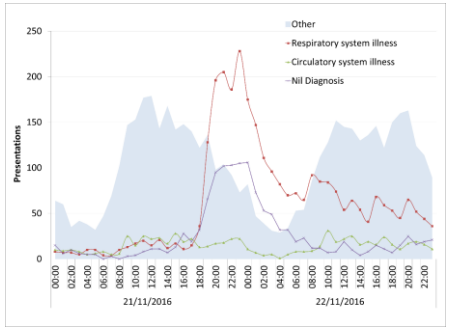

2016-11-21_13_48-59
ESTA 000 call:
No alarm:
Alarm:
50km
.YEA
.ALX
.KTN
.KIM
.DFD
.CWK
.MCD
.WHT
.KING
.SBU
.BALN
.HEA
.BCMS
Northern
Sunshine
Austin
Box Hill
Maroondah
Alfred
Angliss
Monash
Sandringham
Casey
.CSY
.BKB
.PAK
.CRAN
Frankston
.KWR
.WCS
.OCEA
.CLC
Rosebud
.WON

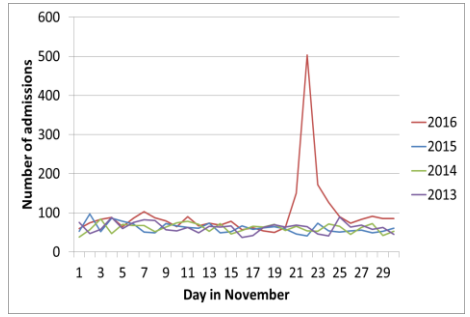
Health System Impacts

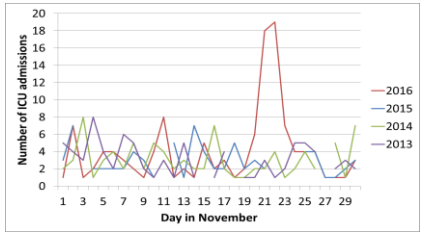
- Sudden rise in 000 calls, ambulance cases, ED presentations, admissions (incl. ICU)
  - 1626 more calls to ESTA
  - 814 ambulance cases generates in six hrs from 6pm (643 code 1)
- Compared to 3-year average in the 30 hrs from 6pm in Melbourne & Geelong
  - 3365 excess reparatory related ED presentations
  - 476 excess asthma admissions
  - 30 excess ICU admission
  - 10 deaths
- General Practice
  - Estimated to have 10,000 extra asthma attendances between 21 – 23 November

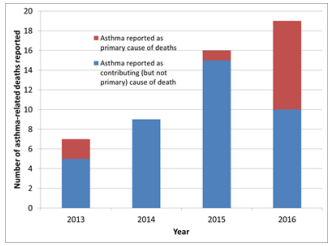




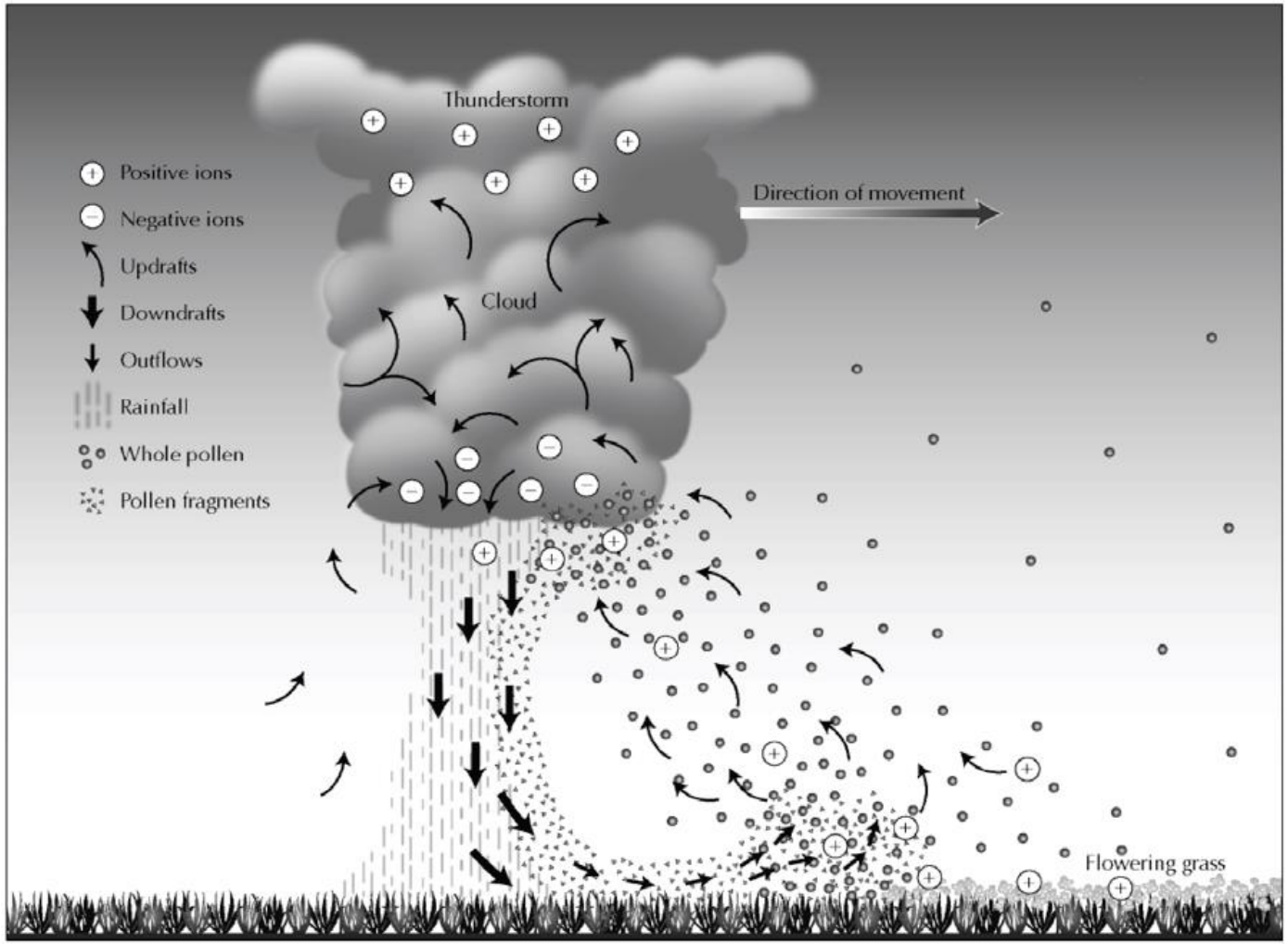


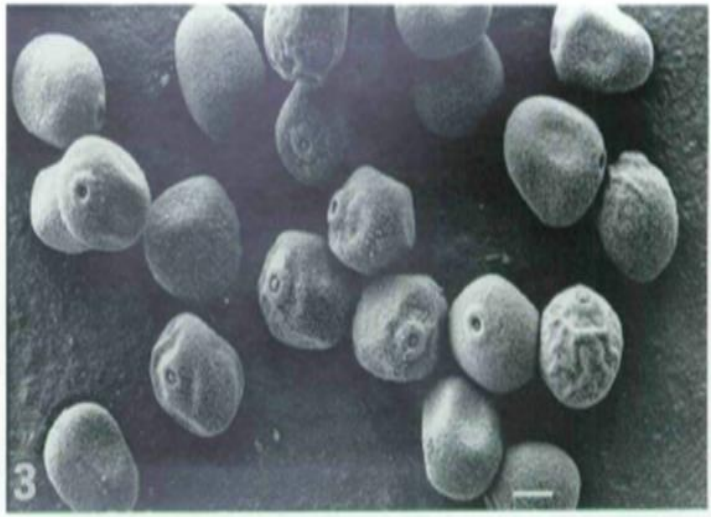






Mechanism


Thunderstorm
Positive ions
Negative ions
Updrafts
Downdrafts
Outflows
Rainfall
Whole pollen
Pollen fragments
Direction of movement
Cloud
Flowering grass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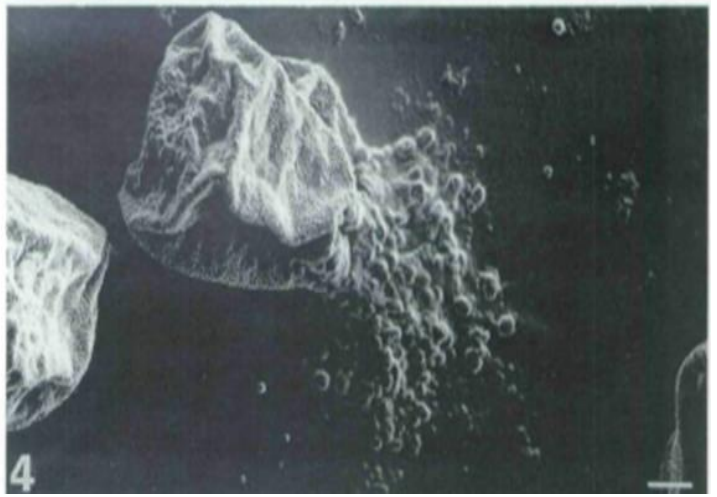
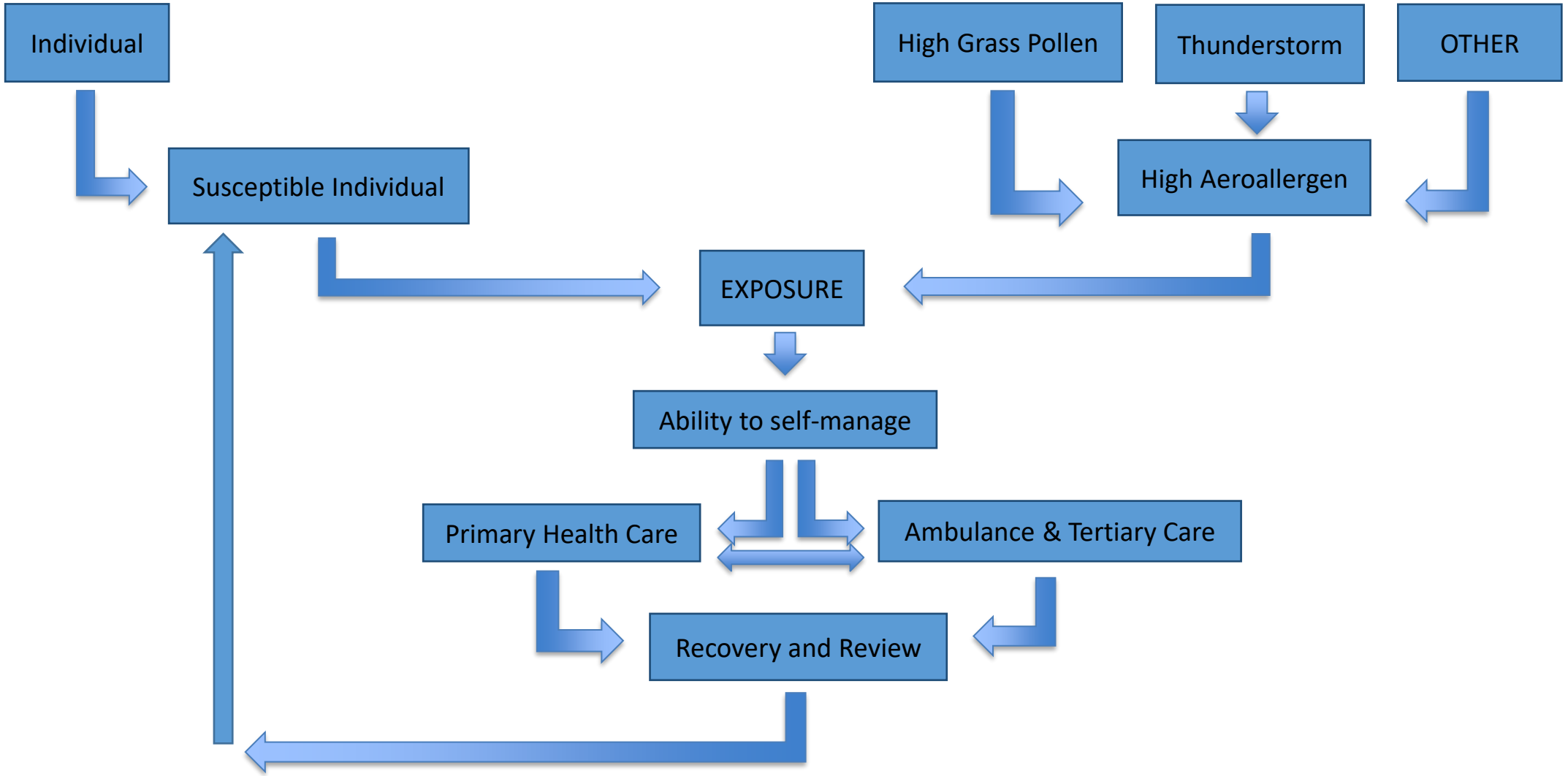
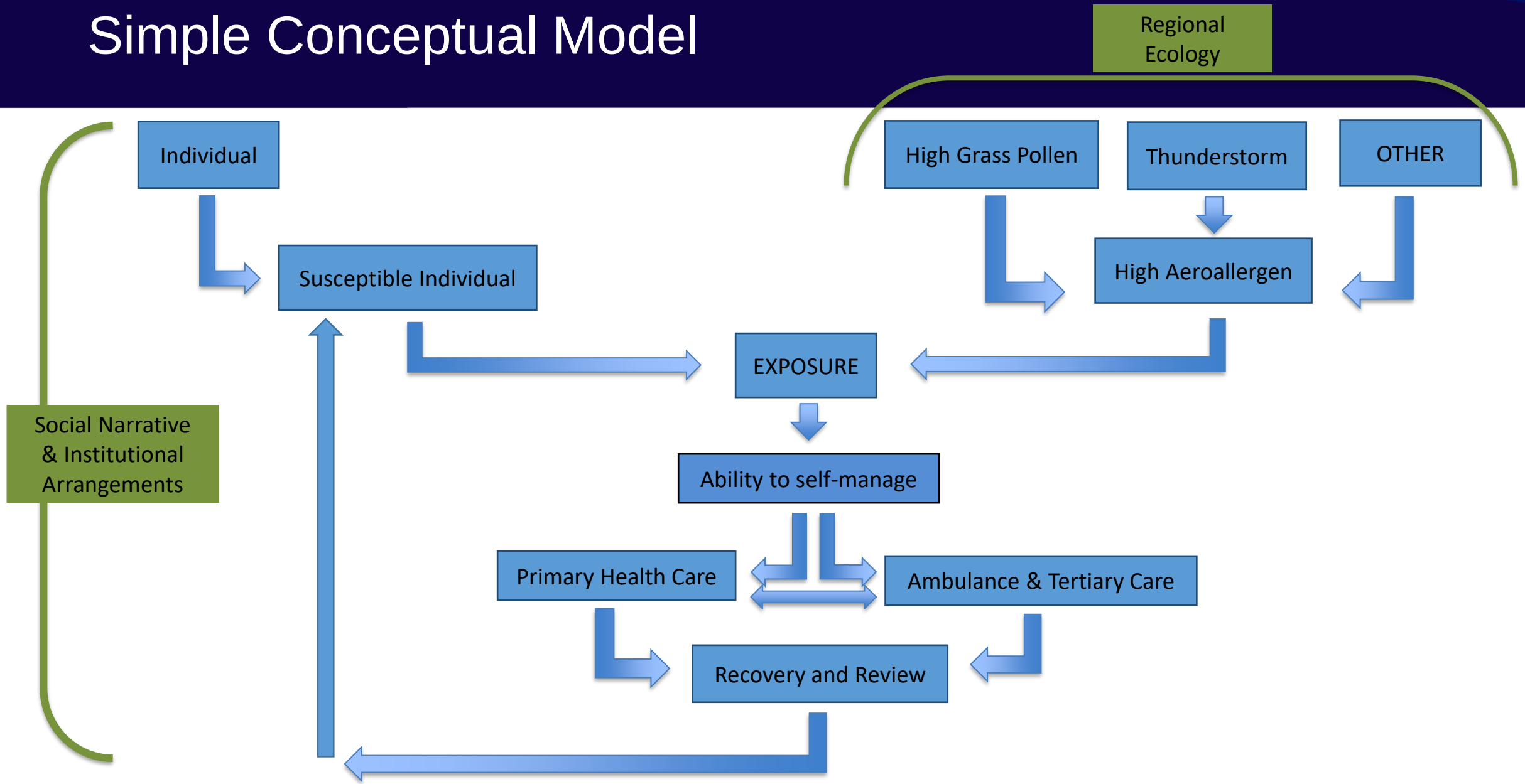

4

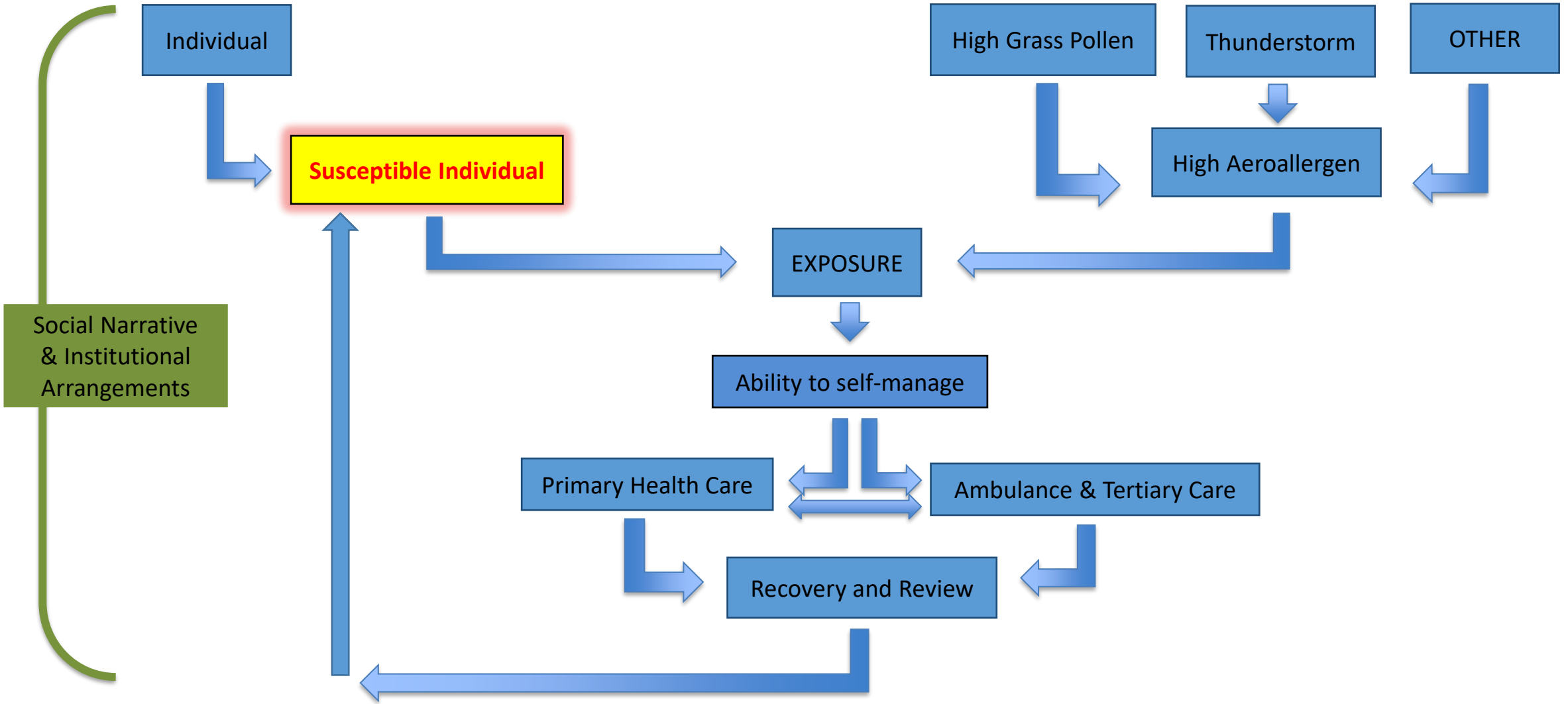
Simple Conceptual Model



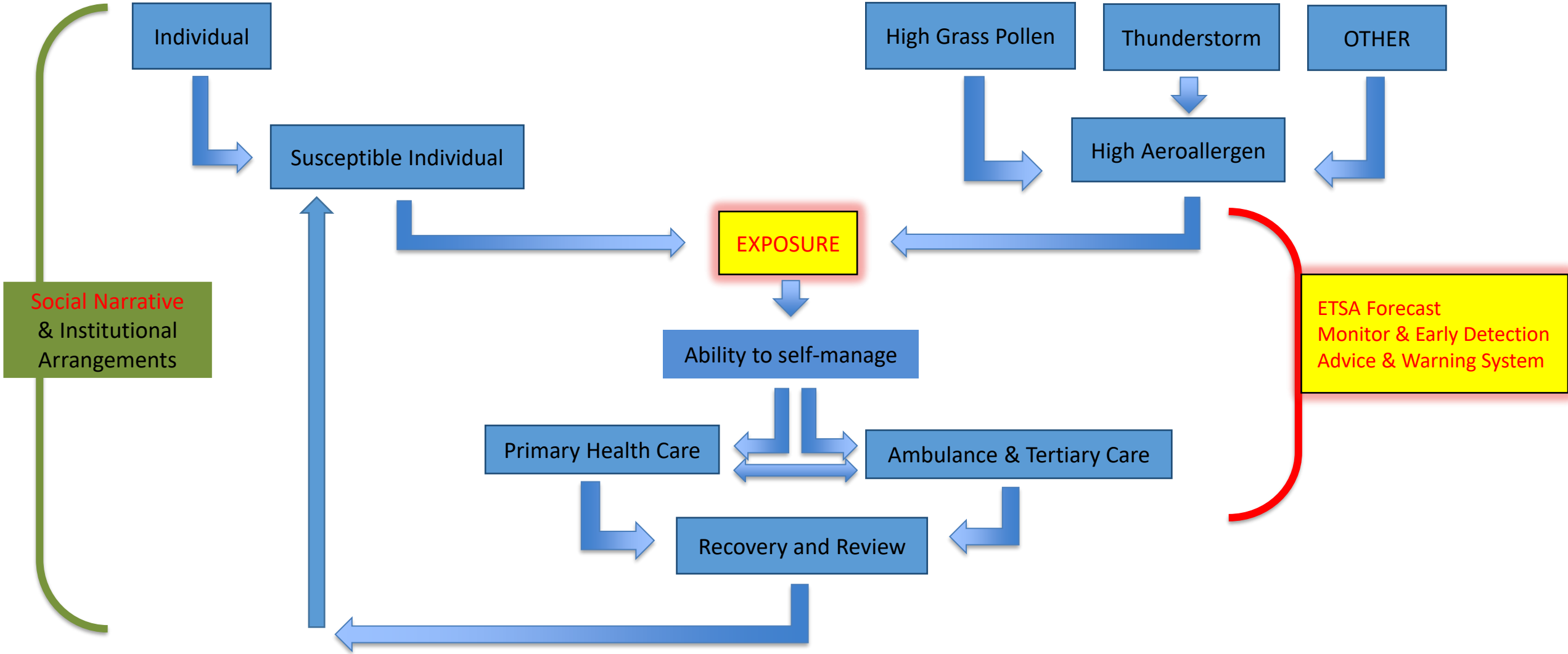
Simple Conceptual Model



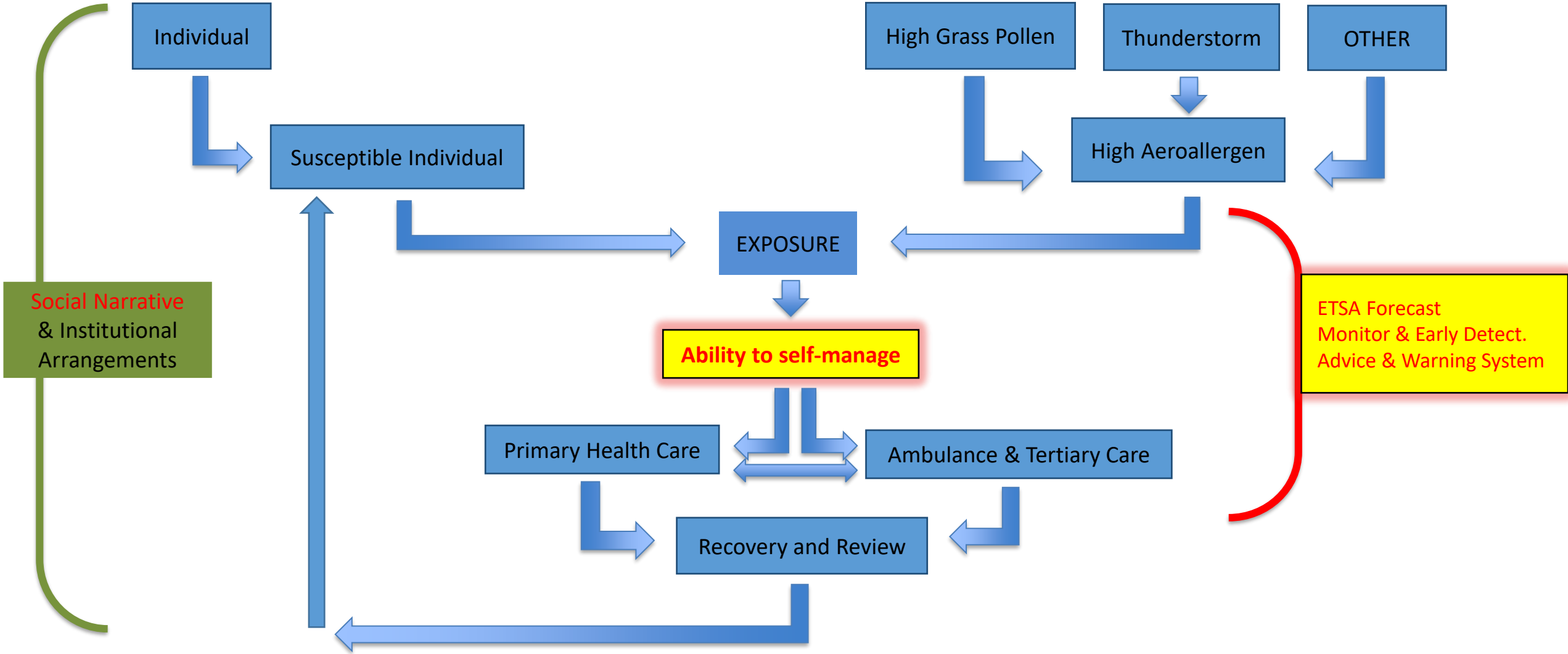
1. Reducing the risk in Susceptible Individuals



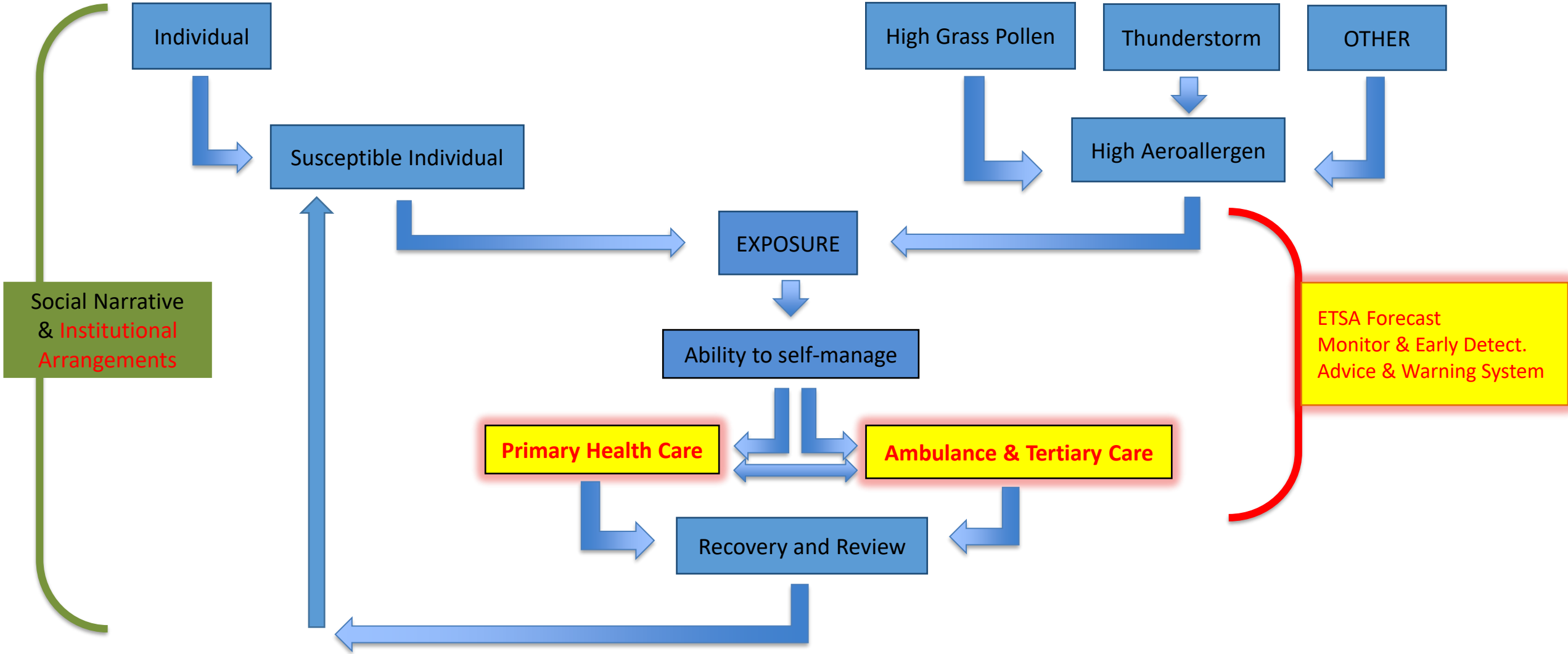
2. Reducing Exposure



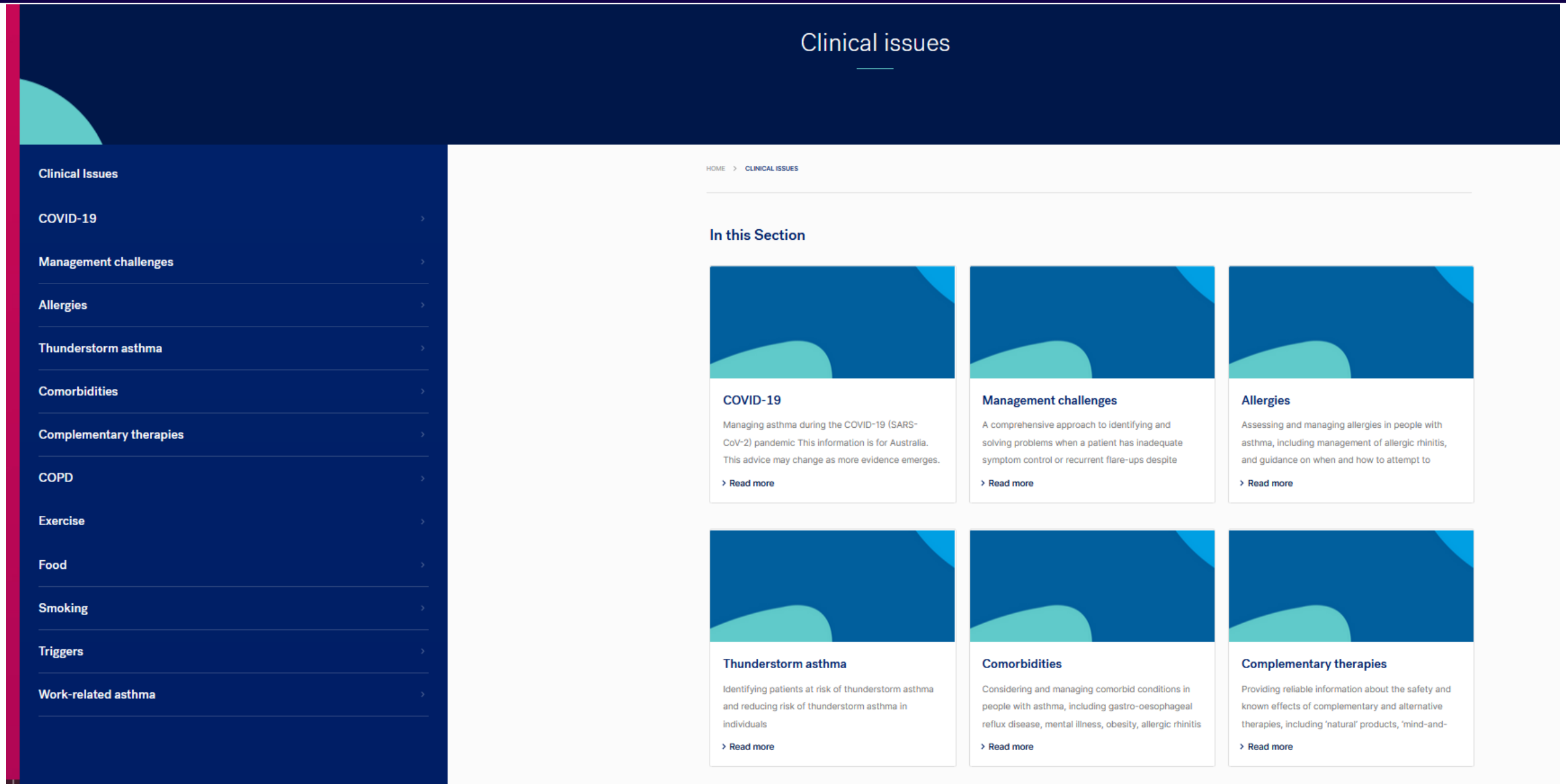
3. Improved Ability to Self Manage



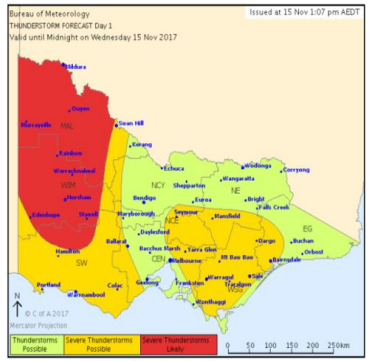
4. Improved Ambulance and Health Services Preparedness and Response

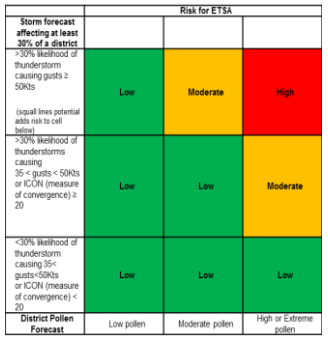


Asthma Handbook – section on Thunderstorm Asthma



ETSA Forecast and Warning System





ETSA forecast on Vic Emergency website /app

Forewarning of high-risk days

- Health & Emergency sector
- Community
- Education, Sports clubs, Workplaces etc

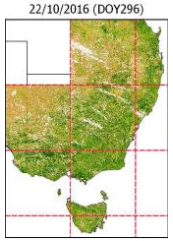
Monitoring and Early Detection System

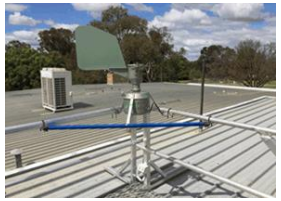
- ESTA and AV call out data
- ED presentations – Syn Surv
- Code Browns
- Social media monitoring

BoM Pollen Forecast

District	Wednesday 15th November, 2017	Thursday 16th November, 2017	Friday 17th November, 2017
Mallee	16 LOW	7 LOW	3 LOW
Wimmera	32 MODERATE	13 LOW	8 LOW
Northern Country	60 HIGH	25 MODERATE	18 LOW
North Central	76 HIGH	38 MODERATE	21 MODERATE
North East	65 HIGH	47 MODERATE	29 MODERATE
South West	104 EXTREME	25 MODERATE	27 MODERATE
Central	86 HIGH	36 MODERATE	27 MODERATE
West and South Gippsland	76 HIGH	53 HIGH	32 MODERATE
East Gippsland	23 MODERATE	26 MODERATE	17 LOW

Use Machine Learning computer models to generate grass pollen forecast for 9 BOM districts



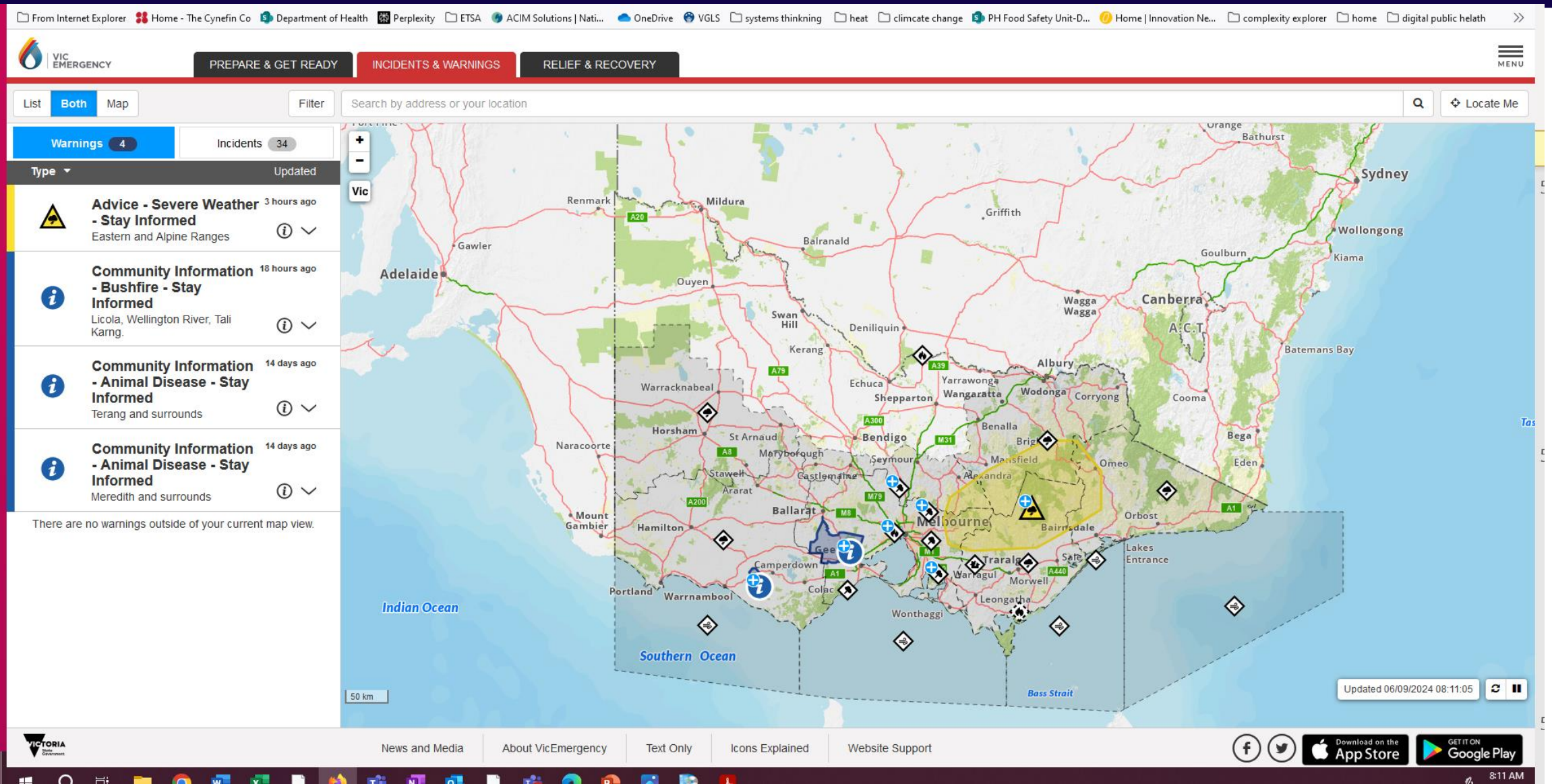


Health.vic website
Email notifications to subscribers
Melbourne Pollen website /app
Deakin Airwatch
Social media, radio

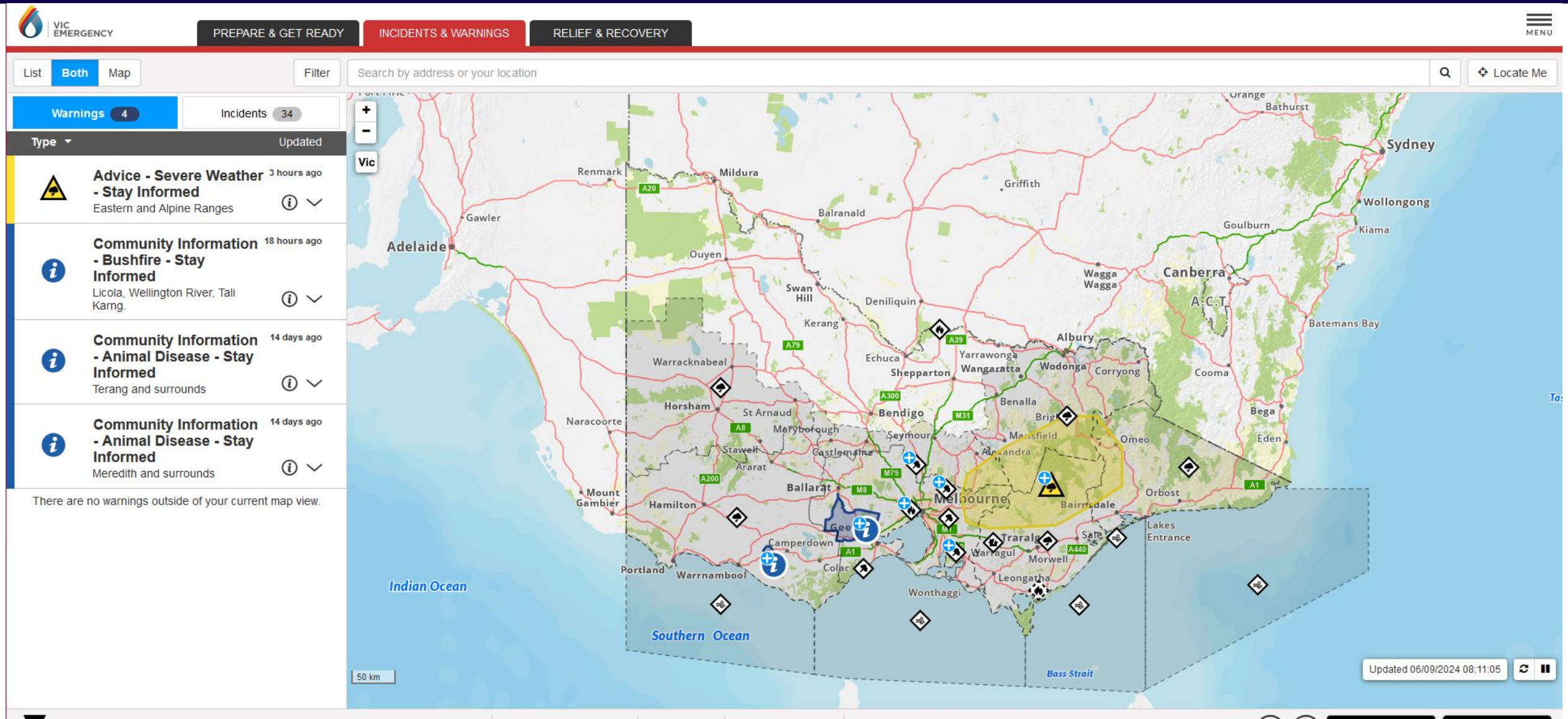
Advice and Warnings

- Advice of risk for high risk day
- Warnings for detected rise
- Emergency warning for confirmed ETSA and strain on system

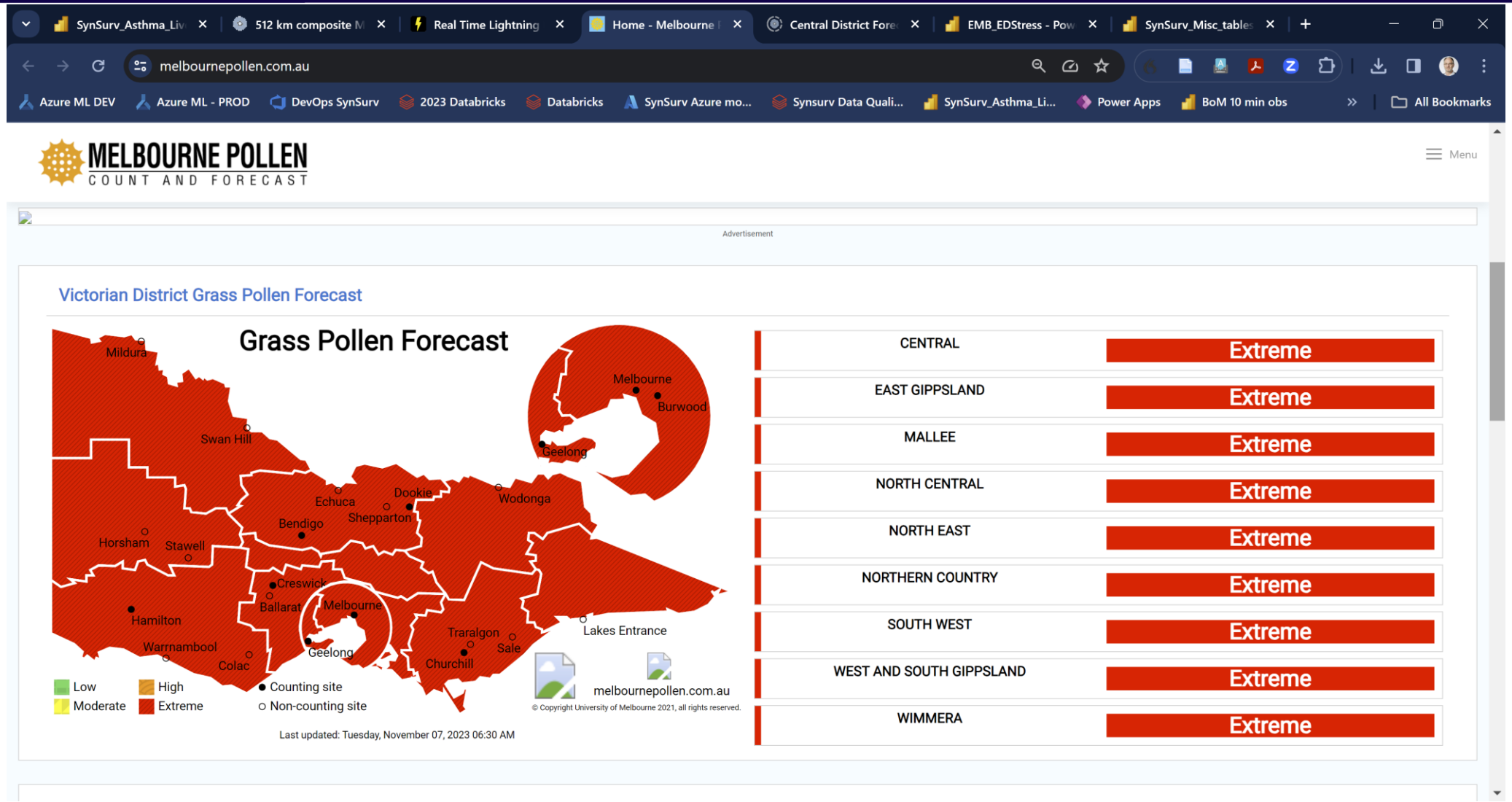
VicEmergency website – Incidents and Warnings



VicEmergency website – Prepare & Get Ready



On November 7 – Pollen levels were high



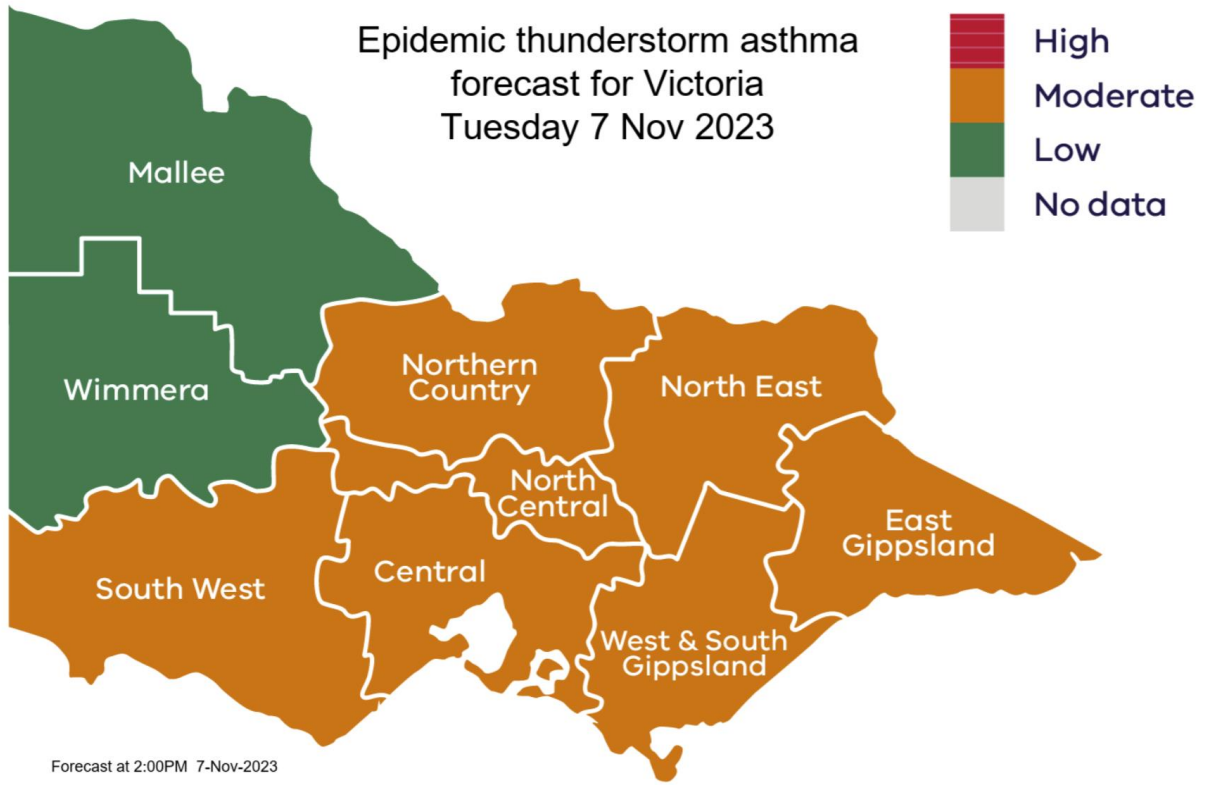
The forecast was (mostly) moderate risk:

MELBOURNE POLLEN
COUNT AND FORECAST

Thunderstorm Asthma Forecast

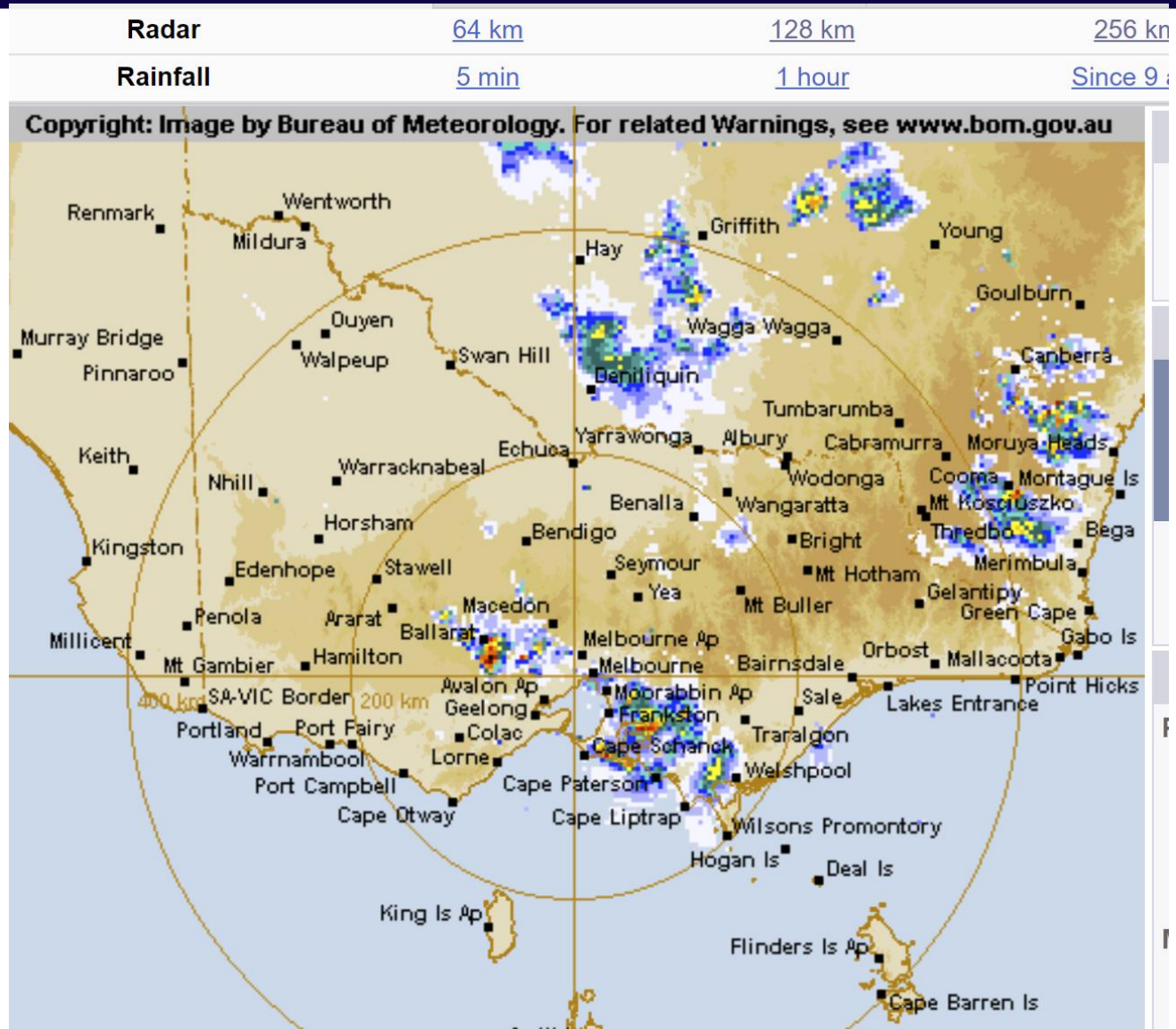
The epidemic thunderstorm asthma forecast combines the Bureau of Meteorology's forecast of a certain type of thunderstorm and the grass pollen forecast in each of the state's districts. More information about the forecast can here.

CENTRAL	Moderate
EAST GIPPSLAND	Moderate
MALLEE	Low
NORTH CENTRAL	Moderate
NORTH EAST	Moderate
NORTHERN COUNTRY	Moderate
SOUTH WEST	Low
WEST AND SOUTH GIPPSLAND	Moderate
WIMMERA	Low

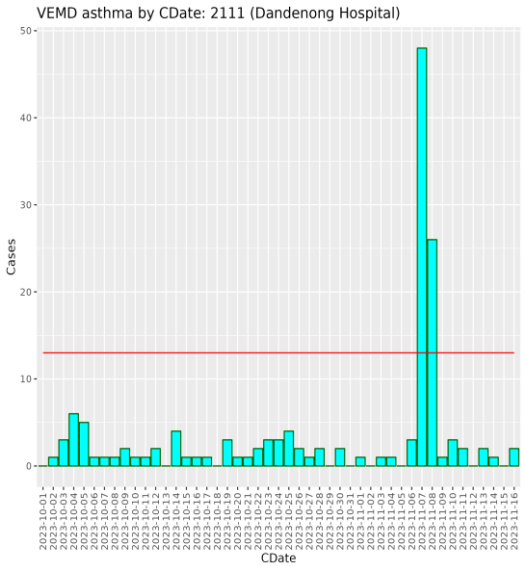


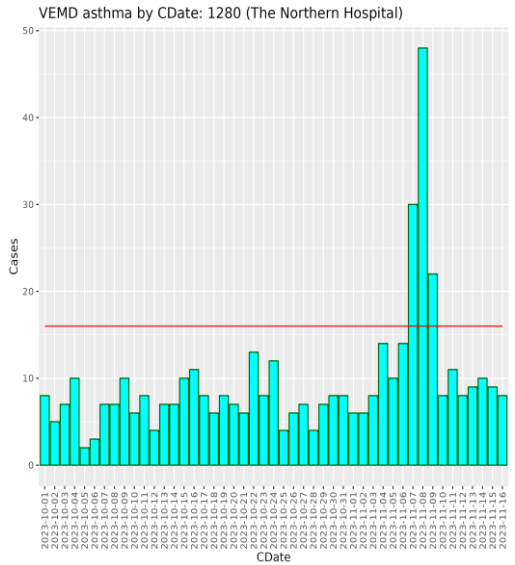
Note: The above epidemic thunderstorm asthma forecast information was provided by the Victorian Department of Health and the Bureau of Meteorology. For more information pertaining to these forecasts visit this website.
Last updated: Monday, November 06, 2023 02:00 PM

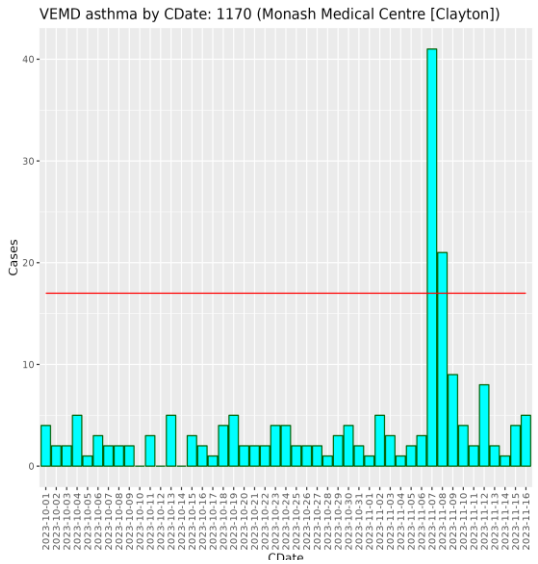
On November 7 – Storm in evening

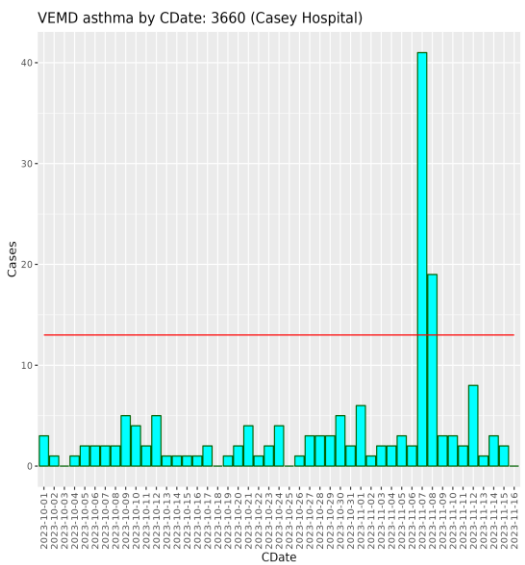


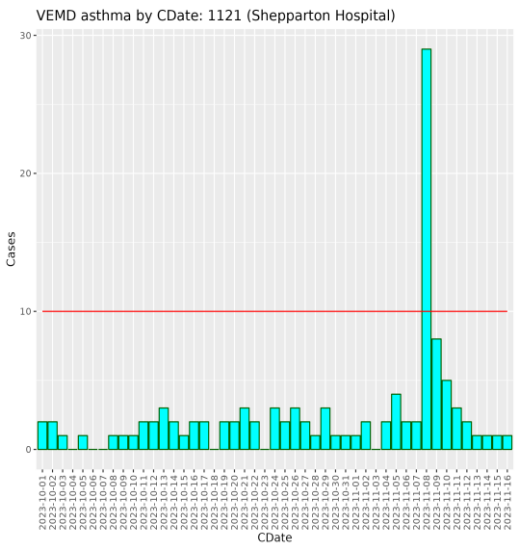
Asthma cases as determined by SynSurv

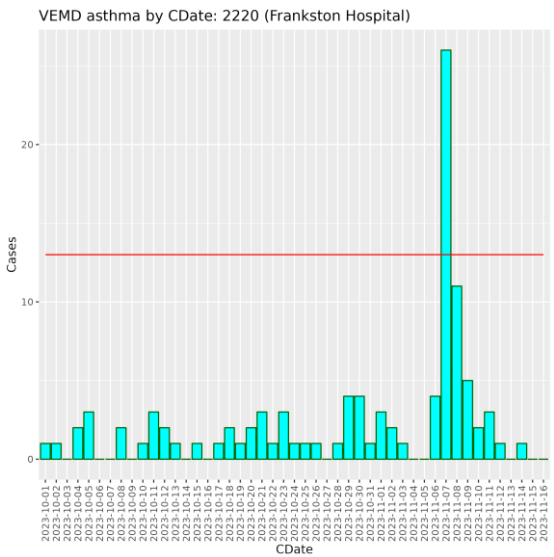


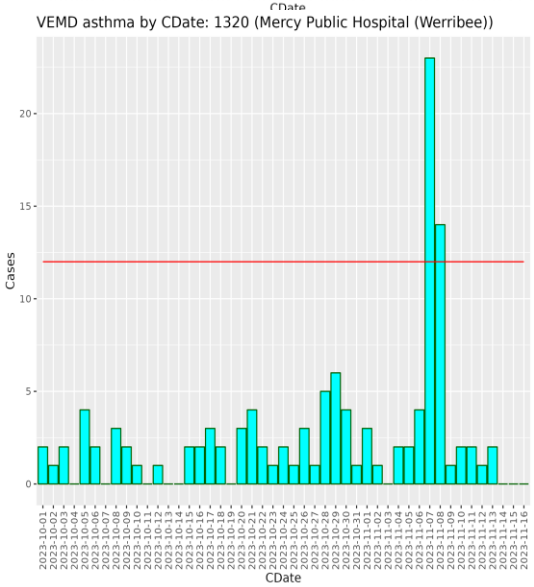


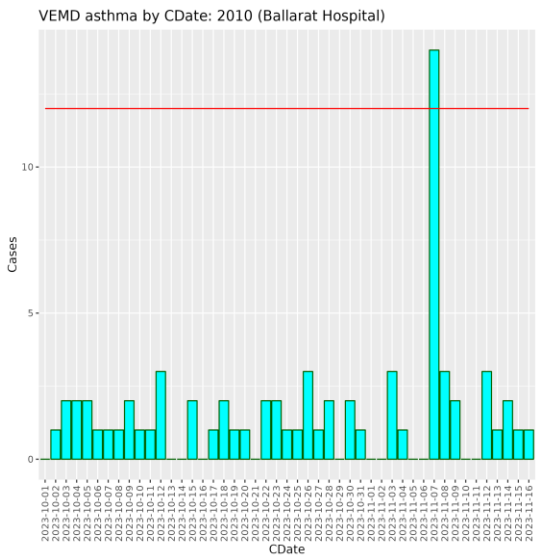












Take home messages for ETSA

Your Clinic

- Prepare your clinic every Spring and think through/ practice how your team would manage 1 or 2 cases of severe asthma one evening, or lots of calls for an appointment regarding asthma in the day after an event
- Let your staff know about ETSA so they stay safe
- Watch the ETSA forecast between 1 October - end December
- Posters in clinic
- Remember those with hay fever are at increased risk (pharmacists may refer people to you)
- Can sent reminders to patients or mention in newsletters, other patient communications

Asthma patients

- Talk to patients about ETSA, mention it in AAP, aim for good control (technique/ adherence/ adjustment – added motivation)
- They should watch the forecast (set up watch zone), avoid storms in grass pollen season, carry reliever, known asthma first aid

People with Spring hay fever

- Talk to them re ETSA
- Ask if they have any asthma symptoms
- They should watch forecast, avoid storms in grass pollen season, know asthma first aid and where to get a reliever if needed

Thank you

Sustainable Asthma Care Roadmap for Australia

Presented by Dr Mike Forrester

ICAM
SYMPOSIUM

Sustainable Asthma Care Roadmap for Australia

Deakin University, Barwon Health

Presented by Dr Mike Forrester

phn
NORTH WESTERN
MELBOURNE
An Australian Government Initiative

Multidisciplinary case studies

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Case Study 1

Case Study 1

- 2yo Male unwell with viral URTI
- Mum giving ventolin via spacer and mask at home every 4 hours 4-6 puffs
- Increased WOB and RR
- Wheeze throughout chest
- Last Ventolin 2hours ago at home – 6 puffs
- Given 6 puffs burst in practice, improvement but still wheezy

Past Medical History

- Multiple admissions with bronchiolitis <12m
- First given Ventolin ED age 14m and discharged with spacer and mask
- Last 10m: 3xED admissions, 4x oral steroid community and ED, 2 oral abx course, wheeze in every URTI monthly, used 2-3 ventolin inhalers
- No diagnosis, told too young to say asthma
- No formal asthma education, plan or asthma device education
- Eczema
- Vaccinated apart from influenza
- No regular GP

Family and Social History

- Lives Mum, Dad and 3 step siblings
- Dad poorly controlled Asthma
- Both parents vape and smoke outside the home
- No pets
- No food allergies
- No reported damp or inhaled allergens

Where to go from here

- Any further questions?
- Next steps?
- Asthma Plan?
- Referrals?

Next Steps

- Diagnosis Asthma made to Mum
- Letter to ED outlining current situation and PMH
- Burst therapy, oral steroid, admitted to Paeds ward
- Diagnosis asthma communicated by ED, Paeds, Asthma Nurse on ward
- Started Flixotide Jnr 1puff BD, Asthma plan, referral CAP, follow up GP appt made prior to discharge
- Discharge paper given to Mum and sent to GP
- Advised on ventolin weaning
- GP arranged GPMP/TCA, asthma plan review date 6weeks, influenza vaccine
- Advised on VVED service, GP each time unwell, pharmacy to help educate new inhaler

Follow up

- Seen by CAP following week
- Seen at GP each URTI for 3months
- Further wheeze each episode no admissions
- Increased Flixotide to 2puffs BD
- Good control on this dose until following winter

Next year...

- 3yo now
- Wheeze every month with viral infection in Winter
- 1 ED admission and oral steroid
- Parents still smoking
- Ongoing CAP and GP review, GPMP/TCA asthma updated
- Montelukast or Resp referral?

Where to go from here

- Any further questions?
- Next steps?
- Asthma Plan?
- Referrals?

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Case Study 2

Case Study 2

- 5yo F attend with Mum and Dad
- Preschool asthma diagnosed age 3
- Viral trigger, no co-existing atopy or environmental trigger, Dad asthma, non smokers/vapers, no pets
- First presentation: Two hospital admission within 6 weeks requiring burst therapy and oral steroids
- Asthma diagnosis made and commenced flixotide jnr 2puffs BD at RCH
- Referred CAP and discharged after 2-3 months
- CAP referred to a regular GP
- Very well through spring and summer no Ventolin use 6months, preventer weaned then stopped

- One episode late summer responded well to PRN Ventolin, settled 2 days, cough predominant, parents not sure if wheeze, didn't attend during illness
- Attended with few repeated asthma episodes autumn/winter with viral infections
- 3 episodes requiring regular Ventolin 2-4 puffs given PRN for up to 5 days over a 2 month period
- Mild wheeze on auscultation and asthmatic cough, no inc WOB or SOB, responded well to 2-4 puffs Ventolin, max required 4 hourly
- Started flixotide 1 puff BD on third episode - high burden of asthma symptoms, "always at GP" time off school, never severe symptoms
- Responded well, further one episode later in winter – flixotide increased to 2 puffs for 4 weeks then reduced back to 1 puff and maintained symptom control
- Referred CAP – education and improved understanding of inhaler use and symptoms
- No further symptoms and preventer stopped after 6months

- IT’S WINTER AGAIN

- Perhaps mild flare in summer whilst abroad in hot humid city which parents describe as “very polluted” given Ventolin during trip PRN

- Otherwise well until this attendance with Viral trigger asthma

- Wheeze and cough again, mild responding to PRN ventolin

- What would you do?

Where to go from here

- Any further questions?
- Next steps?
- Asthma Plan?
- Referrals?

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Case Study 3

Case Study 3

- 8yo F known mild asthma presents with cough, rhinorrhoea, sneezing, itchy eyes in late October
- Increased ventolin use 2-3 times a week for cough
- No asthma symptoms 8months prior to this, last was late last summer
- No admissions, oral steroid, abx
- PMH: egg allergy, eczema, hay fever
- Never had preventer, mostly uses ventolin in spring season PRN
- Non smokers/vape, cat at home
- Well no wheeze or examination findings
- Asthma plan for school, allergy plan for egg at school

Where to go from here

- Any further questions?
- Next steps?
- Asthma Plan?
- Referrals?

Next Steps

- Difficulty ascertaining how much of the symptoms were asthma and whether there was response to ventolin
- Higher risk child with significant atopy, however no severe asthma history
- Started BD oral antihistamine, nasal steroid, PRN eye drops
- Hayfever allergy plan for school and home
- Referral CAP for further asthma assessment and education

Follow up

- Review 2 weeks later
- No ventolin use, symptoms well controlled
- Education with CAP given regards to ventolin use
- GPMP/TCA to continue care, CAP and allergy service
- However... mid November thunderstorm asthma event and admitted with acute Asthma
- Burst Therapy, oral steroid, mild O2 requirement, 2 day stay

Where to go from here

- Any further questions?
- Next steps?
- Asthma Plan?
- Referrals?

Follow up

- GP review 1 week post discharge
- No further ventolin requirement
- Now on Alvesco OD
- Parents want to know if will be on Alvesco long term and when they can stop
- Worried about another event and how she will react, will she have worse allergies now, is she higher risk forever?
- Should they get rid of the cat?
- How long should she stay on nasal steroid and antihistamine?

Where to go from here

- Any further questions?
- Next steps?
- Asthma Plan?
- Referrals?

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Case Study 4

Case Study 4

- 12yo Female, new patient asking for asthma plan for school
- Diagnosed asthma preschool with wheeze in viral infection
- Few courses oral steroid between 5-12 for wheezey episodes in community
- Last exacerbation 5months ago, attend ED and required steroid, oxygen, burst therapy, discharged after 2hours
- Never prescribed preventer, Ventolin PRN via spacer, home predmix
- Increasing Ventolin use, several times a week, waking tight chested since moving and high school last year
- Breathless, gasping, light headed, can pass out
- No cough, thinks wheezey at the time
- PMH: cat allergy, rhinitis, complex PTSD, CSA, anxiety with multiple somatic symptoms, recently started SSRI
- SH: moved 5 schools in 7 years

Where to go from here

- Any further questions?
- Next steps?
- Asthma Plan?
- Referrals?

Next steps

- Started Symbicort SMART therapy
- Referred CAP
- Asthma plan for school using symbicort
- GPMP/TCA and MHTP completed
- Pharmacy medication review as multiple new meds
- Referred to Headspace for psychology and RMH for psychiatry Input for pharmaceutical support
- 6 week review asthma symptoms resolved
- Ongoing anxiety now clearer to manage

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Case Study 5

Case Study 5

- 14yo Male, new patient asking for asthma plan for school
- Diagnosed asthma preschool with wheeze in viral infection
- Used Ventolin PRN since, via spacer very rarely, sometimes not for 1year+
- No admissions, no oral steroid, no antibiotic use, never required preventer
- Self managed Ventolin use since 12 at school
- Reporting increased use at school, especially in sports
- Breathless after few minutes running, tight chest, no cough, unsure if wheeze
- Takes Ventolin when breathless, unsure if helping
- Reports main exercise is rugby, Mum reports hasnt played rugby for 2 years
- PMH: Diagnosed ASD age 7, anxiety, NDIS, childhood trauma, hayfever with rhinitis

Where to go from here

- Any further questions?
- Next steps?
- Asthma Plan?
- Referrals?

Next Steps

- Seen by CAP for further assessment
- Hayfever controlled with antihistamine and nasal steroid
- Allergy plan for school
- Exercise test and PFTs completed
- No evidence asthma
- Asthma plan remained at school just in case
- More understanding of physical fitness limitations and increased exercise tolerance
- No further ventolin use, undiagnosed 6months later, letter to school and asthma plan removed

Symposium Conclusion

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