

Epidemic Thunderstorm Asthma Program

Dr Angie Bone, Deputy Chief Health Officer (Env)

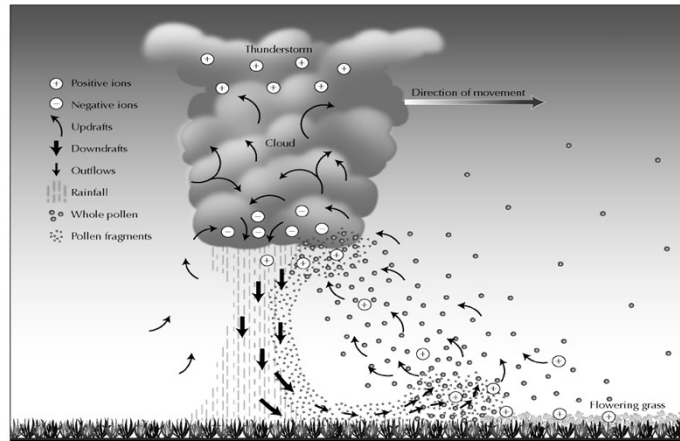
Local Public Health Unit Directors Meeting

Thursday 1 September 2022

OFFICIAL

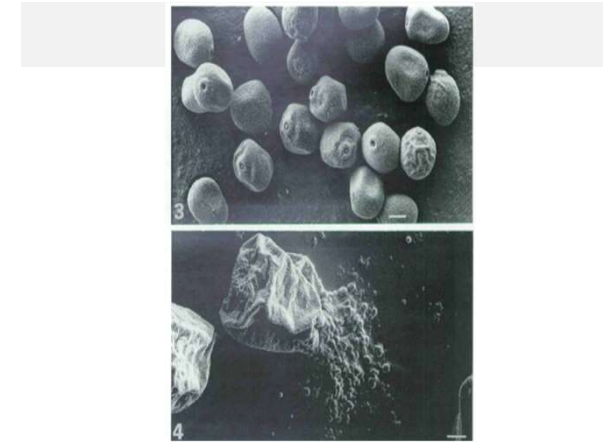
What is epidemic thunderstorm asthma (ETSA)?

- Caused by uncommon combination of high grass pollen levels and a certain type of thunderstorm.
- No universal definition of an ETSA event but includes:
 - Large numbers of people with sudden onset asthma in temporal and spatial relation to storm
 - Large geographical area affecting multiple health services, with resultant strain on health and emergency systems
 - Inhalation of small and newly exposed allergen extruded from ruptured rye grass pollen



Source: Taylor, P. E. and Jonsson, H. 2004. Thunderstorm asthma. *Current Allergy and Asthma Reports* 4 (5): 409-413.

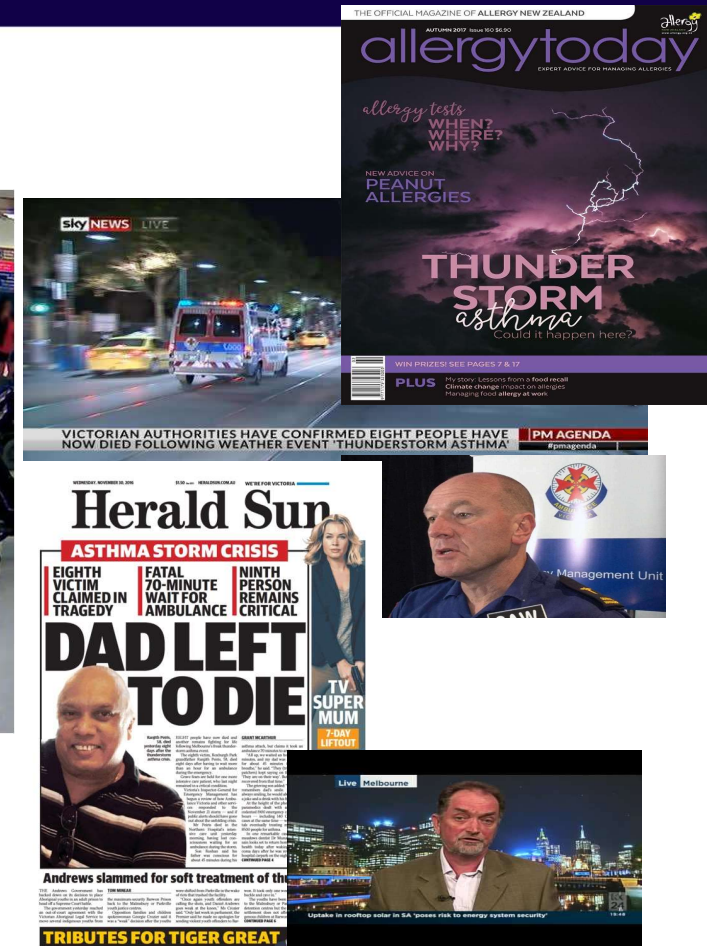
In Victoria, the period 1 October to 31 December is considered the **grass pollen season**, when the underlying conditions for ETSA may be present.



OFFICIAL

2016 Epidemic thunderstorm Asthma Event

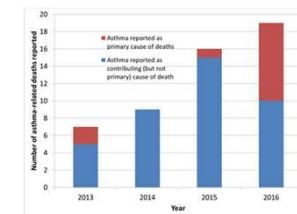
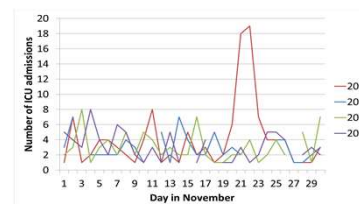
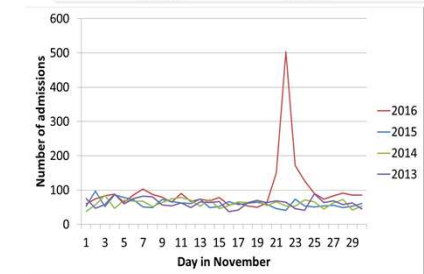
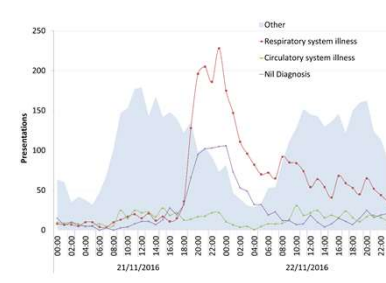
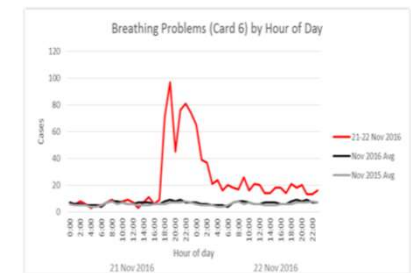
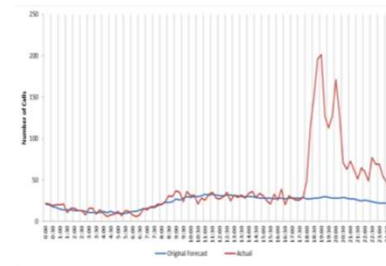
- On 21 November 2016, the state witnessed the largest ETSA event recorded worldwide
- Thousands of people developed breathing difficulties within a short period of time
- For many of those affected, it was their first asthma attack
- This event was unprecedented in size, severity and impact



OFFICIAL

Health System Impacts Nov 2016

- Sudden rise in 000 calls, ambulance cases, ED presentations, admissions (incl. ICU)
- 1,626 more calls to ESTA
- 814 ambulance cases generated in six hrs from 6pm (643 code 1)
- Compared to 3 year average in the 30 hrs from 6pm in Melbourne & Geelong
 - 3,365 excess reparatory related ED presentations
 - 476 excess asthma admissions
 - 30 excess ICU admission
 - 10 deaths



OFFICIAL

Who is at risk and what should patients do?

Who is at risk?

- people with current, past or undiagnosed asthma
- people with seasonal allergic rhinitis

What should patients be encouraged to do?

- attend GP to review asthma and hay fever control, update asthma action plan as required
- take preventive medication as directed using good technique
- follow asthma action plan and learn asthma first aid
- check the epidemic thunderstorm asthma risk forecast
- stay out of storms from October through December especially the wind gusts that precede them, go indoors and close doors and windows, and turn off any air conditioners that bring outside air indoors (e.g. evaporative units)



OFFICIAL

ETSA risk forecasting system

- The risk of an ETSA event is forecast and recorded daily during grass pollen season.
- The Bureau of Meteorology generates risk forecasts by combining the grass pollen forecast with weather and storm forecasts.
- The risk forecast covers three days (today, tomorrow and the day after):
 - The current day (D0)
 - The following day (D1)
 - The day after (D2)

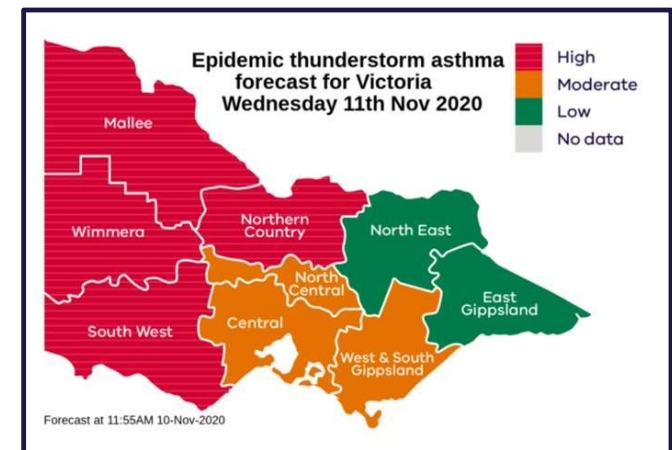
Risk forecasts is updated twice daily during the grass pollen season:

- At **12:30pm**, the risk forecast for the current day (D0) updates on VicEmergency, Melbourne Pollen, Deakin Airwatch and health.vic websites
- At **3:00pm**, the D1 and D2 risk forecasts update

Adjustments at midnight for the changing day (i.e. Day 1 becomes Day 0, Day 2 becomes Day 1).

OFFICIAL

Risk forecasts enable advanced planning by health and emergency management services and the community



Monitoring and early detection systems

- The Emergency Management and Regional Public Health Branch undertakes ongoing monitoring over grass pollen season to detect and respond to signals suggesting an ETSA event.
- ETSA data sources:
 - Emergency Service Telecommunications Authority notification process
 - Ambulance Victoria activity
 - SynSurv (detecting abnormal increases in asthma presentations to Emergency Departments)
 - Code Brown notification process
 - Social and digital media activity

- Other potential data sources:
 - Department of Education and Training
 - NURSE-ON-CALL
 - Pharmacy Guild
 - DH Regional Health Coordinators
 - Concerned clinician

Concerns that an ETSA event may be occurring will be relayed through usual emergency channels – first wave notification, posted on Vic Emergency’s Incident and Warnings website, media including social media.

OFFICIAL

Pre-seasonal Preparedness

- This is 6th season and lots of effort has been made in earlier years to raise awareness in the community and have relevant agencies undertake required planning and preparation
- Health and emergency sector (including DET) have well established plans
- Pre-seasonal reminder of upcoming grass pollen season is sent out to all stakeholders during asthma week (1st week of September) to start annual preparations as appropriate in their settings. (GPs, Pharmacists, PHNs, Health Services, Depts of Education, public and social housing orgs, Local Governments, VACCHO, multicultural agencies and community groups, etc)
- Also communications tool kits are included for further distribution as they are able (no attached funding) and see fit
 - Web links to ETSA campaign page, Better Health Channel materials, DH Facebook/twitter
 - Social media tiles, videos, posters/ brochures, links to fact sheets, multicultural resources, presentation to explain ETSA

OFFICIAL