Ethical Issues in Anaphylaxis

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Declaration of Interest

- None with respect to this presentation

Overview

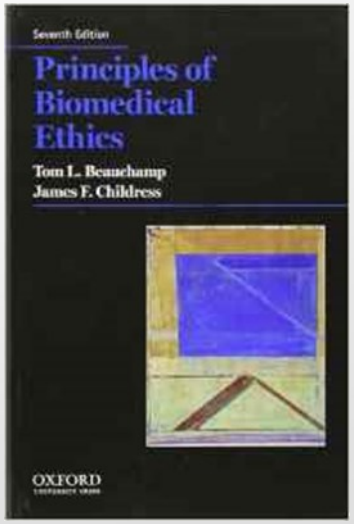
- Ethical principles
- Cases in anaphylaxis
  - Sabrina Shannon, Natalie Giorgio, Anthony Lyson
  - MPS case
- Ethical and Legal issues: Competing principles
  - Recognising and quantifying risk, dealing with uncertainty
  - Food allergy and anaphylaxis in schools: rights and responsibilities
  - Legal liability and negligence (schools, nurses, camps)
  - Justice: access to investigation and treatment; food labelling for allergen content

The four principles approach to biomedical ethics: Action guides with guidelines

Beauchamp & Childress 2013

The Four Principles

- Respect for autonomy
- Beneficence
- Non-maleficence
- Justice



Beauchamp & Childress 2013

Respect for autonomy

- Autonomous people should be able to take control of their lives in accordance with their core values
- Includes self-determination, independence, freedom
- Patient-doctor confidentiality
- Telling the truth

Respect for autonomy 2

- Informed consent / decision making
  - Western view: liberal-individual
  - Traditional African context: community involvement

- Children may not be fully autonomous
  - Age, maturity, experience, IQ, EQ, gravity of decision to be made

Beneficence

- Obligation to do good for the patient
- In moral problem situations, the first concern ought to be the benefit and interests of the patient
- The “best interests” principle

Non-maleficence

- Do no harm
- Do not kill
- Avoid therapies that do not provide benefit
- Do not cause pain or suffering to others

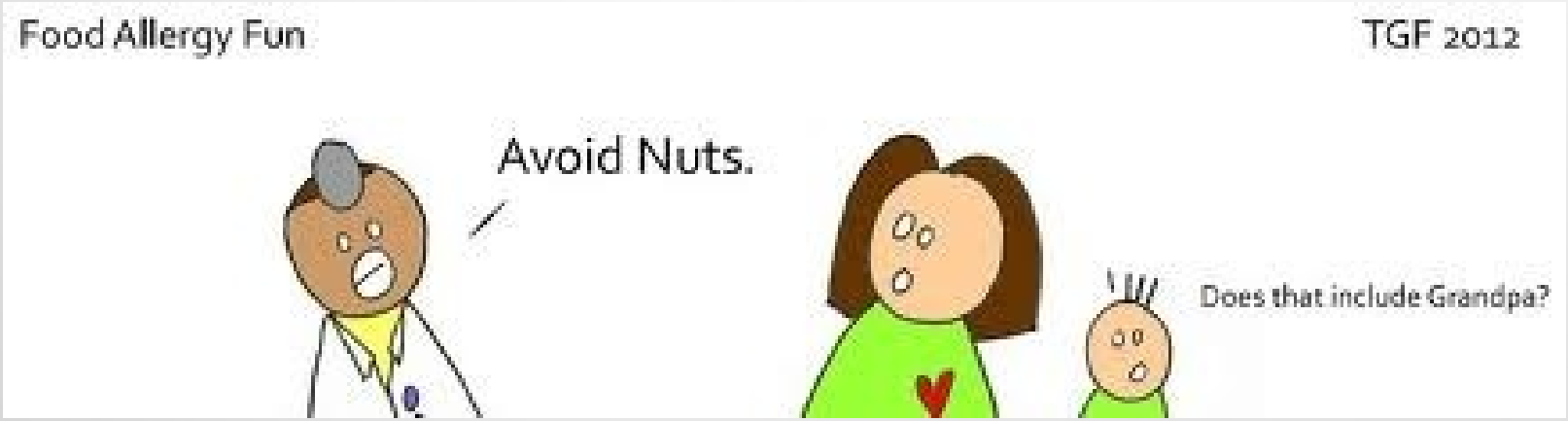
Justice

- Respect for people's rights (rights-based justice)
- Respect for morally accepted laws (legal justice)
- Fair distribution of limited resources (distributive justice)

Using the four principles

- Each principle carries equal weight
- If conflict occurs, the principles must be balanced and weighed against the others
- E.g., beneficence may conflict with justice - expensive treatment for few vs. vaccination for many

Cases in Anaphylaxis



Sabrina Shannon

- Allergic to peanut, dairy products, soya – high risk of anaphylaxis
- At age 10 made a documentary about living with allergies
- Grade 8 at Bishop Smith Catholic High School in Pembroke, Ottawa, Canada
- On 29 September 2003 13-yo Sabrina refused her usual home-made allergen-free sandwich and opted to eat French fries at the school cafeteria; safely eaten the previous week.
- Sabrina checked that the fries were cooked in vegetable, not peanut oil

Sabrina continued

- Started to wheeze in class after lunch, thought it was an asthma attack
- Collapsed and arrested before teacher could get her EpiPen auto-injector from her locker
- Brain dead on 30 September, removed from life support
- Cause of death: anaphylaxis from food tongs contaminated by cheese curds

Sabrina's Law

- Chief Coroner for Eastern Ontario, Dr Andrew McCallum, called for the implementation of comprehensive anaphylaxis management plans in schools
- Adrenaline auto-injectors have to be available in school office
- Staff and teachers must be trained to use auto-injectors
- Eventually Sabrina's Law came into effect on 1 January 2006 in Canada

Sabrina's Law

- School Boards to ensure that all principals implement anaphylaxis plans including:
- Strategies to reduce exposure to allergens
- Procedures to communicate to parents, students and employees about life-threatening allergies
- Regular training for teachers and other staff on dealing with life-threatening allergies
- Individual anaphylaxis plan for each student at risk

Natalie Giorgi

Mail Online

Girl, 13, tragically dies from peanut butter allergy after eating Rice Krispie treat at summer camp

- **Natalie Giorgio was with her family at Sacramento Camp in California on Friday night when she ate the dessert, not realizing it contained nuts**
- **The girl immediately spat it out and told her mother but it was too late**
- **She began vomiting, had trouble breathing then went into cardiac arrest**
- **She was then taken to hospital where she was pronounced dead**

By HELEN POW
PUBLISHED: 00:23 BST, 30 July 2013 | **UPDATED:** 11:38 BST, 31 July 2013

91 View comments

A 13-year-old California girl has died after she ate a Rice Krispie snack made with peanut butter at a summer camp and had an intense allergic reaction.

Natalie Giorgio, from Carmichael, California, was with her family at Camp Sacramento in El Dorado County when she ate the dessert on Friday night not realizing it contained nuts.

The girl immediately spat out the treat but it was too late. After 20 minutes, she

Anthony Lyson

Allergic Living

Teen Who Turned Life Around Dies of Severe Allergic Reaction to Tree Nuts

By: **Mariam Matti** in **News, Peanut & Tree Nut**
Published: July 28, 2017

Anthony Lyson, a high school senior who overcame a difficult childhood and had dreams of becoming an aeronautical engineer, has died of an anaphylactic reaction after eating part of a nutrition bar that contained tree nuts.

Anthony Lyson, 18, died of an anaphylactic reaction after accidentally consuming nuts. Photo: Facebook

Anthony's grandfather, David Lyson of Sparks, Nevada, told *Allergic Living* that on July 20, his grandson had been hanging out with friends, including his girlfriend, when he started to feel really hungry. According to the grandfather, the 18-year-old, who had allergies to tree nuts including walnuts and cashews, grabbed a power bar and began eating without first checking the ingredients.

Shortly after eating at least half of it, a friend asked Anthony if he was aware that this brand of bar contained nuts.

"Immediately, Anthony threw the bar down when he heard that," says Lyson, who says his grandson was usually vigilant about asking about or reading ingredients to avoid nuts. The friends told the grandfather that Anthony tried to vomit to get rid of

Post-operative anaphylaxis

Fatal inaction

01 September 2010

Mr W, a 19-year-old drama student, was admitted to his local hospital where he was diagnosed with an acute testicular torsion. He was listed for an emergency exploration.

Dr H, an anaesthetic trainee, saw him beforehand and found him to be well with no allergies (ASA1). Dr H performed a rapid sequence induction of anaesthesia, and secured the airway with a cuffed endotracheal tube. Anaesthesia was maintained with isoflurane vapour. Atracurium was given as a muscle relaxant, and fentanyl and diclofenac were administered for analgesia. The operation was uneventful and lasted about 30 minutes.

MPS Casebook 1 Sept 2010

Fatal inaction 2

- Extubated patient, but subsequent desaturation
- Developed pulmonary oedema
- Diagnosed anaphylactoid reaction; admitted to ICU
- Decided to intubate patient – unsuccessful - arrrested
- Severe hypoxic brain damage
- Died 10 days later

MPS Learning points

- Must be able to recognise and treat emergencies
- Do not give a drug with which you are unfamiliar
- 50-70% of cases of anaphylaxis during anaesthesia triggered by muscle relaxants. Patients can deteriorate very rapidly.
- Know the limits of your competence
- In a critical incident, call for senior help immediately

What do these cases have in common?

- Delayed recognition of anaphylaxis
- Auto-injector not accessible:
  - Safely locked away
  - Failure to carry auto-injector
  - Failure to store auto-injector correctly?

Theme Editorial

Anaphylaxis: Recognizing Risk and Targeting Treatment

David B.K. Golden, MD *Baltimore, Md*

J Allergy Clin Immunol Pract 2017;5:1224-6.

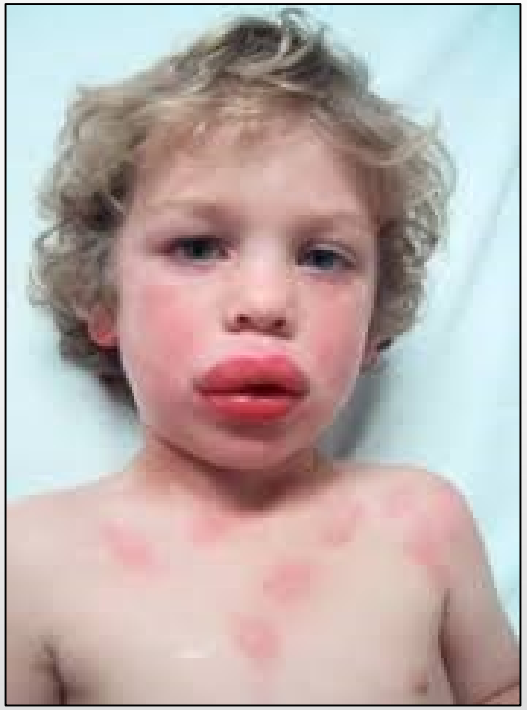
Clinical Commentary Review

Epinephrine Autoinjectors: New Data, New Problems

Susan Waserman, MSc, MDCM, FRCPC[a], Ernie Avilla, MBA(c)[a], Moshe Ben-Shoshan, MD, MSc[b], Lana Rosenfield, MD[c], Andrea Burke Adcock, MD[c], and Matthew Greenhawt, MD, MBA, MSc[d] *Hamilton, Ontario and Montreal, Québec, Canada; Aurora, Colo*

J ALLERGY CLIN IMMUNOL PRACT
SEPTEMBER/OCTOBER 2017

Food allergy risk and the ethics of uncertainty in allergic disease



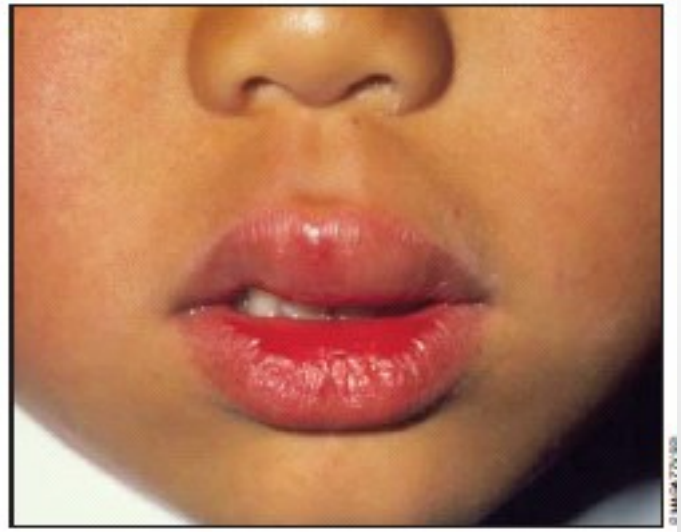
Google images

Ethics in practice

Making clinical decisions when the stakes are high and the evidence unclear

Wendy Hu, Andrew Kemp, Ian Kerridge

Children with peanut allergy are often provided with adrenaline (epinephrine) in case of a severe reaction. The probability of a life threatening reaction is low, however, and the criteria for provision are controversial. How should the costs and benefits be balanced?



BMJ VOLUME 329 9 OCTOBER 2004 bmj.com

Food allergy risk and uncertainty

- Dylan, aged 20 months, peanut allergy
- At 12 months of age facial contact urticaria to peanut butter
- SPT 9 mm reaction to peanut
- No further reaction, but avoids peanuts
- **Would you prescribe an autoinjector for Dylan?**
- **Should the family avoid peanuts in the home?**

Hu BMJ 2004;329:852-4

Food allergy risk and uncertainty

- Jarred, 23 months
- At 9 months of age, peanut butter contact with face resulted in local urticaria, lip and periorbital swelling, no systemic symptoms
- At hospital placed on monitor, 2x adrenaline IMI
- SPT 9 mm reaction to peanut
- **Would you prescribe an autoinjector for Jarred? Advice to family re avoidance?**

Hu BMJ 2004;329:852-4

Ann Allergy Asthma Immunol 114 (2015) 3–5

Contents lists available at ScienceDirect

Perspective

Uncertainty and the ethics of allergy care

Andrew S. Nickels, MD [*]; and Jon C. Tilburt, MD, MPH [†]

[*] *Division of Allergic Diseases, Departments of Medicine and Biomedical Ethics Program, Mayo Clinic, Rochester, Minnesota*

[†] *Division of General Internal Medicine, Department of Medicine and Division of Healthcare Policy & Research, Department of Health Sciences Research Biomedical Ethics Program, Mayo Clinic, Rochester, Minnesota*

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BMJ VOLUME 329 9 OCTOBER 2004 bmj.com

Food allergy risk and uncertainty

- Peanut allergy: what is the risk of a severe reaction if a child tests positive? And what is the risk of anaphylaxis? And of death?
- If uncertain – how to counsel parents and child? What is in child's best interests?
- Respect for parental autonomy in decision making regarding preventive management

Hu BMJ 2004;329:852-4

Food allergy risk and uncertainty

- Dylan, aged 20 months, peanut allergy
- At 12 months of age facial contact urticaria to peanut butter
- SPT 9 mm reaction to peanut
- No further reaction, but avoids peanuts
- **Family does eat peanuts and other nuts**
- **No adrenaline autoinjector prescribed**

Hu BMJ 2004;329:852-4

Food allergy risk and uncertainty

- Jarred, 23 months
- At 9 months of age, peanut butter contact with face resulted in local urticaria, lip and periorbital swelling, no systemic symptoms
- At hospital placed on monitor, 2x adrenaline IMI
- SPT 9 mm reaction to peanut
- **Paediatric allergist prescribed adrenaline autoinjector**
- **Peanuts removed** from household and family's diet
- **Childcare centre banned peanuts, nuts, food labelled "may contain nuts"** when Jarred enrolled there

Hu BMJ 2004;329:852-4

Ethics in practice

Making clinical decisions when the stakes are high and the evidence unclear

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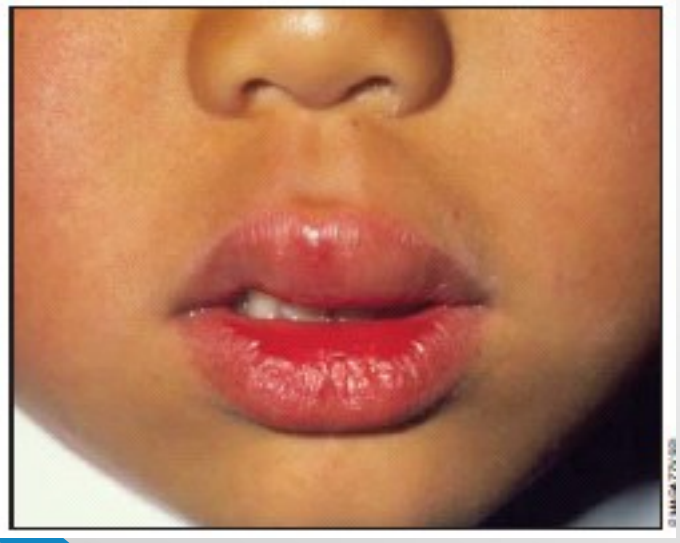

Summary points

- Peanut allergy is an increasingly common problem.
- The risk of anaphylaxis is difficult to predict
- Providing adrenaline autoinjectors to every child with food allergy is costly and criteria for provision are uncertain
- Risk perceptions are influenced by the value society places on children's lives
- Management should be decided with parents after discussing the uncertainties

Anaphylaxis: Recognising risk

- Prevent both alarmism and complacency
- Prevent severe reactions in those at greatest risk
- Avoid unnecessary prescription of adrenaline and associated impairment in quality of life in those at low risk
- Risk stratification depends on identification of clinical and laboratory markers of risk
- Risk of dying from anaphylaxis is never zero, but lower than previously thought

Golden JACI Pract 2017;5:1224-6

TABLE I. Factors that increase the risk for severe, near-fatal, or fatal anaphylaxis

Delay in use of epinephrine
Severity of reaction
Absence of urticaria
Biphasic reaction
β-Blockers/ACEI
Age >65
Cardiovascular or pulmonary disease
Medication as a trigger
Uncontrolled asthma
Elevated tryptase/mast cell disorder
PAF-AH deficiency

ACEI, Angiotensin converting enzyme inhibitors; *PAF-AH*, platelet activating factor acetyl-hydrolase.

Problems with autoinjectors

- Information on features and functionality: Epinephrine Autoinjectors (EAIs) vs injectable adrenaline using ampoules
- Underprescribing
- Training on the use of an EAI (including schools)
- Carriage and use at the time of a reaction by patients, schools, camps, ECs, paramedics

Waserman JACI Pract 2017;5:1180-91

Food allergy and anaphylaxis in schools

Google images

The food allergic child at school

- Celine has mild atopic dermatitis and has a number of food allergies
- During the December school holidays she had a severe reaction after eating a peanut butter sandwich, and had to be taken to hospital, where she received an adrenaline injection
- When she enrolled at her new school in January the following year, her mom, Mrs Abrahams, informed the school principal of her allergy

Celine continued

- Mrs Abrahams asked the principal to instruct all the other children's parents not to allow their children to bring peanut butter sandwiches to school
- She also requested the school to identify a teacher who could be trained to administer an adrenaline autoinjector to Celine in the event of a severe reaction
- The principal refused on both counts
- What are Celine's rights? And those of the other children?

  How would you advise the mother? And the principal?

Food allergy and anaphylaxis in schools: The issues

- Tension between respecting individual child's rights and the rights of other children
- Confidentiality of food allergic child's diagnosis
- Avoidance of stigmatisation vs risk and potential harm
- What is the responsibility of the school in ensuring a safe environment for the food allergic child?

Behrmann J School Nursing 2010;26(3):183-193.

Anaphylaxis through the eyes of the food-allergic child

- Environmental and social barriers left children feeling isolated, excluded, teased
- Missing out on school activities (e.g. camps)
- Deprived of time with friends
- Being singled out as being different, “on the outside”
- Emotional burden of responsibility when negotiating situations with potential for exposure to allergens
- Food allergy is a “big deal” because it is a life or death issue

Fenton Risk Analysis 2010 DOI:10.1111/j.1539-6924.2010.01488.x

The responsibility of the school

https://foodallergiesrock.wordpress.com/category/school-allergy-resources/

1. Management of anaphylaxis

- School policy and guidelines
- Training of staff to recognise and treat emergency situation
- Harm resulting from unnecessary administration of adrenaline: non-maleficence
- Indemnification of person administering adrenaline

Behrmann J School Nursing 2010;26(3):183-193.

2. Prevention of exposure to/ ingestion of food allergen

- Policies that prohibit sharing of food or food containers between children
- “Allergen-free” areas in cafeterias / classes
- Balance between beneficence (what is in food allergic child’s best interests) and non-maleficence (isolation of food allergic child)
- Total bans e.g. on peanuts usually not effective and infringe on rights of other children

Behrmann J School Nursing 2010;26(3):183-193.

Position Statement

ALLERGIES IN SCHOOLS

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1. Allergy (chronic disease) action committee
2. Written chronic and emergency treatment plan, signed by doctor, + ID photo per child with chronic illness
3. Reduce exposure to allergens
4. Emergency medicine; availability
5. Training of staff to recognise and treat severe allergic reactions

Western Cape Government
Education

Chief Directorate: Inclusive Education and Special Programmes

Reference: 20161115-6122
12/5/8/P
Enquiries: SM Naicker

Inclusive Education and Special Programmes Minute: 0001/2017

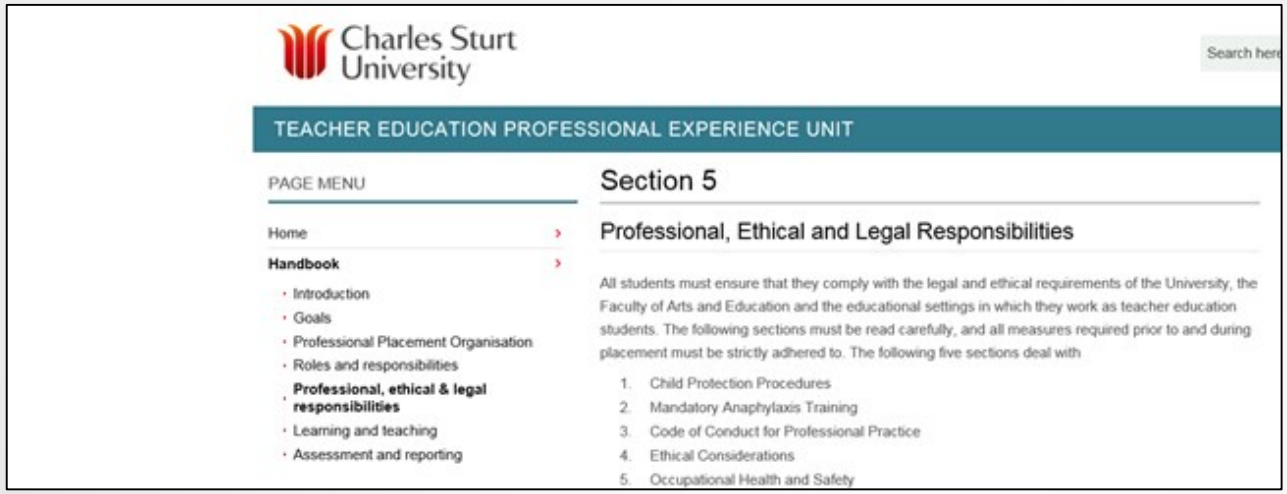
To: Deputy Directors-General, Chief Directors, Directors, Deputy Directors (Head Office and district offices), Heads: Curriculum Coordination and Advice, Heads: Learning Support, Heads: IMG Coordination and Advice, Circuit Managers, Chief Education Specialists, Deputy Chief Education Specialists, Subject Advisers, Learning Support Advisers and Principals of ordinary public schools, independent schools and special public schools

Subject: Dealing with allergies in schools

Subject: **Dealing with allergies in schools**

1. The Western Cape Education Department supports the Allergy Foundation of South Africa's *Allergy in Schools Policy* aimed at reducing the impact on learning for children with life-threatening chronic health conditions and ensuring the safety of children with severe allergies in schools. The fundamental aspects of the policy include ensuring that:

   a) an Allergy Action Committee (or a Chronic Illness Action Committee) is established at every school;
   b) every learner with an allergy is identified and has both a chronic treatment plan and an emergency treatment plan, signed by their doctor, which includes a photograph of the learner (photo ID);
   c) measures to reduce exposure to identified allergens are implemented for those with severe allergies;
   d) emergency medication is available and accessible at all times; and
   e) staff undergo online training on the identification and treatment of severe allergic reactions.



Mandatory Anaphylaxis Training for All Initial Teacher Education Students

The Board of Studies, Teaching and Educational Standards (BOSTES) (previously the NSW Institute of Teachers) and the Department of Education and Communities (DEC) now require that all initial teacher education students have training in managing anaphylaxis. In order to meet this requirement, ALL CSU students in teacher education courses, other than the Bachelor of Education/Bachelor of Teaching (Birth-5), must complete the training module provided by the Australian Society of Clinical Immunology and Allergy (ASCIA) before undertaking any professional experience placement.

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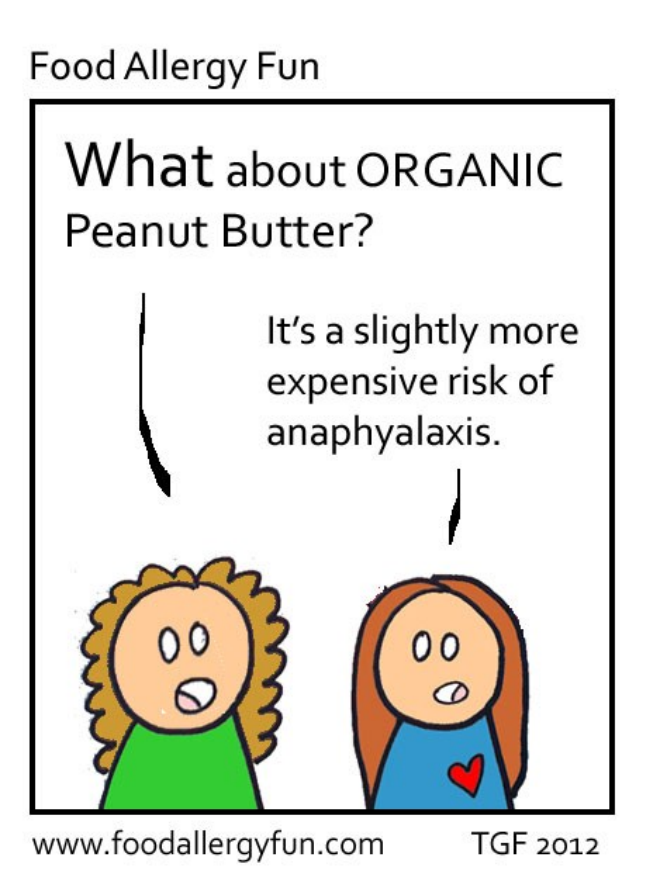
This is a free, online module available at http://etraining.allergy.org.au/. The training is required to be successfully undertaken every two years.

This is the only training that will be accepted by the DEC to meet the requirement of anaphylaxis training for initial teacher education students.

Legal and civil liability, beneficence and non-maleficence

- Luvo attends a private school in Cape Town
- A school outing is arranged, and Luvo is stung by a bee. He develops facial swelling and his breathing becomes very laboured
- The school nurse is in attendance and recognises that he is having an anaphylactic reaction. She knows that another learner, Samantha, has peanut allergy and carries an adrenaline autoinjector
- May the nurse use Samantha's autoinjector for Luvo?
- What are the potential consequences if she does?

Distributive and social justice: Access to investigation and treatment of anaphylaxis

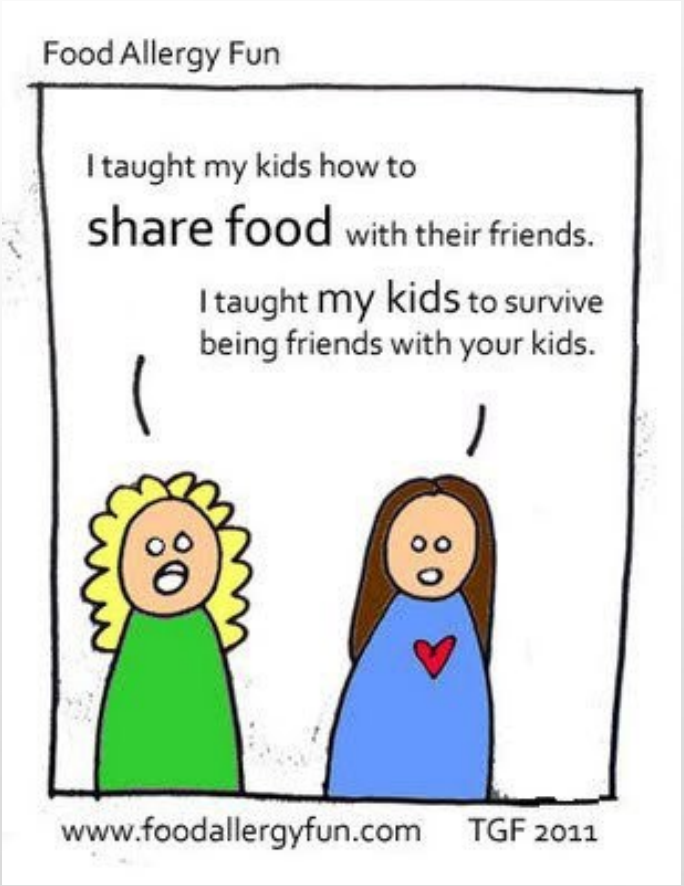


Beneficence vs. Justice

- South Africa has limited resources
- Limited access to specialised allergy services for investigation
- Cost of adrenaline autoinjector: if risk of anaphylaxis uncertain it is difficult to motivate for access in public sector
- Explore alternative options e.g. adrenaline ampoule & syringe
- Advocate with funders and pharmaceutical industry

Legislation to protect school children at risk of life-threatening allergies

- Australia
- Canada
- United States of America



Medical liability and negligence

- Fatal or near-fatal anaphylaxis: could it have been prevented or managed better?
  - Critical issue: administration of adrenaline
- Standard: care given by a reasonable medical practitioner
- The healthcare practitioner should express regret, but must not admit liability; consult legal advisor or risk manager

Labelling of foods for allergen content

- SA legislation requires food allergen labelling of food
- Statements “made in a factory that also uses nuts” insufficient information
- Independent testing by laboratories

Conclusion

- Anaphylaxis is potentially life-threatening
- Management of anaphylaxis poses numerous ethical and legal dilemmas and concerns
- Main ethical issues are uncertainty regarding risk and avoidance of harm
- Schools play important role in avoidance of exposure and treatment of anaphylaxis
- Legal issues: lack of due care and liability
- “Good Samaritan” rule for rescuers – not applicable in South Africa

The Future?

- Role of allergy practitioners as advocates and advisors:
  - Engage with regulatory bodies and legislators
  - Education of public, school staff and health professionals
  - Training of school staff and other care-givers

AFSA
allergy foundation south africa