

## List of included studies

### Risk of recurrence

1. Cianferoni A, Novembre E, Pucci N, Lombardi E, Bernardini R, Vierucci A. Anaphylaxis: a 7-year follow-up survey of 46 children. *Ann Allergy Asthma Immunol* 2004;**92**:464–8.
2. Decker KW, Bellolio MF, Campbell RL, Luke A, Anderson JL, Sauver J, *et al.* Recurrent anaphylaxis events in patients presenting to the emergency department over a 10-year period. *Ann Emerg Med* 2008;**51**:214.
3. Mehl A, Wahn U, Niggemann B. Anaphylactic reactions in children--a questionnaire-based survey in Germany. *Allergy* 2005;**60**:1440–5.
4. Múgica Garcia M, Tejedor Alonso M, Rojas Perez Ezquerro P, Moro Moro M, Vila Albelda C, Rosado Ingelmo A, *et al.* A study of the recurrence of anaphylaxis. Paper presented at 29th Congress of the European Academy of Allergy and Clinical Immunology, 5–9 June 2010, London, UK.
5. Mullins RJ. Anaphylaxis: risk factors for recurrence. *Clin Exp Allergy* 2003;**33**:1033–40.

## List of studies with potential relevance for the background of the guideline

1. Abraham D, Grammer L. Idiopathic anaphylaxis. *Immunol Allergy Clin North Am* 2001;**21**:783–94.
2. Alrasbi M, Sheikh A. Comparison of international guidelines for the emergency medical management of anaphylaxis. *Allergy* 2007;**62**:838–41.
3. Bonifazi F, Jutel M, Bilo BM, Birnbaum J, Muller U. Prevention and treatment of hymenoptera venom allergy: guidelines for clinical practice. *Allergy* 2005;**60**:1459–70.
4. Choo K, Sheikh A. Action plans for the long-term management of anaphylaxis: systematic review of effectiveness. *Clin Exp Allergy* 2007;**37**:1090–4.
5. Ellis AK, Day JH. Diagnosis and management of anaphylaxis. *Can Med Assoc J* 2003;**169**:307–12.
6. Estelle F, Simons R. Anaphylaxis, killer allergy: long-term management in the community. *J Allergy Clin Immunol* 2006;**117**:367–77.
7. Harduar-Morano L, Simon MR, Watkins S, Blackmore C. Algorithm for the diagnosis of anaphylaxis and its validation using population-based data on emergency department visits for anaphylaxis in Florida. *J Allergy Clin Immunol* 2010;**126**:98–104.
8. Kemp SF, Lockey RF, Simons FER. Epinephrine: the drug of choice for anaphylaxis. A statement of the World Allergy Organization. *Allergy* 2008;**63**:1061–70.
9. Lieberman P, Decker W, Camargo CA Jr, Oconnor R, Oppenheimer J, Simons FE. SAFE: a multidisciplinary approach to anaphylaxis education in the emergency department. *Ann Allergy Asthma Immunol* 2007;**98**:519–23.

10. Lieberman P, Nicklas RA, Oppenheimer J, Kemp SF, Lang DM, Bernstein DI, *et al.* The diagnosis and management of anaphylaxis practice parameter: 2010 update. *J Allergy Clin Immunol* 2010;**126**:477–80.e42.
11. Matasar MJ, Neugut AI. Epidemiology of anaphylaxis in the United States. *Curr Allergy Asthma Rep* 2003;**3**:30–5.
12. McLean-Tooke APC, Bethune CA, Fay AC, Spickett GP. Adrenaline in the treatment of anaphylaxis: what is the evidence? *BMJ* 2003;**327**:1332–5.
13. Moneret-Vautrin DA, Flabbee J, Morisset M, Beaudouin E, Kanny G. [Epidemiology of prelethal and lethal anaphylaxis.] *Rev Fr Allergol et d'Immunologie Clinique* 2004;**44**:315–22.
14. Moneret-Vautrin DA, Morisset M, Flabbee J, Beaudouin E, Kanny G. Epidemiology of life-threatening and lethal anaphylaxis: a review. *Allergy* 2005;**60**:443–51.
15. Sheikh A, Shehata YA, Brown SGA, Simons FER. Adrenaline (epinephrine) for the treatment of anaphylaxis with and without shock. *Cochrane Database Syst Rev* 2008; Issue 4, Art. No.: CD006312. DOI: 10.1002/14651858.CD006312.pub2.
16. Simons FER, Frew AJ, Ansotegui IJ, Bochner BS, Golden DBK, Finkelman FD, *et al.* Risk assessment in anaphylaxis: current and future approaches. *J Allergy Clin Immunol* 2007;**120**:S2–24.
17. Simons FER, Frew AJ, Ansotegui IJ, Bochner BS, Golden DBK, Finkelman FD, *et al.* Practical allergy (PRACTALL) report: risk assessment in anaphylaxis. *Allergy* 2008;**63**:35–7.
18. Soar J. Emergency treatment of anaphylaxis in adults: concise guidance. *Clin Med* 2009;**9**:181–5.
19. Soar J, Pumphrey R, Cant A, Clarke S, Corbett A, Dawson P, *et al.* Emergency treatment of anaphylactic reaction: guidelines for healthcare providers. *Resuscitation* 2008;**77**:157–69.
20. Wasserman S, Chad Z, Francoeur MJ, Small P, Stark D, Vander Leek TK, *et al.* Management of anaphylaxis in primary care: Canadian expert consensus recommendations. *Allergy* 2010;**65**:1082–92.

### List of studies with potential relevance for the cost-effectiveness analysis

1. Bohlke K, Davis RL, DeStefano F, Marcy SM, Braun MM, Thompson RS. Epidemiology of anaphylaxis among children and adolescents enrolled in a health maintenance organization. *J Allergy Clin Immunol* 2004;**113**:536–42.
2. Brockow K, Jofer C, Behrendt H, Ring J. Anaphylaxis in patients with mastocytosis: a study on history, clinical features and risk factors in 120 patients. *Allergy* 2008;**63**:226–32.
3. Brown AFT, McKinnon D. Emergency department anaphylaxis: a review of 142 patients in a single year. *J Allergy Clin Immunol* 2001;**108**:861–6.
4. Cardenas GA, Deitcher SR. Risk of anaphylaxis after reexposure to intravenous lepirudin in patients with current or past heparin-induced thrombocytopenia. *Mayo Clin Proc* 2005;**80**:491–3.
5. Cianferoni A, Novembre E, Mugnaini L, Lombardi E, Bernardini R, Pucci N, *et al.* Clinical features of acute anaphylaxis in patients admitted to a university hospital: an 11-year retrospective review (1985–1996). *Ann Allergy Asthma Immunol* 2001;**87**:27–32.
6. Clark S, Bock SA, Gaeta TJ, Brenner BE, Cydulka RK, Camargo CA. Multicenter study of emergency department visits for food allergies. *J Allergy Clin Immunol* 2004;**113**:347–52.
7. Clark S, Long AA, Gaeta TJ, Camargo CA. Multicenter study of emergency department visits for insect sting allergies. *J Allergy Clin Immunol* 2005;**116**:643–9.

8. De Silva IL, Mehr SS, Tey D, Tang MLK. Paediatric anaphylaxis: a 5 year retrospective review. *Allergy* 2008;**63**:1071–6.
9. Dibs SD, Baker MD. Anaphylaxis in children: a 5-year experience. *Pediatrics* 1997;**99**:E71–5.
10. Dietrich W, Ebell A, Busley R, Boulesteix AL. Aprotinin and anaphylaxis: analysis of 12,403 exposures to aprotinin in cardiac surgery. *Ann Thorac Surg* 2007;**84**:1144–50.
11. Dietrich W, Spath P, Ebell A, Richter JA. Prevalence of anaphylactic reactions to aprotinin: analysis of two hundred forty-eight reexposures to aprotinin in heart operations. *J Thorac Cardiovasc Surg* 1997;**113**:194–201.
12. Dietrich W, Spath P, Zuhlsdorf M, Dalichau H, Kirchhoff PG, Kuppe H, *et al.* Anaphylactic reactions to aprotinin reexposure in cardiac surgery: relation to antiaprotinin immunoglobulin G and E antibodies. *Anesthesiology* 2001;**95**:64–71.
13. Ellis AK, Day JH. Incidence and characteristics of biphasic anaphylaxis: a prospective evaluation of 103 patients. *Ann Allergy Asthma Immunol* 2007;**98**:64–9.
14. Erlewyn-Lajeunesse M, Dymond S, Slade I, Mansfield HL, Fish R, Jones O, *et al.* Diagnostic utility of two case definitions for anaphylaxis: a comparison using a retrospective case notes analysis in the UK. *Drug Saf* 2010;**33**:57–64.
15. Estes O, Sala Cunill A, Guilarte M, Labrador M, Luengo O, Cardona V. A review of anaphylaxis management in the emergency room. Paper presented at 29th Congress of the European Academy of Allergy and Clinical Immunology, 5–9 June 2010, London, UK.
16. Flabbee J, Petit N, Jay N, Guenard L, Codreanu F, Mazeyrat R, *et al.* The economic costs of severe anaphylaxis in France: an inquiry carried out by the Allergy Vigilance Network. *Allergy* 2008;**63**:360–5.
17. Gonzalez-Perez A, Aponte Z, Vidaurre CF, Rodriguez LAG. Anaphylaxis epidemiology in patients with and patients without asthma: a United Kingdom database review. *J Allergy Clin Immunol* 2010;**125**:1098–104.e1.
18. Helbling A, Hurni T, Mueller UR, Pichler WJ. Incidence of anaphylaxis with circulatory symptoms: a study over a 3-year period comprising 940 000 inhabitants of the Swiss Canton Bern. *Clin Exp Allergy* 2004;**34**:285–90.
19. Hompes S, Scherer K, Kohli A, Rueff F, Mahler V, Lange L, *et al.* [Food anaphylaxis: data from the anaphylaxis register.] *Allergo J* 2010;**19**:234–42.
20. Korenblat P, Lundie MJ, Dankner RE, Day JH. A retrospective study of epinephrine administration for anaphylaxis: how many doses are needed? *Allergy Asthma Proc* 1999;**20**:383–6.
21. Lang DM, Alpern MB, Visintainer PF, Smith ST. Gender risk for anaphylactoid reaction to radiographic contrast-media. *J Allergy Clin Immunol* 1995;**95**:813–17.
22. Laporte JR, de Latorre FJ, Gadgil DA, Chandrasekhar DV, Laszlo A, Retsagi G, *et al.* An epidemiologic study of severe anaphylactic and anaphylactoid reactions among hospital patients: methods and overall risks. *Epidemiology* 1998;**9**:141–6.
23. Laporte JR, de Latorre J, Laszlo A, Retsagi G, Gadgil DA, Chandrasekhar DV, *et al.* Risk of anaphylaxis in a hospital population in relation to the use of various drugs: an international study. *Pharmacoepidemiol Drug Saf* 2003;**12**:195–202.
24. Laxenaire MC. [Epidemiology of anesthetic anaphylactoid reactions. Fourth multicenter survey (July 1994–December 1996)]. *Ann Fr Anesth Reanim* 1999;**18**:796–809.
25. Manivannan V, Campbell RL, Bellolio MF, Stead LG, Li JTC, Decker WW. Factors associated with repeated use of epinephrine for the treatment of anaphylaxis. *Ann Allergy Asthma Immunol* 2009;**103**:395–400.

26. McIntyre CL, Sheetz AH, Carroll CR, Young MC. Administration of epinephrine for life-threatening allergic reactions in school settings. *Pediatrics* 2005;**116**:1134–40.
27. Mehl A, Wahn U, Niggemann B. Anaphylactic reactions in children: a questionnaire-based survey in Germany. *Allergy* 2005;**60**:1440–5.
28. Mulla ZD, Simon MR. Hospitalizations for anaphylaxis in Florida: epidemiologic analysis of a population-based dataset. *Int Arch Allergy Immunol* 2007;**144**:128–36.
29. Neugut AI, Ghatak AT, Miller RL. Anaphylaxis in the United States—an investigation into its epidemiology. *Arch Intern Med* 2001;**161**:15–21.
30. Noimark L, Khakoo GA, Summerfield A, Gardner J, Cox H, Warner JO. Awareness of adrenaline auto-injector availability and emergency management in school among parents of children with allergy. Paper presented at British Society for Allergy and Clinical Immunology Annual Conference; 29 June to 1 July 2009, Nottingham, UK. *Clin Exp Allergy* 2009;**39**:1949–50.
31. Ross MP, Ferguson M, Street D, Klontz K, Schroeder T, Luccioli S. Analysis of food-allergic and anaphylactic events in the national electronic injury surveillance system. *J Allergy Clin Immunol* 2008;**121**:166–71.
32. Rudders SA, Banerji A, Corel B, Clark S, Camargo CA, Jr. Multicenter study of repeat epinephrine treatments for food-related anaphylaxis. *Pediatrics* 2010;**125**:e711–18.
33. Rueda GM, Guilarte M, Luengo O, Sala A, Labrador M, Cardona V. Impact of adrenaline auto-injector prescription in anaphylaxis. *Allergy* 2008;**63**:734.
34. Sampson HA. Epidemiology of food allergy. *Pediatr Allergy Immunol* 1996;**7**:42–50.
35. Sheikh A, Alves B. Age, sex, geographical and socio-economic variations in admissions for anaphylaxis: analysis of four years of English hospital data. *Clin Exp Allergy* 2001;**31**:1571–6.
36. Simons FE, Peterson S, Black CD. Epinephrine dispensing for the out-of-hospital treatment of anaphylaxis in infants and children: a population-based study. *Ann Allergy Asthma Immunol* 2001;**86**:622–6.
37. Simons FER, World Allergy Organization. Epinephrine auto-injectors: first-aid treatment still out of reach for many at risk of anaphylaxis in the community. *Ann Allergy Asthma Immunol* 2009;**102**:403–9.
38. Singh J, Aszkenasy OM. Prescription of adrenaline auto-injectors for potential anaphylaxis: a population survey. *Public Health* 2003;**117**:256–9.
39. Yang M-S, Lee S-H, Kim T-W, Kwon J-W, Lee S-M, Kim S-H, et al. Epidemiologic and clinical features of anaphylaxis in Korea. *Ann Allergy Asthma Immunol* 2008;**100**:31–6.
40. Yocum MW, Butterfield JH, Klein JS, Volcheck GW, Schroeder DR, Silverstein MD. Epidemiology of anaphylaxis in Olmsted County: a population-based study. *J Allergy Clin Immunol* 1999;**104**:452–6.

### List of excluded studies with reasons for exclusion

1. Rimmer JS, Katelaris CH, editors. Proceedings of the XVII International Congress of Allergology & Clinical Immunology, Sydney, 15–20 October. Boston, MA: Hogrefe & Huber Publishing; 2000. No relevant data (no relevant studies identified).
2. Reduce anaphylactic reactions to anaesthetic drugs by identifying definite risk factors and preventing subsequent reactions. *Drugs Ther Perspect* 2005;**21**:24–6. No relevant data.
3. Ahlback S, Boehncke WH. Management of anaphylactic reactions in the allergological practice. *Allergologie* 2003;**26**:294–302. No relevant data.

4. Aleman A, Sastre J, Quirce S, de las Heras M, Carnes J, Fernandez-Caldas E, *et al.* Allergy to kiwi: a double-blind, placebo-controlled food challenge study in patients from a birch-free area. *J Allergy Clin Immunol* 2004;**113**:543–50. No relevant data.
5. Al-Ghanem F, Al-Mutairi N. Spectrum of cutaneous adverse drug reactions seen in the emergency department (ED): a prospective study from Kuwait. *Middle East J Emerg Med* 2006;**6**:11–15. Not anaphylaxis.
6. Bilo BM, Bonifazi F. Epidemiology of insect-venom anaphylaxis. *Curr Opin Allergy Clin Immunol* 2008;**8**:330–7. No relevant data.
7. Boehncke WH, Ahlback S. [Emergency management in the allergological practice: prevention of iatrogenic anaphylactic reactions.] *Allergologie* 2003;**26**:78–83. No relevant data.
8. Charpin D, Benzarti M, Birnbaum J, Hemon Y, Senft M, Alazia M, *et al.* Risk-factors for anaphylactic reactions to muscle relaxants. *J Allergy Clin Immunol* 1987;**79**:239. No relevant data.
9. Chee R, Rattray L, Nagendran V, Bansal A, Hayman G, Warner A, *et al.* Assessing baseline serum platelet activating factor acetylhydrolase levels in determining the risk of anaphylaxis in allergic patients. *Allergy* 2008;**63**:1135. No relevant data.
10. Collet E, Jeudy G. Clinical aspects of severe cutaneous allergies (excluding cutaneous drug eruptions). *Rev Fr Allergol* 2008;**48**:115–19. Not anaphylaxis.
11. Dobbie A, Robertson CM. Provision of self-injectable adrenaline for children at risk of anaphylaxis: its source, frequency and appropriateness of use, and effect. *Ambul Child Health* 1998;**4**:283–8. No relevant data.
12. Dykewicz MS, McGrath KG, Patterson R. Identification of patients at risk for anaphylaxis from streptokinase. *J Allergy Clin Immunol* 1986;**77**:225. No relevant data.
13. El-Shanawany T, Seddon L, Jolles S, Carne E, Dowd H, Williams P. Patients with anaphylaxis in accident and emergency are not referred to specialised allergy services. *J Clin Pathol* 2010;**63**:375. No relevant data.
14. Ellsworth PI, Merguerian PA, Klein RB, Rozycki AA. Evaluation and risk factors of latex allergy in spina bifida patients: is it preventable? *J Urol* 1993;**150**:691–3. Not anaphylaxis.
15. Fisher MM. The epidemiology of anaesthetic anaphylactoid reactions in Australasia. *Klinische Wochenschrift* 1982;**60**:1017–20. No relevant data.
16. Helbling A, Muller U, Hausmann O. [Anaphylaxis: reality of acute therapy and preventive measures. Analysis of 54 patients in a specialized city hospital.] *Allergologie* 2009;**32**:358–64. No relevant data.
17. Hompes S, Scherer K, Kohli A, Rueff F, Mahler V, Lange L, *et al.* [Food anaphylaxis: data from the anaphylaxis register.] *Allergo J* 2010;**19**:234–42. Foreign-language paper.
18. Kanny G, Moneret-Vautrin DA, Flabbee J, Beaudouin E, Morisset M, Parisot L. Risk factors of food induced anaphylactic shock. *J Allergy Clin Immunol* 2002;**109**:743. Wrong study type.
19. Levy Y, Segal N, Danon YL. Trends in adrenaline (EpiPen) dispensing in Israel in 1997–2004. *Public Health* 2007;**121**:144–7. No relevant data.
20. Lieberman P, Camargo CA Jr, Bohlke K, Jick H, Miller RL, Sheikh A, *et al.* Epidemiology of anaphylaxis: findings of the American College of Allergy, Asthma and Immunology Epidemiology of Anaphylaxis Working Group. *Ann Allergy Asthma Immunol* 2006;**97**:596–602. No relevant data.
21. Malinovsky JM, Vervloet D, Laxenaire MC. Are there risk factors of anaphylaxis related to patient factors, to treatments, and to anaesthetic procedures? How identify the people at risk for anaphylactoid reactions in anaesthesia? *Ann Fr Anesth Reanim* 2002;**21**:S129–50. Wrong study type.

22. Moneret-Vautrin DA, Kanny G. Food-induced anaphylactic shock: a French multicentric survey over 1991 and 1992. *Ann Gastroent Hepato* 1995;**31**:256–63. Foreign-language paper.
23. Muck AE, Bebarta VS, Borys DJ, Morgan DL. Six years of epinephrine digital injections: absence of significant local or systemic effects. *Ann Emerg Med* 2010;**56**:270–4. No relevant data.
24. Piomrat K, Chinratanapisit S, Trathong S. Anaphylaxis in an emergency department: a 2-year study in a tertiary-care hospital. *Asian Pac J Allergy Immunol* 2008;**26**:121–8. No relevant data.
25. Poachanukoon O, Paopairochanakorn C. Incidence of anaphylaxis in the emergency department: a 1-year study in a university hospital. *Asian Pac J Allergy Immunol* 2006;**24**:111–6. No relevant data.
26. Pritchard KI. Endocrine symptoms to predict risk of recurrence? *Lancet Oncol* 2008;**9**:1117–19. Wrong study type.
27. Rusznak C, Peebles Jr RS. [Anaphylaxis and anaphylactoid reactions.] *Sendrom* 2003;**15**:57–64. No relevant data.
28. Santaella ML, Cox PR, Ramos C, Disdier OM. Anaphylaxis: an analysis of cases evaluated at the Puerto Rico Medical Center over a ten-year period. *P R Health Sci J* 2006;**25**:143–7. No relevant data.
29. Schnadt S. Anaphylaxis: data from patient's perspective. A national survey of the German Allergy and Asthma Association (DAAB). *Allergologie* 2009;**32**:17–27. No relevant data.
30. Schwartz HJ. Acute allergic disease in a hospital emergency room: a retrospective evaluation of one year's experience. *Allergy Proc* 1995;**16**:247–50. No relevant data.
31. Simons FER, Lieberman PL, Read EJ Jr, Edwards ES. Hazards of unintentional injection of epinephrine from autoinjectors: a systematic review. *Ann Allergy Asthma Immunol* 2009;**102**:282–7. No relevant data.
32. Tejedor M, Moro M, Múgica M, Vila C, Rosado A, Gomez-Traseira C, et al. Referral to allergy unites of patients with anaphylaxis who attended to emergency departments. *Allergy* 2008;**63**:292. No relevant data.

### List of studies that were not retrieved

1. Cichocka-Jarosz E. Anaphylaxis in children. *Postep Derm Alergol* 2009;**26**:357–60. Stock in British Library goes up to 2009, 26(3).
2. De Swert L. [Anaphylaxis in children.] *Tijdschr Geneesk* 2005;**61**:1150–4. Closed building at the British Library; not available until November 2011.
3. Gomes ER, Demoly P. Epidemiology of hypersensitivity drug reactions. *Curr Opin Allergy Clin Immunol* 2005;**5**:309–16. Closed building at the British Library; not available until February 2012.
4. Hoigne R, Schlumberger HP, Vervloet D, Zoppi M. Epidemiology of allergic drug reactions. *Monogr Allergy* 1993;**31**:147–170. Closed building at the British Library, not available until May 2011.
5. Lowe G, Kirkwood E, Harkness S. Survey of anaphylaxis management by general practitioners in Scotland. *Scott Med J* 2010;**55**:11–4. Closed building at the British Library; not available until February 2012.
6. Pumphrey R. Anaphylaxis: Can we tell who is at risk of a fatal reaction? *Curr Opin Allergy Clin Immunol* 2004;**4**:285–90. Closed building at the British Library; not available until February 2012.
7. Rohrer CL, Pichler WJ, Helbling A. [Severe anaphylaxis: clinical findings, etiology and course in 118 patients.] *Schweiz Med Wochenschr* 1998;**128**:53–63. Closed building at the British Library; not available until November 2011.

8. Simons KJ, Simons FER. Epinephrine and its use in anaphylaxis: current issues. *Curr Opin Allergy Clin Immunol* 2010;**10**:354–61. Closed building at the British Library; not available until February 2012.
9. Tang MLK, Osborne N, Allen K. Epidemiology of anaphylaxis. *Curr Opin Allergy Clin Immunol* 2009;**9**:351–6. Closed building at the British Library; not available until February 2012.
10. Worm M. Epidemiology of anaphylaxis. *Allergologie* 2010;**33**:293–6. Ordered from British Library in London. A day later received notification that this is missing stock.