FACULTY OF FAMILY PLANNING AND REPRODUCTIVE HEALTH CARE
OF THE ROYAL COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

F **Faculty**
A **Aid to**
C **CPD**
T **Topics**

A **CPD** Self-Assessment Test

REVIEW

This review is intended as an educational exercise and reports the personal views of the authors

Review No. 2001/03

To be reviewed not later than 31 May 2006

Resuscitation in the family planning and reproductive health care setting

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How to use a FACT

A FACT is an up-to-date review of a subject relevant to the speciality, intended to help you fulfil your CPD requirements in your home or place of work. Whilst FACTs are edited and reviewed at various levels within the Faculty, the actual contents and views expressed are those of the authors and not the Faculty. More specifically, these reviews are not guidelines. The CEC is producing clinical guidelines separately.

FACTs have three sections: a review, a true/false test, and discussion points. To use a FACT to earn CPD credits you should do the following:

1. **Working alone**: Read the review and do the test on page 169. The answers are provided on page 173 so you can mark yourself. If there are points you are unsure about, disagree with, or need further clarification on, make a note of these for use at a later date. This should take you no more than 1 hour. Keep a record of having done this in your CPD diary and, unless indicated otherwise on the FACT, this will earn you 1 hour (DFFP), 1 credit (MFFP).
2. **Working as a group**: arrange a meeting of at least 1 hour with colleagues to discuss the discussion points given in the FACT (page 168) and any issues the participants have come up with as a result of reading the FACT. Keep a record of having done this in your CPD diary and, unless indicated otherwise on the FACT, this will earn you 1 hour (DFFP), 1 credit (MFFP).

Introduction

The family planning team usually works in clinics in the community or in general practice away from the emergency back-up found in the acute services. Doctors, nurses and paramedical staff functioning in an official capacity have an obligation to perform cardiac pulmonary resuscitation (CPR) if it is clinically indicated.[1] Whilst it is unlikely we would have to deal with a cardiac arrest in the family planning setting, there are other conditions that can occur which require immediate intervention (see Table 1). Vasovagal attack and anaphylactic reaction are the conditions most likely to occur in the family planning clinic. It is important that these two events are correctly identified and correctly treated.[2,3] Rarely, we may have to manage an epileptic fit or a hypoglycaemic attack in a diabetic client. If the clinic environs are regularly assessed by the Health and Safety Department of your service, other incidences should be unlikely to occur.

Anticipation of situations and identification of individuals likely to have problems is good practice to prevent incidences occurring. Take a full history to include allergies and pre-existing conditions. If the client suffers from epilepsy or diabetes it is helpful to ask about their control and any precipitating factors that have lead to previous problems. Ask asthmatics to bring salbutamol (Ventolin) inhalers if a procedure is anticipated. If a diabetic has hypoglycaemic attacks, make sure they have eaten before the procedure, and that they have a source of glucose available (e.g. bar of chocolate) so a hypoglycaemic event can be prevented.

Complications when fitting an intra-uterine device (IUD)

When family planning clinics were independent from the

Table 1 *Emergencies that can lead to collapse*

Vasovagal reaction		
Cervical shock		
Faint after injection		
Faint after blood test		
Faint by friend or partner observing a procedure		
Anaphylaxis (commoner in atopic individuals)		
Reaction to	-Lignocaine	-Cervical analgesia
		-Fitting and removal of implant
		-Vasectomy
	-Latex	
	-Depo Provera	
	-Rubella vaccination	
	- Aspirin or NSAIDS given for IUD fitting	
Epileptic fit		
Spontaneous in known epileptic		
Unexpected	-with stimulation of cervix	
	-with vasovagal collapse	
Cardiac arrest		
Spontaneous		
After or during IUD fitting if severe bradycardia		
Hypoglycaemic attack in a diabetic		
Other potential incidences in a public area		
Choking		
Unconsciousness due to injury		
Electrocution		

NHS, there was a Family Planning Association clinic handbook which outlined procedures in the clinic. For the insertion of an IUD the following were advised: reassure the patient, demonstrate confidence, keep up conversation and let the patient relax, BE GENTLE and QUICK (FPA's emphasis).[4] This is still good advice and has been repeated in varying forms over the intervening years.[5,6] It is important to explain the procedure to the woman, and to use appropriate analgesia if needed. A clinician must not attempt to fit an IUD without training, and ideally should have another health professional present.[7]

Vasovagal attack

The assistant needs to monitor for signs of a vasovagal attack, indicated by sweating, pallor and bradycardia (pulse < 60 beats/min). If a vasovagal attack occurs, stop the procedure, remove instruments and IUD if not yet fully inserted, raise the client's legs and lower her head. This should enable the woman to recover quickly within a few seconds, and her pulse rate should start to rise. If the vasovagal attack occurs after the fitting and recovery is swift, the IUD should be left in place. If she is not recovering, consider removing the IUD and administering oxygen (if available in your clinic), as this will produce an improvement in the woman's condition. Put the woman into the recovery position once improvement is seen (until the side effects of the attack have dissipated).

Call for an ambulance if there is persistent bradycardia with pulse < 60 beats/minute or systolic BP < 90 mmHg, ventricular arrythmia requiring correction, or signs of heart failure. If the heart rate drops below 40 beats/minute, or the systolic blood pressure is below 90 mmHg, then 500 µg of atropine should be given by slow IV injection. If the response is not satisfactory this can be repeated every few minutes up to a dose of 3 mg.[8]

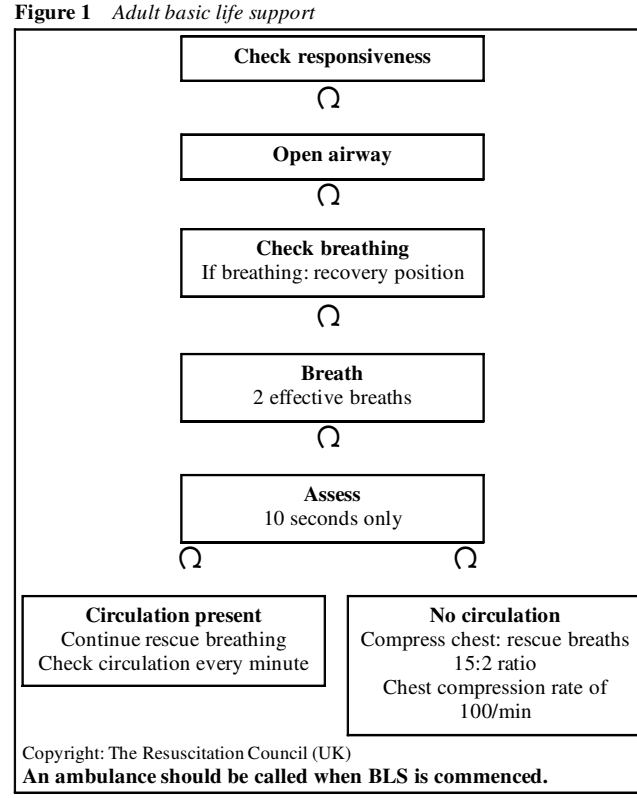
Table 2 *Summary of distinguishing features of vasovagal reaction versus anaphylaxis*

	Vasovagal	Anaphylaxis
Pulse	Slow < 60 beats/min	Fast
BP	Low	Low
Skin changes	Pallor Sweating	Urticaria Pruritis Variable colour
Respiration	Normal Stridor	Wheeze
Other changes		Rhinitis Conjunctivitis Abdominal pain Vomiting Diarrhoea Sense of impending doom

Cardiac arrest

Cardiac arrest can occur very rarely and basic life support (BLS) must be commenced and continued until emergency services arrive (see Figure 1).

Figure 1 *Adult basic life support*



Copyright: The Resuscitation Council (UK)

An ambulance should be called when BLS is commenced.

Epileptic fit

Epileptic fit may occur in a known epileptic, or spontaneously with no previous history of a fit. Before commencing an IUD insertion,[3] advise a known epileptic that it may precipitate an attack. Ask about the nature and duration of the fits, as the woman will usually know. In a known epileptic there is no need to call an ambulance if the woman comes out of the fit spontaneously and no injury has occurred. Position the woman in the recovery position until the post-ictal phase has resolved. If an injury has occurred which cannot be dealt with, if the seizures do not stop after a few minutes, or there is difficulty breathing, call for an ambulance. If the response time for emergency services is known to be more than 20 minutes, then treat a non-resolving fit with rectal diazepam.[9] There are no clear guidelines as to when to treat, but it is thought to be if the fit has continued for more than 5 minutes.

Table 3 *Summary of treatment in an emergency situation*

Event	Drug of choice	Action
Vasovagal		
	Atropine	Raise feet, lower head: this should lead to recovery
If heart rate falls below 40 b/min	500µg by slow IV injection up to a total of 3 mg given every few minutes	If inadequate response or other indicators of asystole risk call ambulance
Anaphylaxis	Adrenaline Chlorpheniramine Hydrocortisone Give oxygen if available	0.5mg(0.5ml of 1:1000) IM 10-20mg slow IV after 5 minutes 100-300mg IV (no immediate effect)
Epileptic fit	Diazepam	10 mg rectally if fit lasting more than 5 minutes
Unconscious		Call for ambulance and maintain airway
Cardiac arrest		Call for ambulance and commence BLS
Choking[15]		Encourage coughing Carry out back blows Abdominal thrusts BLS if unconscious
Electrocution		Switch off electricity and if unconscious or cardiac arrest, call for help and commence BLS

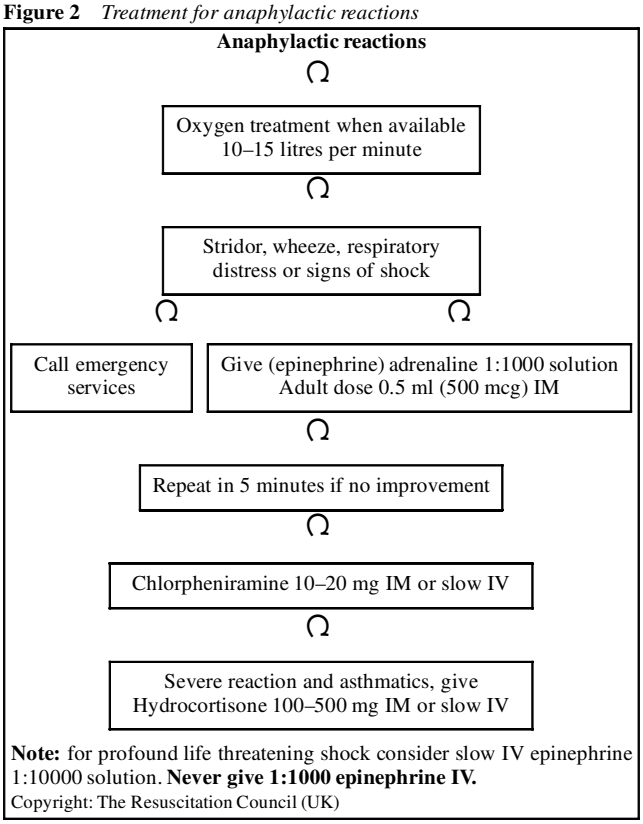
Anaphylaxis

Anaphylaxis can occur at IUD insertion if there is a reaction to analgesia, either local or oral, or to latex gloves (see below).

Anaphylactic reactions in the family planning setting

An anaphylactic reaction can occur in the family planning setting after use of lignocaine, or latex gloves, and possibly after Depo Provera injection. An anaphylactoid reaction is clinically similar, but occurs after the first exposure to certain drugs and is a dose-related idiosyncratic reaction rather than an immunologically mediated one. Both may present with angio-oedema, urticaria, dyspnoea, and hypotension. Death is rare, but can result from acute irreversible asthma or laryngeal oedema. Cardiac dysfunction is principally due to hypotension. Other symptoms include rhinitis, conjunctivitis, abdominal pain, vomiting, diarrhoea and sense of impending doom. The patient may either be flushed or pale.[10] There is a lack of any consistent clinical manifestation and reactions can be delayed by a few hours. Anaphylactic reaction may occur if there is a history of previous allergic reaction. The reaction is distinguished from the bradycardia of a vasovagal attack by the rapid pulse of a severe anaphylactic attack. Special attention should be paid to skin condition, pulse, blood pressure, upper airways and auscultation of the chest.[11] The treatment for an attack is set out in Figure 2.

Figure 2 *Treatment for anaphylactic reactions*



Note: for profound life threatening shock consider slow IV epinephrine 1:10000 solution. **Never give 1:1000 epinephrine IV.**

Table 4 *Content of emergency shock pack for family planning clinics* (Contents may vary depending on response time of local emergency services)

Essential	
Atropine 0.5mg in 1ml	2-4 ampoules
Adrenaline 1: 1000	2 ampoules
Chlorpheniramine 10 mg	2 ampoules
Depends on local emergency back up: if rapid these drugs may not be needed	
Hydrocortisone 100 mg	2 ampoules
Diazepam	2 rectal tubes (Store in cool dry place)
Also needed	
Needles	
Syringes	
Water for injection	
Airway (Guedel) and Laerdal mask	

Basic life support

If the emergency procedures above fail, or if a patient has a cardiac arrest, then ring for emergency services and commence basic life support (Figure 1). The three elements can be remembered as 'ABC': airways, breathing, and circulation. It is essential that all clinical staff in family planning have training and regular (annual) updating for basic life support so that the correct actions are taken. Skills

not regularly practised are not retained.[12] To protect the rescuer, there are ventilation masks available. Resuscitation should not be delayed for a device to be sought. There is no evidence that a rescuer has contracted HIV from a victim when carrying out rescue breathing.[13] Survival is rare if defibrillation and/or drug therapy is unavailable within 30 minutes of cardiac arrest.[14]

Summary

A potentially life-threatening emergency in the family planning clinic situation is going to be extremely rare. However, as members of the medical profession acting in our official capacity in the clinic situation, we should know and be able to carry out correct procedures. It is important that regular updating of all the staff is made available.

Good clinical practice should minimise the likelihood of a serious adverse event. Make sure that the person fitting the IUD has sufficient training and that there is always another colleague present in the room or nearby. If a client collapses, someone has to call for help while the other starts recovery procedures. Make sure the basic emergency drugs are available in the clinic. What is held at the clinic level will depend on the local response times of the emergency services and the policy of the parent NHS provider unit, and should be discussed with the local risk manager; this also applies to availability of oxygen, which is used by some providers. A protocol should be in place to check and replenish the contents of the emergency drug pack. Advanced life support has not been addressed in the discussion. However, as more defibrillators become available in public places, knowledge of how to use them may become essential in the future.

References

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Contact addresses for further information and guidelines

The Resuscitation Council (UK)
5th Floor
Tavistock House North
London WC1H 9 JR
Tel: 020 73884678
Web site: www.resus.org.uk

British Epilepsy Association
New Anstey House
Gate Way Drive
Yeadon
Leeds LS19 7XY
Help line Number: 0808 800 5050

Discussion points

1. Many family planning clinics are in community clinics isolated from the on-the-spot emergency facilities. How do your clinics maintain safe practices to manage emergencies if they occur?

2. What are the back-up services for a family planning clinic outside the hospital setting? What are the referral pathways in the event of an emergency and what is the response time for emergency services?

3. BLS skills in general practice are often not updated frequently. Does your practice ensure regular training sessions for clinical and non-clinical staff? Is a record kept of training attended?

4. Are IUDs in your practice ever fitted without an assistant? If so, is this safe practice?

5. Are all collapses recorded and discussed as critical incidents?