Basic Life Support (BLS)

Subharti Dental College

Recognized by Govt. of India, Ministry of Health & Family Welfare, Govt. Letter No. V.12017/22/96-PMS(Pt.II)
Website: dental.subharti.org, e-mail: dental@subharti.org, Ph.: 0121-2439043 / 52 (Extn: 2012, 2003), Telefax: 0121-3058030, 2439067
A constituent college of
SWAMI VIVEKANAND SUBHARTI UNIVERSITY

Office of the Principal & Dean

Ref. No. SDC/Misc./2018/34
Dated: 06.03.2018

NOTICE

For all Faculty Members, Final Year PGs and Interns

Like previous years, **Basic Life Support (BLS)** course is being organized again in the college from 19.03.2018 onwards. It is mandatory for all final year PGs and Interns to do the course & get BLS certification. Internship Completion and MDS Passing Certificates will not be issued until BLS certificate is produced. It is also mandatory for all faculty members who have not done the course in the last 2 years, in order to continue their services/salary. The details are as follows.

- Date – 19.03.2018 – 23.03.2018
- Time – 8:30 am to 5:30 pm daily, LT-04
- Certificates shall be given on successful completion
- Lunch will be provided by the college
- Course fee – Rs. 1600/- only

All are requested to contact **Dr. Prajesh Dubey,** Associate Professor, Oral & Maxillofacial Surgery Department for enrolling their names & to deposit course fee.

Note:

1. Those who have already done the above course within last 2 years are exempted on submitting the proof.
2. Since, the course will be running for 5 days, HODs are requested to send faculty, PGs and interns in such a way that departmental work does not suffer.

(Dr. Nikhil Srivastava)
MDS, FICD,FDS-RCPS(Glasgow)
Principal & Dean

Registrar
Swami Vivekanand
Subharti University
MEERUT

Copy to:

1. Director PGs studies
2. Dr. C. Munish
3. All HODs/Deptt. Incharge
4. Dr. Prajesh Dubey

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Basic life-saving measures

Sudden circulatory arrest is one of the main causes of death in many parts of the world [2]. In over 50 % of cases, the person suffers from ventricular fibrillation [3] where almost no more blood is being pumped around the system. The patient becomes unconscious and may die within a few minutes. Up to 50 % of patients can survive this sudden circulatory arrest if they are resuscitated immediately by witnesses of the emergency, and subsequently receive professional medical care [4]. The basic features of successful resuscitation include early recognition of the circulatory arrest, alerting the emergency services, early, efficient cardiopulmonary resuscitation and early electric defibrillation ("chain of survival").

Early recognition of circulatory arrest and alerting the emergency services

Is the patient unconscious?
To check whether the patient is conscious, shake him or her by the shoulders and ask loudly: "Are you all right?" If the patient reacts, the rescuer should provide appropriate assistance, such as alerting the emergency services and continuing to regularly check the patient's condition. If the patient does not react, it is recommended to call for help before checking whether the patient is breathing.

Is the patient breathing normally?
If the patient is breathing normally, the rescuer should put the patient in the recovery position and alert the emergency services. If the patient is not breathing or is gasping for breath occasionally, it is recommended, if available, to get the defibrillator or to get somebody to get it, and alert the emergency services. Then cardiopulmonary resuscitation should start immediately! If the victim is a child, it is advisable, if no other rescuers are available, to perform 5 rounds of cardiovascular resuscitation and then alert the emergency services, and possibly fetch a defibrillator if one is at hand, as most children suffer from a lack of oxygen rather than ventricular fibrillation following circulatory arrest [5].

The content of this training aid concentrates on the basic measures that should be carried out by rescuers to resuscitate adults, young people and children aged one year and up. It adheres strictly to the current guidelines of the American Heart Association and the European Resuscitation Council 2010. The scientific basis of these guidelines is the consensus paper "International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations 2010" [1] by the International Liaison Committee on Resuscitation, an international body of institutions and professional organizations from around the world that are concerned with scientifically based heart and lung resuscitation. The consensus paper includes the most up-to-date results of research from an international evidence evaluation process. It also includes recommendations on implementing resuscitation measures, taking into account their effectiveness as well as the ease with which they can be practically applied and taught.

Recovery position

If the patient does not react, but is breathing normally, he or she should be placed in the recovery position. This position ensures that the airways remain open so that the risk of an obstruction by saliva, vomit or blood is reduced. There are number of variations of the recovery position, each with its own advantages. It is important that the position is stable, that the head is extended, and that the breathing is not restricted by pressure on the thorax.

Early cardiopulmonary resuscitation

Although undertaking resuscitation measures early improves the chances of the patient surviving, such measures are often not performed until the emergency services arrive [6]. If the patient does not react, and is not breathing normally, heart massage should be started immediately! Preliminary artificial respiration is no longer recommended before carrying out heart massage [7].

Heart massage:
Heart massage creates minimal circulation which ensures sufficient blood flow to the cardiac muscle and brain. This is why each rescuer should carry out effective heart massage if the victim suffers circulatory arrest. The maxim that applies here is: "push hard and fast". It is recommended that each compression should be of at least 5 cm, and the compression rate should be at least 100 compressions per minute. The thorax should be allowed to recoil completely between each compression so that the heart can fill up completely before the next compression. Because a rescuer can quickly become tired, if several rescuers are present, they should take over from each other every two minutes, to maintain effective compressions. It is generally best to avoid interrupting the heart massage.

The recommendations on how to carry out thorax compressions (heart massage) are summarized in table 1.

Artificial respiration:
Carrying out artificial respiration during cardiopulmonary resuscitation serves to enrich the blood with oxygen and evacuate carbon dioxide. While rescuers, who are unable or unwilling to carry out artificial respiration, should at least administer heart massage [8], the combination of heart massage and artificial respiration is the method of choice to achieve successful resuscitation. Before administering artificial respiration, the rescuer should open up the patient's airways by stretching the head back, raising the chin. As the heart's output is considerably reduced while thoracic compressions are being performed, small rescue breaths, and a slower than normal respiratory rate, are enough to achieve a sufficient level of ventilation [9]. It is recommended to insufflate until the patient's thorax rises visibly. Each rescue breath should be administered in around a second. Excessive insufflation is to be strictly avoided, because increasing the pressure in the thoracic cavity reduces the heart output and venous backflow to the heart, thereby diminishing the patient's chance of survival. The ratio of cardiac compressions to rescue breaths should come to 30 to 2 [10].

The recommendations on how to carry out artificial respiration (rescue breaths) are summarized in table 1.

Early Defibrillation

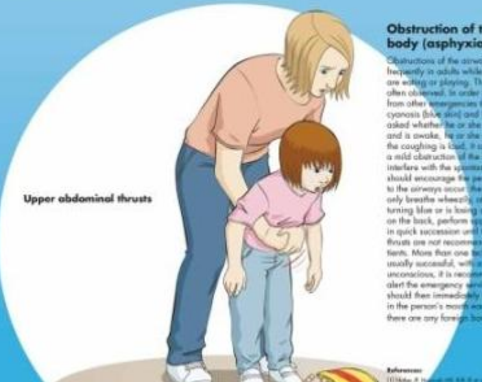
Defibrillation stops defective cardiac impulses (arrhythmia) through administering electroshocks. The heart is rendered capable of recovering its normal rhythm and its normal activity. Patients suffering from ventricular fibrillation have the best chances of survival if cardiopulmonary resuscitation with defibrillation is carried out within 3 to 5 minutes of the cardiopulmonary arrest occurring. [11] The defibrillation should take place as soon as the equipment is available. Until then, the rescuers should perform cardiopulmonary resuscitation and interrupt it as little as possible while the AED is being used.

The recommendations on how to use an AED (automated external defibrillator) are summarized in table 1.

Table 1: Summary of the recommendation for effective cardiopulmonary resuscitation by rescuers [12]

		Adults and young people	Children**
	Recognition	No reaction	
		No breathing or abnormal breathing (e.g. gasping)	No breathing or gasping
	CPR sequence	Compressions – airways – rescue breaths	
	Compression/ rescue breath ratio	30:2	30:2 (1 rescuer) 15:2 (2 rescuers)
Thoracic compressions	**Pressure point:**	Lower half of the sternum	
	Method:	Two-hand technique	One or two-hand technique
	Depth of compression	At least 5 cm	At least 1/3 of the depth of the chest
	Recoil	Let the sternum recoil completely between each compression	
	Compression rate:	At least 100 per minute	
Rescue breaths	**Free up the airways:**	Stretch the head backwards and raise the chin	
	Method:	Mouth-to-mouth	Mouth-to-mouth and mouth-to-nose
	Rescue breath volume:	Visible rising of the thorax - avoid performing rescue breaths that are too fast or too powerful	
	Duration of each rescue breath	1 second per rescue breath	
	Untrained/inexperienced rescuers:	Thoracic compressions only	
	Defibrillation:	Start using AED as soon as available; keep any interruptions to the heart massage before and after using AED as short as possible; start up CPR again immediately after each AED session, starting with thoracic compressions	

Abbreviations: CPR = cardiopulmonary resuscitation, AED = automated external defibrillator
* during or after puberty
** at least 1 year old up to the onset of puberty



Obstruction of the airways by a foreign body (asphyxiation)

Obstructions of the airways caused by a foreign body occur most frequently in adults while they are eating; and in children while they are eating or playing. This is why asphyxiation emergencies are most often observed. In order to differentiate a blockage of the airways from other emergencies that are accompanied by shortness of breath, cyanosis (blue skin) and loss of consciousness, the person should be asked whether he or she is having a choking fit. If the person says "Yes", and is awake, he or she can breathe in before the coughing fits, and the coughing is loud, it can be assumed that the person is suffering from a mild obstruction of the airways. In this case, the rescuer should not interfere with the spontaneous coughing and attempts to breathe, and should encourage the person to cough. If signs of a serious obstruction to the airways occur (the person cannot speak, cannot breathe or can only breathe wheezily, attempts to cough are quiet or silent, the person is turning blue or is losing consciousness), the rescuer should hit the person on the back, perform upper abdominal thrusts or thoracic compressions in quick succession until the obstruction is removed. Upper abdominal thrusts are not recommended for heavily pregnant women or obese patients. More than one technique may be necessary. These measures are usually successful, with a survival rate of over 95 % [13]. If the patient is unconscious, it is recommended to lay the person carefully on the floor, alert the emergency services, or get somebody else to do it. The rescuer should then immediately start cardiopulmonary resuscitation, and look in the person's mouth each time the airways are cleared to see whether there are any foreign bodies; if there are any, they should be removed.

References:
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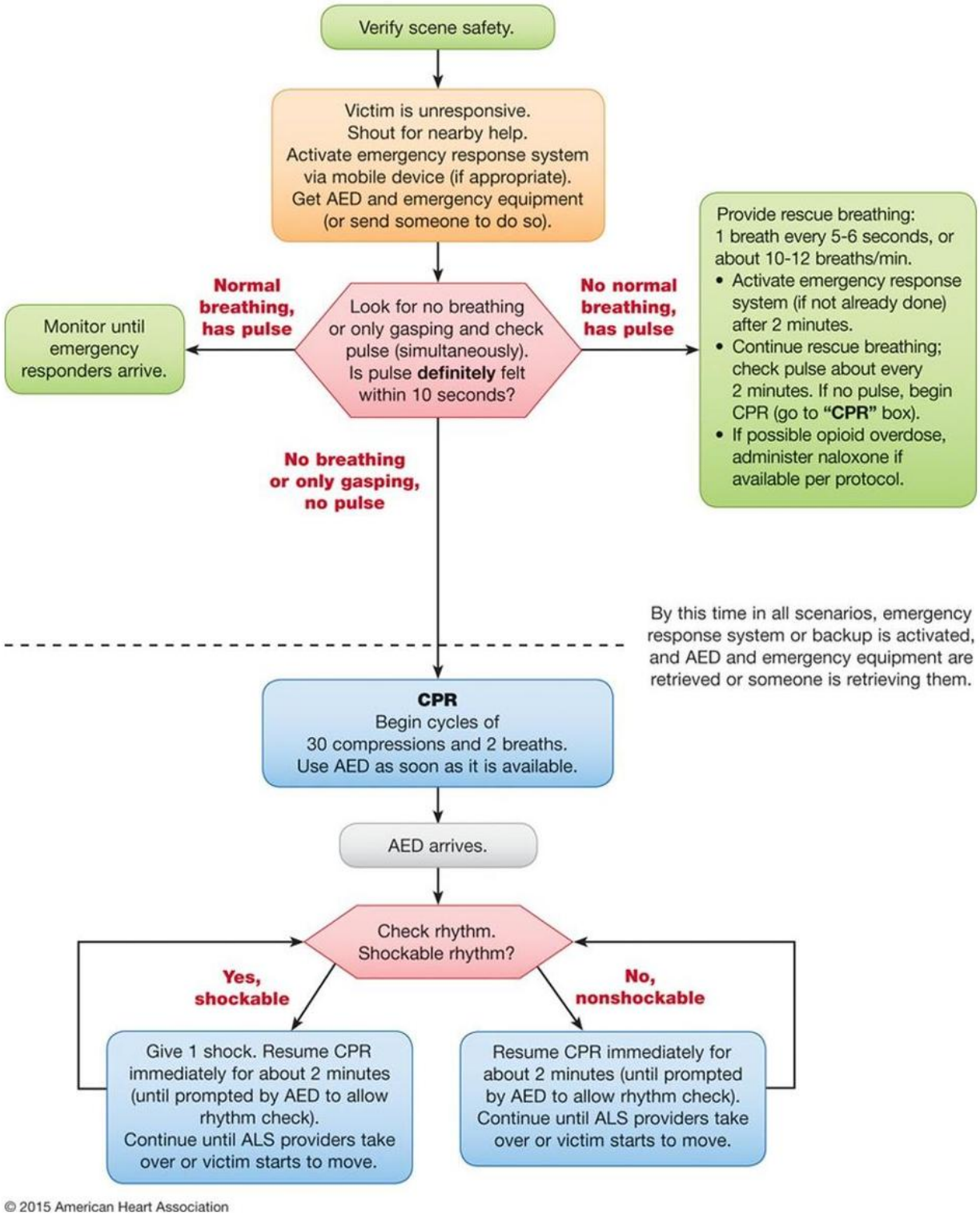


How to use an AED

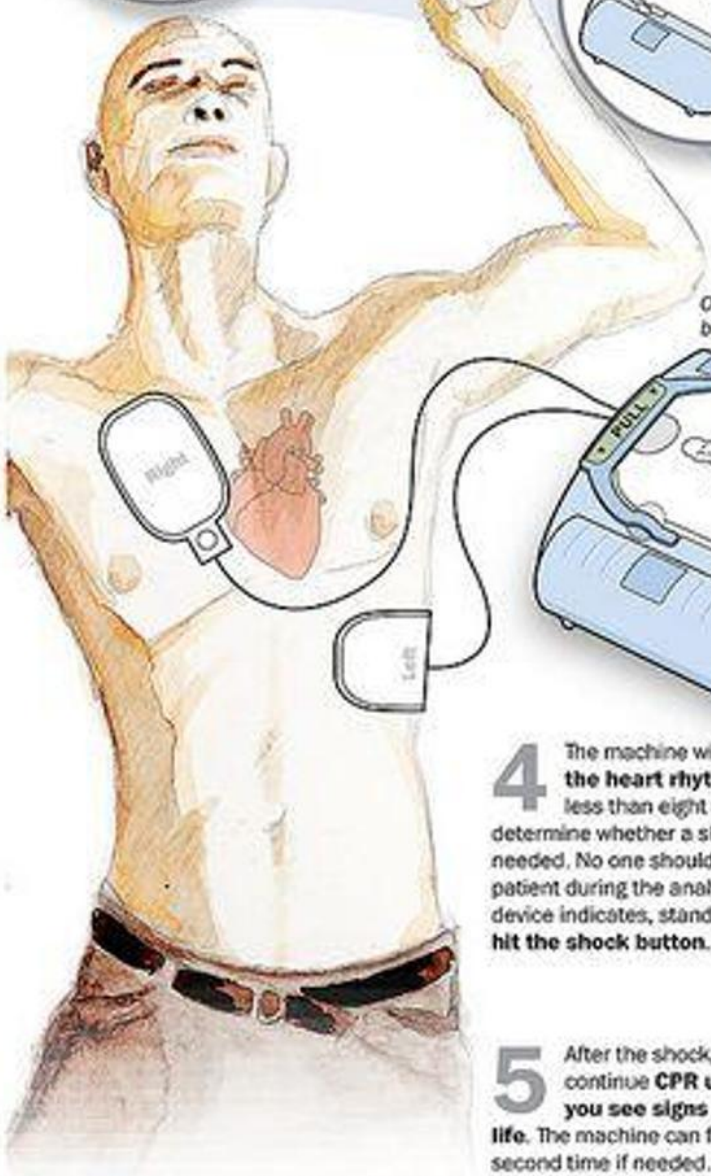
You're in the mall, and suddenly the shopper next to you collapses. On the wall is an automated external defibrillator (AED), a device that can shock a heart in cardiac arrest back into a normal rhythm. Although sending electricity through an unconscious stranger's heart may seem like something best left to a professional, AEDs can be used successfully by passersby with no training. And the sooner the better: Survival rates are near 90 percent for people treated within the first minute.

1 **Call 911** to get the professionals moving in your direction. Have someone else do **CPR chest compressions**. Clear the area of flammable liquids and standing water.

2 **Turn on** the AED. Open the case (in this model, you pull the plastic cover). This will activate **voice commands**. If the information button flashes, press it for more info.

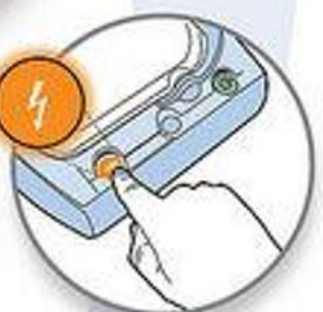
All clothes must be removed from the chest area.

3 Stick the **adhesive electrode pads** to the person's bare chest according to the diagram on the machine. The pad labeled "right" goes above the right nipple; the "left" one goes below the left nipple along the ribcage.



The pads have an adhesive liner.

4 The machine will **analyze the heart rhythm** and in less than eight seconds determine whether a shock is needed. No one should touch the patient during the analysis. If the device indicates, stand clear and **hit the shock button**.



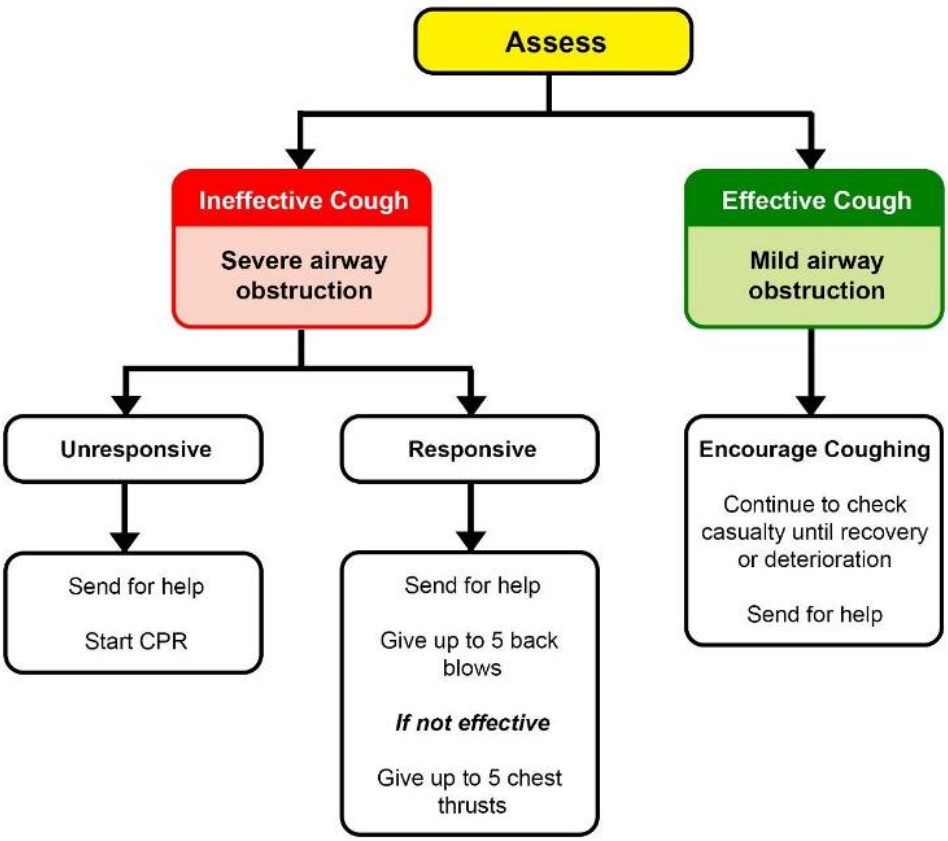
5 After the shock, continue **CPR until you see signs of life**. The machine can fire a second time if needed. (If the machine says not to fire, continue CPR until the paramedics arrive.)

Note: Don't worry: You can't accidentally shock someone who doesn't need it. If the machine decides that the person is not in cardiac arrest, it simply won't fire.

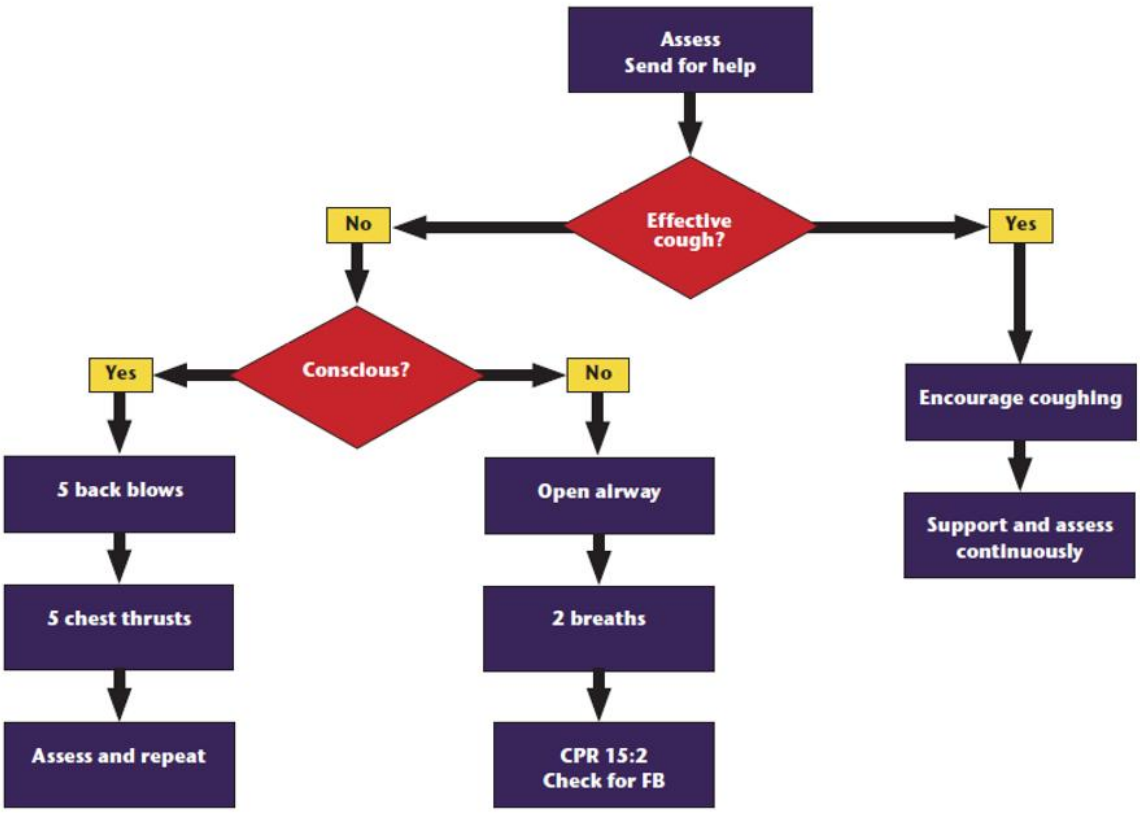
SOURCES: HeartSmart Inc.; D.C. Fire and Emergency Medical Services

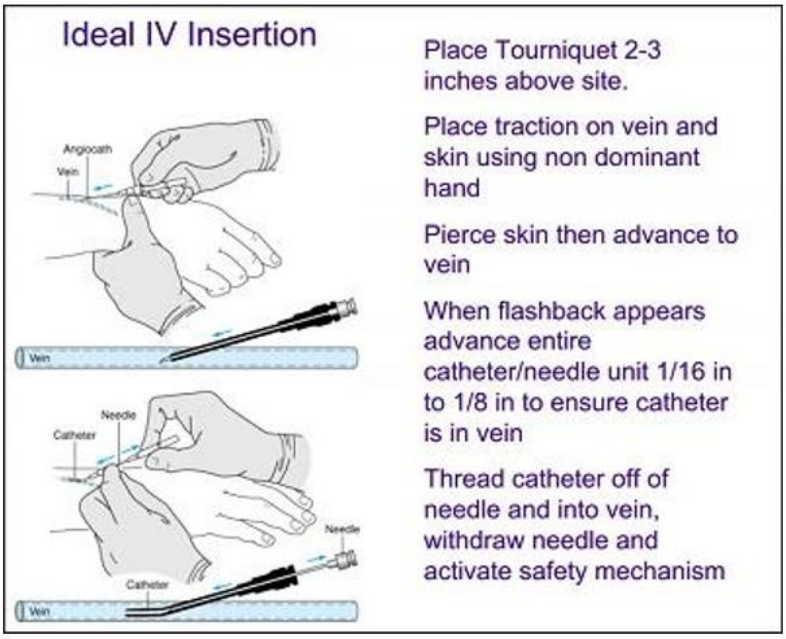
LESLIE TAMURA, BONNIE BERKOWITZ AND ALBERTO CUADRA /THE WASHINGTON POST

Foreign Body Airway Obstruction (Choking)



THE CHOKING CHILD





Course contents

S.No.	Topic	Type of session
1.	Pretest	MCQs
2.	Patient Management in Emergency	Didactic
3.	CPR and use of AED	Didactic
	CPR and use of AED	Skill
5.	Foreign body airway obstruction	Didactic
6.	Advanced Life Support (CPR, Defibrillation and drugs)	Didactic
7.	Basic airway management	Didactic
8.	Basic airway management	Skill
9.	IV placement	Skill
10.	Post test	MCQ's

SUBHARTI DENTAL COLLEGE

(College established in 1996 & Recognized by DCI)

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SWAMI VIVEKANAND SUBHARTI UNIVERSITY

(Established under UP Govt. Act No. 29 of 2008 and approved under section 2(f) of UGC Act, 1956)

E-mail: subharti.uni@gmail.com; www.subharti.org

(Glimpse of Basic Life Support)

(BLS training Of Dental Students)

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Objectives of the BLS Workshop

The purpose of value added courses like BLS is to understand the basic principles of emergency treatment. Treatment for specific needs depends on the context, the patient status, the capabilities and competencies of the treating professionals. The treatment needs to be tailored according to such combination. Medicine is ever changing subject and the principles need to be updated. Thus, BLS courses are conducted annually for interns, students, postgraduate students and dental faculty:

- To orient the dental students on humanistic values in medical care.
- To inculcate the values of humanism through cooperative, team based learning approaches
- To bring in the concepts of reflective practice in patient care and team building.

Who are the participants?

- Dental Students
- Dental Interns
- Post graduate students
- Dental Faculty

COURSE OUTCOME

- Additional opportunity for students to enhance their knowledge and skills
- Inter-professional education
- Added certification to enhance job opportunities for students
- Life skills is essential for survival in this competitive world

Number of students enrolled in the value added courses (Basic Life Support) during the last five years

Number of students enrolled in value-added courses imparting transferable offered year-wise during the last five years

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STUDENTS ENROLLED FOR VALUE ADDED COURSE

BASIC LIFE SUPPORT

Sr. No	Enrolment No	Name of PG students
1	1002101315	Anirudh Sharma
2	1602000003988	Nivedita
3	1602000003974	Shama
4	1002101361	Rhytm
5	1602000003981	M. Gyanada
6	1002101321	Arvind
7	1602000003977	Deepanshu
8	1602000003978	Naina
9	1602000003980	Ambati
10	1802000023261	Yogesh
11	1602000003986	Khushboo
12	1602000003987	Ankika
13	1002101329	Deepakshi
14	1002101390	Pooja
15	1602000003989	Anjum
16	1002101358	RajSha
17	1602000003975	ShivaniMathur
18	0902101383	Ratendra
19	1002101368	Shruti
20	1602000003979	Bhavna
21	1002101337	Jhanvi
22	1602000003990	Noopur
23	1002101310	Abhishek
24	1802000023247	Shipra
25	1602000003982	Rimi
26	1602000003983	AsmaUsmani
27	1602000003991	Sidharth
28	1602000003984	Chhavi
29	1002101391	Rahul
30	1002101319	Arushi
31	1602000003985	Mansi

S. No.	Enrolment Number	Name of Interns
1.	1402010004737	Shoaib
2.	1402010004743	Sonam

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3.	1402010004688	Diksha
4.	1402010004728	Rishika
5.	1302104238	Ponit
6.	1402010004491	Aakash
7.	1402010004764	Haroon
8.	1402010004706	Mohit
9.	1402010004741	Shubham
10.	1302104185	Abhishek
11.	1402010004720	PriyaPanwar
12.	1402010004722	Priya Sharma
13.	1102101487	Puro
14.	G1470684	Gauri
15.	2013/660	Madhur
16.	G1470698	Khyati
17.	G1470707	Md. Tehmeed
18.	1402010004718	Pranav
19.	G1352021	Gagam
20.	1402010004741	Shubham Sharma
21.	1402010004725	Rashid
22.	1302104204	Chirag
23.	1402010004756	Yoshita
24.	1402010004736	Shivangi
25.	1402010004765	Karishma
26.	1402010004748	Tanu
27.	1302104256	Siddhanth
28.	1302104242	Ramish
29.	1302104193	Ankita
30.	1402010004739	Shruti
31.	1402010004735	Shiksha
32.	1402010004763	Chetna
33.	1402010004768	Nidhi
34.	1302104196	Apoorv
35.	1302104279	Varun Kapoor
36.	1402010004733	Shaifali
37.	1402010004683	Ayshi
38.	1002101339	Dr. Kunal
39.	1802000023263	Dr. Agrim
40.	1402010004698	Jasmeet Kaur
41.	1402010004730	SakshiLuthra
42.	G1470726	Sakshi Aggarwal
43.	0902101376	Prerna Deep
44.	1302104203	Bhavika
45.	1402010004757	Zoya

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46.	1002101314	Amita
47.	EXTERN	Lakshi
48.	1302104222	Kartik
49.	1402010004696	Ispita
50.	1402010004769	Ria
51.	1302104219	Huda
52.	1402010004701	Kirti
53.	1402010004770	Upasna
54.	1402010004685	Bhibhuti
55.	1402010004742	Simran
56.	1402010004708	Nikita
57.	1402010004686	Deeba
58.	1402010004699	Kanika
59.	1402010004712	Nishat
60.	1402010004695	Harsha
61.	1402010004704	Manvi
62.	1402010004498	Anisha
63.	1402010004745	Suni
64.	1402010004746	Surupa
65.	1402010004724	Raja
66.	1402010004692	Firdous
67.	1402010004691	Fayaz
68.	1402010004747	Saif
69.	1002101388	Mohd. Shadab
70.	1302104192	Anjali Tomar
71.	1402010004755	Y, SaiTeja

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(Value Added Course on "Basic Life Support")

(Successfully completed Value Added Course on "Basic Life Support")