

Specialists in soft silicone vacuum cups,
Rigid vacuum cups and exclusively designed
Vacuum extractor

MEDISIL
Vacuum Delivery System

Vacuum Delivery System

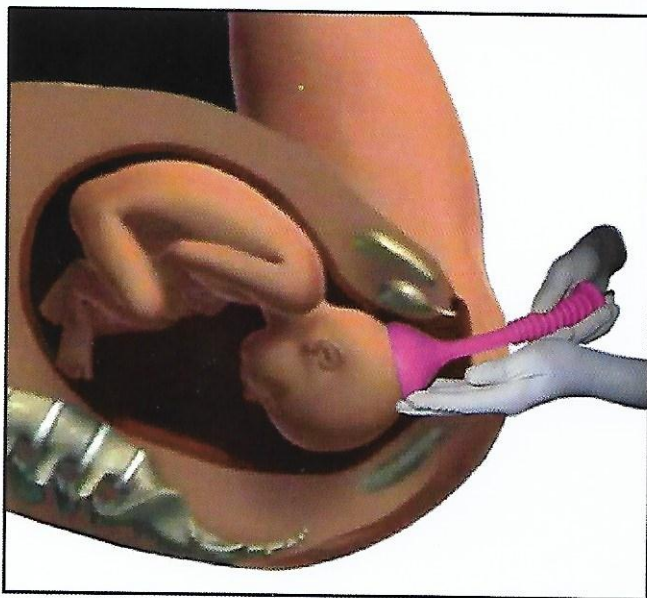


Digital LED Model
(MVDS-02)

Minimum Touch -
Maximum Safety
Machine for Doctors
and Midwifery

ISO 13485 - 2012 (medical devices) certified company

Ever-since we started manufacturing vacuum extractor from 2005, we have installed more than 6000 units till year 2020 all over India and exported to more than 20 countries



MEDISIL SOFT SILICONE CUP:

Medical Grade Silicone Rubber ensures absolute biocompatibility and high durability.

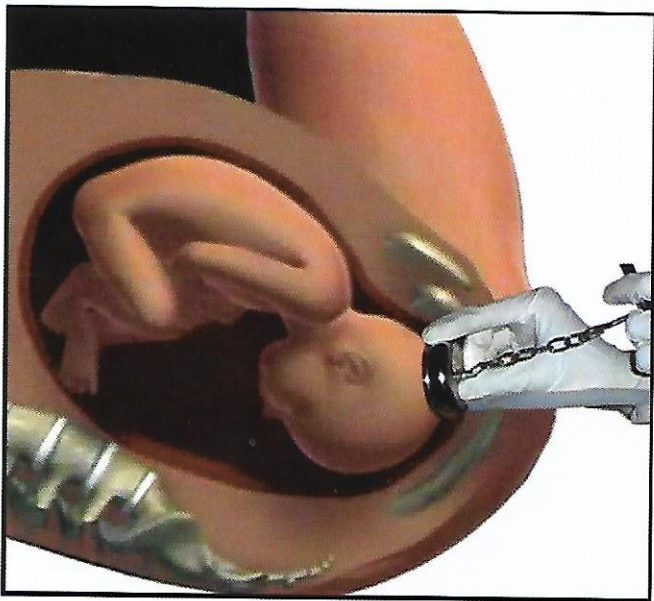
Available in four sizes (50 mm - Navy Blue, 55 mm - Pale Green, 60 mm - Pink & 65 mm - Gray).

Smooth external surface with a small longitudinal ridge to observe any rotation.

Inside the cup is lined with smooth projections, which enable the air between the cup and the child's head and ensure that the cup sucks firmly on child's head. The soft suction cup deforms, thereby ensuring optimal adhesion and minimizing trauma to the fetal scalp.

Suitable for occipito-anterior (OA) positions and Outlet Presentation

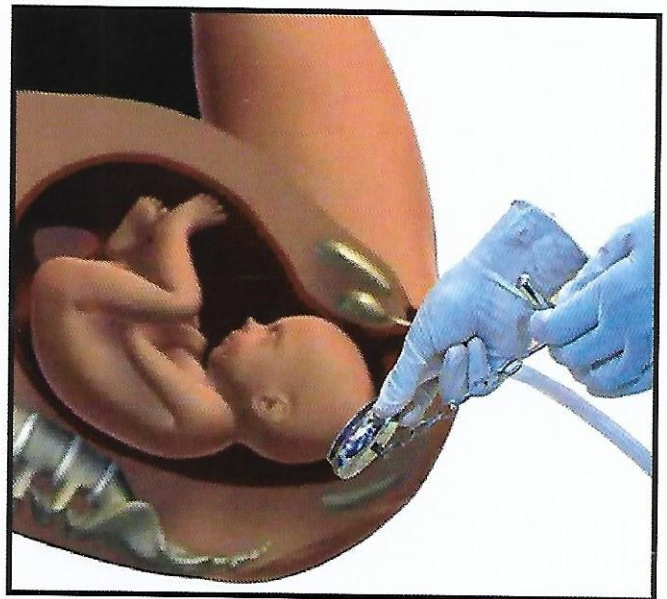
(Sterilisation - Autoclaving process)



BIRD CUPS (Occipito Anterior) Three Sizes 40mm, 50mm, 60mm.

The anterior cup has the metal suction nipple eccentrically placed on the dome of the cup. If the occiput is anterior, at spines, with some degree of caput and moulding, the Bird anterior cup is suitable.

Made of stainless steel and very less weight and very smooth inner surface. Short traction chain for better control. All rigid cups are equipped with a bottom plate mesh. Its function is to distribute the vacuum evenly between the scalp and the suction cup and to prevent the scalp being sucked into the tube connector of the cup. A separate Steel handle can be hooked into the appropriate link of the chain after the cup is vacuum fixed and used for traction. Traction should involve both hands, with the thumb of the non-pulling hand pressing firmly against the dome of the cup and helping to prevent it from slipping off the scalp. During traction the index finger resting on the scalp and rim of the cup, and this allows appreciation of descent of the presenting part and not just the caput and detects separation of the cup from the scalp. The suction tube is towards the sinciput.



BIRD CUP (Occipito Posterior) 50mm.

The posterior cup has the nipple attached to the side wall of the cup. For occipito-posterior (or) occipito-lateral, transverse position, the Bird posterior cup is suitable.

- The overall Caesarean section rate is significantly lower with the vacuum extractor. Use of the vacuum extractor rather than forceps for assisted delivery appears to reduce maternal morbidity.
- Metal cups appear to be more suitable for 'occipito-posterior', transverse and difficult 'occipito-anterior' position deliveries. The soft cups seem to be appropriate for straightforward deliveries.

Citation: Johanson R, Menon V. Soft versus rigid vacuum extractor cups for assisted vaginal delivery. Cochrane Database of Systematic Reviews 2000.

SALIENT FEATURES OF MEDISIL VACUUM EXTRACTOR

Very useful for the process of extra-gentle Vacuum Assisted Delivery. We have two types of vacuum extractor with analog meter model (Bourdon gauge) and Digital Display model (LED).

The creative concept of the twin footswitch for the vacuum extractor is that the doctor is raising the vacuum with the help of footswitch, so that the exact positioning of the cup on the scalp (Flexion point) is possible. If the vacuum reaches 200 mmHg (Approximately) the cup is lightly attached, the doctor stop pressing footswitch and vacuum maintain and then the doctor with the index finger check around the perimeter of the cup to ensure no maternal tissue is interposed between the cup and the scalp also the position (Flexing median) of the cup. If not satisfied, the doctor can release the vacuum immediately (With in few seconds) and reapply. If satisfied, doctor can continue increasing pressure with the help of footswitch up to the recommended pressure of 0.8 Kg/cm² or equivalent 585 mmHg. The most striking point is that the entire vacuum delivery procedure is performed by the doctor only without assistant so the focus on the procedure of cup application, vacuum increase, traction, head delivery and the quick releasing of vacuum with other footswitch is perfect. Also in-between uterine contraction, the vacuum pressure can be reduced at minimum level with the help of footswitch to avoid unnecessary pressure on the scalp and during next contraction, the vacuum can be raised immediately to required point.

Innovative design of Micro-Processor controlled – Digital display (LED) with precise indication up to ± 1 mmHg accuracy which may not be seen in the conventional analog Bourdon vacuum gauge. Acoustic signal when the target value of preset vacuum is reached so that the doctor stops pressing the footswitch without even seeing the machine gauge.

Vacuum Indication can be preselected in the digital display model either in mmHg or in Kg/CM² whichever is convenient to the doctor and also the provision for immediate changeover between the two vacuum units by pressing the UNIT Button.

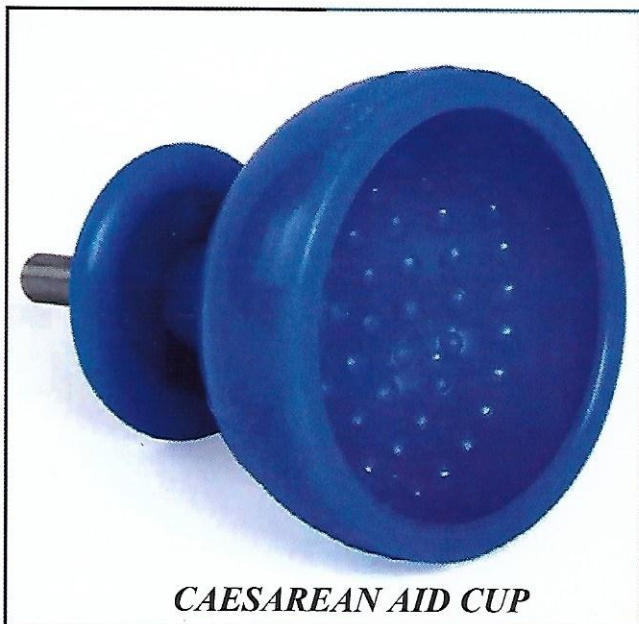
The Vacuum pressure does not drop due to non-return valve and the doctor can concentrate only on delivery. the press release fixed above the bottle helps the doctor to release vacuum without touching the machine. Unbreakable plastic jar for easy handling, cleaning and reassembling. Electrically operated and the power consumption is very low (40 watts only) and absolutely very silent. It can run with inverter also. Maintenance free oil less pump with absolutely low noise (60 dB). The overflow protection device prevents liquid or solid particles from entering the intermediate tubing, Stainless steel trolley designed exclusively for vacuum extractor with superior quality castors, which occupies minimum space in the labor room. Provision offered to hang the footswitch.



Analog Meter Model
(MVDS-01)



Digital LED Model
(MVDS-02)



INNOVATIVE DESIGN OF MEDISIL CAESAREAN AID CUP available in 2 sizes (55 mm - pale green & 60 mm light blue)

Applying a specially developed MEDISIL CAESAREAN AID CUP obviates the need for applying the forceps to deliver the fetal head at caesarean section (unengaged head position) and allows gentle and controlled delivery of the baby.

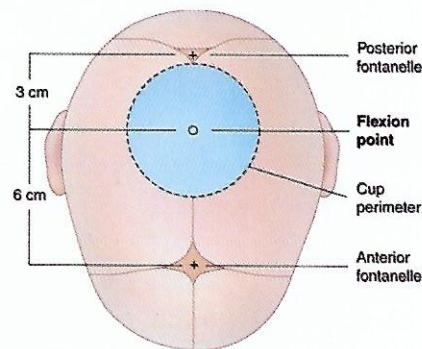
During Caesarean section, when the head is deeply fixed and transverse, by rotating the head get the right occipital front and place the cup on the flexion point, the baby can be delivered smoothly without fundal pressure and without pushing.

MEDISIL C-cup provides easy access to high floating head during repeat C-section, immediate assistance for failed vaginal deliveries when fetal head has descended low into the birth canal.

The device is flexible and atraumatic, with no damage to mother and baby. It is light, small and easier than forceps to manoeuvre into position at caesarean section. Use of the device does not affect the size or position of the skin or uterine incisions.

Flexion Point Location

- The flexion point is situated on the sagittal suture 3 cm in front of the posterior fontanelle.
 - The flexion point may be located during vaginal examination by identifying the posterior fontanelle and then moving the finger anteriorly a distance of approximately 3 cm along the sagittal suture.
 - The tip of the finger will mark the flexion point.
- If the cup is placed exactly on the flexion point, it assists the delivery of the smallest diameters of the fetal head.



The instrument consists of a single fenestrated blade the shape of which is very similar to that in the ordinary midwifery forceps, except for an exaggerated cephalic curve. Immediately at the base of the blade is a double hinge built into the normal diameter of the shaft connecting the blade to the handle. The shaft carries a sliding sleeve which by simple sliding movements covers and the locks double hinge thus made the instrument to one piece and making blade rigid with the handle.

Venkatesh's Vectis (Single bladed caesarean Forceps)



Advantages of Vectis-

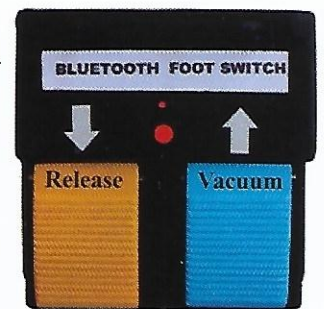
1. The most striking advantage claimed for this instrument is the absence of hemorrhage during delivery of the head. Consequently the uterine incision can be enlarged bit by bit, the whole time under direct vision. The incision is therefore never made unnecessarily large.
2. Tearing the uterus should not occur, as delivery is slow and under complete control. Under these conditions unsuspected damage to the uterine vessels should be impossible.
3. If difficulty is experienced in turning the head it can be lifted out in any position. This is not possible when delivering with forceps, as they cannot be applied if the head lies in the transverse diameter.
4. The foetal skull is subject to a minimum of pressure, which is probably less than that of normal labour. Head injuries should therefore be extremely rare. This is not always so after a hurried delivery by the operator's hand or the small forceps.

BLUETOOTH FOOTSWITCH FOR VACUUM EXTRACTOR. (MVDS-BT).

We have developed Bluetooth controlled (CORDLESS FOOT SWITCH) twin foot switch operated vacuum extractor. Since No wire, the footswitch will be 100 % electric proof and shock proof.

Lithium Polymer Battery life for 2000 vacuum extraction usages. (500 to 600 Hours of operation). After that the battery can be charged for one hour and can be continued for next two years.

Can be used from 5 meter to 10 meter distance, so that the midwifery can use from distance for releasing the vacuum.



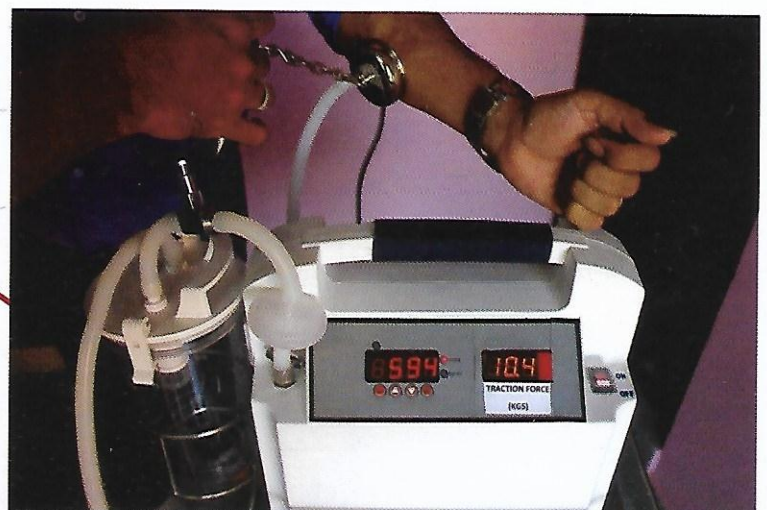
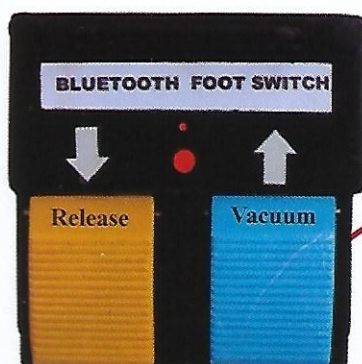
TRACTION FORCE INDICATOR

To measure the traction force applied during the Vacuum Extraction of foetal head, we designed an intelligent handle contains a load sensor that actually measures the force applied between the handle and the hook of the metal cup or pulling thread of the plastic cup. The signal is converted to a digital format and sent to receiver connected in the machine, precisely indicating the load in Kilograms. (KGS)

The doctor can analyse the traction force with various parameters like

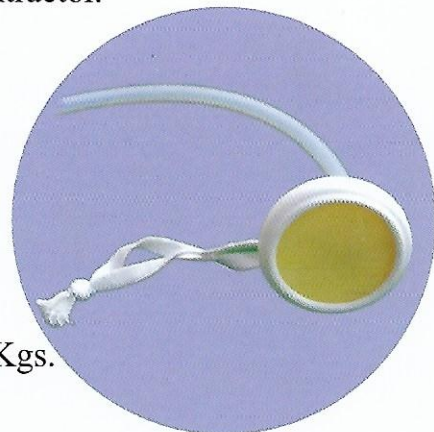
- A. Weight of the foetus.
- B. Station of the head (either outlet or low cavity).
- C. Position of the foetal head like occipito anterior or occipito posterior.

Very useful in medical colleges and teaching institutions for doctors to have complete idea about the exact pulling force applied during Vacuum Extraction.



ABDUL PLASTIC VACUUM CUP

- ❖ Abdul Anti Bacterial Plastic Cup with a Plastic Handle for Vacuum Extractor.
- ❖ Silver impregnated Medical Graded Plastic is being used.
- ❖ Similar to Birds Metal Cup with the Plastic Handle.
- ❖ ETO sterile and Disposable (Single Use).
- ❖ Connectable to the Vacuum Extractor Equipment.
- ❖ Connectable to Traction force indicator with digital display shown in Kgs.



Expert's Comment



Reported rates for assisted vaginal deliveries are showing considerable variations around the world and in India with a trend towards an increase in number of vacuum extraction deliveries with a corresponding decrease in number of forceps deliveries. Successful vacuum delivery depends on number of factors all of which have to be carefully assessed before the procedure is attempted.

One of the key pre requisites is a good, reliable and consistent working condition of the vacuum extraction device and appropriate selection of the cup (anterior, posterior, metal, silicon etc). It is with reference to this aspect of the importance of instrumentation that I feel responsible and proud to be associated with M/S MEDISIL ENGINEERS, CHENNAI as a senior design consultant (ObGyn)& part of their research and development team.

Medisil engineers are in the forefront in developing effective, quality, & affordable innovations in their vacuum extraction devices. My passion and obsession in popularizing the art and science of instrumental delivery for the past two decades as a clinician and teacher along with bio engineering brilliance of Mr. Segu Mohamed Ismail led to the unveiling of single bladed vectis for delivery of the fetal head in caesarean sections for the first time at FOGSI conference in Jaipur. We now have over 4000 practicing gynaecologists from India and abroad using our entire range of products. Its because of these doctors who have been a constant driving source of patronage, encouragement and admiration that Medisil is able to constantly improve and innovate with times.

Dr. N. Venkatesh D.Ph, MBBS.MD, DGO, DNBE, DICOG, ARCOG, PGDHHM.
Vikram hospital, Bangalore.

nagarajvenkatesh@gmail.com
098453 51567

TO WHOM SOEVER IT MAY CONCERN

This is to certify that department of Obst. & Gynae is using “vacuum extractor with accessories”, Make MEDISIL ENGINEERS supply by M/S Medisil Engineers, Porur, Chennai-56. Since 2010, the machine has been found to be working satisfactory.

Head, Dept of Obst. & Gynae.
KING GEORGE'S MEDICAL UNIVERSITY
(KGMU) Lucknow, Uttar Pradesh.

DOCTOR COMMENTS



This to certify that we have been using the Medisil Vacuum Extractor for the past 5 years. We have found the device extremely useful in our labour room our usage various from 50-60 deliveries in very month. We have been using the routine metal cups as well as OP metal cups. The Op cups are quite useful for face to Pubis deliveries. We would also like to add that post sales service is good.

***SALEM POLYCLINIC
Dr.Rashmi Rao***

This is to certify that we are using the vacuum extraction machine from Medisil Engineers . In CMC hospital, labour room number of suction cup of vacuum deliveries is around 70 – 80 per month. We are satisfied with the machine.

CMC VELLORE



This is to certify that the Vacuum Extractor provided by MEDISIL ENGINEERS, from Chennai, used regularly with satisfaction in our institute and the model used is digital model. The instrument was demonstrated and simultaneous training was given by the company person with satisfaction.

***Dr. Mukhopadhyay. Prof & HOD,
Eden Hospital, Kolkata Medical college.***

Instrumental vaginal delivery is an art and vacuum delivery is preferred over forceps. In our institution vacuum delivery is about 8-10% of total deliveries. Vacuum delivery is safe both for mother and newborn and its easy to acquire this skill for safe obstetric practice.

***Dr. Somajitha Chakraborty,
Professor, Kolkata Medical College.***



This is to certify that Medisil Vacuum delivery system is very satisfactory machine I am using in Government sub divisional hospital, Sagara since 2012. Hence average delivery per month 150-200 about 30% are vacuum delivered. (6000 vacuum approximately) and no failures of deliveries all these years and the machine is good condition.

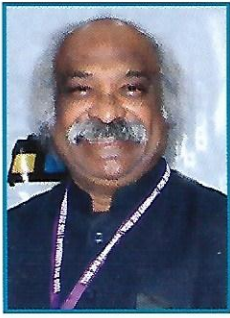
***Dr. Pratima
Senior specialist, Govt. Sub divisional hospital
Sagara,, Karnataka.***



I am extremely happy to have Medisil Vacuum extractor for the last 7 years It is a mandatory instrument in the labour ward. It avoids many of the second stage caesarean section. there is no need to worry about metal cups usage as for the our indication for application is correct. We use Metal cups vacuum extractor for upto 30 to 40 cases / per month and so for we have not seen even a single maternal or neonatal complication related to metal cup.

***Dr. U. Laximi Sowjanya MD., (OBG)
Life Hospital
Railway station road Nandyal (AP)***

Doctor's Testimonials



As in fact found, lot of changes in terms of the design and the spectrum of indication over the last few decades, with the abolition of high forceps application vacuum extraction have scored over the forceps in modern obstetrics particularly when the head is low.

However the use of the innovative silicone cups (Medisil Make) have revolutionised delivering the heads in abdomen delivery in caesarean section. I have been using this for the last fifteen years for delivering the head in caesarean section which is very simple, avoids extension of uterine incision and moreover a controlled delivery and thus could obviate gymnastics in o.t. while doing a caesarean. I find it very useful for maternal as neonatal safety.

Dr. PC Mahapatra, HOD (OBG)- SCB Medical College, Cuttack, Orissa.



I have been using Ventouse (both Silicone and Metal Cups) for the past 10 years. As we are facing many occipito posterior presentations because of the present life style changes. We are using Ventouse (Especially OP cups) to avert caesarean sections. I find the metal OP cup of Medisil very useful

in prolonged second stages especially after epidural analgesic.

Dr M. Subbulakshmi, MD (OBG), Pankajam Memorial Hospital, Chennai, India



I have been using metal vacuum cups specially Bird's modification since 8 years. Vacuum (Ventouse) application requires minimum skill and learning curve is less compared to Forceps application. Morbid fear about metal cups among younger obstetricians is uncalled for and is a result of lack of training. So

called complications of metal cups are mainly due to poor decision making. I call for training younger obstetricians in the field. Unjustified increase in Cesarean rates is also attributable to reduction in instrumental delivery rates.

Dr. Jayaprakash Patil, DNB (OBG), Raichur



We are very happy to have the digital model of Medisil Vacuum Extractor. We have been using the old model for last ten years for all vaginal deliveries and also during C sections with Medisil cups and new digital model appear more safe and better. All the best.

Dr. Narendra Malhotra, MD (OBG), Rainbow Hospitals, Agra



I have been using these metal cups since 8-10 years, they have been very useful in Occipito posterior and transverse position. I have avoided many cesarean operation by using these cups. In places where OT facilities are not available, they are really good help to the practicing obstetrician.

Dr. Mohan Hande, MD (OBG), Ranibennur, Karnataka, India



The Cesarean cup is a surgeon and baby friendly device which has made delivery of mobile head during Cesarean section much easier and incision-delivery faster. It is easy to apply and has a very short learning curve. It is flexible and atraumatic construction ensures fetomaternal safety.

Dr Prabha, MD (OBG) Public Health Centre, Chennai, India



we are happy to have Medesil vacuum extractor. I've been using it since last 5yrs & it is very very useful in delivery in caesarean with high floating head & difficult 2nd stage deliveries

Dr. Swati Mahobia, MD (OBG), Raipur, Chattisgarh.

Medisil Engineers

Proprietor : Segu Mohamed Ismail (B.sc.,B.Tech - Rubber Technology MIT, Chennai)

Manager : Abdul Kader (B.Sc., Allied Health Sciences, Apollo Hospital, Chennai)

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