



Short-Term Tasks and Long-Term Objectives of Chinese Anesthesiology Clinical Practice

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Abstract

This perspective discusses the short-term tasks and long-term objectives of Chinese Anesthesiology clinical practices proposed by the Chinese Association of Anesthesiologists under the leadership of Dr. Buwei Yu and his colleagues and alliances.

Keywords

Task, Anesthesiology, Anesthesiologists, Long-term objectives, China

Short-Term Goals of Chinese Anesthesia

To summarize the experience of Chinese anesthesiologists in the treatment of critically ill Covid-19 patients

Our immediate priority is to sum up anesthesia experience in the management of critically ill COVID-19 patients and introduce such experiences to the world, which may help all patients worldwide and facilitate rapid recovery.

The successful quick control of the epidemic and the resumption of China's everyday life are due to the wise and decisive command of leaderships under Chairman Xi, including early quarantine and lockdown of cities, nationwide virus testing, education, and rapid policy making and implementation. One of the critical turning points was on February 14, 2020, when anesthesiologist's formed a special task team to guide safe and organized tracheal intubation and mechanical ventilation of all critically ill patients. After February 20, anesthesiologists participate directly in maintaining vital signs and artificial hibernation with muscle relaxant. Anesthesiologists in Shanghai were sent to Wuhan, the epicenter of the China epidemic, to combat the disease there, not only acting as intubation team members. These efforts reversed the high mortality rate in early-stage COVID-19 infection and played a crucial role in rescuing patients' success. Many anesthesiologists published their experiences from their front-line management of COVID-19 patients [1-7]. These experiences need further discussion to understand leadership's critical role in preparing for the next potential

epidemic or pandemic. This is an opportunity for us to educate people, including the leadership of the national health authorities and medical institutions, about the critical roles of anesthesiologists in saving lives during a crisis like such as a devastating pandemic.

Improve anesthesia and analgesia for labor and delivery and promote its coverage by healthcare

With society's progress and the increasing pressures of work and life, young couples' desire to have children is gradually decreased. From 2015 to 2020, the number of newborns in Shanghai has reduced from 200000 to 150000; a fast downtrend in five years. It will seriously affect the Chinese population structure, family/social stability and influence the Chinese nation's great rejuvenation. Therefore, we should popularize labor analgesia to ease significant pain suffered by mothers during childbirth and facilitate a comfortable delivery process. This is an area that anesthesiologists can contribute to the prosperity of the country. Therefore, the Chinese Anesthesiologist Association plans to communicate with stakeholders, such as the National Health Commission, the Women's Federation, the Medical Insurance Bureau, and the Anesthesiology Branches of the Chinese Medical Association, the Anesthesiology Branch of the Chinese Medical Education Association, to create a special task force to advance this agenda. Unfortunately, some insurances do not currently cover analgesia for labor and delivery. We should strongly advocate that insurance companies cover analgesia for labor and delivery and *in vitro* fertilization. This approach may increase awareness in the community about the benefits of labor anesthesia, such as the pleasure of meeting a newborn baby under epidural analgesia, and may increase fertility rate. Offering comfortable anesthesia during *in vitro* fertilization could also improve fertility rate and provide new avenues for innovation and research [8].

Develop and implement national policies to solidify the development of anesthesiology managed intensive care units

We should develop outpatient and postoperative

care units (PACU) of the anesthesiology department, in accordance with the core contents of document No 21, issued by the seven ministries of the State Council in 2018 (document No. 884 issued by the State Health Commission in 2019).

At present, large hospitals are overcrowded and inefficient. It is essential to improve hospitals' efficiency to meet the medical needs of patients. We need to enhance hospitals' efficiency by performing same-day surgeries and shortening the hospitalization days before surgery. If the anesthesia clinic is appropriately constructed, the pre-operative evaluation and anesthetic plan can be completed concomitantly to facilitate surgery after admission and even on the same day.

Another strategy is to reestablish ICU care in the anesthesia department. Since ICU care has been separated from anesthesiology, it is challenging to meet the needs of elderly patients and critically ill patients entering the ICU after surgery. If such patients are sent directly to the surgical ward, it will significantly increase nursing needs on the ward and may worsen patient outcomes. Restoring the ICU of anesthesiology is an important task and an effective measure that may reduce morbidity and mortality and improve anesthesia service quality. Besides, it may also enhance utilization of medical equipment and increase hospitals' profitability. In the initial stage, the PACU may be used as an intensive care unit at night to build a bridge between wards and traditional ICUs.

Transform draft to official bills: Anesthesiologists labor protection act and operating room environmental protection act

The fourth task is to transform the two proposals made by the Shanghai Association of Anesthesiologists. In daily work, anesthesiologists encounter a state of high stress, and burnout is pervasive. It has been reported that the sudden death of anesthesiologists is on the rise [9,10]. This should be taken seriously and initiatives should be created to mitigate this issue. We will send our official documents to all leaderships in the country, hoping they appeal to their local government to implement labor protection regulations for anesthesiologists to improve their overall wellbeing. Environmental safety of operation room staff has not been attended to for a long time. Exposure to volatile anesthetics, carcinogenic substances from charred adipose tissue, and electromagnetic radiation is harmful to operating room personnel and should be prevented. It is necessary to establish a fresh air system that can effectively improve operating room ventilation.

Anesthesiologists routinely treat patients with infectious diseases such as AIDS, hepatitis, tuberculosis, which increases their risk for infection, especially during intubation. We also have significant X-ray exposure in

many of our services, including providing anesthesia for orthopedic surgery, interventional cardiology and neurology, and ERCP. So we should strive for adequate health benefits for anesthesiologists and operating room staff. We are committed to improving the physical and mental health of anesthesiologists, surgeons, operating room nurses, and all those working in the perioperative arena. Only to do so can we offer our outstanding care and maximize safety for our patients.

Long-Term Goals of Chinese Anesthesia

The Chinese anesthesiology department's long-term goals are to establish anesthesiology as a clinical discipline that includes divisions of anesthesia services, airway management, AICU, pain management, and clinics for unique diseases using anesthesia technologies.

Eventually, anesthesiology can become an actual clinical department

Although the Ministry of Health has officially documented in 1989 that anesthesiology is a secondary clinical subject, covering clinical anesthesia, resuscitation, intensive monitoring, and pain management, Chinese anesthesiology has not developed into a true clinical subject. Two sub-specialties: Pain management and intensive care unit, were separated from anesthesia and became independent. Only by establishing our outpatient clinics and wards can anesthesiology eventually become a separate clinical department with the ability to diagnose and treat patients' diseases. Therefore, we need to take serious consideration on how to strengthen anesthesia. Because of the space limitation, this article cannot fully elaborate, but the framework is listed as follows:

1) Outpatient anesthesia, including

A. Anesthesia clinic branch

- Anesthesia Clinic
- Preoperative Preparation Centre
- Outpatient operating room
- Outpatient recovery room
- Rehabilitation Centre after Anesthesia

B. Pain-free centre

- Includes all types of painless anesthesia and postoperative recovery

C. Pain management centre

- Pain Clinic
- Imaging & ultrasound diagnostic chamber
- Pain Management Cell
- Recovery room

D. Day surgery centre

- Preparation room
- Day surgery room
- Recovery room
- Day surgical ward

2) Anesthesia major operating room**A. Clinical anesthesia**

- Preparation room
- Induction room
- Operating room
- Resource center

B. Recovery unit**C. Anesthetic pharmacy****D. Clinical laboratory****E. Pathological room****F. Blood bank****3) Anesthesiology Intensive Care Unit (AICU)****4) Anesthesia laboratory****5) Anesthesia teaching office****Establish anesthesia clinics to treat disease using anesthesia techniques**

With the rapid development of our society, under high stress and pressure, people develop habits that may cause disease such as insomnia, cognitive disorders, etc. Even among various specialties, many such patients have no access to high-quality care. What to do and how to do it? We anesthesiologists can do a lot nowadays. Using anesthetic agents to provide sleep is equivalent to making a forced restart of the computer, cutting off all his work, and waiting for it to return to its original state. This is a fundamental principle of anesthetic care and can only be provided by anesthesiologists.

Other successful cases are Amyotrophic Lateral Sclerosis and Psoriasis. Anesthesia treatment can improve symptoms; most of the mild-to-moderate patients can return to self-care (Authors preliminary unpublished work).

We hope that all anesthesiologists, nurses, and researchers can work together towards a new goal. Young people should have dreams, ambitions to do something beyond the world. We believe the 21st century will be the century of China! Chinese anesthesiologists will eventually lead anesthesiology in the 21st century.

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Conflict of Interests

None.

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