

ANAESTHESIOLOGY ACTIVITIES IN CROATIA FROM THE FIRST ETHER NARCOSIS IN ZADAR IN 1847 TO 2008¹

ANESTEZIOLOŠKA AKTIVNOST U HRVATSKOJ
OD PRVE ETERSKE NARKOZE U ZADRU 1847. DO
GODINE 2008.

Marko Jukić²

SUMMARY

This is a short review of the historical development of anaesthesiology and intensive care in Croatia from its beginning to recent days (2008).

Five months after the first public demonstration of ether anaesthesia in the USA, Ivan Bettini followed with the first ether anaesthesia in Zadar, on 13 March 1847.

In the 19th century and the first half of the 20th century, the following doctors wrote about performing anaesthesia: Miroslav Čačković (in 1896), Dragutin Schwarz, Edo Šlajmer, Milan Crljenak, Antun Medanić, Božidar Lavrić, Simo Mučalov, Josip Vodenhal, Ante Dreščik, Radoslav Akerman, and Đurđa Klaić.

The first endotracheal anaesthesia, was induced by Dr Risto Ivanovski at the military hospital in Zagreb in 1948.

Croatian anaesthesiology started to develop in 1950 with the introduction of a one-year postgraduate course in Copenhagen, within the framework of a WHO programme, intended for underdeveloped and developing countries and overseen by the WHO Centre for Anaesthesiology. Croatian physicians attending this course were Andrija Longhino, Jagoda Bolčić Wickerhauser, Miroslav Hromadko, Mara Biondić, and Vlasta Lederer. The first

¹ Much of this article overlaps with a poster presented at Fifth International Symposium on the History of Anesthesia, Santiago Spain 19-23 September 2001, that was later adapted for publication in International Congress Series 2002;1242:587-95 (doi: 10.1016/S0531-5131(02)00773-2).

² Department of Anesthesiology and intensive care Clinical hospital Split, Split, Croatia
Correspondence to: Marko Jukić, MD PhD. Čiovska 15, 21000 Split, Croatia. E-mail: marko.jukic@st.t-com.hr. Tel. 021/358-204, Mob. 0915739049

specialists in anaesthesiology in Croatia were Đurđa Klaić, Ljubomir Ribarić, and Jagoda Bolčić Wickerhauser. In Zagreb, the first postgraduate courses in anaesthesiology were held in 1953, 1955, and 1957.

In 2007, the anaesthesiology service in Croatia consisted of three Anaesthesiology and Intensive Care Clinics, three Anaesthesiology and Intensive Care Departments, 11 Anaesthesiology and Intensive Care Units, 13 Anaesthesiology and Resuscitation Services, and eight Anaesthesiology Units within Surgery Departments. It included 481 specialists in anaesthesiology and resuscitation and 172 general physicians specialising in anaesthesiology and resuscitation (totalling 653 in December 2007). This means that one specialist serviced 9,140 people, that is, 6,730 if we include GPs undergoing specialist training. Anaesthesiologists in charge of intensive care units covered 364 beds.

Key words: history of medicine, 19th and 20th century, anaesthesiology, intensive care, Croatia

INTRODUCTION

On 13 March 1847 - five months after the first public demonstration of ether anaesthesia in Boston on 16 October 1846 - surgeons Cezar Pellegrini-Danieli, Jerolim Definis, and Toma Fumagallo performed a procedure on an eighty-year-old woman with incarcerated hernia, using ether narcosis for the first time. The anaesthesia was induced by Johannes Baptista Germanus Bettini (1816-1888), who reported the procedure in a local newspaper [1,2].

In Dubrovnik on 14 April 1847 ether anaesthesia was used again in a breast operation performed by Dr Frane Lopišić, with the assistance of Dr Šarić and Dr Kaznačić. A machine designed by Pinelli was used for this purpose. It consisted of a balloon with a sponge supplied with a tube and two valves. In Split, on 17 June 1847, Dr Esler, a local garrison physician, performed several operations under ether anaesthesia [3].

On 8 September 1847, the National Official Gazette reported the use of ether anaesthesia in an operation performed in Sisak on 29 August 1847.

In 1876, Dr Albin Flesch worked with anaesthetics (ether and chloroform) in Osijek, afterwards it was Dr Branislav Grčić (in Osijek) who worked with anaesthetics. There are few other records on the use of anaesthesia in Croatia until the end of the 19th century. Surgeons themselves induced anaesthesia using ether and chloroform. Dr Miroslav Čačković wrote about anaesthesia in Zagreb in 1896 [4].

The discovery and use of a cocaine solution (1% to 5%) raised new issues (4). Surgeons concluded that this solution could not ensure a painless operation. Dr Karl Ludwig Schleich managed to suppress pain using a highly diluted cocaine solution containing common table salt, cooled down to zero degrees Celsius. Surgeons in Europe distinguished between three types of solutions (strong 0,2% cocain, mild 0,05% cocain and weak 0,01% cocain) [4].

Dr Dragutin Mašek was the first to use the Schleich solution at the Sisters of Mercy hospital (Bolnica milosrdnih sestara) in Zagreb [4], and it was later used at the same hospital by Dr Teodor Wickerhauser. The solution was used for tumour, hydrocele, epithelioma, hernia, as well as for minor plastic surgery and laparotomy. Schleich's method of infiltrational analgesia made it possible for major surgery to be performed without general anaesthesia, which was particularly important for patients at risk [4-6].

Surgeon Dr Dragutin Schwarz, head of staff of Brothers of Mercy hospital (Bolnica milosrdne braće) in Zagreb, reported a kidney operation in which Billroth's compound was used for anaesthesia [7] and then in 1900, he made public his experience with medullary analgesia, which he performed with 2% cocaine and tropacocaine. Edo Šljajmer and M. Crljenjak also wrote about the use of medullary analgesia.

Anaesthesia was performed using ether, chloroform, ether and chloroform combined, morphine, and a local anaesthetic.

Dr Ivan Maixner, head of staff of the Varaždin Hospital [8] wrote about anaesthesia at that time, as did physicians from the Osijek Hospital [9], including Dr Bela Fischer, head of surgery.

In 1920, a Surgery Ward was opened at the hospital in Drašković Street (Zagreb). General anaesthesia was induced by chloroform and ether drops. Spinal, intravenous, and local anaesthesia were induced by surgeons.

Once electricity was introduced to operating rooms, chloroform replaced ether. Before that, ether drops were administered by dripping them on Schimmelbusch's mask or using the Ombredanne inhaler.

In the 1930s, Dr Antun Medanić wrote about anaesthesia issues in Croatia. He believed that for a serious medical and scientific subject, it received oversimplified and uncritical coverage. Most of the Croatian population was uneducated at the time and had an aversion to anaesthe-

sia and loss of consciousness. They feared that they would not awake from anaesthesia and believed that each procedure shortened life by five years.

In 1932, Dr Božidar Lavrić, a surgery clinic assistant in Zagreb, wrote about the use of percaine in anaesthesia and so did Dr Simo Mučalov of the gynaecological clinic in Zagreb. Dr Josip Vodenhal reported that 1,037 lumbal anaesthesias were performed in the Ogulin hospital from 1924 to 1935. Novocaine, pantocaine, percaine L, and tropacocaine were used.

Dr Ante Dreščik, head of the Zadar Hospital Surgery reported the use of Pages-Dolliot's epidural anaesthesia in 1948, using 2-3% novocaine in a saline solution. Dr Radoslav Akerman of the Gynaecology and Obstetrics Department of the Zadar General Hospital reported the problem of alleviating pain during delivery. He used meperidine (Dolantin®), a combination of barbiturates, scopolamine, novocaine for a paracervical block, chloroform for inhalation, ether, and ether given rectally.

Towards the end of the Second World War, a British government military mission came to Yugoslavia. They helped take care of a large number of wounded who needed medical care by providing a certain amount of anaesthetics, by assisting in surgical procedures, and between 1945 and 1947 by teaching physicians and other medical staff at the Military Medical Academy in Belgrade how to induce anaesthesia. Dr Risto Ivanovski completed his training there and came to the Zagreb Military Hospital at the end of 1947 to take over the position of head anaesthetist. There he performed the first endotracheal anaesthesia on 7 January 1948, and later in other hospitals in Zagreb and in Rijeka. The experience with the procedure was later reported by Dr Đurđa Klaić [10].

THE DEVELOPMENT OF ANAESTHESIOLOGY SINCE 1950 AND THE BEGINNINGS OF CROATIAN ANAESTHESIOLOGY

The Anaesthesiology Training Centre in Copenhagen was founded in May 1950. This one-year postgraduate course was part of the WHO programmes set up for the underdeveloped and developing countries. At that time, the WHO was chaired by Andrija Štampar (professor of hygiene and social medicine at the Zagreb University School of Medicine and director of the School of Public Health in Zagreb). He was aware of the importance of anaesthesiology in modern medicine and secured one WHO fellowship for the first postgraduate course in 1950/1951. The first fellow was Dr Andrija Longhino from Zagreb. Other Croatian physicians that attended

the course were Jagoda Bolčič Wickerhauser (1954/55), Miroslav Hromadko (1960), Mara Biondić (1964), and Vlasta Lederer (1967).

POSTGRADUATE COURSES IN ANAESTHESIOLOGY IN ZAGREB

After Copenhagen, Dr Longhino received another WHO fellowship and spent some time in Stockholm and Liverpool with a view to organising a postgraduate course in Zagreb. The result were three six-month courses held in 1953, 1955, and 1957 for 50 people. Fifteen physicians later specialised in anaesthesiology.

At that time, specialization took two years. The first to specialise in anaesthesiology (in Croatia) was Dr Darinka Soban from Slovenia on 15 March 1954. The first physician from Croatia to pass the exam was Dr Đurđa Klaić on 7 April 1955. Others were Ljubomir Ribarić (1956), Jagoda Bolčič Wickerhauser (1957), Višnja Svoboda (1958), Ivana Perić (1959), Metka Betriani (1959), Neda Butigan (1960), Nikola Radoš (1960), Nikola Franičević (1960), Maša Formanek (1960), and Vlasta Strižić (1960).

From 1959 to 1974 specialisation in anaesthesiology took three years and since 1974 four years [13].

ANAESTHESIOLOGY PRACTICE IN HOSPITALS BETWEEN 1950 AND 2008

In 1950, the Surgery Ward in the Rebro Hospital (Zagreb) had one Foregger-type machine, and Dr Đurđa Klaić was the first to use it for endotracheal anaesthesia. Dr Andrija Longhin's return from Denmark to Zagreb in 1951 and his anaesthesiology courses marked a turning point. Professor Andrija Štampar secured anaesthetics, anaesthetic machines, books, and course funding. In addition to the Foregger, the training machines included an AGA machine, an intermittent anaesthetic administration machine, and two Boyle's machines.

With the first trained anaesthesiologists, practice improved, but the process was slow due to shortage of medicines and apparatus. Well-trained specialists simply could not apply their knowledge to everyday practice.

The most common anaesthetics were ether, nitrous oxide, cyclopropane, trylene, and chlorethyl. Of the relaxants, there was only tubocurarine and of the intravenous pharmaceuticals there were barbiturates of ultrashort-term, short-term, and prolonged effect. For surgery performed

in outpatient clinics, skin cooling chlorethyl was used. After a number of years, neuroleptanaesthesia was introduced, ketamine, and new curariform and depolarising relaxants. Furthermore, all kinds of regional anaesthesia were performed. After her return from Copenhagen, Dr Jagoda Bolčič Wickerhauser introduced hypotensive and hypothermic anaesthesia. The former was mainly for neurosurgery and plastic surgery, while the latter was for major surgery on the blood vessels or for operations in which massive haemorrhage was expected. On 1 September 1960, Dr Jagoda Bolčič Wickerhauser introduced halothane, bringing improvements to hypotensive and hypothermic anaesthesia.

In 1959, the first anaesthesiology unit was set up within the surgery department of in Zagreb (Rebro), and in 1962, the first anaesthesiology department was set up in Rijeka (the Braća Sobol Hospital).

In 1970, the Urological Clinic (Rebro, in Zagreb) became a separate institution, and Dr Ivanka Gjajić-Broz was appointed head of the newly opened Ward for Anaesthesiology, Resuscitation, and Intensive Care

When a Neurosurgery Clinic (Rebro, in Zagreb) was set up on 23 June 1972, it employed a permanent team of anaesthesiologists, consisting of Dr Metka Betrijani, Dr Danijela Toth, Dr Eduard Peruško, and Dr Marija Hotujac-Šverko. In 1979, a new Neurosurgery Intensive Care Unit (Rebro, in Zagreb) was opened and a modern Anaesthesiology and Intensive Care unit was set up [13].

At the Thoracic Surgery Unit, (Jordanovac in Zagreb), anaesthesia was performed by Dr Ivan Janjić, who was medical consultant. He was later succeeded by Dr Višnja Majerić Kogler.

In 1976, the Anaesthesiology and Intensive Care Units of the Jordanovac Hospital in Zagreb became part of Thoracic Surgery. In 1986, the unit became the Department of Anaesthesiology and Intensive Care. Its head, Professor Jagoda Bolčič Wickerhauser retired in 1990 and was succeeded by Dr Ivan Janjić and in 1995 by Dr Dubravka Žanić-Matanić. The Children's Hospital in Zagreb set up an Anaesthesiology and Intensive Care unit in 1967. Its first specialist in anaesthesiology was Dr Ljiljana Audy-Kolarić.

Anaesthesiology gradually entered other hospitals in Zagreb, including Sisters of Mercy, the Gynaecology Clinic at the Holy Spirit Hospital (Merkur), the Casualty/Emergency Hospital, and the Surgery Clinic of the Zagreb University School of Medicine. Not all physicians who performed

anaesthesia specialized in anaesthesiology and resuscitation. The working conditions in the hospitals were worse than at the School of Medicine Surgery Clinic.

DEVELOPMENT OF ANAESTHESIOLOGY IN INTENSIVE CARE UNITS

The pioneers of intensive therapy in Croatia were Jagoda Bolčić Wickerhauser, Eduard Peruško, Ivan Janjić, Maša Formanek, and Ljiljana Audy-Kolarić from Zagreb, Ljubomir Ribarić from Rijeka, Božena Pavičić from Split, Nada Vuković from Varaždin, and Ida Krleža-Jokanović and Dubravka Fantov-Jovandžikova from Osijek.

In Croatia, intensive care units (ICUs) started in 1962-1964 as single rooms, only to develop into independent units supervised by anaesthesiologists.

In these early rooms, locally termed as recovery rooms, surgeons were in charge, but anaesthesiologists took care of mechanical ventilation, provided parenteral therapy, and monitored haemodynamic parameters.

The first ICUs, supervised by anaesthesiologists, started in the early 1970s, first in Zagreb (1971/72) and Rijeka (1972/73), and then in Split (1976), Varaždin (1978), and Osijek (1984).

They combined surgery and non-surgery patients and provided medical therapy, parenteral nutrition, mechanical ventilation, and non-invasive and invasive monitoring. At that time, anaesthesiologists used BOC's Harlow ventilators, Draeger breathing assistants and ventilators, and Siemens monitors.

Some units were not equipped for mechanical ventilation, invasive monitoring, or parenteral nutrition. For instance, units for patients with cardiovascular diseases, which were supervised by cardiologists, had no respirators nor did they provide parenteral nutrition. Often lacking in equipment, the early ICUs could not provide complete care for all patients.

Postoperative units later became surgery ICUs and specialised in neurosurgery, thoracic surgery, paediatric surgery, and cardio surgery. Combined ICUs later became respiratory, neurological, psychiatric, and other ICUs.

The first neurosurgery ICU started in Zagreb (Rebro) in 1972. Since 1981, it has provided monitoring of intracranial pressure. Brain electrical

activity monitoring started in 1985. The unit now provides monitoring of neuromuscular activity and hemodynamic monitoring as well.

Thoracic Surgery Clinic in Zagreb established an independent ICU in 1971 and extended (with new beds and monitoring) it in 1976.

In 1971, Children's Hospital in Zagreb established its own ICU, headed by Dr Ljiljana Audy Kolarić.

In 1994, intensive care in Croatia totalled 643 beds, of which 277 were supervised by anaesthesiologists (43%). Anaesthesiologists were in charge of 57.5%, internists 25.9%, paediatricians 9.2%, infectologists 3.7%, and surgeons 3.7% units. More than 80% of respirators and 64% of monitors belonged to ICUs supervised by anaesthesiologists.

Between 1995 and 1998, the World Bank financed several healthcare projects in Croatia. One was an eight-million US dollar project to upgrade ICUs. With this money, the Croatian Ministry of Health bought 139 respirators, 214 monitors, 60 hemodynamic monitors, and 80 pulse oximeters. Nearly a million US dollars were allocated to fund two postgraduate courses in intensive care medicine.

In 2001, ICUs totalled 123 all over the country, but not all of them provided equal level of health care.

Today there are 45 ICUs in Croatia, which are supervised by anaesthesiologists (36% of total ICUs). They belong to university, clinical and regional hospitals and provide maximal care. Anaesthesiologists are in charge of 364 intensive care beds (about 40% of the total number of intensive care beds). The number of ICUs supervised by anaesthesiologists is small because new ICUs are specialised and headed by paediatricians, neurologists, psychiatrists, and internists.

There is a considerable difference in healthcare service quality between ICUs supervised by anaesthesiologists and by other specialists, as the former provide respirators for all and hemodynamic monitoring for 40-50% of patients. In contrast, neurology or psychiatry ICUs usually provide respirator for only 20% patients, while hemodynamic monitoring is available only for a restricted number of patients suffering from cardiovascular diseases and those in paediatrics ICUs.

With limited financial resources, all ICUs suffer from personnel shortage and outdated equipment to some extent. Croatia's GNP is considerably lower than in developed European countries.

In Croatia, there are 286 operating theatres providing anaesthesia. Besides anaesthesiology and ICUs, there are anaesthesiology clinics for pre-operative check-ups and pain clinics. Anaesthesiologists provide advice to other specialists such as surgeons, gynaecologists, otorhinolaryngologists, and orthopaedists. They also lead hospital teams for resuscitation and transport of patients in critical condition.

CROATIAN SOCIETY OF ANAESTHESIOLOGY AND INTENSIVE CARE MEDICINE

Croatian Medical Association was established in Zagreb in 1874 . Its Anaesthesiology Section was established on 25 April 1962. The Section helped set up the Association of Anaesthesiologists of Yugoslavia in 1962, and organised meetings, congresses, and symposia all over former Yugoslavia.

The first Symposium on Intensive-Care Medicine was organised in Zagreb in 1976 by an anaesthesiologist, Dr Maša Formanek. Since then, symposia on intensive-care medicine have been held every year.

The year 1991 was the year of open armed aggression against the Republic of Croatia and the year when the Socialist Federal Republic of Yugoslavia fell apart. This brought an end to all joint activities. The Section changed its name to the Croatian Medical Association - Croatian Society of Anaesthesiology and Intensive-Care Medicine.

The Society is now a member of the World Federation of Societies of Anaesthesiologists (WFSA), the Confederation of European National Societies of Anaesthesiology (CENSA), and other associations [13] .

TEACHING ANAESTHESIOLOGY AT UNIVERSITIES

In 1958, anaesthesiology was introduced to the Zagreb University School of Medicine as part of a course in clinical surgery. It also made part of a postgraduate course in surgery, medical emergency services, and nursing. In 1974, the Medical School's Council set up the Department of Anaesthesiology and appointed Jagoda Bolčić Wickerhauser as acting chair. On 22 May 1992, the name of the Department was changed to Anaesthesiology and Resuscitation with Professor Ivan Janjić as the first department head.

Today the Department employs five professors of anaesthesiology, four assistant professors, and several assistants. The department head is Professor Višnja Majerić Kogler.

ANAESTHESIOLOGY SERVICE IN THE HOMELAND WAR (1991-1995)

During the Croatian war of independence, also known as the Homeland War (1991-1995), 35% of anaesthesiologists were on the front lines working in mobile surgery-anaesthesiology teams or at war hospitals. War hospitals employed 132 anaesthesiologists and 90 medical technicians (13).

REFERENCES

1. Bettini I. Chirurgia. Gazzetta di Zara, 1847, no. 21.2.
2. Dreščik A. Zbornik Zadra (Proceedings of Zadar), Zagreb 1964, pp.655.
3. Dreščik A. Prva eter narkoza u dalmatinskim bolnicama (The first ether narcosis in Dalmatian hospitals). In: Grmek M. D, Dujmušić S. Ed. Iz hrvatske medicinske prošlosti, Spomen knjiga Zbora liječnika Hrvatske 1874. – 1954. (Memorial edition of the Croatian Medical Association). Zagreb, 1954.
4. Čačković M. O Schleichovoj anaestheziji infiltracijom (On Schleich's anaesthesia by infiltration). Liječ vjesn 1896; 18 (7): 161-4.
5. Čačković M. Petdesetgodišnjica narkoze. (Fifty years of narcosis). Liječ vjesn 1896; 18 (II): 257-64
6. Wickerhauser T. Operacije Schleichovom analgezijom (Surgery with Schleich's analgesia. Liječ vjesn 1899; 21 (8): 251-4.
7. Formanek M. Klinika za anesteziologiju i intenzivno liječenje (Clinic for anaesthesiology and intensive care). In: Klinička bolnica «Dr. Mladen Stojanović» Zagreb 1845-1985. (University Hospital "Dr Mladen Stojanović" Zagreb 1845-1985), Anali Kliničke bolnice „Dr. M. Stojanović“ Vol. 24, posebno izdanje, br. 2. pp. 115—124. Zagreb 1985. Izdavač Klinička bolnica „dr. M. Stojanović“ Zagreb 1985.
8. Maixner I. Kazuistika iz gradske bolnice u Varaždinu. (Case histories of the city hospital in Varaždin). Liječ vjesn 1903; 25(3): 81-5.
9. Godišnji bolnički izvještaj za 1895. godinu (Annual hospital report for 1895), Osijek 1896. pp 142.
10. Klaić Đ. Naša iskustva s endotrahealnom anestezijom (Our experience with endotracheal anaesthesia). Liječ vjesn 1950; 72: 330-3.

11. Secher O. Anaesthesiology Centre Copenhagen, Anaesthesia - Essay on its History. Berlin - Heidelberg, Springer – Verlag 1985. Edited by Rupreht J, van Lieburg MJ, Lee JA, Erdmann W. pp. 322-33.
12. Medicinski fakultet Sveučilišta u Zagrebu, Škole narodnog zdravlja, Nastavni plan i program tečaja iz anesteziologije, (Curriculum of the course in anaesthesiology of the School for Public Health, Medical Faculty of Zagreb University). Zagreb: Škola narodnog zdravlja, 1954,
13. Jukić M. Anesteziologija u Hrvatskoj od Ive Bettinija do godine 1998. (Anaesthesiology in Croatia from Ivo Bettini until the present day, 1998). Zagreb: Medicinska naklada, 1999., pp 45-45-271.
14. Degoricija V, Šefer S, Kujundžić-Tiljak M, Gjurašin M. Intensive Care Units in Croatia: 2001. Survey. Croat Med J. 2002;43:713-21.
15. Biondić-Stipanić M, Jelić J. Osuvremenjivanje jedinica intenzivne skrbi zahtjeva prvenstveno bolju organizaciju. (Modernisation of intensive care units requires better organisation). Medicina 1995; 31 (suppl. 1.): 1-5.

SAŽETAK

Ovo je kratak povijesni prikaz razvoja anesteziologije i intenzivnog liječenja u Hrvatskoj od njezinih početaka do 2008. Pet mjeseci nakon prve javne demonstracije eterske narkoze u SAD-u, u Zadru je Ivan Bettini izveo prvu etersku narkozu 13. ožujka 1847. U XIX. stoljeću i prvoj polovici XX. stoljeća više je liječnika pisalo o izvođenju anestezije. Prvi je bio Miroslav Čačković (1896.), a zatim Dragutin Schwarz, Edo Šlajmer, Milan Crljenak, Antun Medanić, Božidar Lavrić, Simo Mučalov, Josip Vodenhal, Ante Dreščik, Radoslav Akerman, Đurđa Klaić i drugi. Prvu endotrahealnu anesteziju obavio je dr. Risto Ivanovski u vojnoj bolnici u Zagrebu 1948.

Razvoj hrvatske anesteziologije započinje 1950. Jednogodišnji poslijediplomski tečajevi iz anesteziologije u Kopenhagenu bili su jedan od programa namijenjenih nerazvijenim zemljama i zemljama u razvoju s velikim učinkom (Centar za anesteziologiju SZO-a). Andrija Longhino, Jagoda Bolčić, Miroslav Hromadko, Mara Biondić i Vlasta Lederer hrvatski su liječnici koji su završili tečaj u Kopenhagenu.

Prvi anesteziolozi u Hrvatskoj bili su Đurđa Klaić, Ljubomir Ribarić i Jagoda Bolčić. Poslijediplomski tečajevi iz anesteziologije u Zagrebu održani su 1953., 1955. i 1957.

Godine 2007. anesteziološka služba u Republici Hrvatskoj bila je organizirana kako slijedi: tri klinike za anesteziologiju i intenzivno liječenje, tri zavoda za anesteziologiju i intenzivno liječenje, jedanaest odjela anesteziologije i intenzivnog liječenja, trinaest službi za anesteziologiju i reanimatologiju i osam jedinica za anesteziju pri kirurškim odjelima.

Na kraju 2007. bio je 481 specijalist anesteziologije i reanimatologije i 172 liječnika na specijalizaciji iz anesteziologije i reanimacije (ukupno 653). Na 9.140 stanovnika dolazi jedan specijalist anesteziolog, a ako se uključe i specijalizanti, tada na 6.730 stanovnika dolazi jedan liječnik koji se bavi anestezijom. Anesteziolozi skrbe za bolesnike u jedinicama intenzivnog liječenja (364 postelje).

Ključne riječi: povijest medicine, XIX. i XX. stoljeće, anesteziologija, intenzivno liječenje, Hrvatska