NA HOMOLCE
HOSPITAL

ANNUAL REPORT NA HOMOLCE HOSPITAL 2021

AKREDITOVÁNO SAK AKREDITOVÁNO

CONTENT

ABOUT US

Dear friends,

2021 was an exceptionally successful year for the Na Homolce Hospital in terms of economic stability and further improvement of the quality of medical and nursing care.

Our hospital achieved a record net profit of CZK 536 million with total revenues of CZK 4.7 billion. Thanks to a number of measures we have introduced in recent years, the hospital's economic situation is currently balanced. It is very good that we have managed to complete the setup of the processes for purchasing materials and medicines, so that we have a record-breaking pro-competition rate from the point of view of hospitals in the Czech Republic. At the same time, we have also managed to achieve significant savings that will be used for the benefit of the hospital. In total, we invested almost CZK 372 million in the hospital's assets in 2021. I am very happy that we have managed to complete the reconstruction of Gastroenterology and the related modernisation of the Endoscopy Centre. In record time and with minimal operational restrictions, we completed the long-delayed reconstruction of the Nuclear Medicine Department – PET CT. Intensive work has been and will continue to be carried out to expand parking capacity on the hospital grounds. A large-scale outpatient consolidation project is also currently underway, which will significantly improve the logistics of the care provided.
However, other successfully managed investments should also be mentioned. We have purchased a whole range of expensive instrumentation for nearly CZK 232 million. The largest investment projects were the PET/CT scanner and the 3T MRI. We have secured CZK 154 million from subsidy programmes, which will be used to purchase other extremely expensive devices – state-of-the-art angiography devices or a unique PET-MRI machine, which will make Homolka Hospital only the third hospital in the Czech Republic and the only one in Prague to have this modern method.
In the field of medicine, we have succeeded in defending the status of the Centre for Highly Specialised Cardiovascular Care, the status of the Centre for Highly Specialised Cerebrovascular Care and the status of the Centre for Specialised Care for Pharmacoresistant Epilepsy. Being a part of the National Network of Centres of Highly Specialised Care is a clear confirmation of the wide range of diagnostic and therapeutic care in our core disciplines with the level of the world's top modern medicine and with the significantly supra-regional character of the services provided.

Although thanks to a number of measures we have managed to stabilise the hospital economically over the last two to three years and thus to secure financial resources for the future development of the hospital, we are watching with concern current very negative economic development, which will inevitably be reflected in the hospital's economy and will also affect our investment plans. The highly uncertain global economic situation forces us to continuously strive for efficiency in all our activities with the utmost effort to maintain economic stability. We are aware that only an economically strong hospital can provide healthcare at the highest level. And that is our common goal.
Thanks to all the employees of our hospital for making this happen together.

Petr Polouček, MD, MBA

Petr Polouček, MD, MBA
Director of the Hospital

Vladimír Mikulenka, MD, MBA
Deputy Director for Treatment and Preventive Care

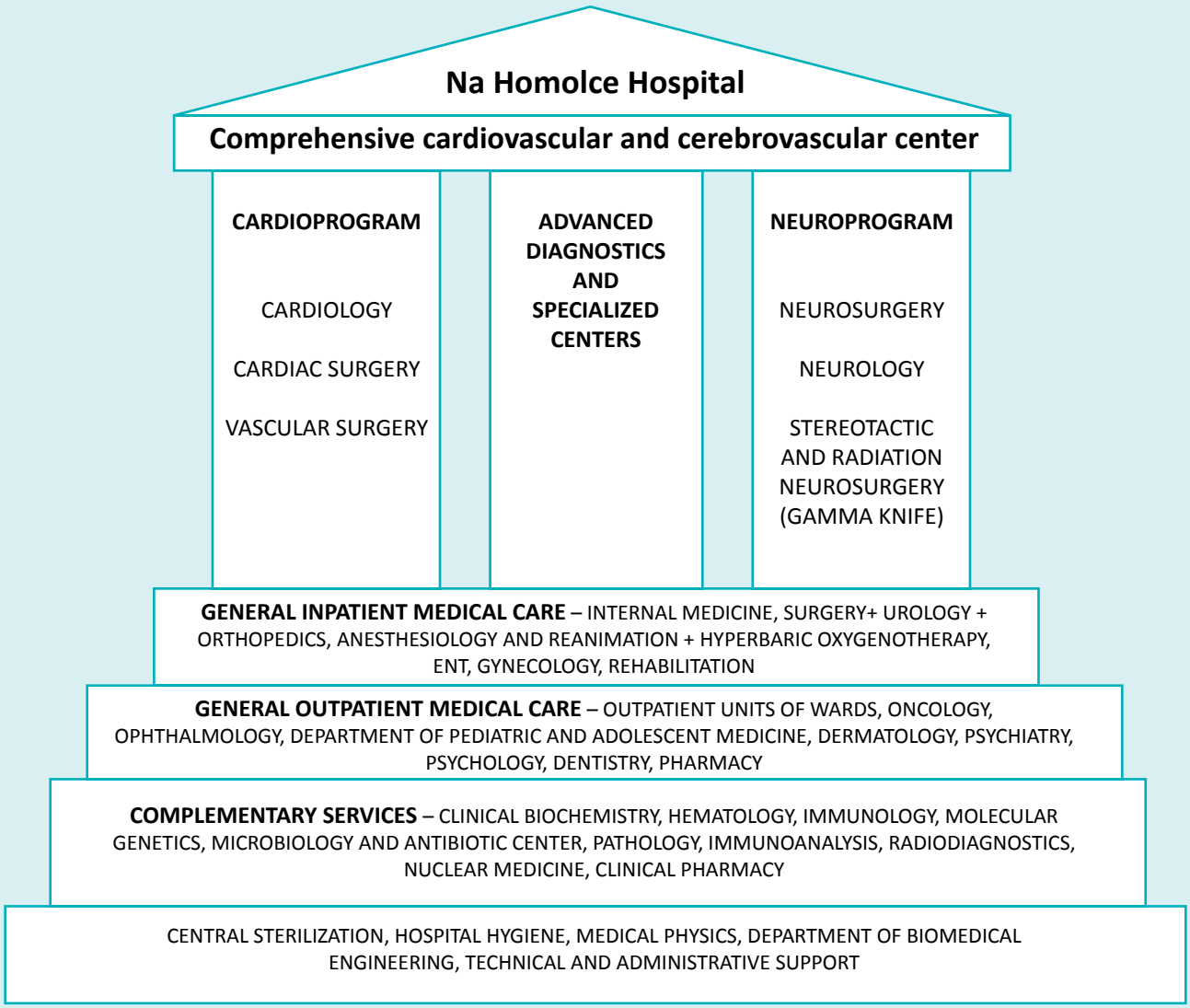
Tomáš Hadžega, MSc
Deputy Director for Economic and Technical Administration

Dušan Chvojka, MSc., MBA
Deputy for Information and Communication Technologies

Ivana Kirchnerová, MS.
Deputy Director for Nursing Care

Assoc. Prof. Otakar Bělohlávek, MD, Ph.D.
Deputy Director for Science and Research until 6/202

Prof. Josef Vymazal, MD, Ph.D.
Deputy Director for Science and Research from 7/2021


Na Homolce Hospital
Comprehensive cardiovascular and cerebrovascular center
CARDIOPROGRAM
CARDIOLOGY
CARDIAC SURGERY
VASCULAR SURGERY
ADVANCED DIAGNOSTICS AND SPECIALIZED CENTERS
NEUROPROGRAM
NEUROSURGERY
NEUROLOGY
STEREOTACTIC AND RADIATION NEUROSURGERY (GAMMA KNIFE)
GENERAL INPATIENT MEDICAL CARE – INTERNAL MEDICINE, SURGERY+ UROLOGY + ORTHOPEDICS, ANESTHESIOLOGY AND REANIMATION + HYPERBARIC OXYGENOTHERAPY, ENT, GYNECOLOGY, REHABILITATION
GENERAL OUTPATIENT MEDICAL CARE – OUTPATIENT UNITS OF WARDS, ONCOLOGY, OPHTHALMOLOGY, DEPARTMENT OF PEDIATRIC AND ADOLESCENT MEDICINE, DERMATOLOGY, PSYCHIATRY, PSYCHOLOGY, DENTISTRY, PHARMACY
COMPLEMENTARY SERVICES – CLINICAL BIOCHEMISTRY, HEMATOLOGY, IMMUNOLOGY, MOLECULAR GENETICS, MICROBIOLOGY AND ANTIBIOTIC CENTER, PATHOLOGY, IMMUNOANALYSIS, RADIODIAGNOSTICS, NUCLEAR MEDICINE, CLINICAL PHARMACY
CENTRAL STERILIZATION, HOSPITAL HYGIENE, MEDICAL PHYSICS, DEPARTMENT OF BIOMEDICAL ENGINEERING, TECHNICAL AND ADMINISTRATIVE SUPPORT

Basic data

Number of employees	Number of beds	Number of admissions	Number of surgeries	Number of outpatient interventions
1 790	**357**	**17 294**	**15 363**	**964 967**

Staff and wage data

	Physicians	Pharmacists	General nursing staff	Other auxiliary medical staff with professional competence	Auxiliary medical staff with professional and specialised competence
Total wages paid (in CZK)	404 634 902	14 437 627	534 085 759	99 988 240	44 807 182
Average recalculated number of employees	289,58	16,64	676,44	147,26	60,76
Average salary (in CZK)	116 443	72 304	65 796	56 583	61 454

	Auxiliary medical staff under specialized supervision or direct guidance	Technical and administrative staff	Operators	Total
Total wages paid (in CZK)	102 215 954	165 676 545	45 079 379	**1 410 925 588**
Average recalculated number of employees	214,91	272,59	111,74	**1 789,92**
Average salary (in CZK)	39 635	50 649	33 619	**65 688**

Auxiliary medical staff – medical staff excluding physicians
Technical and administrative staff

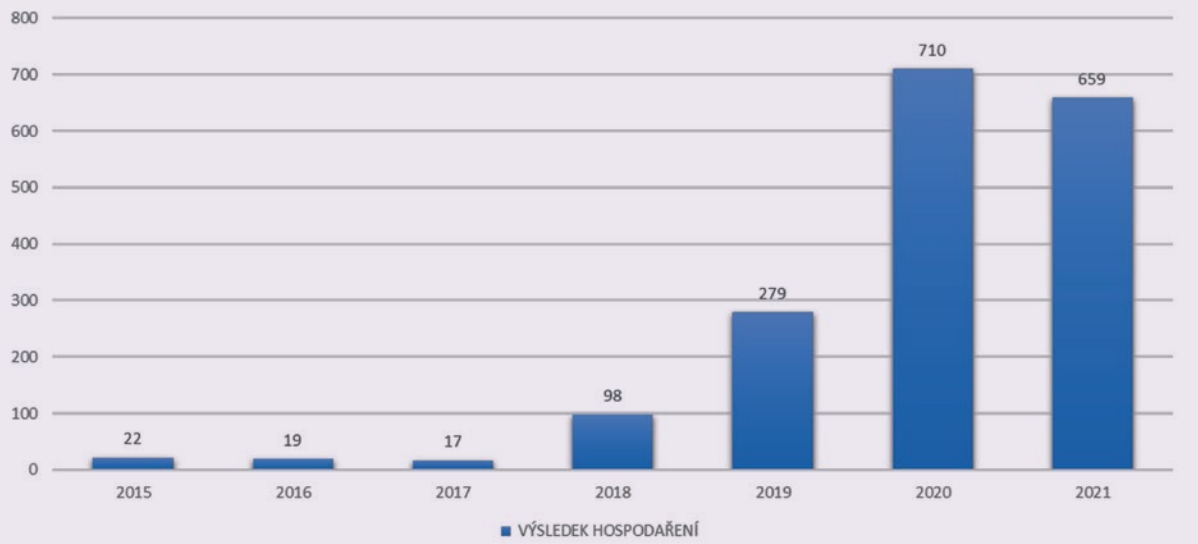
ECONOMIC STABILITY

Development of costs and revenues

Medical costs	2020 (in CZK mil.)	2021 (in CZK mil.)	Increase/decrease 2021/2020 (in CZK mil.)	2021/2020
Medicines	91	92	1	101 %
Separately accounted medicines	77	90	13	117 %
Blood and blood derivatives purchase	32	35	3	109 %
Special medical materials	197	220	23	112 %
Separately accounted materials	750	764	14	102 %
Labour costs (in CZK mil.)	**2020** (in CZK mil.)	**2021** (in CZK mil.)	**Increase/decrease 2021/2020** (in CZK mil.)	**2021/2020**
Wages	1 425	1 578	153	111 %
Obligatory payments	474	525	51	111 %
Other costs (in CZK mil.)	**2020** (in CZK mil.)	**2021** (in CZK mil.)	**Increase/decrease 2021/2020** (in CZK mil.)	**2021/2020**
Other consumables (including low-value fixed assets)	75	72	-3	96 %
Energy consumption	43	39	-4	91 %
Sale of goods	112	123	11	110 %
Repairs and maintenance	63	71	8	113 %
Travel expenses and education	3	4	1	133 %
Services	99	100	1	101 %
Other costs	291	279	-12	96 %
Depreciation	155	173	18	112 %
Total costs	3 896	4 163	267	107 %
Costs before taxes	3 781	4 040	259	107 %

Revenues (in CZK mil.)	2020 (in CZK mil.)	2021 (in CZK mil.)	Increase/decrease 2021/2020 (in CZK mil.)	2021/2020
Revenues from own goods and services	3 934	4 186	252	106 %
– of which revenues from Health Insurance Companies	3 883	4 133	250	106 %
Sale of goods	149	154	5	103 %
Financial and other revenues	408	359	-49	88 %
Total revenues	4 491	4 699	208	105 %

Profit (loss) (in CZK mil.)	2020 (in CZK mil.)	2021 (in CZK mil.)	Increase/decrease 2021/2020 (in CZK mil.)	2021/2020
Profit (loss) before taxes	710	659	-51	93 %
Profit (loss) in the accounting period	595	536	-59	90 %



v mil. Kč	2015	2016	2017	2018	2019	2020	2021
NÁKLADY CELKEM	3 100	3 151	3 321	3 435	3 615	3 780	4 040
VÝNOSY CELKEM	3 122	3 170	3 337	3 533	3 894	4 491	4 699
VÝSLEDEK HOSPODAŘENÍ	**22**	**19**	**17**	**98**	**279**	**710**	**659**

Awards, certificates

zindex.cz —— nemocnice —— neplejtvak.cz

Neplejtvák 2021

Nemocnice Na Homolce

1. místo

Tento certifikát dokládá, že výše uvedený zadavatel obdržel cenu Neplejtvák 2021 za 1. místo v kategorii nemocnice. Umístil se tedy mezi deseti nejlepšími v žebříčku zindex.cz, hodnotícím dobrou praxi při zadávání veřejných zakázek, který vyhlašuje Datlab institut z.s.

DATLAB INSTITUT

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APES

ASOCIACE POSKYTOVATELŮ ENERGETICKÝCH SLUŽEB

NEJLEPŠÍ PŘIPRAVOVANÝ EPC PROJEKT ROKU 2021

3. MÍSTO NEMOCNICE NA HOMOLCE

JOZEF SÍKELA
MINISTR PRŮMYSLU A OBCHODU

MIROSLAV MARADA
PŘEDSEDA APES

V PRAZE 29. 3. 2022

HASAP CONSULTING

HASAP Consulting, s.r.o., uděluje

CERTIFIKAČNÍ OSVĚDČENÍ

„Zavedení postupů založených na zásadách HACCP"

v souladu s požadavky Nařízení Evropského parlamentu a Rady (ES) č. 852/2004 ze dne 29. dubna 2004 „o hygieně potravin"

provozovateli / potravinářskému podniku

Nemocnice Na Homolce

Provozovna: Nemocnice Na Homolce, Roentgenova ul. 2, Praha 5

NEMOCNICE NA HOMOLCE

Zavedení a používání postupů založených na zásadách HACCP a provádění správné výrobní praxe bylo posouzeno pro technologické úseky a postupy:

- **Příjem potravin**
- **Skladování potravin**
- **Příprava surovin pro výrobu**
- **Výroba teplých pokrmů**
- **Výroba studených pokrmů**
- **Zchlazování a zmrazování produktů**
- **Výdej pokrmů**
- **Expedice pokrmů**
- **Cateringové služby**

Platnost certifikátu do: 30. 3. 2023

Miloš Žáček – jednatel

HASAP Consulting, s.r.o., V Propustku I. 1150, 252 45 Březová - Oleško, IČO: 26479010

Certifikační osvědčení č. 00009 / 16 / 02 / 2022

Statutory audit of the annual financial report for 2021

FIZA

EKONOMIKA ▪ PORADENSTVÍ ▪ AUDIT ▪ DAŇOVÉ PORADENSTVÍ

Zpráva nezávislého auditora o přezkoumání hospodaření státní příspěvkové organizace Nemocnice Na Homolce za rok 2021

17. 2. 2022

Auditorská společnost

FIZA, a.s. se sídlem Hrozňatova 3, 615 00 Brno, IČ 26252325, číslo oprávnění 377.

Auditor

Ing. Jiří Ficbauer, CSc., MBA, číslo oprávnění 0431

Název, sídlo a IČ státní příspěvkové organizace

Název: Nemocnice Na Homolce
Sídlo: Roentgenova 2, PSČ 150 30 Praha 5
IČ: 00023884

Období, za které bylo provedeno přezkoumání

Ověřovaným účetním obdobím je rok 2021. Toto účetní období bylo uzavřeno dnem 31. 12. 2021.

Vymezení odpovědnosti

Za vedení účetnictví, za jeho úplnost, průkaznost a správnost odpovídá ředitel státní příspěvkové organizace. Naším úkolem je, na základě provedeného ověření, zpracovat zprávu a vyjádřit názor na účetní závěrku a hospodaření státní příspěvkové organizace.

Rozsah přezkoumání

Předmětem přezkoumání je účetní závěrka státní příspěvkové organizace za rok 2021. Přezkoumání hospodaření také zahrnovalo ověření údajů:

- v účetní závěrce za rok 2021;
- o dodržení zásad hospodaření státní příspěvkové organizace v roce 2021;
- o plnění příjmů a výdajů rozpočtu;
- o ostatních peněžních operacích;
- o tvorbě a použití peněžních fondů;
- o nákladech a výnosech hlavní a hospodářské činnosti.

Předmětem přezkoumání bylo rovněž nakládání s majetkem ve vlastnictví státní příspěvkové organizace, zadávání a uskutečňování veřejných zakázek, stav pohledávek a nakládání s nimi, ručení za závazky fyzických a právnických osob, zastavování movitých a nemovitých věcí ve prospěch třetích osob a zřizování věcných břemen k majetku.

Přezkoumání hospodaření bylo naplánováno a provedeno výběrovým způsobem s ohledem na významnost jednotlivých skutečností tak, aby auditor získal přiměřenou jistotu pro své vyjádření.

Přezkoumání bylo provedeno v souladu se zákonem č. 93/2009 Sb., o auditorech a o změně některých zákonů (zákon o auditorech). Dále bylo provedeno v souladu se standardem ISAE 3000 „Ověřovací zakázky, které nejsou auditem ani prověrkami historických finančních informací", přičemž byla současně přiměřeně aplikována i ustanovení dalších standardů ISA. Dále byl proveden s přihlédnutím zejména k:

- zákonu č. 563/1991 Sb., o účetnictví, ve znění pozdějších předpisů,
- zákonu č. 218/2000 Sb., o rozpočtových pravidlech a o změně některých souvisejících zákonů (rozpočtová pravidla), ve znění pozdějších předpisů;
- vyhlášce č. 410/2009 Sb., kterou se provádějí některá ustanovení zákona č. 563/1991 Sb., o účetnictví, ve znění pozdějších předpisů, pro některé vybrané účetní jednotky, (dále také jen „vyhláška č. 410/2009 Sb.);
- Českým účetním standardům pro některé vybrané účetní jednotky, které vedou účetnictví podle vyhlášky č. 410/2009 Sb. (účinným od 1. 1. 2010);
- Zákonu č. 134/2016 Sb., o zadávání veřejných zakázkách, ve znění pozdějších předpisů a
- dalším navazujícím normám, předpisům, zákonným ustanovením a obvyklým postupům.

Rozsah provedených prací na přezkoumání hospodaření státní příspěvkové organizace nesplňuje požadavky pro vydání auditorského výroku, a proto tato zpráva není zprávou auditorskou, ale je zprávou ověřovací.

Výrok auditora

Při provedení přezkoumání hospodaření státní příspěvkové organizace byl prověřen stav účetnictví, účetních výkazů a ostatní skutečnosti ověřující správnost hospodaření, a nebyly zjištěny žádné významné nedostatky.

Auditor je toho názoru, že hospodaření státní příspěvkové organizace a její účetní závěrka podává ve všech významných ohledech věrný a poctivý obraz aktiv, závazků, vlastních zdrojů krytí stálých a oběžných aktiv, cizích zdrojů a finanční situace státní příspěvkové organizace k 31. prosinci 2021 a výsledku hospodaření za rok 2021 v souladu se zákonem o účetnictví a příslušnými předpisy České republiky.

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Při provádění přezkoumání hospodaření státní příspěvkové organizace nebyly zjištěny významné nedostatky ani rozpory se závaznými právními předpisy, a proto vyslovuje auditor výsledek přezkoumání státní příspěvkové organizace

bez nedostatků

Ing. Jiří Fichbauer, CSc., MBA
auditor
číslo oprávnění 0431

FIZA, a.s.
auditorská společnost
číslo oprávnění 377

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OUR ACTIVITIES

NEUROLOGICAL-NEUROSURGICAL PROGRAM

Department of Neurology

Head of Department: Martin Kovář, MD

Activities of the Department

- Emergency diagnostics and treatment of patients with acute ischaemic stroke and other urgent cerebral diseases – at the Neurological Intensive Care Unit (a key part of the Comprehensive Cerebrovascular Centre)
- Diagnostics and treatment of epilepsy both in the outpatient consulting clinic and in the Epilepsy Monitoring Unit (EMU), including a complete epilepsy surgery program
- Inpatient diagnostic-therapeutic care of other neurological patients
- Examination in the Centre for Sleep Disorders with two beds for polysomnography and consulting clinic
- Cerebrovascular consulting clinic with neurosonology
- Two electromyography laboratories performing, in addition to all methods of electromyography, also somatosensory and motor evoked potentials, in high annual numbers of patients.
- Specialised examination room for visual and auditory evoked potentials
- Two electroencephalographic examination rooms and a mobile EEG device
- General neurological outpatient units

Organisational units of the Department

- Intensive Care Unit with 12 beds is a central part of the Centre of Specialised Cerebrovascular Care (formerly a Comprehensive Cerebrovascular Centre).
- Inpatient Unit: Unit with standard beds. It is followed up by the Epilepsy Monitoring Unit (EMU), which is together with a consulting clinic a basic part of the Centre for Pharmacoresistant Epilepsy with the status of a highly specialised care centre. The centre is one of three such centres in the Czech Republic. The inpatient unit also includes a fully accredited Centre for Sleep Disorders with a sleep laboratory where sleep polygraphy is performed on two monitored beds, indications for corrective ENT operations, and especially supportive aids (CPAP, BiPAP) helping patients with sleep apnoea syndrome.
- Outpatient Unit: The outpatient section includes an extrapyramidal consulting unit, an outpatient unit focused on neuroimmunological diseases of the central nervous system, in particular multiple sclerosis, cerebrovascular consulting clinic, epilepsy outpatient unit, sleep outpatient unit and an outpatient unit for patients with neuromuscular diseases.

Basic data

Number of physicians	23 (18 FTEs)
Number of nurses	54 (43 FTEs)
Number of administrative staff	3
Number of standard beds	21
Number of ICU beds	12
Number of EMU beds	4
Number of sleep laboratory beds	2
Average length of hospital stay (in days)	4.4
Number of admissions	1685
Number of outpatient examinations in total	21,814 (in 9,408 patients)

Performance overview

Admissions

The year 2021 was impacted, as everywhere, by the Covid-19 pandemic. We provided beds for ENT patients, yet the number of admissions to the remaining ones increased slightly.
In 2021, 688 patients were hospitalised for CVA and transient ischaemic attack in the NHH. Intervention radiologists performed 125 mechanical thrombectomies of closed cerebral arteries (one of the highest numbers in the Czech Republic and the highest in Prague) and 136 intravenous thrombolyses. The median time from patient arrival to thrombolysis administration was maintained at a very good time – 22 minutes. All patients with mechanical and intravenous recanalisation are entered in detail in the national registry ResQ. We make decisions about recanalisation in some specific situations with the help of a software tool that evaluates cerebral perfusion on CT.
The Epilepsy Monitoring Unit treated 147 patients per year within typically weekly diagnostic admissions. Patients underwent a comprehensive diagnostics, in the case of pre-surgical examination, including the use of ictal SPECT in some patients. Several had invasive EEG monitoring – either stereotactically inserted hippocampal electrodes and strips or minimally invasive intracerebral electrodes. The EEG from the electrodes is used to identify an epileptogenic zone that may be a candidate for surgical removal to cure epilepsy. 22 resection epilepsy surgery operations were indicated and performed, and 7 patients were implanted or reimplanted with a vagus nerve stimulator (VNS).
263 patients have been admitted to the Centre for Sleep Disorders, well over half of them were newly indicated for treatment with a device providing permanent airway overpressure (CPAP or BiPAP). The effectiveness of their treatment can be monitored remotely and the parameters readjusted, while we have many hundreds of patients monitored in this way.
Percutaneous cement vertebroplasty of a lumbar or thoracic vertebral fracture was performed in almost one hundred patients during a short hospitalisation. It is an effective minimally invasive method of treating vertebral fracture pain, mainly caused by osteoporosis. Na Homolce Hospital is traditionally one of the leading institutions in this discipline.

Outpatient Unit

The number of outpatient examinations increased slightly, and the number of remote consultations also increased. Most patients are examined in specialised outpatient units – epilepsy, sleep, cerebrovascular, neuroimmunological, neuromuscular and extrapyramidal. The outpatient unit cooperates with all disciplines within the hospital.

Changes / new events in the previous year

- We have been awarded the status of Certified ESO Stroke Centre by the European Stroke Organisation.
- We received the Diamond Status Award under the auspices of the European Stroke Organisation as a recognition of the quality and speed of care for patients with acute stroke.
- We have received reaccreditation for the Sleep Medicine Centre for the next 5 years.
- We have joined the Stroke Czech Research Network structure to organise multicentre research. A Framework Agreement on Research Infrastructure Cooperation was signed with NHH.
- One physician of the Department passed the postgraduate certificate examination and thus acquired specialised competence in neurology. One graduate physician has joined the Department.
- During the sanitary closure of the Neurology ICU for 10 days in the summer of 2021, our physicians continued to admit, urgently diagnose and treat acute strokes in collaboration with other departments in the hospital so that we did not interrupt care for the catchment area stroke patients.
- At the end of the year, the Department of Neurology switched to a new hospital information system, which we tested and helped modify as the first department in the hospital.
- Neurology Outpatient Units were consolidated from two hospital sites to one.

Perspectives for the next year

The main task is to maintain a high standard of care even with a large number of treated patients – both the inpatients and outpatients. The core segment is the cerebrovascular program, especially acute treatment of stroke. High number of mechanical thrombectomies and thrombolyses in patients admitted with acute stroke and treatment of other cerebrovascular patients persists. We are investigating the indication for recanalisation of cerebral artery occlusion in borderline patients with major or prolonged ischaemic involvement and the use of multimodal imaging in acute stroke.
Ongoing cooperation with Motol University Hospital in the framework of the Centre of Highly Specialised Care for Pharmacoresistant Epilepsies.
NHH will seek involvement in the National Centre of Excellence for the Treatment of Stroke.
Several studies (TENSION, CHIP, PROOF) are in the process of approving or approved, we also cooperate with the Department of Cardiology in the program of diagnostics of unclear disorders of consciousness, in the examination and prognosis of patients after cardiopulmonary resuscitation and in non-pharmacological treatment of atrial fibrillation.

Educational and other specialised activities

- **Lectures, educational activities**: Lectures held at the Institute of Postgraduate Studies in Health Care, managing study visits in the field of neurointensive care (Vondráčková, MD, Panský, MD), presentations at national webinars and congresses (Head of Department Kovář vice-president of the Cerebrovascular Congress in 06/2021), teaching at the 1st and 3rd Medical Faculty of Charles University (Assoc. prof. Vojtěch), conducting study visits in epileptology and electroencephalography (Assoc. prof. Vojtěch), electromyographic study visits (Jerie, MD), neurological study visits for physicians in other fields as part of pre-certification training
- **Principal investigators and co-investigators of grants**: internal grants (Head of Department Kovář, Assoc. prof. Vojtěch, Jaroš, MD, Červenka, MD)
- Ongoing study **Sonobirdie** – sonolysis in carotid endarterectomy, **the PACIFIC study was closed**– drug antithrombotic secondary stroke prevention. The **CHIP study** – is underway to identify risk factors for stroke.
- **Membership of professional associations**: Czech Neurological Society (Head of Department Kovář a member of the cerebrovascular section committee), Czech League Against Epilepsy (Assoc. prof. Vojtěch a member of the committee), European Stroke Organisation, Epistop Civic Association
- **Preparation of constitutional reviews in the field** of Neurology in Courts.

Department of Neurosurgery

Head of Department: Jan Klener, MD

Despite the difficult situation due to the Covid-19 pandemic in 2021, the Department of Neurosurgery continued to deal with comprehensive diagnostics, surgical treatment and follow-up care of patients suffering from diseases of the central and peripheral nervous system in order to provide comprehensive and safe services that improve patients' quality of life.

Activities of the Department

These activities mainly involve neurosurgical treatment of patients with diseases of the brain, base of the skull, spinal cord, spine and peripheral nervous system, including patient education, preoperative diagnostics, the actual surgical treatment and post-operative neurointensive and follow-up care. In particular, emphasis has been put on the high quality of surgical and post-operative care, using modern methods and technology, minimizing stress and risks for patients, good communication with them, and observance of JCI accreditation standards and, since 2019, SAK accreditation standards as well.
Patient care was traditionally provided in four key areas – as part of the neuro-oncological, neurovascular, functional neurosurgical and spinal programs. In 2021, a total of 2,386 surgeries were performed, 2,260 patients were admitted and 9,151 patients were treated in the outpatient unit.
The Department of Neurosurgery is a supra-regional, national or even international centre for a number of treated diagnoses. Morbidity of planned surgeries ranges at lower values than national data. These are mainly patients with serious diseases which can only be treated in a small number of centres in the Czech Republic. In 2021, surgical treatment was performed in a multifunctional complex of operating rooms equipped with state-of-the-art technology, including intraoperative magnetic resonance imaging and surgical navigation systems, surgical microscopes, and intraoperative electrophysiological monitoring. Integration of operating room technologies enables the Department to provide patients undergoing operations of the brain, spinal cord or spine with a higher standard of precisely targeted, highly efficient and safe treatment.

Neuro-Oncological Program

Within the Neuro-Oncological Program, operations on a wide range of brain tumours, including both intra-axial and extra-axial brain tumours, as well as tumours of the base of the skull are performed. In the surgical treatment: emphasis is put on mini-invasive approaches which reduce the burden on patients. Where appropriate, "keyhole" craniotomy and "non-retraction" neurosurgery, minimizing trauma to the brain, are preferred. The Department of Neurosurgery of Na Homolce Hospital is one of the pioneers in the use of this technique and is a leading facility in the Czech Republic. The surgical standard employs microsurgery techniques using neuronavigation and intraoperative imaging aided by intraoperative MRI and perioperative duplex ultrasonography. The safety and accuracy of surgical operations are increased by using functional neuronavigation, intraoperative fluorescent visualisation of tumours or intraoperative electrophysiology monitoring. In the field of electrophysiological monitoring, we promote the use of subcortical stimulation integrated in the suction device that is permanently placed in the surgical field, leading to increased safety of the procedure. Resections of speech centres are routinely performed by means of so-called "awake craniotomy" which means that part of the procedure is performed on a patient who is fully conscious. We continued in the development of endoscopy surgical techniques, especially in surgeries of hypophysis adenomas, and rarely in surgeries of intradural tumours.
In addition to its own surgical program, the Department of Neurosurgery also promoted other treatment methods for patients with brain tumours in 2020, for instance in the form of regular interdisciplinary neuro-oncology workshops attended by a multidisciplinary team of specialists from Na Homolce Hospital and oncologists from Motol University Hospital (fractionated radiotherapy, chemotherapy, radiosurgical treatment especially with the use of Leksell gamma knife or proton treatment).

Neurovascular Program

With regard to the Neurovascular Program, the Department of Neurosurgery is part of the Comprehensive Cerebrovascular Centre, whose status Na Homolce Hospital acquired in April 2010 and since then it has been regularly renewed.
The main task is to provide comprehensive care to patients with subarachnoid haemorrhage which includes both treatment of the most frequent cause of bleeding, i.e. cerebral aneurysm rupture, as well as neurocritical and other types of care. A wide range of microsurgical and endovascular treatment techniques are available. In 2021, microsurgical treatment included a broad range of currently used methods – standard clipping, clip reconstruction, temporary clipping and remodelling, trapping and indirect methods using vascular occlusion and revascularisation bypass techniques. Neurosurgeons have applied a mini-invasive approach to surgery and cerebral retraction, routinely used electrophysiological imaging, state-of-the-art intraoperative video-angiography and the selectively useful method of flowmetry. In individual cases, circulation was stopped by means of adenosine during cerebral aneurysm surgeries. In the field of endovascular treatment, interventional radiologists have at their disposal all currently available endovascular methods for aneurysm treatment. Microsurgery and endovascular treatments are available around the clock.
Even in 2021, we operated a large number of unruptured aneurysms, arteriovenous malformations and cavernomas, as well as numerous operations to stop spontaneous intracerebral haemorrhage. In cooperation with the Department of Neurology, procedures were performed in accordance with prepared indication criteria for decompression (pressure relief) craniotomy for some types of ischaemic cerebral strokes, and bypass procedures between extra- and intracranial blood flow.
The safety of surgical procedures to treat vascular lesions can be increased by using microscope fluorescence mode which shows the patency of critical vessels and obstruction of pathological vessels after the application of a special fluorescent agent. Procedure safety is also increased by Dopplerometry or a flowmeter, measuring qualitatively or quantitatively blood flow in individual arteries. Monitoring of blood flow allows for a prompt response to haemodynamic changes and prevents a critical lack of blood supply to individual parts of the cerebral tissue.

Functional Neurosurgery Program

The Functional Neurosurgery Program mainly includes epilepsy surgery and neurosurgery aimed at reducing pain. The Centre for Epilepsy Treatment at Na Homolce Hospital is, together with a similar centre at Motol University Hospital, part of a large centre for the Czech Republic and has been granted European accreditation for the treatment of patients with epilepsy. The Centre includes several departments of the Na Homolce Hospital (Neurosurgery and Neurology Departments, Leksell Gamma Knife Unit, Department of Radiodiagnostics and PET Centre) and around 30-40 patients undergo surgery for epilepsy treatment per year.
Resection operations were carried out both by standard microsurgery technique and by stimulation treatment (application of vagal stimulators). During the procedure, patients are examined by intraoperative MRI which provides instant feedback on the extent of the resection, thus increasing the safety and efficiency of surgical procedures.
The main procedures aimed at alleviating pain include a so-called microvascular decompression and partial sensory rhizotomy for intractable pain of the trigeminal nerve. The treatment of pain by neurostimulation and neuromodulation has been further developed in collaboration with the Department of Anaesthesiology and Reanimation.

Spinal Surgery Program

The Department of Neurosurgery at Na Homolce Hospital has been for years one of the leading centres in the Czech Republic for its spinal surgery program. These operations are performed on the entire spine using all access routes to treat degenerative diseases, as well as trauma and oncological conditions. Preference is given to a microsurgical approach and safe minimally invasive techniques using electrophysiological monitoring where indicated. Spine surgery uses a complete range of spinal im-

plants, including arthroplasty systems and percutaneously implanted stabilisers at its disposal. A minimally invasive character is also preferred for major fixation surgeries which can be performed by means of novel, safe techniques. Further, minimally invasive percutaneous vertebroplasty or kyphoplasty are used, which are most commonly performed to treat osteoporotic fractures of the vertebral column, in cooperation with intervention radiology. Since 2019, we have expanded our surgery portfolio to encompass an endoscopic approach, which allows us to completely minimise the access path and thus reduce the morbidity of intervention.
The range of spinal tumour operations included in 2021 all types of lesions, including intradural, extradural, intramedullary and extramedullary tumours.

Operational data

Total number of beds	65
Number of standard beds	45
Number of intensive beds	8
Number of intermediate beds	12
Number of physicians	18
Number of general nursing staff	88
Number of outpatient examinations	9,151
Number of admissions	2,260
Bed occupancy rate (in %)	75
Average treatment period(in days)	7.0

Breakdown of interventions

Cerebral tumours	263
Vascular diseases	186
Functional procedures	55
Spinal diseases, including tumours	1,384
Craniocerebral injuries	122
Other	376
Total	2,386

Educational, research and other specialized activities

- The Department of Neurosurgery of Na Homolce Hospital is a training centre for physicians preparing for postgraduate examinations in neurosurgery, both in cranial neurosurgery and in spine surgery.
- In 2021, neurosurgeons of Na Homolce Hospital were involved in postgraduate training of neurologists and surgeons for postgraduate certificate and were organising study visits in neurosurgery for Czech and foreign physicians.
- In 2021, 5 internal grant projects were carried out in the Department of Neurosurgery. Furthermore, in cooperation with the Czechoslovak Academy of Sciences, research into glial cancer diseases is being carried out within the framework of the Grant Agency of the Czech Republic. Physicians are actively participating in webinars of both international and national congresses, this year with a limited number of contributions due to the pandemic. 5 important works were published in impact journals.

Department of Stereotactic and Radiation Neurosurgery

Head of Department: Assoc. Prof. Roman Liščák, MD, Ph.D.

Activities of the Department

Radiosurgical treatment using the Leksell gamma knife, stereotactic and functional neurosurgery. In addition to consulting and follow-up care provided to our neurosurgical patients, our outpatient unit provides also specialised ophthalmic and neurosurgical consulting care.

Organisational units of the Department

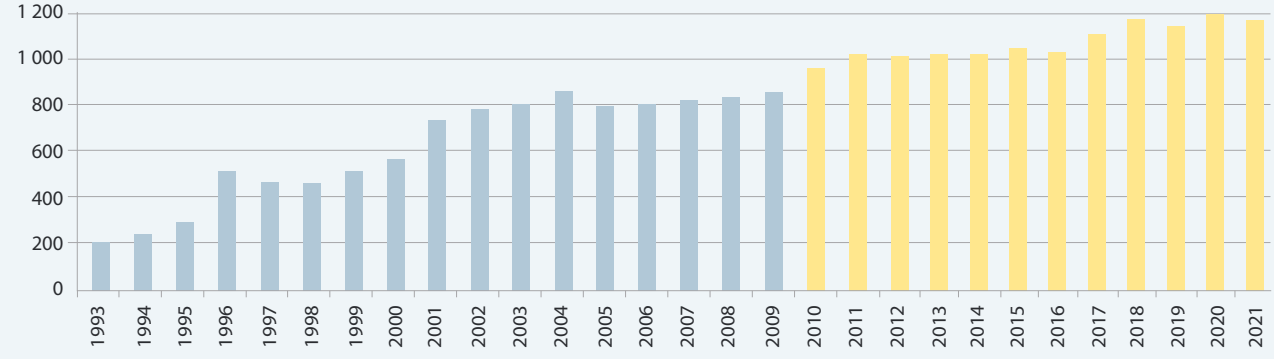
Outpatient Unit: Neurosurgical outpatient unit, neurophysiological outpatient unit, neurological outpatient unit, ophthalmological outpatient unit

Inpatient Unit: 1 operating room for stereotactic and functional neurosurgery, Leksell gamma knife treatment unit

Operational data

Number of physicians:	5 + 2 external ophthalmologists, 2 neurologists, 1 systemised post vacant at present
Number of nurses:	11 + 1.5 radiology laboratory technician
Number of other staff:	7 (3 attendants, 4 members of paramedical staff)
Number of beds:	8 – short stay ward (Monday-Friday)
Number of operations performed using Leksell gamma knife:	1,171
– of which	76 were foreigners (6.5%) – Poland 1, Slovakia 72, Ukraine 2, Sweden 1
– Form S 2:	66
– Self-payers:	10
Number of other operating room surgeries:	164
– of which	42 were deep brain stimulation (19 primary implantations, 23 re-implantations)
Number of admissions:	1,064
Number of outpatient examinations:	1,818 patients

Number of gamma knife operations in each year (yellow – following installation of the Perfexion model)



Changes / new events in the previous year

The years 2020 and 2021 have been challenging for the health sector in many ways due to the ongoing epidemic of Covid-19. For example, at a certain period of time, only one patient could be hospitalised even in a multi-bed room. Therefore, we had to move a significant part of our treatment to outpatient services and, since we treat patients from all over the country, this brought some logistical problems. However, despite many limitations and obstacles, we treated the highest number of patients with the gamma knife in these years, with 1,200 patients in 2020 and 1,171 patients in 2021, a record number in the 29-year history of the Department. The age of the radiation sources (Cobalt 60) has exceeded five years and thus the radiation time has doubled. The number of patients treated hypofractionated with thermomask fixation was 17 (1.5%). We were able to achieve a high number of treatments with a very beneficial upgrade to the Icon model at the end of 2019 and the installation of a new generation of planning system at the end of 2020, which reduces planning and treatment time. The number of international patients has further decreased to 6.5% due to ongoing travel restrictions and the international teaching courses, otherwise regularly organised in our Department, could not be renewed even in 2021.

Perspectives for the next year

In 2022, we plan to replace the old mobile X-ray in the operating room and expand the range of stereotactic operations, especially in the field of pain management. We will start to prepare the renewal of the Co-60 radiation sources, which should take place in 2023. In the autumn of 2022, the Gamma Knife will celebrate 30 years during which 24,000 radiosurgical operations have been performed.
As of 01/01/2022, a certified neurosurgeon will take up the previously vacant systemised position.

Educational and other specialized activities

- In 2021, 6 trainees completed their postgraduate certificate internship in neurosurgery at our Department.
- During 2021, the gamma knife was visited by 43 registered visitors in the controlled area.
- Within institutional support, we are carrying out 2 grant projects and one project supported by the AZV agency.
- Publications: 27 articles in impact journals.

CARDIOVASCULAR PROGRAM

Department of Cardiology

Head of Department: Prof. Petr Neužil, MD, CSc., FESC

The clinical activities of the Department cover a wide range of preventive, diagnostic and therapeutic care provided to patients with diseases of the heart and blood vessels or who have an increased risk of these diseases. As in previous years, the Department continued to cover all individual specialised areas in 2021.

Multifunctional Catheterisation Unit

Despite the ongoing coronavirus epidemic, the programme of catheter ablation and implantable electronic devices (CIEDs) was not only fully maintained but also further developed in 2021.
A total of 1,475 ablations were performed, i.e. a slight increase compared to 2020. Currently, so-called comprehensive interventions (ablations for atrial fibrillation, atrial and ventricular tachycardias) account for approximately 85% of all ablations. In most cases of complex ablations, it is an ablation for atrial fibrillation. In 2021, a total of 1,088 procedures were performed for this diagnosis (of which 50% ablations for the paroxysmal form and 50% for persistent or long-term persistent forms of atrial fibrillation). Following previous clinical research, we were the second institution in the world and the first in the Czech Republic to use a newly approved treatment device for pulmonary vein isolation in Europe – the so-called Farapulse system (Boston Sc.). It is a method designed to ablate atrial fibrillation using a pulsed field, called electroporation. The principle of electroporation is in the application of ultra-short pulses of high voltage electric field, which leads to tissue destruction. However, unlike other ablation energies, the pulsed field affects only cardiomyocytes – it is selective in its effectiveness and therefore does not "destroy" the surrounding tissue (connective tissue, nerves, vascular wall, etc.). This increases the safety of the procedure. At the same time, this method has demonstrated higher acute and long-term ablation success rates in clinical studies. In 2021, more than 300 patients with atrial fibrillation were treated with the Farapulse method at our Department.
There were 98 catheter ablations for ventricular tachycardias performed, of which 60% were ablation of idiopathic ventricular tachycardia, 40% were ablation in structural heart disease (IHD, DCM, ARVC). There is a growth in the number of so-called cardioneuroablations, the indications of which are cardioinhibitory syncopes, which in the recent past have been addressed primarily by a permanent cardiac pacemaker.

We perform all complex procedures with the use of the state-of-the-art electroanatomical 3D navigation systems, the use of which significantly increases the efficiency and safety of catheter ablations while significantly decreasing radiation exposure.

As part of clinical research, in 2021 we participated in the development and verification of the effectiveness and efficiency of new mapping and ablation technologies, such as:
- pulsed electric field ablation of pulmonary veins,
- innovative 3D imaging system with the ability to ablate with short, high-energy applications,
- a mapping system to identify potential sources – electrographic flow map, etc.

In terms of the number of implanted pacemakers and defibrillators (ICD – implantable cardioverter defibrillator), the Department has long been among the largest centres in the Czech Republic and Europe. The Department specialises in defibrillator implantations (416 procedures) and cardiac resynchronisation therapy (200 procedures). A clear trend in cardiac pacing and device treatment of heart failure is the so-called physiological stimulation from the septal area (left bundle of Tawara (LBBAP) or bundle of His). The acute haemodynamic effect of physiological stimulation can be verified invasively by evaluating the pressure/volume curve. We continue to implant subcutaneous ICDs, of which a total of 50 were implanted in 2021. Implants are also associated with procedures where the pacing or defibrillation electrodes need to be extracted. The total number of these procedures in 2021 was 61 with the rate of success reaching 99%. Since 2012, the Department has been the world-wide recognised development centre for implantation

of leadless pacemakers. In 2021, implantation of the new leadless pacemaker Aveir VR (Leadless II IDE clinical trial) continued. In 2021, the total number of implanted leadless pacemakers was 39.
Our electrophysiological laboratory closely cooperates with a syncope and neurology outpatient unit in diagnosing cardiac arrhythmias, non-clarified disorders of consciousness or cryptogenic cerebral strokes. In 2021, a total of 121 patients were implanted with a subcutaneous heart rhythm monitor for these indications.
We have long been dealing with non-pharmacological prevention of embolic stroke, one of the options is the catheter management of left atrial appendage closure. In 2021, a total of 54 of these procedures were performed. The clinical trial with implantable carotid filters is also ongoing.
The project of the experimental laboratory at the Institute of Physiology of the 1st Medical Faculty of Charles University continues to function and develop. Experiments with different types of cardiac support, new ablation technologies and treatment devices have been performed.

Intervention cardiology

A total of 3,010 catheterisations were performed, of which 2,650 were diagnostic coronary angiography, a slight increase of 20% compared to 2020. 665 percutaneous coronary interventions (PCI) were performed, which represents a decrease of 11%, on the contrary, we performed 226 primary PCIs (i.e. PCI for myocardial infarction with ST-elevations), which was 14 procedures more than in 2020. The program of structural cardiac interventions continued, including patent foramen ovale closures, defect of the atrial septum, pulmonary vein stenoses and closures of paravalvular leaks; certain unique combined catheterisations for structural cardiac defects were performed. The total number of catheter closures of the atrial septal defect was 63, this number ranks us first in the Czech Republic
The transcatheter aortic valve implantation (TAVI) program also continues, in 2019, a total number of 95 procedures were performed (it was 34 procedures in 2017, 72 procedures in 2018, 74 in 2019 and 79 in 2020). Compared to 2019, we managed to perform significantly more transcatheter mitral valve interventions for mitral valve insufficiency using the Mitraclip clamp, a total of 26 patients were intervened (in 2019 there were 6 patients, in 2020 there were 16) – the program of structural interventions for valvular heart disease is thus being successfully developed.
This program is highly complex with regard to both the scope of diagnostic preoperative examinations, interventions and post-operative care and the demanding multidisciplinary cooperation. TAVI is successfully performed in analgosedation in a large proportion of patients, allowing for earlier physiotherapy and mobilisation and subsequent discharge of these patients.
After the first transcatheter pulmonary valve implantation was newly performed in 2015 in a patient with a complex congenital heart defect, we performed this procedure in 4 more patients in 2021. This has led to further development of the program for these interventions which will be an integral part of care for patients with complex congenital heart defects who have been systematically treated on a long-term basis in our Cardiac Centre.
The development of percutaneous coronary interventions with different types of circulatory support continued and in cooperation with the angiology outpatient unit of our Department, routinely performs diagnostic examinations and interventions on peripheral arteries.
As part of the internal grant, we continued coronary interventions using the shockwave system. It is an intracoronary lithotripsy, which is a new and very effective method in patients with markedly calcified coronary arteries. The Centre was traditionally involved in the preparation of recommended procedures of the Czech Society of Cardiology and numerous professional programs and presentations at professional conferences and meetings in the Czech Republic.

Acute Cardiology

Also in 2021, the Acute Cardiology Department provided acute and intensive cardiac care to patients with severe cardiovascular disease and patients requiring circulatory support or organ support/replacement. A total of 579 patients were admitted to the Coronary Unit, 782 electrical cardioversions were performed, 22 patients were treated with extracorporeal membrane oxygenation (ECMO), 9 patients had cardiac support with the Im-

pella CP/5.0 system, and 61 right-sided catheterisations/monitorings were performed using a pulmonary artery catheter. In 2021, a significant trend towards hospitalisation of patients in more severe condition with worse prognosis could be observed, as evidenced by a clear rise in hospital mortality to 10.2% and an increase in the average hospitalisation time to 4.3 days. Hospitalisations of the most severe patients with Covid-19 and pulmonary failure requiring ECMO support clearly account for a large proportion of these changes; here, in-hospital mortality reached 50%, which is consistent with the dismal data from international registries. After 207 days of ECMO support at our Department for Covid pneumopathy, one patient had a successful lung transplantation (in Motol University Hospital) with subsequent rehabilitation back at our Department (probably the longest successful ECMO support for Covid-19 worldwide). Thus, throughout 2021, 1-2 beds of the Coronary unit were permanently occupied by non-cardiac patients with lung disease requiring ECMO treatment.
Scientific research activities with grant support (AZV, NHH) were also successfully carried out, including the multicentre study ECMO-CS (extracorporeal membrane oxygenation in patients with cardiogenic shock). In addition to several journal communications, we have also published a monograph Haemodynamic Monitoring in the Intensive Care Unit, which was co-authored by all certified physicians in the Coronary Unit.

Non-invasive cardiology

In 2021, the number of procedures and examinations in non-invasive cardiology at Cardiology and Angiology Outpatient Units increased despite the ongoing epidemic of Covid-19. There was a planned relocation of the Cardiology and Angiology Outpatient Units and the Ergometry, tilt test and Holter ECG monitoring rooms to the first floor. Preparations for the creation of a Centre for Valvular Heart Disease within the Comprehensive Cardiovascular Centre are continuing. In 2022, we are planning preparations for the creation of a multi-purpose short stay ward in order to increase the number of some cardiology procedures in the outpatient mode.

Multifunctional Catheterisation Unit

Ablations – total	1,475
Ablations according to arrhythmias:	
Atrial fibrillation	1,088
paroxysmal	629
persisting	398
long-term persisting	52
re-ablations	278
Atrial flutter	40
Atrial tachycardias	67
Non-selective RFA of AV node	26
Atrioventricular nodal reentry of tachycardia (AVNRT)	100
Wolff-Parkinson-White syndrome (WPW syndrome)	41
Ventricular tachycardia	98
structural	33
non-structural	65
ICD (implantable cardioverter defibrillators) – total	416
ICD: primary implantation	249
ICD: exchanges	167
CRTD (BIV/LBBAP)	200(115/85)
VVI ICD	41
DDD ICD	125
Subcutaneous ICD	50

Pacemakers – total	730
Pacemakers: primary implantation	534
Pacemakers: replacements	157
Leadless pacemakers	39
Extraction procedures – total	61
Subcutaneous recorder implantation	121
Catheter management of left atrial appendage occlusion	54
Renal denervation	2

Intervention cardiology

Diagnostic catheterisation	2,650
Percutaneous coronary intervention (PCI)	665
Primary PCI (in acute myocardial infarction)	226
Catheter Management Of Atrial Septal Defect (ASD) / patent foramen ovale – PFO	63
Transcatheter aortic valve implantation (TAVI)	97
Percutaneous pulmonary valve implantation (PPVI)	4
Transcatheter mitral valve intervention (MitraClip)	26

Non-invasive cardiology

General and angiology outpatient unit	16,560
Stimulation outpatient unit	7,602
Transthoracic echocardiography	8,947
Oesophageal echocardiography	997
Outpatient monitoring: Holter ECG + Loop monitor + Omron ECG + BP monitor + ECG card	1,796
ECG stress test (ergometry)	173
Tilt test	33
Outpatient electric cardioversion – total	910

Coronary Unit

Acute coronary syndrome	308
Extracorporeal membrane oxygenation (ECMO)	22
Total mortality	10.19%

Operational data

Total number of beds	52
Number of standard beds	30
Number of intermediate beds	4
Number of intensive beds	18
Number of physicians	42
Number of general nursing staff	127
Number of outpatient examinations	48,654
Number of admissions	5,057
Average treatment period (in days)	2.63

Department of Vascular Surgery

Head of Department: Prof. Petr Štádler, MD, Ph.D.

Activities of the Department

- Comprehensive surgical treatment of diseases of the vascular system, primarily the narrowing or occlusion of blood vessels caused by atherosclerotic changes or dilation (aneurysms) and also injuries of the arteriovenous system except for the coronary arteries, the ascending aorta and aortic arch. Focus on classical surgery in the region of the thoracoabdominal aorta and on new trends and techniques in vascular surgery (minimally invasive approaches, endovascular treatment, robot-assisted surgery, and laparoscopic surgery)
- Since the beginning of 2009, the Department has also been performing minimally invasive operations on varicose veins using a radiofrequency method that reduces post-operative pain and facilitates early return to daily routine activities
- Referential clinic for surgical treatment of the thoracoabdominal aorta, robot-assisted and laparoscopic vascular surgeries, international training centre in the area of robot-assisted vascular surgery
- Outpatient care and follow-up of patients undergoing vascular surgery and patients indicated for conservative treatment
- teaching workplace of the 1st and 2nd Faculty of Medicine, Charles University in Prague

Organizational units of the Department

Outpatient units	6 examination rooms
Reception	1
Standard bed station (B)	17 beds
Standard bed septic station (A)	17 beds
Intermediate care unit	13 beds
Intensive care unit (6th floor)	5 beds
Intensive care unit (2nd floor)	7 beds

There are 2 operating rooms available daily, and in addition, a hybrid multidisciplinary operating room and a robot-assisted operating room are available once a week. An X-ray operating room is also used in cooperation with radiologists for some acute procedures. The Department provides continuous operation for urgent vascular surgery procedures and above-regional service for difficult aorta surgeries.

Operational data

Number of physicians	18
Number of nursing staff	107
Number of auxiliary medical staff	24
Number of paramedic staff – attendants	1
Number of technical and administrative staff	6
Number of standard beds	34
Number of intermediate beds	13
Number of ICU beds	12
Number of admissions	1,942

Number of admitted patients	1,515
Bed occupancy rate (in %)	69%
Average treatment period (in days)	8.6
Number of treatment days	14,991
Mortality (in %)	1.9%
Number of outpatient examinations / number of examined patients	19,303 / 7,912

Number of interventions

Total number of surgical procedures	1,473
Thoracic aneurysm – classical	26
Thoracic aneurysm – stent graft	32
Abdominal aneurysm – classical	81
Abdominal aneurysm – stent graft	40
Aneurysm of popliteal artery	19
Aortofemoral reconstructions	58
Pelvic reconstructions	9
Extra-anatomic reconstructions	32
Management of vascular prosthesis infections	18
Aortic arch branch surgeries – total	115
of which: carotids – endarterectomy	107
glomus tumour	0
carotid aneurysm	0
bypass or implantation of carotid/subclavian	4
bypass from ascending aorta (sternotomy)	5
Femoropopliteal proximal reconstructions	55
Reconstructions of arteries in the groin area	70
Crural reconstructions – total	134
Varicose vein surgeries	323
of which: classical	278
radiofrequency	45
AV shunts	11
TOS	1
Transplantation of vascular allografts	2
Xenografts	16
Hybrid surgeries	38
Robot-assisted vascular surgeries	40
Laparoscopic surgeries:	6
Thoracoscopic thoracic sympathectomy	9
Lumbar sympathectomy by laparoscopic method	0
Endoscopic sampling of vena saphena magna	0
Vascular Interventions in collaboration with the Department of Radiodiagnostics	682
Rec. inferior vena cava, malignancy	1

The course of 2021

- Since January 2008, the Department of Vascular Surgery has been managed by Head of Department, Prof. MUDr. Štádler, MD, Ph.D., who is also a member of the external educational staff of the 1st School of Medicine, Charles University, with which the Department actively cooperates. Since 2015, the Department has participated in the training of students from the 2nd School of Medicine, Charles University, managed by Petr Šedivý, MD, Ph.D.
- In 2021, the surgery rate was affected by the unfavourable pandemic situation due to Covid-19 and there was a partial reduction in the number of surgeries by 10% compared to 2020 and by 25% compared to 2019.
- Comprehensive diagnostics and surgical treatment of diseases of the vascular system are routinely performed, primarily the narrowing or occlusion of blood vessels caused by atherosclerotic changes, and also of injuries to the arteriovenous system except for the coronary arteries, the ascending aorta and aortic arch that are traditionally the responsibility of cardiac surgery. The range of surgical interventions included operations on branches of the aortic arch, thoracic and abdominal aorta, including aneurysms (the Department of Vascular Surgery has the highest number of aortic operations in the Czech Republic), reconstruction of arteries supplying abdominal and retroperitoneal organs, operations on arteries supplying the limbs, as well as varicose veins, and a relatively unique transplantation of vascular grafts to deal with the infection of vascular prostheses. One of the largest groups of patients includes those with ischaemic disease of the lower limbs and with narrowing of the arteries supplying blood to the brain. Minimally invasive approaches are used in thoracoscopic thoracic sympathectomy or laparoscopic lumbar sympathectomy procedures, endoscopic operations of varicose veins, endoscopic sampling of veins for vascular reconstructions and operations of the abdominal aorta through reduced surgical approaches, the so-called mini-laparotomies, and in particular robot-assisted and laparoscopic vascular surgery (these procedures have been newly covered by public health insurance since 2018).
- The Department of Vascular Surgery continues to retain its unique position of a world leader in robot-assisted vascular surgery and a national leader in thoracoabdominal aortic surgery. Cooperation continued with the National Institute for Cardiovascular Diseases in Bratislava in the area of the thoracoabdominal aorta. Unfortunately, due to the unfavourable epidemiological situation, the international training in robot-assisted vascular surgery did not take place this year either.
- Another important area vascular surgery deals with is endovascular program. It especially focuses on implanting stent grafts for treating abdominal or thoracic aortic aneurysms. Implantation of stent grafts, perioperative angiography and intraoperative angioplasty are routinely carried out in collaboration with the Department of Radiodiagnostics at Na Homolce Hospital. The created team of vascular surgeons and radiologists (P. Šedivý, MD, Ph.D., K. El Samman, MD, H. Přindišová, MD, A. Šnajdrová, MD), who are actively involved in endovascular procedures, continues successfully. Both vascular surgeons who are members of the endovascular team have the required specialisation certification. We plan to train another vascular surgeon and a radiologist.
- The Department also performs complicated interventions to treat infections of vascular prostheses using vascular allografts, femoral veins or xenografts that have already been certified "CE" (a bovine pericardial prosthesis or patches). Together with the Institute of Clinical and Experimental Medicine, the General Teaching Hospital in Prague and the Tissue Bank of the General Teaching Hospital in Hradec Králové, the NHH Department of Vascular Surgery participates in the program of vascular graft cryopreservation. A number of centres in the Czech Republic take advantage of the Department of Vascular Surgery as a consultancy centre for the treatment of a range of serious vascular problems.
- Since 2016 our Department has had a hybrid multidisciplinary operating room available at least 1.5 times per week, where robot-assisted surgeries, implantations of stent grafts and hybrid procedures are carried out.
- International congresses where we regularly presented our results and experience were released only slowly. In 2021, the annual congress of the Czech Society for Cardiovascular Surgery was held in Brno, where we presented our experience in various areas of vascular surgery in a series of lectures. In September 2021, a report on aortic surgery at our Department was broadcast on TV NOVA.

- Prof. Štádler and colleagues, in collaboration with the University of Michigan in the USA, published a paper on robotic and laparoscopic vascular surgery.
- There were no major changes in personnel.

Outlook for 2022

- The year 2022 will hopefully be less affected by the Covid-19 pandemic, which has affected the number of planned procedures in the last 2 years.
- Even in 2022, the Department of Vascular Surgery will carry out comprehensive diagnostics and surgical treatment of diseases of the arteries and veins in the entire range, focusing on new, modern trends. We plan to cooperate with the Department of Cardiac Surgery in addressing vascular conditions falling into both these specialisations. Thoracoabdominal aortic surgeries will be further developed. Minimally invasive approaches in operations with a focus on robot-assisted and endovascular surgery will be further developed. Since January 2018, robot-assisted vascular surgeries have been on the official list of procedures and thus it is not necessary to ask for approval for every surgery of this type at the relevant Health Insurance Company.
- We will continue to perform minimally invasive surgery using a 3D laparoscopic tower, in agreement with the Head of the Radiology Department, Prof. Vymazal, the successful cooperation of both departments in the endovascular program will continue. In addition, the Department of Vascular Surgery will continue to deal with infections of vascular prostheses, the incidence of which grows nationwide. These procedures are technically and economically very demanding and it is necessary to resume negotiations with insurance companies on the reimbursement of these demanding procedures. The focus of the Department on the latest trends in the field of minimally invasive approaches in arteriovenous surgery is also of great importance.
- In 2022, the possibility of international training activities in robotic vascular surgery as well as the training of physicians in laparoscopic vascular surgery in the Aeskulap Academy project will hopefully open up again.
- We are also planning to resume presentations at congresses at home and abroad.

Educational and other specialized activities

- The Department is also involved in undergraduate training of students of the School of Medicine and postgraduate studies of physicians to obtain a postgraduate certificate in vascular surgery, as well as of physicians whose specialisation requires a study visit to in the Department of Vascular Surgery.
- Prof. Štádler is an external teacher and a member of the Board for Postgraduate Certificate in Vascular Surgery at the 1st Faculty of Medicine, Charles University in Prague. He also works as a lecturer in robot-assisted vascular surgery at the European Institute of Telesurgery in Strasbourg and as a lecturer in Intuitive Surgical in the U.S.A. Prof. Štádler also holds the post of the president of subcommittee for robot-assisted vascular surgery MIRA in Los Angeles, U.S.A., is deputy president of a committee of the Czech Society for Cardiovascular Surgery and a member of the accreditation committee of the Czech ans Slovak Ministry of Health for the specialty of vascular surgery. He is also the founding member of the International Endovascular & Laparoscopic Society, a member of ISMICS (International Society for Minimally Invasive Cardiothoracic Surgery) and a reviewer of the journal Surgical Laparoscopy Endoscopy & Percutaneous Techniques.
- MUDr. Šedivý, MD, Ph.D., participates in the teaching of medical students of the 2nd School of Medicine, Charles University in Prague.
- MUDr. El Samman, MD, continues his doctoral studies at the 2nd School of Medicine, Charles University in Prague.
- MUDr. Stehno, MD, continues his doctoral studies at the 2nd School of Medicine, Charles University in Prague.
- The Department is also involved in undergraduate training of students of the 2nd year of the 3rd School of Medicine, Charles University in Prague, in the "general nurse" specialisation.
- Training in robot-assisted surgery, vascular surgery and radiofrequency surgery of varicose veins for both domestic and foreign physicians will take place in direct dependence on the epidemiological situation.

Department of Cardiac Surgery

Head of Department: Ivo Skalský, MD, Ph.D., MBA

Activities of the Department

- Comprehensive surgical treatment of heart and intrathoracic major blood vessels
- Follow-up of selected groups of patients in outpatient unit before and after cardiac surgery

Organizational units of the Department

Outpatient unit	4 examination rooms
Standard bed station	14 beds
Intermediate care unit	10 beds
Unit of post-operative and reanimation care	10 beds

2 classic cardiac surgery operating rooms are available for 5 working days a week. Moreover, surgeries are performed in the hybrid and robot-assisted operating rooms, one day a week at each. One operating room is open 24/7 for urgent procedures.

Operational data

Number of physicians	19
Number of perfusionists	7
Number of nursing staff	95
Number of auxiliary medical staff	22
Number of technical and administrative staff	2
Number of standard beds	14
Number of intermediate beds	10
Number of reanimation beds	10
Total number of beds	34
Number of admitted patients	619
Average treatment period (in days)	11.97
Total number of treatment days	8,755

Number of Procedures and Mortality

Total number of surgical procedures	628
Isolated aortocoronary reconstructions	152
Combined procedures (valve, bypass, aorta)	252
Heart valve replacements / plastic surgeries	193
Isolated procedures on ascending aorta and aortic arch	31
Other (myxoma, pericardiectomy, PM extraction)	27
Implantation of epicardial stimulation electrodes	1
MAZE surgery (combination with ACB and valve procedures)	94
Operations on the thoracic aorta (combined with other procedures)	112
Robot-assisted interventions	60
Acute and emergency interventions	278
Planned interventions	350
30-day Total Mortality (%)	1.27%
30-day mortality in acute interventions (%)	0.75%
30-day mortality in elective interventions (%)	0.25%
Number of outpatient examinations (visits)	9,560

Changes / new events in the previous year

- In 2021, the global pandemic Covid-19 continued with its another wave, which also affected our work. We had to continue to adapt to the situation and at the beginning of the year we had to significantly reduce the entire operation of our Department again. We were faced with limited bed capacity, repeated lack of staff (either due to Covid-19 infection or repeated forced quarantines), and last but not least, compliance with hygiene and epidemiological measures. From the middle of the year, the situation gradually returned to normal with a gradual increase in our operations and care.
- As in other hospitals or departments, we are constrained by a lack of paramedical staff. We are trying to deal with this problem. Restrictions on the number of operations due to lack of beds are still quite exceptional. This is due to the high level of care, both surgical and post-operative, and the dedication of the entire team that runs the Department. A big thank you to all of them for their dedication.
- A major event was the transition to the new hospital information system HOOD in the outpatient operation and the preparation for the transition of the entire Department to this new and progressive hospital information system.
- A total of 628 cardiac surgery procedures were performed in 2021. Despite the adversity, we were able to respond flexibly to the need for emergent, acute and semi-acute procedures.
- There has been an expansion of outpatient units to meet the needs of our Department. The aim of this step is to improve and accelerate preoperative diagnostics and improve post-operative follow-up. The aim of this project is to create a comprehensive Valve Centre together with the Cardiology Department.
- We continue to develop robot-assisted surgery, which has become a common part of the range of the cardiac surgery performed at our Department. A total of 60 procedures were performed. Mitral valve repairs and myocardial revascularisation account for the largest share.
- The trend in recent years has been an increasing proportion of valve procedures, which accounted for over 60% of all operations. They include both isolated procedures on a single valve, and combined with other valves or other interventions. A high proportion of preservation surgeries contin-

ues to be our priority. In indicated patients, this proportion exceeds 90%. Thanks to these results, we have repeatedly ranked as the leading cardiac surgery centre in the Czech Republic. In this regard, we can emphasise that approximately 90% of isolated procedures on mitral valve were performed using a minimally invasive approach.

- More than 70% of combined procedures are indicative of the complexity of the surgical procedures.
- The total annual mortality of 1.27% is considerably lower compared to the predicted mortality calculated according to Euroscore, an international scoring system, which achieved a value of 6.43% in the previous year. Acute procedures accounted for 3/4 of this overall mortality.
- Of the spectrum of interventions performed last year, the surgeries of congenital heart defects should be mentioned again, as they represented approximately 5% of all procedures. This specific programme with excellent results is systematically developed by the Centre for Congenital Heart Defects in Adulthood.
- The Department is regularly involved in clinical studies in collaboration with international institutions and our Department of Cardiology. The promising results mean a great perspective, especially for our patients.
- We continue in cooperation with workplaces for whose patients we offer a top cardiac surgery background both for elective and acute interventions. In particular, they include hospitals in Liberec, Karlovy Vary, Příbram, Kladno, Benešov, Hořovice.
- We continue to develop interdisciplinary cooperation within the NHH, especially with the Department of Cardiology and Vascular Surgery.

Perspectives for development in the next year

- Efforts will be made to increase the number of operations to pre-pandemic Covid-19 levels.
- The range of procedures will be similar to the previous year.
- We want to continue to develop our core programmes. These include a programme for the treatment of aortic disease (in collaboration with Vascular Surgery and Radiology), a programme for the surgical treatment of valvular heart diseases with the development of an outpatient Valve Centre, a programme for the treatment of congenital heart disease in adulthood and a programme for minimally invasive and robotic surgery.
- In the field of minimally invasive heart surgery we want to be a progressive workplace in the Czech Republic and in the field of robotic surgery we want to be one of the leading workplaces in Europe.

Department of Cardiac Anaesthesiology

Head of Department: Pavel Jehlička, MD, MBA

Activities of the Department

The Department covers two basic areas, namely anaesthesia care for cardiac surgery and cardiology and intensive care for the cardiac surgery post-operative unit.

Anaesthesia care

We provide anaesthesia care for patients undergoing either cardiac surgery, with or without extracorporeal circulation, or cardiac robot-assisted surgery with a minimally invasive approach. For cardiology patients, the Department ensures anaesthesia for complicated heart mapping in arrhythmology, anaesthesia for the extraction of pacemaking systems, anaesthesia for the ablation of renal arteries in patients with high blood pressure and for electrical cardioversions.

Intensive care

In the field of intensive care, the Department is responsible for running the cardiac surgery post-operative unit and also closely cooperates with the cardiac surgery intermediate care unit. Within our Cardiac Centre, it supports other units of intensive cardiology care by providing consultations. Together with the Department of Cardiology and the Department of Biomedical Engineering, we participate in the program of extracorporeal support of circulation for patients in cardiogenic shock.
In 2004, the physicians of the Department of Cardiac Anaesthesiology were the first to introduce extracorporeal pulmonary support (the Novalung artificial lung) in the Czech Republic in a patient with a severe pulmonary failure that could not be managed by standard methods. As the only facility in the Czech Republic, the Department ensures anaesthesia in robot-assisted cardiac surgeries and anaesthesia for operations on adult patients with congenital heart defects.

Operational data

Number of physicians:	10
Number of nursing staff:	9

Administered anaesthesia for:

cardiac surgeries	727
cardiology procedures	829
procedures longer than 2 h	562
procedures longer than 6 h	158

PROGRAM OF GENERAL MEDICAL CARE

Department of Internal Medicine

Head of Department: Viera Křížová, MD

Activities of the Department

The Department of Internal Medicine provides back-up for the activities of the key disciplines of the hospital (Cardiovascular Program and Neuroprogram), to the inpatient unit and to the Polyclinics, Department of Gastroenterology and Centre for Pulmonary Endoscopy. The majority of hospitalised patients are diagnostic admissions from all disciplines of the internal medicine, i.e. gastrointestinal, respiratory, cardiac, diabetic and infectious and autoimmune diseases.
In a number of cases, the Department also treats patients from other regions. The Department provides specific care for patients with short bowel syndrome and ensures their long-term parental nutrition, which includes treatment of any related complications. Specific interventions are performed under ultrasound guidance (central catheter introduction, diagnostic/evacuation puncture, etc.).
In the past year, the operation of the whole Department of Internal Medicine was affected by the pandemic of Covid-19. The ratio of acute and planned diagnostic or therapeutic interventions changed.

Intensive Care Unit

The total capacity of the Unit is eight beds. On these beds, we provide comprehensive intensive care for often polymorbid patients with primarily internal issues. Due to the lack of beds at the Department of Oncology, we often provide the beds for the patients with complications of the oncology therapy and, last but not least, we also take over patients from surgical fields of Na Homolce Hospital – especially when the patient's surgical issues are solved while the need for the complex nutritional and internal therapy continues. Two beds of the ICU of the Department of Internal Medicine are equipped for providing artificial lung ventilation, the cleansing methods are represented by the intermittent haemodialysis which is provided in cooperation with the haemodialysis centre B-Braun, s.r.o. Our ICU also provides the back-up for monitoring and observation of patients after gastroenterological surgical procedures and after surgical procedures performed at the Centre for Pulmonary Endoscopy.

Inpatient unit

The standard inpatient unit provides comprehensive internal medical care both to patients with acute internal diseases referred by the acute internal medicine outpatient unit, and to patients with planned diagnostic and therapeutic treatments. Patients from the internal medicine outpatient units of Na Homolce Hospital, patients with internal issues from other departments of the hospital (including treated oncology and chronic haemodialysis patients with complications), and patients indicated for observation after invasive procedures (gastroenterology, Centre for Pulmonary Endoscopy, interventional radiology) are admitted to treatment. Treated oncology patients with complications are admitted because the Department of Oncology has no beds at its disposal. We also provide inpatient care to patients of the Homolka Premium Care Program, H Plus Program and relatives of hospital staff.
In general, the Department provides care to a large number of patients from other regions, which is particularly noticeable in the pressure on the acute internal medicine outpatient unit, which is regularly addressed by patients themselves from districts outside Prague. Although the bed occupancy rate percentage is one of the highest in the entire hospital, the inpatient capacity cannot meet the demand. However, the stable average length of hospitalisation is mostly the result of long-term parenteral administration of antibiotic treatment and treatment of complicated conditions and therefore cannot be further influenced.

Internal medicine outpatient unit

Physicians of individual specialisations work in specialised inpatient units, closely cooperating and well substitutable both in the outpatient and inpatient units. In addition to the traditional general internal medicine outpatient unit, care is provided in pulmonary, gastroenterological and metabolic outpatient units (for parenteral and enteral nutrition, diabetes, endocrinology and lipid counselling).

Acute internal medicine outpatient unit

In particular, the Department provides treatment and examinations to patients with acute non-surgical issues who have no special referral for a particular specialised examination. Other activities include outpatient infusion therapy and planned diagnostic and therapeutic interventions offered to cover the needs of the Department of Internal Medicine.
The Acute Internal Medicine Outpatient Unit is still the busiest outpatient unit in the department, but this year the operation was significantly affected by the epidemiological situation and the number of treated patients dropped to 4,026 treatments per year (i.e. about 330-350 per month).
An increase in the number of treated patients can also be expected in the future due to the fact that the outpatient unit partially supplements the lack of an emergency department and that care accessibility in other facilities has been deteriorating. Should the number of patients further increase, it will be necessary to increase the staff of the outpatient unit and extend its areas.

Gastroenterology unit

The Gastroenterology Unit is the showcase of the Department of Internal Medicine. It provides excellent gastroenterology care using a wide range of endoscopic methods. It performs common endoscopy of the upper and lower gastrointestinal tracts, as well as a highly specialised ERCP examination of the bile ducts. It has achieved excellent results in the use of endosonographic techniques, including unique interventions for which patients from the entire country are referred to the Department.
As part of a long-term plan to expand and improve the spatial layout of the Gastroenterology Department, a major building reconstruction took place here at the end of the year. This reconstruction meets the hygienic, technical and spatial requirements of contemporary endoscopy.

Centre for Pulmonary Endoscopy

The Centre for Pulmonary Endoscopy and related specialised pulmonary outpatient unit offer comprehensive bronchological diagnostics including autofluorescent bronchoscopy, NBI (Narrow Band Imaging) and endobronchial ultrasonography. The combination of new diagnostic methods with the existing methods, such as PET-CT, provides for an exceptional opportunity for early diagnostics and staging of bronchogenic carcinoma followed by pneumo-oncological treatment. The capacity and the use of bronchologic care has been steadily growing, inter alia due to active cooperation with the Centre for Interstitial Pulmonary Processes, other field pneumologists and other hospitals.

Educational activities

The Department of Internal Medicine is accredited by the Czech Medical Chamber to train and issue functional licenses in internal medicine, gastroenterology, general medicine, abdominal ultrasonography (F008) and endoscopic ultrasonography (F004), endocrinology and diabetology, pneumology and ftiseology. Postgraduate and pre-certification study visits of younger colleagues from other disciplines of Na Homolce Hospital are annually held in the Department. For a long time, the Department

has organised postgraduate courses for physicians preparing for general medicine postgraduate examinations, in cooperation with the Institute of Postgraduate Healthcare Education. To a lesser extent, pre-graduate students of the 1st, 2nd and 3rd Schools of Medicine, Charles University, come within compulsory practice.

Operational data

Number of physicians27 main employment + 6 agreement to complete work + 1 contract for work	
Number of nursing staff	51
Number of members of paramedical staff	10
Number of standard beds	21
Number of intensive beds	8

Total inpatient unit performance 2021/ comparison with 2020

Average treatment period for the entire Department	8.9 / 9.96
Total number of treatment days	8,170 / 8,053
Admissions	1,414 / 1,028

Department of Clinical Oncology

Head Physician: Martin Šafanda, MD, Ph.D.

Responsibilities of the department

The Department of Clinical Oncology is an accredited department of the Ministry of Health of the Czech Republic, which focuses on the treatment of solid tumours in adult patients. We are part of the Motol University Hospital complex oncology centre together with the Military University Hospital Prague and the Proton Centre in Prague. Another collaborating institution is the Transplantation Surgery Department at IKEM. Symptomatic treatment of terminal stages is conducted in cooperation with the Na Pleši Hospital. Since 2009, the Department has been involved in multicentre randomised studies of phase II and III.

Activities of the Department

The oncology program consists of four key areas:

I. Gastroenterology program

- Tumours of small and large intestine
- Stomach and oesophageal tumours
- Pancreatic tumours
- Liver and bile duct tumours

II. Breast cancer program

- Breast tumours

III. Urogynaecological program

- Prostate tumours
- Renal tumours
- Urinary bladder tumours
- Ovarian tumours

IV. Pneumo-oncology program

- Pulmonary and bronchial tumours

Operational data

Number of physicians	3
Number of general nurses	5
Number of newly admitted patients	630
Number of outpatient treatments	17,528
Number of chemotherapy administered	8,766

Department of General Surgery

Head of Department: Ronald Pospíšil, MD

Activities of the Department

The Department provides a clinical programme of general medical care, i.e. diagnostic and therapeutic care both outpatient and inpatient, including intensive care, comprehensively in the entire field of general surgery and urology and some specialised orthopaedic examinations and procedures. The Department of General Surgery treats patients from all over the country, foreign patients and clients of the Homolka Premium Care and H plus preventive programs. It provides a continuous consulting service for other hospital disciplines, including 24/7 emergency visceral operations. It provides training activities in undergraduate and postgraduate programmes for physicians and nurses in the field of surgery and urology.

General Surgery Programme

- Surgery of the gastrointestinal tract ranging from the oesophagus to the rectum, including the pancreas and biliary tract, thoracic surgery, thyroid and parathyroid surgery, hernia surgery, varix surgery, breast surgery for benign and malignant affections. In indicated cases, we prefer minimally invasive approaches in virtually all fields of laparoscopic interventions (from hernia surgery, appendectomy, cholecystectomy, diaphragmatic hernia surgery to laparoscopic surgery of the small and large intestine, rectum, pancreas, spleen and minimally invasive thoracic surgery).
- Surgical oncology in collaboration with other departments of the hospital. Each patient with an oncological diagnosis is indicated for surgery by a multidisciplinary workshop in the presence of experts from all cooperating departments within the Centre for Comprehensive Oncological Care. In the field of surgical oncology, the Department of General Surgery provides surgical treatment of the gastrointestinal tract encompassing the oesophagus – rectum, pancreas, biliary tree, spleen. As part of thoracic surgery, then operations on the lungs, mediastinum, pleura, thoracic wall and breast in its entirety, including examination of the sentinel node Of course, follow-up oncological care within the hospital is also a matter of course.
- Extensive outpatient surgical activities of the on-duty and specialist clinics,
- the area of small outpatient procedures Robotic procedures of the rectum and colon

Urology program

- Open, endoscopic and robotic urinary tract surgery, including prostate laser surgery Urological surgical oncology
- Renal surgery for malignant, benign and functional pathologies.
- Minimally invasive laparoscopic, cystoscopic and ureterorenoscopic surgical methods
- Ultrasound-guided puncture procedures for retroperitoneal diseases
- Comprehensive diagnostics and treatment of erectile dysfunction
- Extensive outpatient urological activity
- Invasive radiological procedures in collaboration with the Radiology Department of the hospital.

Orthopaedics programme

- Broad outpatient orthopaedic activity
- Arthroscopic procedures – especially of the knee and shoulder joint
- Total hip replacements, knee replacements, including reimplantations,
- Modern procedures in hallux surgery and other minimally invasive operations

Organizational parts of the Department

Inpatient Unit

- diagnostic, preoperative and post-operative care in all specialties
- care of patients in intensive and standard beds
- within surgery, urology and orthopaedics offices
- Intensive Care Unit – station A + B

Outpatient Unit

- **Surgical On-duty Outpatient Unit**: It provides daily surgical care for acute patients, including wound dressing changes in patients from other departments of the hospital. It also provides acute 24-hour surgical care.
- **Specialisation Surgical Clinics**: Consulting centre for diseases of the oesophagus and diaphragm, including reflux disease of the oesophagus and diaphragmatic hernias, consulting centre for diseases of the pancreas and biliary trees, coloproctology consulting centre, consulting centre for surgical oncology, hernia consulting centre. The Department performs diagnostics, assessment and ordering of planned operations, post-operative monitoring, follow-up health care.
- **Thoracic Surgical Consulting Clinic**: In cooperation with the Respiratory Consulting Clinic and Oncology Clinic, it provides assessment and ordering of thoracic operations of the lungs, pleura and mediastinum, post-operative monitoring and follow-up continuing care in patients with respiratory and thoracic diseases.
- **Mammology Consulting Clinic**: Provides examinations, comprehensive care, diagnostic services, preoperative evaluation and follow-up care to patients with breast disease, in close cooperation with the Department of Radiology, pathologists and oncologists.
- **Orthopaedic Outpatient Unit**: For diseases of the musculoskeletal system, it provides diagnostics, therapy and indications for surgery in orthopaedic patients in a selected range of diagnoses. Also provides consultancy services to other departments of the hospital.
- **Urology outpatient unit**: Provides care to urological patients, performs diagnostics, including ultrasound and outpatient treatment. The Department also provides preoperative assessment, post-operative monitoring, and comprehensive diagnostics and treatment of erectile dysfunction and a number of outpatient diagnostic and therapeutic procedures (cystoscopy, urethra probing for other departments, etc.).
- **Outpatient unit for minor surgical procedures**: Performs minor outpatient surgical procedures under local anaesthesia at the request of general practitioners and physicians of the hospital's Department of Dermatology, and on patients from the Surgical Consulting Clinics and on-duty surgery.

Operating rooms

- one operating room for orthopaedic surgery and aseptic surgery
- one operating room for open and laparoscopic surgery
- robotic operating room with Da Vinci equipment – available for surgery 4 times a week
- one room for urological surgery

Operational data

Total number of physicians	22
Number of surgeons	15
Number of urologists	4

Number of orthopaedists	3
Total number of non-medical healthcare professionals	75
Total number of beds	34
Number of standard beds	25
Number of intensive care beds	9
Average treatment time (in days)	4.1
Number of treatment days	8,785
Number of patients admitted to hospital	2,062

Number of surgical procedures

Surgery	1,372
Urology	574
Orthopaedics	247
Small outpatient procedures	581
Total	2,774

Number of robotic operations

Surgery	43
Urology	190
Total	233

Number of outpatient treatments

Surgery	15,630
Orthopaedics	7,472
Urology	6,658
Total	29,760

Number of consultative examinations

Surgery	1,229
Orthopaedics	85
Urology	191
Total	1,350

Changes / new events in the previous year

- **Technical equipment**: In the outpatient sector, the new HOOD information system has been fully implemented. The laparoscopic and surgical instruments have been partially replaced. New devices for urological surgery were purchased. A new tower was purchased for minimally invasive procedures in orthopaedics, including an arthroscopic pump. Arrangements have been made to open an additional surgical operating room within the ward tract on the 4th floor to enable it to be opened in early 2022.

- **Surgery**: A multidisciplinary approach has been standardised (surgery, oncology, radiodiagnostics, pathology) in patients with malign alimentary tract and thoracic organs diseases. The volume of operated patients with a malignant diagnosis has significantly increased. The number of laparoscopic interventions has increased compared to the traditional method, particularly in coloproctology and pancreatic surgery. Robot-assisted surgery for distal colon and rectal tumours has been introduced into practice. New approaches have been introduced in addressing incisional hernias and diastasis recti by minimally invasive technique. Wound healing with V. A. C. (Vacuum-Assisted Closure) system in routine practice and with the possibility of applying the system in outpatient mode. Healing of anastomosis defects using the ENDO SPOUCHE method. We routinely performed procedures for anal prolapses and haemorrhoids using the Long method (PPH).
- **Urology**: Endoscopic urethrotomy is used as a routine method, laparoscopic and robot-assisted procedures have been standardised in renal surgeries (pyeloplasty), ureterorenoscopy is used as a routine method. Robot-assisted techniques for prostate surgery are also being improved, and as one of few departments in the Czech Republic, we perform laser surgery for benign prostatic hyperplasia.

Evaluation of clinical activity

- Full functioning of general surgery, urology and orthopaedics with a focus on elective procedures is predominant. The plan is to further expand the range of laparoscopic procedures in abdominal surgery and thoracoscopic procedures in thoracic surgery. We are seeking to contract robotic surgery for lung tumours in patients with the Health Insurance Company. Oesophageal and pancreatic surgery and biliary surgery are routinely performed.
- The Department closely cooperates with the Department of Internal Medicine, Departments of Radiodiagnostics, Pathology and Oncology in the care of oncological patients in regular joint workshops.
- We cooperate very closely with other surgical disciplines of the hospital in dealing with complicated patients – vascular surgery, neurosurgery, cardiac surgery, gynaecology. Operating rooms are used for surgical treatment of the most severe surgical conditions (including acute interventions).
- The Department was actively involved in the development of recommended accreditation standards and optimisation of post-operative pain management.
- Patient satisfaction was continuously assessed by the Department and the outputs were used for further improvements. Particularly during the period of COVID SARS -19 infection, there was an increased emphasis on maintaining hygiene from the units to the operating rooms, the condition has been continuously monitored in cooperation with the Microbiological Department and the Infection Control Team. The number of patients with complications and nosocomial infections has not increased.
- In connection with the urology programme of the Surgical Department, in cooperation with the Gynaecology Department of the NHH and external urology and gynaecology departments, the project for the treatment of urinary incontinence in women and for the treatment of urinary incontinence in men after prostatectomies continued within the framework of **post-operative physiotherapy**. In cooperation with the departments of Gastroenterology and neuro-disciplines, the stated project was expanded to include issues dealing with proctology and neurogenic sphincter dysfunctions.
- After surgeries and for the treatment of functional disorders of the musculoskeletal system, the Physiotherapy Department under the leadership of Head of Department MUDr. Ivan Hadrava took over surgery and orthopaedics patients.
- The Department of Physiotherapy has been treating pelvic floor muscle dysfunction, including conditions after radical prostatectomies, HoLEP and urogynaecological surgeries, since 2004. During this time, approximately 2,000 patients were treated.

Perspectives for the coming year

- The inpatient unit is to undergo a major redevelopment to expand the standard surgery inpatient unit by 10 beds.

- Due to a significant increase in the number of oncological patients in the Czech Republic, the Department's activities will focus more on the development of the latest surgical procedures using minimally invasive approaches – laparoscopic as well as robot-assisted – within comprehensive therapy for these patients.
- We will continue to cooperate with specialists – gastroenterologists, pneumologists, endocrinologists in Prague and the Central Bohemian Region and other places in the Czech Republic.
- In addition, certain physicians will be involved in teaching medical students at the 1st and 3rd School of Medicine, Charles University in Prague. There will also be a professional nursing practice in the Department.
- The training of physicians will continue in the form of regular educational seminars in the Department.

Educational and specialised activities

Educational and teaching activities

- Clinical educational seminars for the physicians regularly take place in the Department.
- The Department organised an undergraduate study visit for medical students (4th and 5th year of study) from the 1st, 2nd and 3rd School of Medicine, Charles University.
- Within the postgraduate education, physicians from other departments of our hospital as well as general practitioners from the field have completed the pre-certification study visits at our Department.
- We participated in all-hospital seminars and regular common indication seminars together with oncologists, gastroenterologists, pathologists and radiologists.
- The general nursing staff from the Department of Surgery participated actively and passively in a number of training and lectures necessary to improve their professional knowledge and skills.
- We will start lecturing at Czech and foreign congresses in surgery and urology.

Professional activities and membership in professional association

Physicians of the Department passively and actively participated in several national and international congresses, seminars and workshops.

Our physicians are also members of a number of professional societies, such as:
- Czech Medical Association of J. E. Purkyně
- Czech Association of Hepatobiliary Surgery
- Czech Surgical Society
- Czech Society for Endoscopy
- Section of Endoscopic and Minimally Invasive Surgery of the Czech Surgical Society
- Czech Society of Coloproctology
- Czech Society of Gastroenterology
- Czech Orthopaedic Society
- Section of Thoracic Surgery of the Czech Pneumological Society
- Czech Urological Society
- European Urological Society
- Czech Society of Robotic Surgery of the Czech Medical Association of J. E. Purkyně

Department of Gynecology and Minimally Invasive Therapy

Head of Department: Petr Popelka, MD

The activities of the Department in 2021 were significantly affected by the Covid-19 pandemic. The premises of the inpatient unit were set aside for a period of 4 months in favour of the COVID – OXY units with 12 beds. The remaining activity of the Department focused on the diagnostics and surgical treatment of gynecological diseases, with emphasis on minimally invasive approaches. The complete range of pelvic surgery concentrated on three main clinical programs in 2021: Urogynecological program, comprehensive treatment of endometriosis, and general gynecological surgery, including oncology. The Department has a specialised centre for each program.

Urogynecological program covers diagnostics, surgical and conservative treatment of incontinence and pelvic floor disorders. In total, 185 female patients with the above problems were operated of which 18 interventions were performed with the use of implants.

Program for comprehensive diagnostics and endometriosis surgery offers comprehensive treatment to patients from the whole Czech Republic, including radical laparoscopic surgery and subsequent hormonal therapy with final verification of the outcome. The Department of Gynecology of Na Homolce Hospital is one of the most experienced centres in the Czech Republic in performing radical operations of retroperitoneal endometriosis. In 2021, the Department carried out 60 procedures, of which 11 procedures were radical surgeries for infiltrative retroperitoneal endometriosis.

General gynecological surgery deals with the surgical treatment of sterility, myomatosis, adnexal tumours and cysts, problems with post-operative adhesions, chronic pelvic pain, inflammations and congenital development disorders. Hysteroscopy operations include diagnostic and surgical endoscopy of the uterine cavity. 26 oncological cases were newly detected, of which 18 were operated on.

In 2021, 931 gynecological and 107 Covid positive patients were admitted for treatment to the Department.

The total number of surgical procedures reached 922 surgeries in 2021, of which 95% were performed using minimally invasive methods.

Basic data

Number of beds gynecology	14/20*
– standard	10/16*
– ICU	4
Number of physicians	8
Number of nursing staff	22
Number of outpatient examinations	10,114
Number of admissions	931
Number of treatment days	
Number of interventions	922
Bed occupancy rate (in %)	
Average treatment period (in days)	2.45

*increased since May 2021

Department of ENT / Head and Neck Surgery

Head of Department: Petr Jirák, MD

Activities of the Department

The Department of ENT / Head and Neck Surgery specialises in diagnostics and conservative and surgical treatment of ear, nose and throat diseases.
The pandemic in 2021 also affected the operation of the Department of ENT. The inpatient part of the unit has been allocated to care for patients with Covid-19 disease requiring hospitalisation and oxygen therapy, twice in total – until June 2021 and then from November 2011. The ENT outpatient unit and the operation of the ENT operating rooms were not completely closed, but only limited for acute surgical procedures. The ENT department staff cared for patients with Covid-19 disease, but we also provided concurrent care for our ENT patients, including on-call services.

Similarly to previous years, surgical procedures carried out in 2021 covered a whole range of head and neck surgery – surgeries of the nose and paranasal cavities (mostly as endoscopic procedures), comprehensive surgery of the thyroid and parathyroid glands, microsurgery of the vocal cords and larynx, cophosurgical interventions (ear surgeries), surgeries to treat sleep apnoea syndrome and rhonchopathy, as well as corrective surgeries in the area of the head and neck, surgeries on the soft tissues of the head and neck, surgeries for injuries of facial bones and ENT surgical oncology. Skull base surgery was intensively developed in collaboration with the Department of Neurosurgery.
Within Na Homolce Hospital, the Department cooperates with neurologists in the treatment of balance disorders and has at its disposal a unit with state-of-the-art equipment – the Leksell Gamma Knife – for the treatment of auditory nerve tumours. In cooperation with dental surgeons and neurosurgeons, it performs demanding operations on the facial skeleton and skull base. We cooperate inter alia with experts in allergology and immunology, especially when dealing with chronic rhinitis or chronic sinusitis. We also work closely with the Department of Rehabilitation and Physical Medicine in the diagnostics and treatment of patients with temporomandibular joint disease, vertigo and patients with laryngeal mobility disorders. One of the key areas is treatment of patients with cancer. The Department provides a detailed diagnostics, surgical treatment and follow-up care, in collaboration with oncologists.
The program of temporomandibular joint treatment has further continued. In 2021, the treatment of diseases of the temporomandibular joint was conservative and minimally invasive (arthrocenteses under local anaesthesia, arthroscopic surgeries).
Surgical treatment of rhonchopathy and sleep apnoea syndrome is also very common, with the use of a radiofrequency method that reduces healing time and post-operative discomfort for patients. We have established very close cooperation with the Centre for Sleep Disorders which is part of the Department of Neurology of Na Homolce Hospital to treat patients with sleep breathing disorders.
In the field of thyroid surgery, the Harmonic scalpel has been increasingly used, which significantly reduces the length of surgical procedures. In indicated cases, minimally invasive procedures to remove thyroid tissue by the MIVAT method (minimally invasive video-assisted thyroidectomy) are used. At the same time, the Department carries out a whole range of surgeries, ranging from partial to extensive procedures, including removal of the entire gland and surrounding lymph nodes. It provides comprehensive post-operative care in cooperation with endocrinologists. In addition to that, the Department closely cooperates with the Department of Nuclear Medicine of the Teaching Hospital in Motol in the follow-up care of patients with thyroid cancer.
Close cooperation with dental surgery has continued. Together, we indicate and operate on patients for whom the combination procedure is an advantage.

In 2020, the outpatient unit of the Department of ENT / Head and Neck Surgery provided comprehensive services, including specialised consultancy services in oncology, otoneurology, cophosurgery and otoprosthetics, outpatient unit for treatment of rhonchopathy, outpatient unit for corrective head and neck surgery, phoniatric outpatient unit, joint outpatient unit (temporomandibular joint), and a specialised outpatient unit for the treatment of salivary glands using endoscopic techniques for diagnostics of salivary gland ducts (sialoendoscopy).
The outpatient centre for sleep and snoring disorders (rhonchopathy) accounts for a large part of our outpatient care and cooperates with the Department of Neurology and the Laboratory for Sleep Disorders. The Department also has an ENT paediatric specialist working in the outpatient unit of the Department of Paediatrics. The Department continues to successfully develop an aesthetic program of corrective surgery of the head and neck which primarily includes procedures on auricles, eyelids and the external nose, and laser operations.
As a standard, we use an NBI diagnostic method (narrow band imaging) which allows us, both in the outpatient setting and during surgeries under general anaesthesia, an earlier and more precise diagnostics of early stages of serious diseases of ENT mucosa, particularly disorders of the vocal cords and larynx.
For patients with swallowing disorders, we continue to perform the FEES (Fibreoptic endoscopic evaluation of swallowing) examination in cooperation with a speech therapist.
A novelty is the use of a sonograph in our ENT outpatient unit in the diagnostics and monitoring of diseases of the salivary glands, thyroid gland and soft tissues of neck. Under sonographic control, we perform needle biopsies of tumours in the soft tissues of the head and neck, which enables faster and especially minimally invasive diagnostics of certain diseases (FNAB/FNAC).
Since 2019, we also perform balloon tuboplasty (BET), which improves the patency of the Eustachian tube in indicated patients. This opens entirely new possibilities of treatment of impaired patency of the Eustachian tube, which is the cause of some types of hypoacusis.
Now, during the ongoing coronavirus pandemic, physicians, nurses and the ENT department staff are involved in vaccination against Covid-19.

Operational data

Number of beds (reserved for COVID OXY)	9
Number of physicians (as of 31/12/2021)	12
Number of general nursing staff	20
Number of outpatient examinations	25,831
Number of consultations	1,167
Number of admissions	874
Number of standard care treatment days	2.5
Bed occupancy rate (in %)	92
Average treatment period for standard care (in days) – ENT patients	2.5

Number of interventions

Surgeries under local anaesthesia	1,438
Surgeries under general anaesthesia	702
FESS surgeries	125
Thyroid gland surgeries	148
MLS (Microlaryngoscopy)	60
NBI	121
TMJ (temporomandibular joint) surgeries	165

Outlook for 2022

- If restrictions in the Covid-19 pandemic allow, we will continue comprehensive ENT diagnostics and therapy. The aim is to further improve the professional standard and quality of the healthcare provided, with a focus on procedures necessitating shorter hospital stays.
- The program of functional corrective surgery and rhonchopathy has an increasing trend.
- We continue to perform the newly introduced examination and surgical techniques – sleep endoscopy (DISE) in patients with sleep apnoea syndrome, fine-needle aspiration biopsy in some types of soft tissue diseases of neck (FNAB) using sonography.
- Grant support for research in thyroid gland surgery and grant support for research in the use of navigation in sinus surgery (FESS) continues.
- Within a grant we are working in research of the approach to patients with a combination of chronic rhinosinusitis of the odontogenic origin in cooperation with dental surgeons in combined ENT/dental surgical procedures.
- Within the neuroprogram, close cooperation will continue with the Department of Neurosurgery, particularly with regard to the skull base surgery.
- Within the cardiac program, the Department will continue to be involved in the preparation of patients for cardiac and vascular surgeries.
- If the epidemiological situation allows, we would like to continue the tradition of organising a workshop on thyroid disorders, with a focus on operative techniques and thyroid surgery.

Department of Anesthesiology and Reanimation

Head of Department: Viktor Kubricht, MD, Ph.D.

Activities of the Department

The Department of Anesthesiology and Resuscitation provides the following types of care:

Anesthetic care: comprehensive care of patients in the preoperative, intraoperative and post-operative periods. Paramedics carry out pre-anaesthetic examinations and preparation for surgery, provide anesthesia and other care during surgery and participate in post-operative care, both in the inpatient unit of the Department of Anesthesiology and Reanimation and some intensive care units, and in the treatment of acute post-operative pain and any complications associated with anesthesia.

Intensive care ("resuscitation" care) deals with the diagnostics and treatment of patients with failure of one or more basic life functions, patients with the need for intensive care of the highest degree, with the need for instrumental support of failing organs. The majority of patients are patients with disorders of consciousness, blood circulation, breathing, internal environment or disorders of other organs and organ systems and combinations of these disorders. Often these are patients after major surgery in the NHH or patients after cardiac or respiratory arrest with restoration of circulation after resuscitation. The unit is also equipped with a hyperbaric chamber with the possibility of artificial lung ventilation.

The hospital has a dedicated **acute pain management** team that systematically monitors and treats acute pain in patients admitted to the hospital, educates patients and staff, and develops advanced techniques in the treatment of acute pain.

Chronic Pain Outpatient Unit then deals with patients suffering from chronic pain.

Basic data

Number of physicians	26.1 FTE
Number of general nursing staff	Anaesthesia: 22.8 FTE, Intensive care: 32 FTE
Number of beds	8
Average treatment period (days)	11

Organisational units of the Department

1 resuscitation station (8 beds)
2 post-operative units of vascular surgery (12 beds)
5 central operating rooms
3 surgical operating rooms
2 gynaecological operating rooms
1 operating room for robot-assisted surgery
8 other operating rooms and departments (ENT, Stereotactic and Radiation Surgery, X-ray, Dentistry, Ophthalmology, Department of Nuclear Medicine – PET, Gastroenterology, Pulmonology)
1 hyperbaric chamber

Performance overview, admissions and outpatient unit

Number of admitted	212
Mortality (in %)	22.9
Total number of anaesthesias	7,821
Patients older than 65 years	1,912
Number of anaesthesias exceeding 2 hours	2,750
Average anaesthetic time/min	96
Number of regional anaesthesias	624
Hyperbaric oxygen therapy	195
Number of acute CO poisonings	5
Number of patients in the chronic pain outpatient unit	542

Department of Rehabilitation and Physical Medicine

Head of Department: Ivan Hadraba, MD

Activities of the Department

The Department provides comprehensive diagnostic and therapeutic care to restore the maximum physical abilities of disabled patients within its basic specialisation. Care is provided to inpatients of the Department, to inpatients of other specialised inpatient units and to outpatients.
Another specialised care provided in the Department is orthopaedic-prosthetic care. It is provided to all patients of the hospital by physicians of the Department in cooperation with external prosthetic and orthotic centres.

Organisational units of the Department

The Department is part of the therapeutic and preventive care section. It has an outpatient unit and an inpatient unit with 10 beds. These are provided to the Department by other departments – Neurosurgery, Vascular Surgery, Neurology and Gynecology. The outpatient unit consists of surgeries of rehabilitation physicians, a hydrotherapy room, and rooms for physiotherapy and physical therapy.

Staff (in terms of FTEs)

Physicians:	7
Head Physiotherapist:	1
Physiotherapists:	32
Occupational therapists:	2
Nursing staff:	4
Paramedical staff:	2
Masseurs:	3
Administrative staff:	3

Operational data

Number of outpatient physician interventions:	36,914
Number of other staff interventions:	74,793
Number of other inpatient non-medical staff interventions:	105,420
Total:	217,127
Number of patients admitted to the inpatient unit of the Department of Rehabilitation and Physical Medicine:	102

Events of the past year

- During the past year, the Department provided outpatient diagnostic and therapeutic care without restrictions. Inpatient care was limited due to the epidemiological situation or the need to transfer the Rehabilitation and Physical Medicine's beds to other units. Supra-regional care continued to be provided to domestic patients, foreigners and clients of the Homolka Premium Care and H plus preventive programmes. The department provided medical consultation service, physiotherapy and occupational therapy for all inpatient departments of the hospital without interruption.
- In connection with the urology programme of the Department of Surgery, in cooperation with the Department of Gynecology of the Na Homolce Hospital and external urology and gynecology departments, the project for the treatment of urinary incontinence in women and the treatment of urinary incontinence in men after prostatectomies continued. In cooperation with the departments of Gastroenterology and neuro-disciplines, the stated project was expanded to include issues dealing with proctology and neurogenic sphincter dysfunctions.

- After operations, injuries and for the treatment of functional disorders of the musculoskeletal system, the Department took over the care of surgery and orthopaedics patients.
- In cooperation with the ENT Department of NHH, complex rehabilitation treatment of voice disorders was carried out. Combination of diagnostics, monitoring of the course of treatment by direct laryngoscopy in the ENT Department and field voice examination in the Department of Rehabilitation and Physical Medicine with the use of voice rehabilitation and re-education methods together with electrostimulation of the vocal cord paresis significantly improves the accuracy of the diagnostics of the voice disorder and accelerates the return of vocal function. In cooperation with HAMU /Research Centre of Musical Acoustics. The Department of Rehabilitation and Physical Medicine has borrowed recording equipment from the Faculty of Music and Dance of AMU, that allows for video and audio recording and numerical evaluation of the voice. In addition to the treatment of vocal cord paresis, the treatment has been extended to other phonation disorders. Treatment of jaw joint disorders, dizziness and tinnitus was also conducted in cooperation with the ENT Department.
- Within the Centre of Specialised Cerebrovascular Care (formerly the Comprehensive Cerebrovascular Centre), of which the Department of Rehabilitation and Physical Medicine is a part,cooperation with the Neurology Department in the treatment of spasticity in patients after stroke has been extended. Physiotherapeutic and occupational therapy examinations of these patients were introduced, testing spastic muscles for botulinum toxin application.
- Dynamic splints were purchased to treat hospitalised patients, especially those with spasticity.
- In cooperation with the Department of Neurosurgery, rehabilitation treatment of patients with vestibular schwannoma will be introduced.
- The next phase of repairs and reconstruction of the hydrotherapy and electrotherapy hall was completed.
- New physical therapy devices (high-induction magnet and shock wave) were purchased from the investment funds.
- Preventive "Healthy Back" exercises and yoga classes continue as part of the commercial services offered.

Development perspectives for 2022

- The basic task even during the coronavirus pandemic is to maintain a high standard of comprehensive rehabilitation care in the outpatient operation with a high number of patients treated and medical procedures performed.
- We plan to expand interdisciplinary collaboration projects with neuro-departments.
- Designated physicians will be trained in spastic paresis rehabilitation, botulinum toxin application.
- Cooperation with the Department of General Surgery in connection with the orthopaedics programme and especially urology, as well as with the departments of Gastroenterology and Gynaecology, including external departments, will continue.
- We plan to expand functional and morphological diagnostics of the musculoskeletal system, including examination of pelvic floor muscles by ultrasound examination, including ultrasound myofeedback.
- The joint project of the Rehabilitation and Physical Medicine and ENT departments on the rehabilitation treatment of voice disorders will continue.
- Depending on the epidemic situation, educational events for physicians, physiotherapists and occupational therapists will be planned.
- During 2022, the Department of Rehabilitation and Physical Medicine will expand physical, physiotherapy and occupational therapy treatment to the "R" premises of the NHH Centre. At the same time, it will expand its commercial activities.

Specialised activities and membership of professional societies

Professional practice of physiotherapy students of individual faculties took place in the Department as part of undergraduate teaching.
Postgraduate training of physicians and physiotherapists of the Department took place. Another physician passed the certification in the field of Rehabilitation and Physical Medicine and thus obtained specialised competence in the field.

The physicians of the Department of Rehabilitation and Physical Medicine are members of professional societies: Czech Medical Association of J. E. Purkyně, Society for Rehabilitation and Physical Medicine, Orthopaedic and Prosthetic Society (Head of Department: Hadraba, member of the committee), Society of Musculoskeletal Medicine, Czech Society of Physical Medicine, Czech Ergonomics Association.

Department of Clinical Pharmacy

Head of Department: Milada Halačová, PharmD, Ph.D.

Activities of the Department

The Department of Clinical Pharmacy was established at Na Homolce Hospital in August 2010 to ensure the safety of pharmacotherapy, which is one of the major priorities of the hospital management. In terms of its organisational structure, it falls within the competence of the Deputy Director for Therapeutic and Preventive Care. The working team of the Department consists of pharmacists specialised in clinical pharmacy or those who will be included in training for this specialisation. The work of the clinical pharmacist is governed by the needs of Na Homolce Hospital, safety standards set by JCI and by staff availability within the Department. The activities in which the clinical pharmacist takes part are divided into several areas.

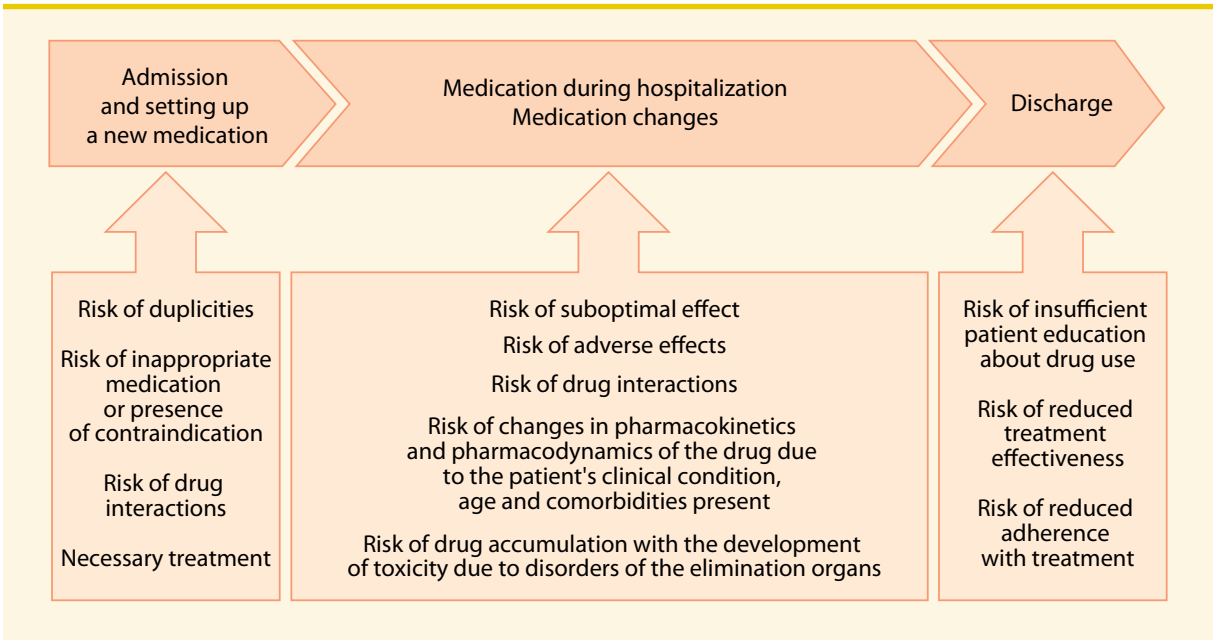
The major areas include **(1) the assessment of a newly admitted patient's medications**. This is a so-called signal check, i.e. a gross assessment of the patient's medication with respect to indications, contraindications, dosages and chosen route of administration. It reveals any duplication of medication and evaluates the clinical importance and risks of drug and food interactions. In this way, future problematic medications for the patient or high-risk pharmacotherapeutic regimes are identified and continuously monitored.

The key activity a clinical pharmacist is **(2)** everyday **work in** the assigned **clinical department** and close cooperation with attending physicians and nurses. The clinical pharmacist monitors patient medications in detail and assesses any causal relationships between specific patient problems and their changes during illnesses, laboratory examinations and current medications, and adjusts drug dosages, especially of antibiotics for patients with various degrees of renal or hepatic damage and dialysed patients. They work with nurses on drug incompatibilities and the crushing of drugs for nasogastric and jejunal probes.

The clinical pharmacist provides an on-demand **(3) consulting service** within the hospital, takes part in **(4) the development of best practice**, reports adverse events to the State Institute or Drug Control and is responsible for preparing **expert reports** on dealing with exceptional events in the hospital related to medications. The Department of Clinical Pharmacy is working on a **list of high-risk drugs** and LASA (look alike-sound alike) drugs and is involved in preparing so-called proactive procedures and storage systems to minimise the number of errors in handling these drugs and the impact such errors might have on patients. The Department of Clinical Pharmacy is the creator of the **(5) generic positive sheet** for the inpatient unit of NHH Hospital.

Since 2012 the Department of Clinical Pharmacy has been involved in the national **(6) Senior project** implemented by Ústav lékového průvodce, z. ú. (Institute for Medical Drug Guidance). Clinical pharmacists at Na Homolce Hospital perform regular drug audits in social facilities throughout the Czech Republic. The project continues in the activities of outpatient unit of clinical pharmacy where, in 2017, we managed to open **a clinical pharmacists consulting service for the needs of outpatient physicians and patients** with the financial support of the Ministry of Health. In 2020, the Department entered a pilot project with 11 general practitioners in Prague. The goal is to gradually develop clinical pharmacy in the outpatient sector.

Analysis of the operational processes related to the activities of the Department of Clinical Pharmacy



Work records and activities of the Department

The Department provides care to all patients admitted in the hospital. The admission to our hospital represents the first screening point and separates young patients without medication who undergo a short-term, mostly ½–1 day hospital stay, and those who are treated in the Centre for Sleep Disorders, who are indicated for Gamma Knife treatment, etc. The remaining approximately 50% of inpatients require detailed revisions by the clinical pharmacist, as many as several times during the hospital stay. Medication is adjusted on the basis of a clinical pharmacist's intervention in about 3,000 patients annually (30%). The highest percentage of interventions includes adjustments of medical drug dosage in the case of impaired function of the organ of elimination (risk of accumulation), clinically significant medical drug interactions, severe adverse events, incompatibilities, contraindications, unnecessary medical drugs, etc.

Number of revisions by international classification of drug problems for 2021.

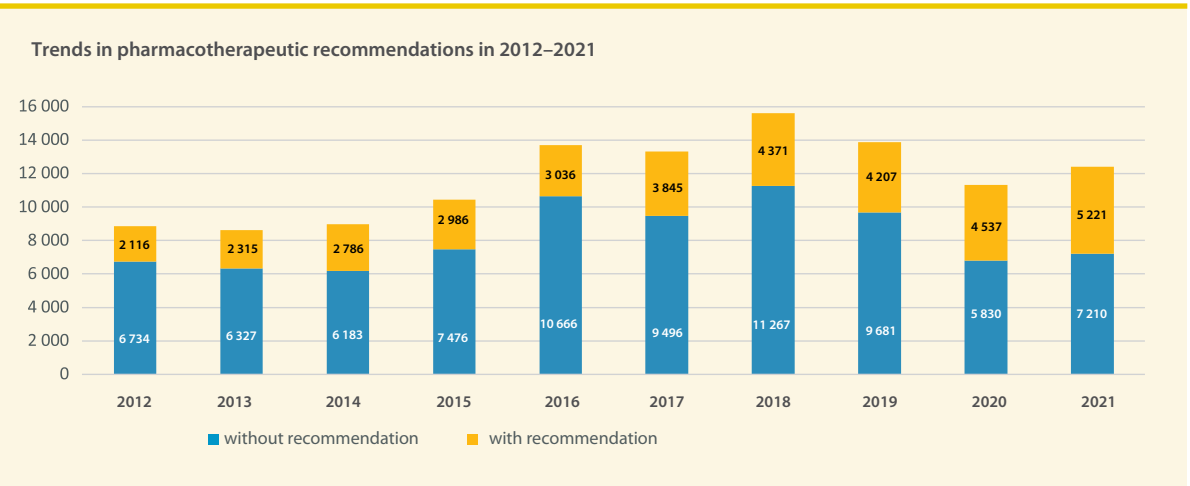
A1 Inappropriate active ingredient	387
A2 Unclear indication	155
A3 Dose adjustment	1,475
A4 Contraindications	115
A5 Side effect	510
A6 Drug interaction	404
A7 Recommendations for TDM	372
A8 Recommendation of a new drug	398
B1 Duplicity	257
B2 Timing of administration	98
B3 Method and route of administration	21
B4 Medicinal form	91
B5 Length of infusions	116
B6 Duration of treatment	42

B7 Incompatibility	15
C) Formal errors	66
E Pharmacoeconomics	1
F Recommendations for perioperative management	187
G Recommendations for laboratory testing	479
H Patient education	10
I Risk of falls	8
J Other	14

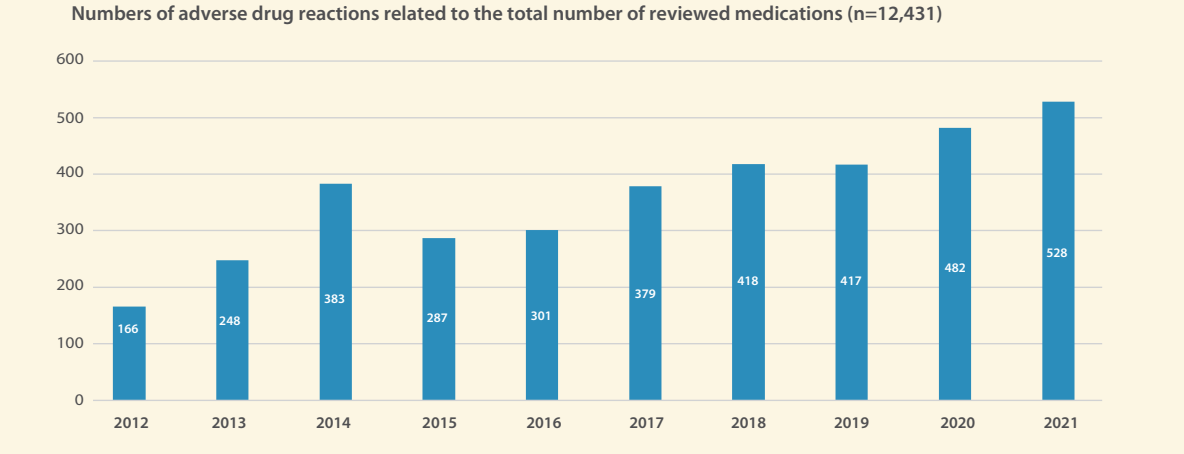
Numbers of hospital admissions reviewed by a clinical pharmacist in 2021:

Number of revised inpatients	12,431
Number of inpatients referred to by the Department of Clinical Pharmacy	5,221 (42%)
Number of inpatients with severe adverse effects	528 (4.2%)

Year-on-year comparison of the number of reviewed medications in the Na Homolce Hospital in 2012–2021



Year-on-year detection (2012-2021) of adverse effects expressed as a percentage of the total number of reviewed medications (year 2021, n=12,431)



Accreditation and specialist activities:

- Status of an accredited facility of the Czech Ministry of Health in the field of clinical pharmacy, membership of the Accreditation Commission of the Czech Ministry of Health in the field of clinical pharmacy
- Membership of the Board of the Clinical Pharmacy Section of the Czech Pharmaceutical Society of J. E. Purkyně (chairmanship)
- Membership of the main Board of the Czech Pharmaceutical Society of the Czech Medical Association of J. E. Purkyně
- Educational activities in the field of pharmacology at schools of medicine and pharmacology in Prague and Brno
- Membership of the Scientific Council of the non-profit organisation Průvodce pacienta, z. ú.
- Guarantee of the national "Senior" pilot project implemented by the non-profit organisation Průvodce pacienta, z. ú.
- Close cooperation with the National Institute of Public Health (hospital antibiotic program and infection prevention and control)
- Membership in the Subcommittee on Antibiotic Policy of the Czech Medical Association of J. E. Purkyně
- Publishing and lecturing in national and transnational professional activities
- Implementation of two grant projects

Staff data

Number of clinical pharmacists:	6.0 FTE

Conclusion

A high standard of clinical pharmaceutical care was confirmed by the JCI international audit of the quality and safety of care which Na Homolce Hospital received again in 2017. The clinical pharmaceutical care provided by the hospital has become a common standard ensuring a high level and safety of pharmacotherapy for all its inpatients. The global set-up of the clinical pharmacological care in Na Homolce Hospital, guaranteed by the JCI independent international accreditation, is at present unique in our country. This project has repeatedly received a medal award in the national Safe Hospital competition (in 2013 it won the absolute victory).

OUTPATIENT UNIT

Centre for Allergy and Clinical Immunology

Head Physician: Assoc. prof. Petr Čáp, MD, Ph.D.

Activities of the Department

- The Centre provides therapeutic and preventive specialised outpatient care to adult and paediatric patients with allergic diseases, immunity disorders and recurrent respiratory infections.
- In 2021, the Centre for Allergy and Clinical Immunology performed comprehensive diagnostic and treatment procedures, including preventive and consulting care, to both child and adult patients from Na Homolce Hospital with allergies, asthma and other immunopathological conditions (immunodeficiency and autoimmune conditions).

Operational data

Outpatient units: 3 surgeries, 2 prep rooms and 1 functional diagnostics laboratory
Number of physicians: 4 (a total of 2.8 FTE)
Number of nursing staff: 4 (a total of 4.0 FTE)

Outpatient unit:

Number of patients	3,280
Number of treatments	4,666
Number of skin tests	13,713
Number of spirometries	4,098
Number of bronchomotor tests	860
Number of rhinomanometries	15
Number of allergen-containing vaccine administrations (treatment initiation)	164

In January 2021, as part of the consolidation of outpatient units, one outpatient unit was relocated to the 6th floor (Assoc. prof. MUDr. Čáp, Ph.D.), other outpatient clinics moved only within the 1st floor closer to the Children's Unit of the hospital (MUDr. Slavíčková, MUDr. Pončáková, MUDr. Dvorská).

Educational and other specialized activities

- **Postgraduate training courses of the Centre for Allergy and Clinical Immunology** provided to physicians and nurses in the field of allergy and clinical immunology for which the Department has received an updated and valid official accreditation by the Czech Ministry of Health
- **Undergraduate courses** provided to students of the 2nd Faculty of Medicine, Charles University, in cooperation with the Institute of Immunology at the University Hospital in Motol
- **Organisation of educational activities** of a national character within the framework of continuous education, conference of the Czech Society of Allergology and Clinical Immunology – in the conditions of the Covid-19 pandemic, i.e. in a distance way
- **Membership of the editorial board of the newspaper *Zdravotnické noviny***
- **PR and educational activities** – radio and television program, newspaper and journal articles
- **Membership of professional associations**: Czech Society for Allergy and Clinical Immunology of J. E. Purkyně (Assoc. prof. Čáp is also a member of the committee of the professional society), Czech Pneumology and Phthisiology Society J. E. Purkyně (Assoc. prof. Čáp), Czech Society of Internal Medicine of J. E. Purkyně (Assoc. prof. Čáp), European Academy of Allergy and Clinical Immunology (Assoc. prof. MUDr. Čáp,Ph.D., MUDr. Pončáková), European Respiratory Society (Assoc. prof. Čáp); **active participation in distant webinars, including international ones**, in the field of allergology and clinical immunology

Department of Paediatric and Adolescent Medicine

Head Physician: Tibor Savel, MD

Activities of the Department

- Therapeutic and preventive care provided to children and adolescents up to 19 years
- Professional care in the field of paediatric neurology, endocrinology, psychology, pneumology, nephrology and speech therapy for children registered at Na Homolce Hospital
- Therapeutic and preventive care provided to foreign nationals
- Consulting services provided to children of foreign nationals

Operational data

- Outpatient unit with 2 offices and 1 room for laboratory sample collection and also for emergency reanimation and possible isolation of infectious patients
- 4 paediatricians (1 full-time paediatrician, 2 part-time paediatricians, 1 paediatrician with contract for work)
- 1 non-medical university graduate with 0,8 FTE (clinical speech therapy)
- 4 consulting physicians with contract for work
- 3 children's nurses (1 children nurse on maternity leave)

Changes in 2021

In 2021, our department joined the vaccination of elderly and at-risk patients against Covid-19 with the vaccine Comirnaty. We are continuing this activity in the form of a benefit for family members of hospital employees. An orthopaedist and a paediatrician working with a contract for work have left our Department. There has been a fusion of two practices for the needs of public health insurance companies into one department, children are still registered with their specific paediatrician.

Development perspective for 2022

Economic activity will be carried out within the hospital flat rate and payment per capita for specialisation 002.
We continue to vaccinate against Covid-19 for family members of the hospital. The aim remains to maintain a good quality of care and economic results by registering new patients from Prague 5, children of hospital employees and patients with UNIQA insurance.

Department of Dermatology and Venerology

Head Physician: Richard Šuraň, MD

Activities of the Department

- The Department provides outpatient therapeutic and preventive care of clients of commercial services (Homolka Premium Care, H Plus and paying foreign nationals), the staff of embassies in the Czech Republic, the staff of Na Homolce Hospital, and consulting services for hospital outpatients and inpatients. Treatment of other patients from the Czech Republic and abroad is provided only based on the immediate availability of physicians in the Department.
- In case of suspected venereal diseases, the Department makes basic examinations. Patients with a confirmed diagnosis of gonorrhoea or lues are referred to the follow-up care of general consulting specialists in dermatovenerology.
- The Department performs examinations of suspected skin tumours and in the case of histological confirmation of the diagnosis, the patients are treated and followed up by the Department. Patients with malignant melanoma and lymphoma cutis are referred to the Department of Oncology of Na Homolce Hospital (and the Department of Dermatology is then involved in their follow-up), or to the outpatient dermato-oncology units of other dermatology departments.
- In addition to the basic specialised examination, the Department performs electrocauterisation, cryotherapy, sclerotherapy of varicose veins, examination of pigment formations by manual and digital dermatoscope, epicutaneous tests.

Operational data

The Department has 1 head physician (1.0 FTE) and 1 nurse (1.0 FTE).

Development perspectives for 2022

The Department staff are involved in postgraduate training courses and regularly read professional journals. The task of the Department for 2022 is to maintain the quality of the provided therapeutic and preventive care, to expand epicutaneous testing and to improve the diagnostics of pigment manifestations.

Department of Ophthalmology

Head Physician: Petr Novák, MD

Activities of the Department

- Outpatient therapeutic and preventive ophthalmological care of patients of H plus and Homolka Premium Care programs, foreign nationals, employees and other patients
- Consulting examinations provided to both outpatients and inpatients from different hospital departments (primarily neurology, neurosurgery, cardiology, anaesthesiology and reanimation and internal medicine)
- Specialised examinations of patients referred from external ophthalmologists and other specialists
- Outpatient surgery – cataract surgery, anterior eye segment and glaucoma surgery, eyelid surgery and surgery of surrounding tissues (currently more than 99% of cataract surgeries are done in an outpatient setting)
- Inpatient surgical procedures are performed for corneal transplantation and certain cataract surgeries (in patients from remote regions and in severely ill patients); for this purpose, the Department uses beds in the ENT Department and the Department of Internal Medicine (*since 2020 all of the above modified with respect to Covid-19)

Organizational units of the Department

The Department of Ophthalmology has an outpatient unit and operating room; it has no inpatient unit. If need be, the patients stay in the ENT Department or the Department of Internal Medicine (*). As of 11/19, the Department is staffed by a senior physician and independent physicians in only three offices.

Procedures

Number of outpatient treatments	11,152
Number of treated patients in individual outpatient units	3,681
Total number of interventions	1,119
Number of cataract surgeries	1,054
Number of corneal transplantations	13
Number of surgical corrections of astigmatism	50

Staff data

Number of physicians	4
Number of physician FTEs	3.0
Number of general nursing staff	6 (+1 maternity leave)
Number of general nursing staff (FTE)	4.6
Number of auxiliary medical staff	1
Number of auxiliary medical staff (FTE)	1.0
Number of technical staff	1
Number of technical staff (FTE)	1.0
Total number of employees	12
Total number of FTEs	9.6

Changes in 2021

- We have managed to maintain the trend of long-term stabilisation of the number of cataract surgeries in our Department in 2021. Unfortunately, in the case of corneal transplants, there has been a significant decrease in the number of operations due to the exceptional hygienic situation in the whole Czech Republic.
- Commercial refractive surgeries – lens extraction and implantation of monofocal or multifocal implants – continue to decrease unequivocally. Patients were still interested in the possibility to pay an additional fee for the implantation of an above-standard lens within the "economically more demanding treatment option" (implantation of toric and multifocal lenses within cataract surgery covered by health insurance companies) that was cancelled in 2013.
- Since 11/19, the capacity of the Department of Ophthalmology has been reduced by one surgery and the number of physicians and nurses has been reduced by one FTE. Despite this, the number of treatments and operations can be maintained within the framework.
- A partial replacement of surgical instrumentation was carried out, a diagnostic ultrasound machine was purchased, the purchase of a perimetry machine and the purchase of a surgical operating table were postponed for the time being

Educational and specialized activities

Physicians of the Department are members of the Ophthalmological Society and the Czech Society of Refractive and Cataract Surgery, the Czech Glaucoma Society, they participate actively and passively in seminars, working days of the society and congresses as well as in a hybrid on-line form, which was necessary due to hygiene measures. In 2021, despite complications with Covid-19, they presented papers at ophthalmology conventions and ophthalmology seminars.

Development perspective for 2022

- Specialists will be provided information on treatment possibilities in the Department of Ophthalmology, either covered by health insurance companies or provided in the form of commercial care.
- We need to cope with competitive conditions in the medical market within so-called economically more demanding options of healthcare.
- We will raise awareness about procedures performed in the Department of Ophthalmology and strengthen its position among other ophthalmology facilities.
- Where possible, we will try to make up for lost time caused by the exceptional circumstances of the COVID-19 measure, particularly in the area of corneal transplants.
- The Department of Ophthalmology has so far complied with the highest standards of surgical treatment of the anterior eye segment; however, it is imperative that medical equipment be gradually replaced.
- Continued cooperation with clinical ophthalmological facilities in Prague will be maintained.
- We will participate in workshops under the auspices of the Department of Ophthalmology, workshops organised by the Association of Nurses, the Lion´s Club Educational Centre in the Czech Republic and the Czech Society of Refractive and Cataract Surgery.

Department of Psychiatry

Head Physician: Petra Kleinová, MD

Activities of the Department

The Department provides diagnostic, therapeutic and preventive psychiatric care only to the adult patients of the polyclinic, patients of the department for foreign nationals, patients using other hospital programs, and consulting services in the hospital. It does not have an inpatient unit. The Department cooperates with physicians in all fields, inter alia within the program of comprehensive pain management, it assesses patients with severe forms of obsessive-compulsive disorder at the Department of Stereotactic and Radiation Neurosurgery which is the only facility performing stereotactic neurosurgical procedures with such patients.

Operational data:
- 1 outpatient clinic
- 1 physician FTE, 2 physicians with 0.8 and 0.2 FTEs.
- 1 nurse for 0.5 FTE
- total number of examinations 2,545 (of which 90 consulting examinations within NHH)

Evaluation of clinical activities

With respect to the limited capacity represented only by one psychiatric position, the extent of clinical activities of the Department remained the same. The focus is on comprehensive diagnostic, therapeutic and preventive psychiatric care, respecting hospital priorities. The patients who cannot be admitted for treatment due to the lack of capacity are referred to the care of other departments of psychiatry. The physicians cooperate with other inpatient departments in Prague and outside Prague where patients indicated for hospitalisation are referred to, as well as with community service centres which receive patients with severe mental disorders and impaired functional abilities. In some cases, the indicated patients are referred to the psychotherapeutic care.

Membership of professional associations and educational activities

The physicians are members of the Psychiatric Society of J. E. Purkyně, the Czech Neuropsychopharmacological Society and the Society for Biological Psychiatry, MUDr. Skopová is a member of the Czech Medical Association's Scientific Council for Psychiatry. Physician with 0.8 FTE, MUDr. Kleinová also works at the Department of Neurology at the 1st Faculty of Medicine of Charles University in Prague and General University Hospital in Prague, where she focuses on neuropsychiatric problems of extrapyramidal disorders and is also certified in Gerontopsychiatry.

Development perspectives for 2022

Na Homolce Hospital is a highly specialised hospital where psychiatry, as one of the basic fields of current medicine, is only a complementary discipline ensuring a comprehensive range of provided healthcare services. No further development is possible under the current staffing conditions i.e. with only one physician FTE. There is no room for scientific work or teaching, given the staffing and the significant number of patients. Therefore, the aim is to maintain the current high quality of care provided and economic results, while the demands for psychiatric services and increase in the number of patients generally increase.

Department of Clinical Psychology

Head of Department: Assoc. Prof. Lenka Krámská, Ph.D.

Activities of the Department

The Department of Clinical Psychology has no inpatient unit. It has four offices – offices of psychologists who examine and provide psychodiagnostic and psychotherapeutic care on a daily basis in accordance with the specialisation in the given program and in cooperation with the target department (mainly Neurosurgery, Neurology, Stereotactic and Radiation Neurosurgery, Internal Medicine, Surgery, Oncology, etc.) according to the requirements of the attending physicians. They also provide consulting services to other departments of Na Homolce hospital. An outpatient clinical psychologist in the office of consulting physicians provides psychodiagnostic and psychotherapeutic care for outpatient children at the children's department in the office of consultants.

Specialised psychological care includes preoperative psychological preparation before complicated procedures, help in coping with the impact of serious diseases, and neuropsychological diagnostics aimed at the identification of intellectual and cognitive abilities or assessment of personality psychopathology. Neuropsychological diagnostics can rule out some medical interventions or refer the patient for special procedures, such as epilepsy surgery, neurostimulator implants etc., for which special psychological or neuropsychological assessment is required by health insurance companies.

Main services

- **Neuroprogram** – Specialised neuropsychological diagnostics and psychotherapy in patients with neurological diseases (epilepsy surgery program, neurosurgical treatment of tumours, cerebrovascular diseases, cognitive rehabilitation, cooperation with the Department of Neurosurgery, e.g. in awake brain surgeries, cognitive rehabilitation of patients with neurocognitive deficit, cooperation with the Department of Stereotactic and Radiation Neurosurgery in the examination of patients with epilepsy, obsessive-compulsive disorder before and after interventions, etc.)
- **Cardiac program** – Specialised psychological diagnostics and psychotherapy in patients with cardiovascular diseases (cardiac surgery, demanding vascular reconstructions, acute myocardial infarction, neurostimulator implantation for refractory angina pectoris, etc.)
- **Internal medicine program** – Specialised psychodiagnostic and psychotherapeutic care in the field of obesitology and bariatrics, as well as diabetology, endocrinology, oncology, pneumology and gastroenterology; consultations, psychosomatic consulting centre
- **Crisis intervention** in acute responses to unfavourable diagnosis, psychological preparation for demanding procedures, assistance in coping with psychological impacts of diseases (Leksell Gamma Knife, oncology, etc.)
- **Cooperation with the Palliative Care Team** – at the request of the attending physicians or nurses, we cooperate with a multidisciplinary team and help patients solve psychological problems and focus on improving their quality of life
- **Pain management consulting centre** – Psychological examination and subsequent supporting psychological care provided to patients with long-term or chronic pain
- **Psychosomatic consulting centre** – Psychological treatment of patients with psychosomatic disorders (e.g. high blood pressure, ulcer disease, diabetes, various functional disorders, etc.) requiring a professional psychological intervention
- **Psychodiagnostics and psychotherapy in children** with various psychosomatic and educational problems within comprehensive care provided to paediatric patients
- **Psychological examination of patients required by different directives and regulations of the Ministry of Health and General Health Insurance Company** – prior to implantation of neurostimulator, programmable pumps, before providing a patient with an electric wheelchair, C-leg prosthesis (microprocessor controlled knee joint), before returning back a driving license to patients, etc.

Complementary services

- Psychological examination of drivers pursuant to Act No. 361/2000 Coll. performed by a psychologist accredited by the Ministry of Transport, often required by the GPs or NHH employees.
- Psychological examination of applicants for a firearms license.

Research activities

- Research follow-up of patients (e.g. with epilepsy, PNES, after ischaemic stroke, etc.) in cooperation with the Epilepsy Centre and Departments of Neurology, Neurosurgery and Vascular Surgery
- Cooperation with the Department of Radiodiagnostics in developing medical memory examination paradigm by means of functional MRI with a focus on higher mental functions (memory, speech, etc.)
- Cooperation with the Department of Stereotactic and Radiation Neurosurgery in examination of patients with epilepsy, obsessive-compulsive disorder, etc. before and after surgery
- Cooperation with the Department of Neurosurgery in awake brain surgeries, monitoring of patients with EC-IC bypasses, elective aneurysm, etc. before and after surgery
- since April, the cooperation with the Clinical Otorhinolaryngology and Head and Neck Surgery of the 1st Faculty of Medicine of Charles University in Prague, Motol University Hospital (Assoc. prof. MUDr. Jan Bouček, PhD., as. MUDr. Zdeněk Fík, PhD.), on the psychological investigation of cochlear implant applicants. Following the preparation of the psychodiagnostic test battery, routine investigations of these applicants began in July and this cooperation will continue in the coming years.
- Preparation of Neuropsychological Assessment Battery (NAB and RBANS) in the Czech language for Testcentrum
- Development of research cooperation with the Faculty of Arts, Charles University – differential diagnostic and methodology research issues

Operational data

Number of Psychologists

With postgraduate certificate	4
Without postgraduate certificate	1

Number of psychological interventions performed in inpatients

Specific psychological intervention (30 min.)	821
Targeted psychological assessment (60 min.)	634
Follow-up psychological assessment (30 min.)	27
Crisis intervention (30 min.)	36
individual psychotherapy	24

Number of outpatient interventions

Individual systemic psychotherapy (30 min.)	959
Comprehensive paediatric psychological assessment (60 min.)	68
Targeted paediatric psychological assessment (60 min.)	148
Comprehensive psychological assessment (60 min.)	8
Follow-up paediatric psychological assessment 13	
Targeted psychological assessment (60 min.)	1,609
Follow-up psychological assessment (30 min.)	6

Specific psychological intervention (30 min.)	3
Psychodiagnostics with a complicated psychotherapeutic intervention (90 min.)	39
Crisis intervention (30 min.)	1,666

Number of points achieved

total	2,898,420
of which outpatient patients	2,219,653

However, behind these figures, one must see specific human beings and fates that would, without the psychological intervention, tolerate hospitalisation, surgical procedures and other major life events with significantly more difficulties. In addition to these reported interventions for health insurance companies, it is necessary to state the outpatient examination of 21 clients who were examined for the purpose of traffic psychological assessment of the skills to drive motor vehicles, and to hold and carry a firearm. Reimbursements of these procedures were made in cash according to the Decree of the Czech Ministry of Health No. 206/1997 Coll. through the NHH cash office. The total amount was CZK 39,000.

Educational activities and membership of professional associations

- By the decision of the Ministry of Health dated 20/10/2021, the Department of Clinical Psychology was extended the accreditation Psychologist in Health Care – Clinical Psychology with validity from 01/11/2021 to 31/10/2026 for 10 trainees.
- There are specialised study visits as part of the undergraduate study programs organised in the Department (for the Faculty of Arts and Teaching School, Charles University – 20 students), supervision of diploma and master's degree theses, as well as postgraduate study (pre-certification study visits in clinical psychology – a total of 4 pre-certification visiting students, 8 PhD students). In 2021, the training of psychologists in pre-certification training took place at the Department; due to government regulations regarding the Covid-19 disease, the training was held only online in the spring and autumn months. Two internal trainees and five external trainees from other healthcare facilities were involved in undergraduate preparation at the Department in 2021.
- Assoc. prof. PhDr. L. Krámská, Ph.D., develops research and pedagogical activities at the Department of Clinical Psychology and the activities of the Czech Neuropsychological Society which she founded with her colleagues in 2011 and obtained accreditation by the Czech Ministry of Health for a certified course in clinical neuropsychology. She is the head of the subject-area board of the postgraduate study program in the field of Clinical Psychology at the Faculty of Arts, Charles University. She is a long-term member of the Department of Psychology, Faculty of Arts, Charles University, she lectured at the University of New York in Prague. She is a member of the Scientific Committee in the International Neuropsychological Society (INS) and the Federation of European Societies for Neuropsychology Committee for the Czech Republic. In 2015–2017, she was a member of the Clinical Neuropsychology Task Force of the European Federation of Psychological Societies in Brussels, to represent the Czech Republic. She participates in the translation of neuropsychological batteries NAB and RBANS and SIMS into the Czech language.
- PhDr. Despite the limitations imposed by the epidemiological situation, Lenka Chválová actively participated in the work of the Department in the field of psychodiagnostics and psychotherapy of child clients of the NHH. She began a training in 2021: "Relational psychotherapy in children and adolescents", participates in professional seminars and supervision of the Children's Psychology Clinic at the Institute for Postgraduate Medical Education.
- PhDr. Lucia Hrešková, Ph.D. was a co-researcher of the project supported by the internal grant of NHH "Diagnostics and treatment of psychogenic non-epileptic seizures (PNES)", under the leadership of the main researcher Assoc. prof. PhDr. Lenka Krámská, Ph.D. At the same time, she and Assoc. prof. Krámská established active research collaboration with the Northeast Regional Epilepsy Group in New York, USA under the leadership of Lorna Myers, Ph.D. They are preparing a joint symposium within the 32nd International Congress of Psychology. And they published a paper together in the impact journal "Epilepsy and Behaviour". Ms Hrešková's employment with NHH ended on 31/07/2021.

- Mgr. Zuzana Dvořáková is involved in the care of outpatients, especially in internal medicine outpatient units, she is also completing her doctoral studies (field of Clinical Psychology, Faculty of Arts, Charles University), within the study she opposed 2 bachelor's theses, worked on the grant project GAUK, was a student of the 4th year of training Integration in Psychotherapy and continued in specialisation education in the field of Clinical Psychology at the Institute for Postgraduate Medical Education. Due to starting maternity leave, she stopped her activities at the Department of Clinical Psychology on 31/05/2021.
- On 01/05/2021 a new colleague, Ms Mgr. Julie Hladíková, a full member of the Czech-Moravian Psychological Society, is involved in the diagnostic, therapeutic and research activities of the Department. These are the following research projects: grant project (GAUK) – Validation study of the Czech version of the Neuropsychological Assessment Battery to the Czech environment and within the framework of PhD studies at the Department of Psychology of the Faculty of Arts of the Charles University, she is researching Detection of insufficient effort and pretending cognitive deficit during neuropsychological examination.
- On 01/09/2021 another new certified colleague, Ms Mgr. Andrea Sakalová started working at the Department of Clinical Psychology, she was transferred from the hospital in Kladno and has also been actively involved in the diagnostic and therapeutic activities of the Department. She is active within the Society for Logotherapy and Existential Analysis and participates as a training co-therapist in the education of future psychotherapists. This will be very useful when we get our Psychotherapy accreditation from the Ministry of Health.
- In 2021, the staff of the Department presented a total of 4 lectures and 1 poster at congresses in the Czech Republic, 5 lectures at professional seminars of the Department of Clinical Psychology, 2 lectures at on-line seminars. They also published 4 articles in foreign peer-reviewed journals with Impact Factor and 1 article in a Czech professional periodical.

Development perspectives for 2022

As in previous years, the Department will continue to provide high-quality psychodiagnostic and psychotherapeutic care to both inpatients and outpatients at Na Homolce Hospital (where necessary also to hospital employees, which is ever-increasing care due to the coronavirus pandemic) and to other healthcare facilities. Further, it will continue to participate in training within the postgraduate track (theoretical-practical and practical programs in clinical psychology) and cooperate with the Faculty of Arts and Teaching School of Charles University and the University of New York in Prague in undergraduate and postgraduate education, to organise study visits within postgraduate education in clinical psychology. We will also continue to implement a specialised educational program in clinical psychology in cooperation with the Accreditation Commission of the Ministry of Health in the further education of postgraduate students. By spring 2022, we would like to obtain accreditation in the field of Psychotherapy for the Department of Clinical Psychology from the Accreditation Commission of the Ministry of Health. The cooperation with the Department of Otorhinolaryngology and Head and Neck Surgery at the 1st Faculty of Medicine, Motol University Hospital will continue on the psychological investigation of applicants for cochlear implantation. The Department will continue to work on the standardisation of neuropsychological methods and procedures for the Na Homolce Hospital neuroprogram (NHH grant for Diagnostics and treatment of patients with PNES diagnosis – psychogenic non-epileptic seizures) and develop psychotherapeutic care and cognitive rehabilitation in patients with neurocognitive deficits, including collaboration on the development of a psychoeducational handbook for PNES patients. We will continue to develop international cooperation and activities with professional associations and institutions in clinical psychology, health psychology, psychosomatics and neuropsychology.
In the summer of 2022, the head of the Department of Clinical Psychology will participate in an internship at a prestigious neuropsychology centre in New York City (Northeast Regional Epilepsy Group, NYU Medical Center and Columbia Presbyterian Medical Centre).

Dental outpatient unit

Head Physician: Petr Kolčava, MD

Activities of the Department:

- Provision of outpatient dental care
- Provision of preventive outpatient dental care
- Provision of acute outpatient dental care on duty
- Provision of consulting services to patients from other departments of the hospital

Operational data

- In 2021, the above given range of outpatient dental care was provided by one full-time physician and one 0.2-time physician with a contract for work. The care was provided to outpatients and inpatients of polyclinics, foreign nationals, contractual partners of Na Homolce Hospital, and hospitalised patients.
- In 2021, the Department had two dental offices. One dental office is used by one physician and a nurse, the other by a physician with reduced working hours without a nurse.
- In 2021, a total of 3,247 patients were examined and treated.

Evaluation of clinical activities

The number of examined and treated patients decreased compared to 2020 due to physician's long-term illness with Covid-19. However, the number of interventions was still rather high which was achieved particularly due to highly efficient organisation of work, immediate phone contact with patients and filling of time slots vacated by absent or late patients and partly by extending office hours beyond working hours i.e. by treating painful conditions before the official working hours. In spite of this, comparable positive economic results were achieved as in the previous year.

Changes and events in 2021

In the field of therapeutic care, the Department continued to cooperate with the Department of Dental Surgery in the treatment of patients with dental implants. An increased number of patients with Class I defects according to Voldřich were treated with adhesive fixed replacements, the so-called Maryland bridge and inlay bridge. The number of patient treated with conditionally removable replacements and all-ceramic restorations increased as well. The use of so-called locators has been extended to increase the retention of lower total replacements. Changes in the operation of the work organisation were made according to the current hygiene-epidemiological situation related to Covid -19. Since the investment requirements of the Department were not approved, the instrument replacement will be solved in the emergency mode.

Development perspectives for 2022

A priority in 2022 will be to supplement the part-time FTE of the physician to the full-time also due to consideration of a possible reduction in the current head physician's hours, and to recruit a dental hygienist. The Department will continue to cooperate with the Department of Dental Surgery in the application of new types of dental bone implants. In cooperation with the prosthetic laboratory, the use of the Silensor anti-snoring system will be increased in selected patients, as well as dental guards to prevent bruxism. Indications will be extended for all-ceramic replacements of veneer-type and the capacity will

be increased for the production of full artificial dentures using locators in order to increase their retention, the production of removable replacements made of flexible resin will be increased. The investment requirements for the renewal of the instruments will be renewed. Although dental care is a complementary service in the system of Na Homolce Hospital, the Department of Dentistry will make every effort to maintain the comprehensive range and high quality of the services provided as far as possible.

SUMMARY OF ACTIVITIES OF DEPARTMENTS PROVIDING COMPLEMENTARY SERVICES

Department of Radiodiagnostics

Head of Department: Prof. Josef Vymazal, MD, Ph.D.

Activities of the Department

Also in 2021, the Department of Radiodiagnostics provided services both to its own hospital and to other medical facilities, including 24-hour support, even for magnetic resonance imaging. It is the continuous availability of MRI examinations at weekends and at night that is often used by workplaces that are equipped with this technology but do not provide continuous service.

Our department provides diagnostic examinations in the entire range of the field of radiodiagnostics with a special focus on diseases of the nervous, locomotor and cardiovascular systems, as well as on vascular and non-vascular interventional therapeutic procedures. Diagnostics and interventions continue to be actively developed.

Vascular methods

Our Angiography Department is equipped with two modern biplane angiography devices with "flat-panel" detectors and rotational AG. We provide comprehensive diagnostic and therapeutic care for vascular diseases in the whole body, excluding cardiac issues. The Department operates on a 24/7 basis. In terms of the number and spectrum of performed procedures, we rank among the largest centres of a similar nature in the Czech Republic.

The core programme of our Department is interventional work within the Comprehensive Cerebrovascular Centre – here we provide a continuous service for endovascular treatment of ischaemic strokes. The number of endovascularly treated patients with iCMP ranks us among the leading centres in the Czech Republic. The quality of care provided is interdisciplinary monitored both within the hospital and nationally, and is traditionally at a very high level. We also perform complicated and complex neuroendovascular procedures in the treatment of pathologies of the cerebral and spinal arteries, especially in the treatment of cerebral aneurysms and dural shunts; in collaboration with Neurosurgery and Leksell Gamma Knife we treat pial AVM. We use the latest methods and instrumentation available for all these procedures.

In a team with vascular surgeons, we endovascularly treat aortic and pelvic artery aneurysms by implanting stent grafts. We are the largest centre in the Czech Republic in terms of the number of SGs implanted.

Within the peripheral arteries, the main focus of our work is the treatment of patients with chronic lower limb ischaemia, but we also deal with more complex and less common pathologies of the peripheral arteries such as aneurysms, malformations, shunts, etc. We also treat acute life-threatening bleeding from peripheral arteries by endovascular treatment, of course only if the procedure is indicated. We regularly attend domestic and international training events, where our participation is often active.

Our Department follows the latest technological trends in this field and reasonably chooses new technologies and materials for its own application.

Non-vascular methods

This area is dominated by CT-guided nerve root injections and vertebroplasty. Interest in these procedures is growing and our hospital is traditionally one of the most active centre in the country in this segment of care. A unique hybrid CT – AG system is dedicated to interventional methods. In 2021, epiduroscopies continued to be performed.

For diagnostic purposes we have been using a dual-source CT Somatom Flash since December 2010. This system will be replaced by a new device in 2022.

In agreement with global trends, we tend to replace a CT scan with MRI in indicated cases, where there is no radiation exposure at all. In this regard, we provide education both among the referring physicians of our hospital and at professional congresses and seminars for other referring specialists.

A significant number of CT scans of the heart, including CT coronarography, continue to increase. We are also able to significantly reduce radiation exposure for these examinations thanks to state-of-the-art equipment. The number of examined patients with a congenital heart defect using CT has been increasing. We often combine CT scans with MRI scans in these patients as well. CT perfusion examination of the entire brain was carried out in acute strokes in indicated cases.

Magnetic resonance imaging (MRI) examination

For several years now, examination by perioperative MRI has been performed on a regular basis, using the equipment installed in the neurosurgery operating room. Our hospital belongs to the very few in the Czech Republic which are able to perform such examinations. This significantly increases the radical nature of neurosurgery interventions and patient comfort.

On MRI devices in the building K, the Department continues to routinely use advanced MRI methods, i.e. MRI spectroscopic examinations, by both SVS and CSI, (both of the brain and other parts of the body, the prostate in particular), diffusion imaging, including the technique of diffusion tensor imaging for white matter tractography. Functional MRI BOLD imaging for preoperative planning, neuronavigation and deep brain stimulation have been further developed. In addition to routine clinical use, research using these techniques has been conducted with prestigious publication outputs. These examinations have become faster and more precise after the implementation of new software.

In January 2021, the obsolete Symphony 1.5 Tesla MRI instrument was replaced by a Vida instrument with an external field strength of 3 Tesla. This device will enable further development of full-scale MRI.

In 2021, the possibility of MRI signal quantification – MRI relaxometry – was significantly expanded with possible clinical use in predicting the progression of malignant brain tumour – glioblastoma, as well as in cardiological imaging in mapping.

The cardiac MRI program continues to evolve significantly, already including phase contrast sequences as standard to image and quantify flow, as well as the aforementioned mapping. We expect a further increase in the number of patients with congenital and acquired heart disease.

Mammography

The mammography unit of Na Homolce Hospital belongs to a network of accredited clinics and is equipped with a Planmed Nuance Clarity system with direct digitisation. Patients with unclear mammography and ultrasound findings are referred for an MRI breast examination in indicated cases, which are also performed in the Department. The second reading of images continues to be a matter of routine.

All radioscopic image documentation is digitally stored in the hospital's information system and is immediately available to physicians. All operations of the Department of Radiodiagnostics have been fully digitalised, i.e. no films have been used since 2009. The hospital also uses a well-proven ePACS system, interconnecting imaging records of most hospitals in the country. In 2020, the use of the hospital's PACS system was streamlined, including a better connection with the PET Centre. Development in this direction will continue in the coming years.

Since 2011, the Department has been using only electronic request forms on a regular basis and external request forms are also transferred to electronic format. The system of electronic request forms for all types of radiodiagnostic examinations has been in use in the hospital for several years now.
The SOU standards and SOPs of the Department of Radiodiagnostics are available on its website.

Operational data

Technical equipment

- Angiography unit: 1x Artis Q biplane, 1x Siemens Axiom Artis biplane
- CT unit: 1x Siemens Somatom Flash (2x128), 1x Siemens Somatom Definition AS Plus
- MRI unit: 1x Magnetom Avanto 1.5 T, 1x Magnetom Vida 3 T, 1x Siemens Skyra 3 T, 1x GE Signa HDx (neurosurgery rooms) 1.5 T
- Ultrasound unit: 1x Toshiba Aplio, 1x GE Logiq E10R2, 1x GE Logiq E9, 1x Siemens Acuson Juniper, 1x Samsung RS85
- Mammography: 1x Planmed Nuance Clarity
- Basic equipment: 1 fluoroscopic and 2 fluorographic units, mobile X-ray equipment, OPG machine, PACS workstations, scanners, printers, data archives

Basic staff data

Number of physicians	28
Number of radiodiagnostic laboratory technicians	31
Number of general nursing staff	9
Number of administrative staff	10
Number of auxiliary medical staff	2

Specialised intervention and treatment procedures

PTA (with or without stent implantation)	477 PTA, 110 stents
Endovascular treatment of cerebral aneurysms (coils, stents)	37
Recanalisation of cerebral arteries in acute stroke	117
PTA/stent of extracranial brain-supplying arteries	40
PTA/stent of intracranial brain-supplying arteries	5
Embolisation in neurological area (cerebral, spinal AVM)	7
Tumour embolisation	13
Stent grafts	76
CT guided intervention in total	3,089
of which: targeted nerve root and facet injections	2,674
vertebroplasty + kyphoplasty	225
radiofrequency ablation	18
CT guided biopsies and drainages	172

Overview of selected radiodiagnostic examinations

Computed tomography	14,863
Magnetic resonance imaging	13,176
Angiographies	2,070
Ultrasound examinations	13,578
Mammography	11,975
of which screening	10,282
Ultrasound examination within mamma diagnostics	2,230
Sentinel node biopsy	139
Fluorography, fluoroscopy + dental X-ray	32,622
Total number of radiodiagnostic examinations	93,476

Plans for 2022

- Replacement of the Somatom Flash CT machine with a new machine
- Application of modern diagnostic procedures on the new Vida 3 Tesla MRI machine
- The method of epiduroscopy should be further used for non-vascular interventions in our hospital, which is the only facility in the country to use it. This technique should help patients who had undergone repeated lumbar spine surgeries and suffer from post-operative adhesions. Basic experience in using this method has already been gained since 2016.
- The department will actively participate in the planning and implementation of the new NIS and PACS systems for the hospital and interconnection with other workplaces.
- The Department will actively support the hospital's cyber security.

Department of Nuclear Medicine – PET Centre

Head of Department: Assoc. Prof. Otakar Bělohlávek, MD, Ph.D.

Activities of the Department

- PET/CT diagnostics
- scintigraphic imaging including SPECT

Organizational units of the Department

- Nuclear Medicine outpatient unit
- Radiopharmaceutical laboratory

Basic data

The Department provides complementary services within the hospital, exclusively to outpatients.

Staff (as of December 31/12)

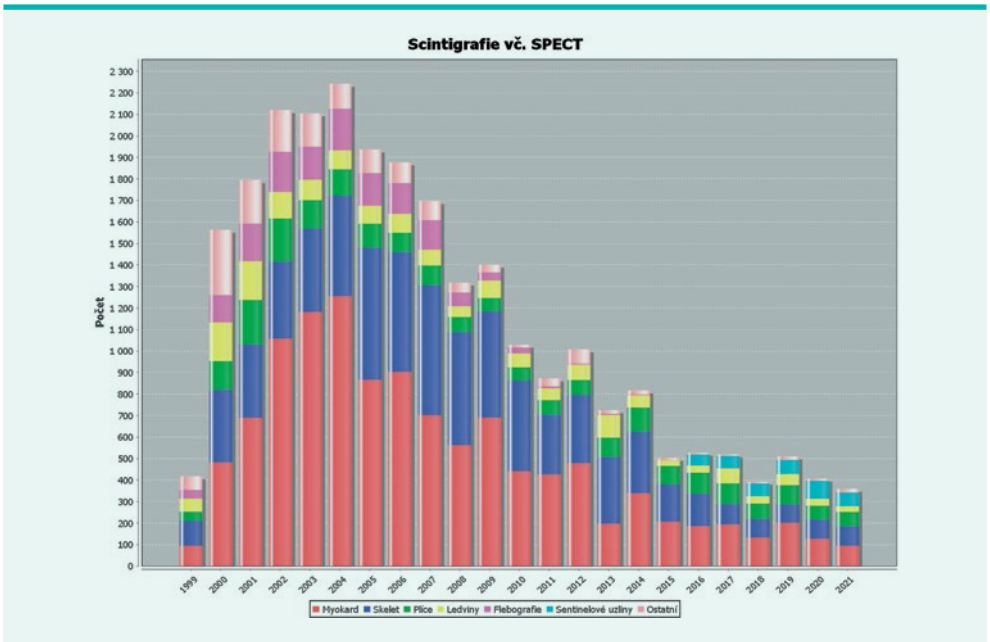
Position	Number of persons	Number of FTEs
Assistant (technical-administrative employee)	2	2.0
Pharmaceutical assistant	1	overtime work of an employee of the Department of Clinical Biochemistry, Haematology and Immunology
Physician	10	9.0
Specialist laboratory technician, preparation of medicines	1	overtime work of an employee of the Department of Clinical Biochemistry, Haematology and Immunology
Radiological assistant	8	8.0
Paramedical staff	1	1.0
General nursing staff	4	4.0

The services of the radiological physicist are provided by the Department of Medical Physics.

Performance overview

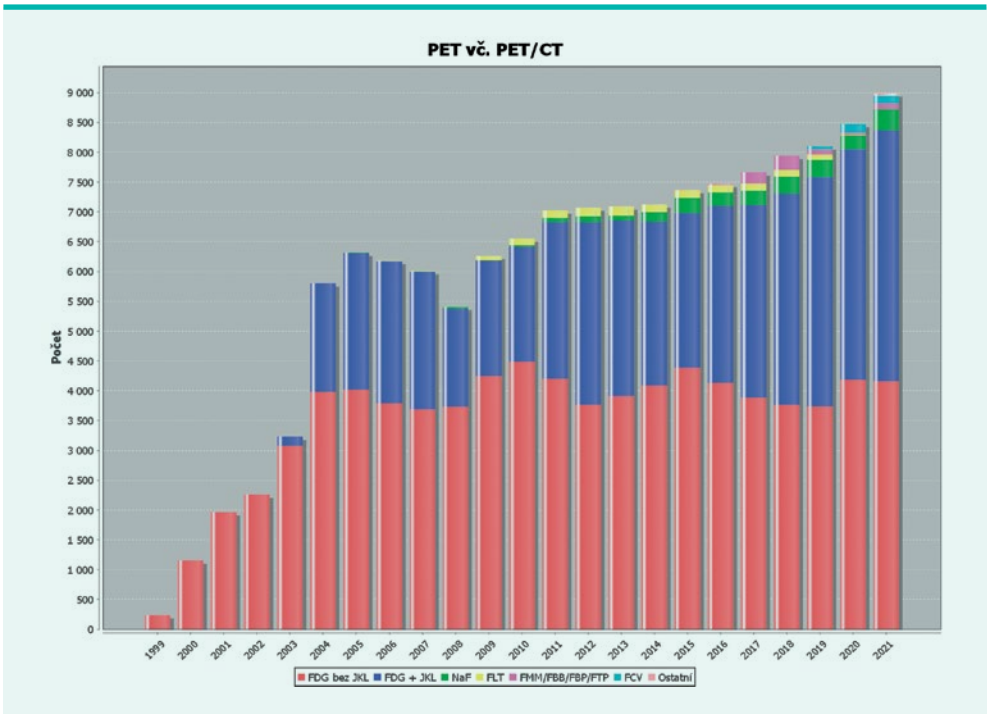
Scintigraphy

Number of examinations: 360 (decrease by 11.5% compared to the previous year). All examinations are performed using a dual-detector camera Siemens E. CAM.



Positron emission tomography

Number of examinations: 8,988 (an increase of 6% as compared to the preceding year). All examinations were performed on two Siemens Biograph hybrid PET/CT scanners, one of which was replaced in August by the state-of-the-art Vision 600 model.



Activity evaluation

- At the beginning of 2021, the hospital management set a plan to increase PET/CT production by 10%. For this purpose, the tabular capacity of the Department was increased by one physician, one receptionist and one radiological assistant. Within two years, i.e. by the end of 2021, this task has been achieved.
- The spring wave of the Covid-19 pandemic led to a decrease in interest in testing. Paradoxically, however, there was an increase in the workplace's production, as the freed capacity together with the extension of overtime Saturday operation helped to cover up the extensive downtime of another Prague PET workplace, which had long-term technical problems.
- PET/CT diagnostics managed to increase its already exceptionally high productivity by 6% year-on-year and again managed to slightly surpass the historical high of the previous year, with 8,988 examinations performed. Due to the good availability of the radiopharmaceutical fluorocholine from domestic production, PET/CT examination in prostate cancer in indications not covered by fluciclovine was introduced.
- In the field of conventional scintigraphic diagnostics, risk ergometric examinations were again significantly reduced due to anti-epidemic measures, so that the number of myocardial perfusion scintigraphies decreased by another 26% year-on-year. The number of preoperative sentinel node examinations decreased by 23% due to the reduction of the surgical programme.
- The operation of the site was significantly hampered throughout the 3rd quarter by the noisy excavation work accompanying the necessary waterproofing of the building. In August, operations were completely halted for 4 weeks due to the replacement of internal water and hot water pipes throughout the building. On that occasion, one of the PET/CT scanners was replaced and the reception area was renovated to reduce the risk of infection transmission. All this work was done in a record short time.
- The staffing situation at the Department was stable; the retirement of one physician was compensated by the extension of the physician's time after maternity leave. It was still not possible to fill the extended position of radiology assistant, without which such intensive, failure-free operation cannot be guaranteed in the long term. Fortunately, the low level of morbidity, thanks also to the anti-epidemic measures taken and the discipline of the staff, made it possible to maintain operations without unexpected reductions.
- In the past year, a new PET/CT scanner was tendered and installed. Despite its excellent imaging properties, it initially suffered from a number of malfunctions that greatly complicated operation. The tender for the chromatogram scanner has been completed, installed and commissioned. Preliminary market consultation prior to the acquisition of the PET/MRI scanner and the preparation of documents for the project documentation of the contemplated extension for PET/MRI were carried out.
- A regular tender for 99Mo/99mTc generators and for the supply of the sestamibi kit was implemented. An extraordinary tender for the supplier of the radiopharmaceutical Axumin was carried out due to a sudden change of ownership of the manufacturer.
- The share of the tendered items was 98% of the total financial volume of direct purchases at the Department of Nuclear Medicine; a negligible 2% of the remaining part consisted of price-regulated radiopharmaceuticals for scintigraphy that are unique on the market.
- The Department successfully passed an external clinical audit according to Act 373/2011 Coll. The Department as a whole has a certified system of quality management pursuant to ISO 9001 and a supervisory audit was successfully completed in the middle of the year. The Department, as part of the hospital, followed SAK accreditation standards.

Educational and other specialized activities

- Study visits for a number of experts are organised in the Department and consultation services are provided as part of the model project of the International Atomic Energy Agency (AIEA).
- 81 examinations were performed for 11 different clinical trials and several additional studies were contracted.

Development perspectives for 2022

- The plan is to make use of all technologies installed in the Department in the scope defined by the reimbursements received from healthcare insurance companies. In addition to this assignment, examinations for clinical trials will continue. Emphasis will be put on the quality and efficiency of the services provided.
- In the second half of the year, the PET Centre building will be insulated and the windows and interior lighting will be replaced. For this reason, a complete suspension of operations is tentatively planned for August.
- Subsequently, an extension and partial reconstruction of a part of the workplace should be implemented in order to expand the PET/MRI technology.
- The implementation of tenders for the supplier of PET/MRI scanner, radioactive phantoms and certification of the workplace according to ISO 9001:2015 is planned.
- Depending on the progress of the PET/MRI project, the staff will be expanded to include radiology assistants and physicians with experience in MRI.
- It is planned to extend the number of licenses for users of the existing syngo.via evaluation system and to upgrade it so that it is ready for the extension of PET/MRI operations.
- The introduction of PET/CT scanning of the parathyroid glands with fluorocholine is planned.
- QuaMan® system is to be connected to the new NIS and a new PACS is to be connected.
- A recertification audit of the Department in accordance with ISO 9001:2015 is planned for the middle of the year. In this context, a patient satisfaction survey and a referring physician satisfaction survey will be conducted.

Department of Clinical Biochemistry, Haematology and Immunology

Head of Department: Assoc. Prof. Miroslav Průcha, MD, Ph.D.

Sections of the Department

- Biochemistry
- IA Laboratory
- Haematology
- Blood bank
- Immunology
- Laboratory of Molecular Diagnostics

Staff (as of 31/12/2021)

(incl. part-time and employment contracts)

Number of physicians	10
Number of university graduates – paramedical staff	13
Number of medical staff	
laboratory technicians	33
nursing staff	7
paramedical staff	7
Number of other staff	4
Total number of employees	74

Activities of the Department

- The Department of Clinical Biochemistry, Haematology and Immunology performs routine and specialised examinations of laboratory parameters within Na Homolce Hospital and for contracted medical facilities in the following fields: clinical biochemistry and immunoassay, clinical haematology and blood transfusion service, clinical immunology and allergology, molecular genetic diagnostics and clinical pharmacology (including pharmacokinetic interpretation of measured drug concentrations). Collection of material from contracted healthcare facilities is secured.
- In critically ill patients, examination of selected parameters is performed directly at the bedside (POCT – point of care testing) and CRP examination in the company physician's surgery.
- The blood bank ensures the supply of blood and blood derivatives to hospital clinical departments.
- Due to the epidemic of Covid-19 disease, testing by antigen and PCR methods and determination of antibodies against Covid-19 in the blood are being carried out.
- The laboratory participates in clinical research projects.
- Department of Clinical Biochemistry, Haematology and Immunology participates with great success in the control cycles of the External quality assessment program.
- The laboratory obtained accreditation by Český institut pro akreditaci, o. p. s., in accordance with ČSN EN ISO 15189:2013.
- The physicians and university staff from the Department of Clinical Biochemistry, Haematology and Immunology provide advisory and consulting services in the relevant fields.
- The Department ensures the activities of the outpatient unit for disorders of lipid metabolism, haematological outpatient unit and the outpatient unit of immunology and allergology

Changes in 2021

- In 2021, the NHH Purchasing and Procurement Department issued a tender for a new Automatic Analytical System (AAS) based on the technical specification of the Department of Clinical Biochemistry, Haematology and Immunology. No winner has yet been selected in the AAS tender, and appeals are pending with the Office for the Protection of Competition. We expect the contract to be concluded in the first quarter of 2022, with the installation and commissioning of the AAS within 6 months of signing the contract.
- In 2021, the LIS OpenLims warehouse module became fully operational. Thanks to the connection to the economic section, in addition to the normal movement of goods at the Department of Clinical Biochemistry, Haematology and Immunology, economic indicators of reagent and consumable management can also be monitored. In particular, these are goods that are purchased under contracts with ongoing recharges according to the contractually agreed price for the examination performed.
- Accreditation from the Czech Accreditation Institute:
  - In the period from January to December 2021, 8 internal audits out of 8 planned were performed at the Department of Clinical Biochemistry, Haematology and Immunology. From these audits, three cards of non-conformities were issued, which were promptly resolved, and recommendations were defined, most of which have been accepted and fully or partially implemented in practice.
  - In April 2021, an extraordinary supervisory visit to the Immunology Department was carried out by correspondence with the Czech Accreditation Institute on the basis of the reported change of the Kryptor analyser. A new Certificate of Accreditation including an updated Annex to the Certificate No. 266/2021 dated 12/05/2021 was issued.
  - In November 2021, the Biochemistry, Haematology and Immunoanalytical laboratory (IA) departments received a regular surveillance visit from the Czech Accreditation Institute. In the case of haematology, this was a rescheduled visit from 2020, when the originally planned visit was postponed due to an emergency state. No non-compliance was identified in any section during the surveillance visit, and three recommendations were made, which the laboratory accepts and will focus on implementing into operations. Two opportunities for improvement were noted, which the laboratory accepts and incorporates into the system.
  - A new Certificate of Accreditation was issued including an updated Certificate Supplement No. 632/2021 dated 02/12/2021. The date of the next re-accreditation audit remains unchanged and is set on 30/05/2024.
- In 2021, laboratories of the Department of Clinical Biochemistry, Haematology and Immunology participated in the External Quality Assessment program organised by SEKK and Instand companies. The EHK covers the full range of methods applied for accreditation.
  - In the first half of 2021, the laboratory participated in the analysis of a total of 983 control samples with an overall success rate of 98.47%.
  - In the second half of 2021, the laboratory participated in the analysis of a total of 637 control samples with an overall success rate of 95.60%.
  - Unsuccessful results were addressed.
- Outpatient unit of the Department of Clinical Biochemistry, Haematology and Immunology
  - During 2021, changes were made to the use of some of outpatient units of the Department of Clinical Biochemistry, Haematology and Immunology and the outpatient units were relocated to newly renovated premises:
    - Metabolic Outpatient Unit: A650 (Monday, Tuesday), A651
    - Haematology Outpatient Unit: A650 (Wednesday to Friday), B413
    - Immunology Outpatient Unit: A621
  - From spring 2021, outpatient units gradually started to use the new NIS HOOD system, some of its functions were not yet operational by the end of 2021 (e.g. the application system)
- Personnel changes in the Department of Clinical Biochemistry, Haematology and Immunology Management in 2021:
- In March 2021, there was a change in the position of the Quality Manager of the Department of Clinical Biochemistry, Haematology and Immunology. Ing. Ladislava Dubská was replaced by Ing. Eva Drncová
- From 01/06/2021, new Chief Analyst of the Department of Clinical Biochemistry, Haematology and Immunology was appointed – Ing. Blanka Míková

Biochemistry

- Changes in medical equipment, new methods
  - In January 2021, the determination of IgG antibodies to SARS-Cov-2 by chemiluminescence on an Atellica analyser was introduced.
  - In February 2021, the determination of Interleukin 6 (IL-6) by chemiluminescence immunoassay in plasma on the Atellica analyser was introduced.
  - In May 2021, the Cobas e 411 analyser (Roche) was replaced by a new Cobas e 601 analyser (Roche). The change concerns the methods NT-proBNP, C-peptide, serum folate, RBC folate. None of the methods are accredited. In the future, methods for the determination of osteomarkers will be introduced.
  - In July 2021, the method for the determination of serum calprotectin was validated by the reagent manufacturer (Gentian company) on an Atellica analyser.
  - In September 2021, the Architect i2000 analyser (Abbott Laboratories) was replaced by the new Centaur XPT analyser (Siemens Healthcare). The change concerns methods for the determination of drug levels, ferritin, cortisol and holotranscobalamin (active B12). None of the methods are accredited.
  - POCT:
    - 10 ABR analysers ABL 825 Flex from Radiometer installed in the period April – June 2021, 1 original ABL815 remains (1x original ABL815 removed). 10x RapidPoint and 2x RapidLab taken away (supplied by Siemens)
    - New contract for reagents for Stat Strip Connectivity Meter Glu network glucose meters in March 2021
- Personnel Changes in the Management
- Without changes

IA Laboratory

- Changes in Medical Equipment, New Methods
  - As of January 2021, the second trimester screening tests for developmental birth defects (HCG, free estriol) have been cancelled due to lack of interest from referring physicians. Examination of HCG as a pregnancy hormone is available at the biochemistry laboratory.
  - In April 2021, the first trimester screening methods for developmental birth defects, free beta-HCG and PAPP-A were transferred to the Kryptor device in the Immunology Department. The Immunoanalytical laboratory (IA) uses only the instrumentation in the Immunology Unit, the system of sample reception, evaluation and distribution of results still remains the responsibility of the IA laboratory.
  - The Stratec SR300 semi-automatic analyser was decommissioned in May 2021.
  - In June 2021, the Centaur XP analyser was replaced by the Centaur XPT analyser, the spectrum of methods remained unchanged, in addition, thyroid antibodies were added to the instrument – anti-TPO and anti-hTg methods.
  - In June 2021, the Architect i1000 was replaced by an Alinity i analyser, the spectrum of methods was retained and the TRAb method was transferred to the instrument.
  - The CEA method was converted from the decommissioned Stratec SR300 analyser to manual processing from June 2021. The principle of the method (IRMA) was retained.
- Personnel Changes in the Management
  - Without changes

Haematology

- Changes in Medical Equipment
  - February 2021: Test 1BCL – sedimentation (variation)
  - April 2021: Multiplate – aggregometer (variation)
  - Since April 2021, a new method on coagulations – Fibrin/fibrinogen degradation products – has been introduced
  - As of September 2021, the sampling tube for antiplatelet therapy resistance testing – hirudin – has been changed
- Personnel Changes in the Management
  - On 04/01/2021, appointed to the position of Head Analyst of Haematology – RNDr. Zdeněk Tokár

Immunology

- Changes in Medical Equipment, New Methods
  - New Kryptor analyser from Thermo Fisher was installed in February 2021 (supplied by Lacomed)
  - New Optilite analyser from The Binding Site company installed in April 2021 for analysis of Ig,

acute phase proteins – FLC kappa and lambda, ASLO, RF (added in December 2021). The original one – BN Prospec (Siemens) was taken away.
  - New contract for reagents for allergy diagnostics (Phadia 250, Thermo Fisher, March 2021)
  - Installation of the new DynaBlot immunoblot analysis instrument (Dynex) in August 2021. Until now, all blot methods were done manually.
  - New methods: ANA blot, anti-myositis blot, ANCA profile (ELISA), cellular immunity against SARS CoV2 after vaccination (ELISA), determination of neutralising antibodies against SARS CoV2 virus (ELISA), determination of RF (Optilite immunoturbidimetry) and tetanic toxoid IgG (ELISA)
- Personnel Changes in the Management
  - On 07/06/2021, appointed to the position of deputy laboratory technician – Mgr. Jarmila Kempeová

Blood bank

- Changes in Medical Equipment
  - Newly tendered ORTHO Vision analysers in operation from October 2021 – replacement after contract expiry
  - New Methods Introduced:
    - Rh system antigen and Kell antigen testing
    - Identification of anti-erythrocyte antibodies
    - Anti-erythrocyte antibody titre testing
- Personnel Changes in the Management
  - Without changes

Laboratory of Molecular Diagnostics

- Changes in Medical Equipment
  - 2x RT PCRcycler mic (bms; AUS); 1x Zybio isolator
- New Methods Introduced:
  - Detection of VanA and VanB gene; resistance to Vancomycin
  - Detection of genetic material – Trichomonas vaginalis
  - Detection of genetic material – Treponema pallidum
  - Detection of genetic material – Legionella pneumophila
- Personnel Changes in the Management
  - On 04/01/2021, appointed to the position of section laboratory technician – Bc. Lucie Fischerová

Economic results for 2021

Since March 2021, the Department of Clinical Biochemistry, Haematology and Immunology's economic results have been affected by the epidemiological situation during the Covid-19 pandemic. The point production of the Department was met compared to the plan in points for outpatient care at 87%.

Total points for outpatient care – General Health Insurance Company, domestic

Period: 2021
Centre: 41 Department of Clinical Biochemistry, Haematology and Immunology
Grouper version: 000.0000

	Budget	Budget to date	Reality
Total	71,730,701	71,730,701	62,523,325
41 Department of Clinical Biochemistry, Haematology and Immunology	71,730,701	71,730,701	62,523,325
4140 Outpatient clinic	782,608	782,608	1,298,291
4141 Sampling point	0	0	1,239,682
4171 Biochemie	21,181,273	21,181,273	18,562,378
4172 Transfusion	1,153,686	1,153,686	524,735
4173 Haematology	6,511,640	6,511,640	7,338,716
4174 Immunology	17,646,289	17,646,289	14,514,001
4175 Liquorology	0	0	0
4176 Laboratory of Molecular Diagnostics/Genetics	6,853,653	6,853,653	2,615,031
4,177 RIA methods	17,601,552	17,601,552	16,430,491

Total points for outpatient care – not a General Health Insurance Company, domestic

Period: 2021
Centre: 41 Department of Clinical Biochemistry, Haematology and Immunology
Grouper version: 000.0000

	Budget	Budget to date	Reality
Total	52,984,713	52,984,713	45,851,199
41 Department of Clinical Biochemistry, Haematology and Immunology	52,984,713	52,984,713	45,851,199
4140 Outpatient clinic	616,220	616,220	1,074,919
4141 Sampling point	0	0	899,381
4171 Biochemie	14,478,442	14,478,442	12,959,457
4172 Transfusion	811,073	811,073	431,784
4173 Haematology	4,729,197	4,729,197	5,328,091
4174 Immunology	15,833,948	15,833,948	11,942,300
4175 Liquorology	0	0	0
4176 Laboratory of Molecular Diagnostics/Genetics	4,443,421	4,443,421	1,768,949
4,177 RIA methods	12,072,412	12,072,412	11,446,318

All reported points

Period: 2021

Centre: 41 Department of Clinical Biochemistry, Haematology and Immunology

Grouper version: 000.0000

	Budget	Budget to date	Reality
Total	0	0	173,539,389
41 Department of Clinical Biochemistry, Haematology and Immunology	0	0	173,539,389
4140 Outpatient clinic	0	0	2,433,635
4141 Sampling point	0	0	2,184,083
4171 Biochemie	0	0	75,764,972
4172 Transfusion	0	0	5,103,621
4173 Haematology	0	0	22,987,006
4174 Immunology	0	0	30,602,258
4175 Liquorology	0	0	0
4176 Laboratory of Molecular Diagnostics/Genetics	0	0	4,915,947
4,177 RIA methods	0	0	29,547,867

Comparison of point production with previous years:

	2017	2018	2019	2020	2021
Outpatient Unit	1,289,192	1,245,430	1,233,129	1,864,141	2,433,635
Sampling point	–	–	–	448,884	2,184,083
Biochemistry	65,857,013	68,306,142	70,008,298	72,611,007	75,764,972
Haematology	20,457,921	20,250,766	21,377,402	20,043,854	22,987,006
Blood bank	4,984,251	4,998,718	6,106,026	8,330,629	5,103,621
Immunology	39,902,995	36,093,256	36,664,333	38,692,073	30,602,258
Immunoassay laboratory	–	–	31,568,064	29,932,009	29,547,867
Laboratory of Molecular Diagnostics	34,105,350	12,293,450	10,916,981	6,852,105	4,915,947
Total	166,596,722	143,187,762	177,874,233	176,774,702	173,539,389

Outlook for 2022

- Bring the new NIS HOOD with integrated request system into full use, replacing the existing Labrequest
- Bring the new automatic analysis line into full use
- Prepare for surveillance visits and audits from the Czech Accreditation Institute
- Continue fulfilling research projects within research and science support at Na Homolce Hospital
- Expand the diagnostic spectrum of examinations with an emphasis on molecular genetics

Educational and other specialised activities

- **Nationwide training and reference activities**: Training centre of the subdepartment of the Institute for Further Training in Healthcare for clinical immunology and allergy; training centre of the Department of Clinical Biochemistry of the Institute for Further Training in Healthcare for automated urine sediment analysis systems; centre for further training in the field of hereditary metabolic disorders

and lipid metabolism disorders; Ph.D. training centre; participation in the training provided at the Immunology Institute of the 2nd School of Medicine, Charles University

- **Membership of professional associations**: The Czech Medical Association of J. E. Purkyně, Czech Society of Clinical Biochemistry, Czech Society of Haematology, Czech Society for Blood Transfusion Medicine, Czech Society for Thrombosis and Haemostasis, Czech Society for Atherosclerosis, Czech Society for Allergy and Clinical Immunology, Czech Immunological Society, Czech Paediatric Society, European Atherosclerotic Society, Immunocompromised Host Society, Society for Study of Inborn Errors of Metabolism, American Association of Clinical Chemistry, International Federation of Clinical Chemistry, International Society for Newborn Screening, European Society for Newborn Screening
- **Membership of editorial boards of professional journals**: Klinická biochemie a metabolismus (Prof. Hyánek), Transfusion and Haematology Today (MUDr. MD).

Prague, 10/02/2022
Elaborated by: MUDr. Jana Dvořáková, Deputy Head of the Department of Clinical Biochemistry, Haematology and Immunology

Department of Clinical Microbiology and Antibiotic Centre

Head of Department: Jan Kubele, MD

Staff

Physician with specialised competence in medical microbiology	3
Physician with specialised competence in infectious medicine	1
University professional in laboratory methods	1
Medical Laboratory Specialist	10
Medical Laboratory Technician	6
Paramedical staff	3
Assistants	2

Clients

- Na Homolce Hospital
- External clients

Number of external healthcare facilities and surgeries

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Number of facilities	101	103	95	97	89	76	77	74	55	64	54

Laboratory diagnostics

Requests for microbiology examinations for Na Homolce Hospital

Year	Bacteriology	Serology	Genetic testing (extrahuman genome, COVID)	Smears from the environment	Total
2011	55,648	11,835	105	NA	67,586
2012	68,246	13,973	174	NA	82,393
2013	71,966	14,169	130	NA	86,265
2014	57,130	11,474	117	NA	68,721
2015	55,921	10,949	163	NA	67,033
2016	57,478	10,368	227	NA	68,070
2017	59,250	10,754	260	1,912	72,176
2018	59,358	13,031	273	2,586	75,248
2019	58,185	11,608	378	2,254	72,245
2020	50,823	10,885	13,720	1,947	77,375
2021	55,964	15,916	14,658	1,893	86,538

Requests for Microbiology Examinations for External Clients

Year	Bacteriology	Serology	Genetic testing (extrahuman genome, COVID)	Total
2011	17,804	3,409	0	21,213
2012	25,144	3,381	0	28,525
2013	23,218	3,261	0	26,479
2014	17,353	2,376	0	19,729
2015	15,738	2,447	0	18,185
2016	15,509	2,391	0	17,900
2017	13,012	2,216	0	15,228
2018	11,631	1,964	2	13,597
2019	10,819	1,684	7	12,510
2020	7,215	1,262	72	8,627
2021	6,190	1,792	35	8,017

Requests for microbiological tests – total

Year	Bacteriology	Serology	Genetic testing (extrahuman genome, COVID)	Smears from the environment	Total
2011	73,453	15,257	105	NA	88,710
2012	93,396	17,373	174	NA	110,769
2013	95,189	17,451	130	NA	112,640
2014	74,502	13,935	117	NA	88,437
2015	71,659	13,403	163	NA	85,062
2016	72,994	12,770	227	NA	85,764
2017	72,263	12,772	260	1,912	87,144
2018	71,010	15,024	275	2,586	88,620
2019	69,382	13,292	385	2,254	84,928
2020	58,038	12,147	13,792	1,947	85,924
2021	62,154	17,708	14,693	1,893	96,448

Antibiotic Centre

Consultations provided to inpatients of Na Homolce Hospital

Year	Number of consultations	Consultation at the bed / week (Ø selected ICU 3 times a week)	Number of patients consulted (total number)	Average number of consultations per patient
2011	8,837	49	2,266	3.9
2012	9,280	51	2,782	3.4
2013	10,021	55	3,004	3.4
2014	10,215	54	2,478	4.1

2015	10,599	54	2,654	4.0
2016	11,388	58	2,798	4.1
2017	10,885	55	2,879	3.8
2018	11,027	58	2,971	3.7
2019	11,038	56	3,146	3.5
2020	10,608	57	2,782	3.8
2021	10,113	64	2,659	3.8

Public activities

- The National Reference Centre for Infections Associated with Healthcare of the National Institute of Public Health: The Department collaborates with the centre.
- Working group for antibiotic resistance monitoring: The Department is part of a network of laboratories monitoring antibiotic resistance in the Czech Republic.
- National Reference Laboratories of the National Institute of Public Health (NIPH): The Department cooperates and participates in national surveillance.

Detailed information on activities and services of the Department of Clinical Microbiology and Antibiotic Centre

Laboratory diagnostics:

- During the Covid-19 pandemic, a very challenging implementation of a new Laboratory Information System (LIS) and, in collaboration with the IT department, the follow-up to the NIS (Hood) was prepared and launched. Furthermore, the cooperation with the Medical Genetics Department was deepened, including the recording of results in the new LIS.
- The implementation of LIS has enabled the completion of the implementation of the EUCAST methodology including new breakpoints for susceptibility assessment of microorganisms. It was also used to determine the sensitivity of selected bacterial species to antibiotics after 4 or 6 hours. Together with the early identification of MALDI-TOF, it was possible to improve and increase the effectiveness of antibiotic therapy for severe conditions as early as the day of signalling a positive haemoculture. Thanks to the extended standard working hours on weekdays (until 6 pm) and the 24-hour telephone consultation service, the attending physician can receive essential information for the patient's therapy.
- Diagnostics has been expanded to include routinely available targeted screening for respiratory agents, including deepened cooperation with a specialised mycology laboratory.
- In collaboration with the Infection Control Team, a comprehensive screening of vancomycin-resistant enterococci (VRE) and carbapenem-resistant gram-negative rods (CRE) was introduced, including improved identification of carbapenemase-producing enterobacteria (CPE).
- The Department of Clinical Microbiology and Antibiotic Centre in collaboration with nurses for infection control, ensures the pre-analytical phase testing for SARS-CoV 2 and other genomic testing. In cooperation with the Molecular Genetics Laboratory, we perform the interpretation and subsequent distribution of the results.
- A comprehensive serological diagnostics of Covid-19 disease antibodies and a method for determining N antigen from blood were introduced. Together with up-to-date professional information, individual assessment of the condition, medical history and indications for therapy are possible.
- At the end of the year, a new automated analyser was installed, which will enable the expansion of the infectious serology tests offered in the following year.
- In collaboration with colleagues from NHH, we were able to organise and conduct a seroprevalence of staff prior to Covid vaccination and enable individualised recommendations.

Antibiotic Centre:

- The number of consultations and patients consulted in 2021 was comparable to the previous year. There has been an increase in the number of consultations in intensive care patients due to the Covid-19 pandemic and the expansion of ICU consultations.
- In 2021, regular consultation activities in the vascular surgery and cardiology ICU were expanded. As a consequence of the pandemic, a significantly higher incidence of imports of multidrug-resistant organisms, in particular vancomycin-resistant enterococci and carbapenem-resistant enterobacteriaceae, and imports of Cl. difficile infections, was observed.
- No significant epidemiological changes in the resistance of infectious agents arising in NHH were observed. The exception is the occurrence of vacomycin-resistant enterococci (VRE), where the number of colonised patients continued to increase compared to previous years. Most of these patients were imported from other health care facilities or from a community service centre. Documents were prepared for the analysis of possible nosocomial transmissions in the National Institute of Public Health.
- Close collaboration with the Clinical Pharmacy Department was supported by individualisation and monitoring of ABX therapy. Flucloxacillin was introduced into the therapy of staphylococcal infections and the preparation of internal recommendations for the indication of aminoglycosides and glycopeptides was started.

Infection prevention and control:

- In 2021, the hospital faced the ongoing implications of the reorganisation of care during the Covid-19 pandemic. Working with the Infection Control Team nurses, the hospital expanded the isolation and quarantine agenda for NHH patients and staff.
- Expert support for the Pandemic Team and Infection Control Team meetings is continuously provided by monitoring the epidemiological situation and the development of Covid-19 disease, and the Department is involved in the implementation of procedures and measures related to Covid-19 in NHH.
- In 2021, there is an increased overall incidence of nosocomial bloodstream infections compared to 2015-2019. However, the number remains below 2 cases per 1000 treatment days. A significant influencing factor is the consequences of the Covid-19 pandemic.
- The assessment of trends in each category is subject to ongoing analysis using the same methodology. Trends are regularly reported by the Infection Control Team to the appropriate departments and appropriate measures are taken.
- The number of primary catheter-related nosocomial infections of the bloodstream continues to increase, with secondary infections showing this trend, particularly in the segment of surgical site infections. It is partly related to expanded surgery and a higher number of higher-risk procedures in the General Surgery Department, where a prophylaxis audit was conducted and recommended prophylaxis procedures were developed in collaboration.
- The number of patients colonised or infected by MRSA has decreased compared to the previous year, the number of MRSA transmissions during hospitalisation at Na Homolce Hospital also decreased and is generally low. The number of infections caused by Clostridioides difficile was higher compared to previous years due to imported cases. The incidence of intercepted colonisation or infections caused by CPE remained sporadic in NHH during the pandemic, which is a testament to the quality implementation of infection control, nursing and barrier care processes.

Operational and economic parameters:

- In 2021, the Department of Clinical Microbiology and Antibiotic Centre managed to stabilise its staffing by training 2 physicians with specialised competence in the field of medical microbiology and 1 physician with specialised competence in the field of infectious medicine.
- The implementation of LIS is associated with a complete revision of reporting and the possibility of better control of the allocated funds. Progressive tenders further reduce costs.

Certification and accreditation:

- The Department received accreditation under the requirements of the ČSN EN ISO 15189:2013 standard and holds an accreditation certificate for examinations in the field of clinical microbiology.

External activities:

- The Department cooperates with the National Reference Centre for Infections associated with healthcare within the National Institute of Public Health (National Reference Centre fro Healthcare-Associated Infections, National Institute of Public Health, NRC HAI NIPH). In 2021, this included collaboration on the development of the planned European Point Prevalence Study (PPS), recommended infection prevention and control practices, and with the local WHO office and national recommendations for surveillance of nosocomial bloodstream infections. The staff of the Department participates actively in professional courses and expert groups of the European Centre for Disease Control and Prevention (ECDC, ARHAI). The Department participates in the training of infection control nurses and physicians organised by the National Reference Centre fro Healthcare-Associated Infections, National Institute of Public Health, NRC HAI NIPH.
- The Department cooperates with the National Reference Laboratory for Antibiotics of the National Institute of Public Health and in 2021 it again participated in the Respiratory Study. The Department participates in the EARS-Net (European Antimicrobial Resistance Surveillance Network) and HAI-Net (Healthcare-Associated Infections Surveillance Network) programs, which are organised by the ECDC. The Department participates in the Euro-GASP program, as well as in the Surveillance program for Gonococcus antimicrobial resistance organised by the European Centre for Disease Prevention and Control (ECDC, Solna).
- The Department cooperates with the Higher Nursing School in Prague at Alšovo nábřeží in Prague in providing training to laboratory technicians.
- The staff of the Department is actively involved in lecturing activities of professional societies and teaching courses of undergraduate and postgraduate education.

Staff Publications for 2021:

DLOUHÝ, P. – ŠTEFAN, M. – CHRDLE, A. and BARTOŠ, H. Manual for Covid Wards Physicians. Clinical microbiology and Infectious Medicine. 2021, 27(2), pp. 41–46. ISSN 1211-264X.
CHRDLE, A. – DLOUHÝ, P. and ŠTEFAN, M. Covid-19: Diagnostics and Treatment Outside the Hospital. Clinical microbiology and Infectious Medicine. 2021, 27(2), pp. 36–40. ISSN 1211-264X.
ŠTEFAN, M. – CHRDLE, A. – HUSA, P. – BENEŠ, J. and DLOUHÝ, P. Covid-19: Diagnostics and Treatment. Clinical microbiology and Infectious Medicine. 2021, 27(2), pp. 61–87. ISSN 1211-264X
ŠTEFAN, M. – DLOUHÝ, P. and BEZDÍČKOVÁ, L. Vaccination Against Covid-19. Clinical Microbiology and Infectious Medicine. 2021, 27(2), pp. 49–57. ISSN 1211-264X.

Department of Pathology

Head of Department: Martin Syrůček, MD

Activities of the Department

The Department carries out all bioptic and cytological diagnostics within Na Homolce Hospital and, in cooperation with other laboratories providing complementary services, provides some bioptic and cytological diagnoses to selected private and state healthcare facilities in Prague. Recently, consultations (second reading) of diagnostically difficult neuropathological biopsies for departments of pathology in the entire country have been provided. In addition, the Department is in charge of necropsy activity (autopsies), including organisational services when delivering bodies to the funeral service. The Department organises clinical pathology workshops with the analysis of selected autopsies and biopsies for individual clinical departments in order to increase the quality of the medical care provided.

Organisational units of the Department

The Department performs its activities as a whole and is not comprised of individual organisational units or cost centres. The newly reconstructed premises are, however, divided into a histology and cytology laboratory and a special methods laboratory (immunohistochemistry).

Basic data

Staff

- 4 independently operating physicians working full-time and one physician with 0.5 FTE and one physician with 0.8 FTE
- 6 full-time and 2 part-time laboratory assistants
- 1 autopsy technician working full-time
- 2 secretaries (assistants) working full-time
- 1 quality manager in charge of the requirements of the Department in connection with JCI accreditation processes and ISO 15189

Premises

The division and equipment of the Department of Pathology comply with the requirements of ISO 15189. They include:

- administrative section with 6 offices for physicians, one office for the senior laboratory technician and quality manager, administrative offices, rooms for employees, changing rooms, storerooms for preparations and workshop rooms,
- the autopsy unit with a dissection room, preparation rooms and cooling equipment with 20 units for the deceased (these premises are separated by a sanitary filter),
- laboratory premises (also separated by a sanitary filter) with 6 rooms – histology laboratory, cytology laboratory, special methods laboratory, laboratory for cutting materials fixed in formol-saline, laboratory for cutting materials using microtomes, and a cytology screening room.

Performance overview

Biopsy diagnostics

	2009	2011	2012	2014	2015	2016	2017	2019	2020	2021
Number of slides	58,429	61,631	65,890	63,972	65,489	61,401	64,155	62,244	57,366	57,415

Cytological diagnostics

	2009	2012	2014	2015	2016	2017	2019	2020	2021
Number of examinations	2,738	2,205	1,993	1,992	2,249	2,152	2,155	2,091	1,687
Number of slides	6,214	4,932	4,365	4,392	5,191	4,589	4,044	4,158	2,596
BAL (bronchoalveolar lavage)	187	162	121	107	114	123	200	174	137

In 2021, the number of biopsy examinations remains at the same level, while the number of cytological examinations has slightly decreased compared to previous years. In 2021, the Department laboratory increased the number of immunohistochemistry examinations, due to the complicated diagnostics of the tested samples and the necessity to increase the accuracy of tumour lesion classification.

Autopsy activities

	2009	2014	2015	2016	2017	2018	2019	2020	2021
Number of deceased	270	225	196	233	226	239	240	240	274
Number of autopsies	154	123	122	136	121	122	121	93	118

The autopsy rate for 2021 amounts to 43%.

Workshops

In 2021, the physicians of the Department attended 141 clinicopathologic conferences, where 17 autopsy and 880 biopsy cases were discussed.

	2005	2009	2015	2016	2017	2018	2019	2020	2021
Number of workshops	127	85	95	94	114	139	126	120	141
Number of autopsy cases	65	20	21	19	26	18	17	12	17
Number of biopsy cases	377	684	753	701	692	901	775	887	880

For many years, in addition to clinical and pathological workshops, we organise regular weekly multidisciplinary mammology workshops with the attendance of a surgeon, radiologist and oncologist, focused on the analysis of biopsy examinations based on the clinical picture, together with analysis of therapeutic and prognostic outlooks. Workshops are also organised once a week or once every two weeks in cooperation with the ENT Department and clinical and pathological oncology workshops with the Department of General Surgery take place once a week. Regularly once a week, the staff participate in neuro-oncological workshops with physicians from neurosciences, oncologists from the Motol University Hospital and physicians from the Department of Radiodiagnostics, to discuss all biopsy cases from the preceding period. Workshops with other specialisations are organised as needed, approximately

twice a year, clinical pathological workshops together with the Department of Cardiac Surgery are organised once a month on a regular basis. These workshops are part of the further training program of clinical departments, aimed at increasing the quality required under the accreditation standards.

Significant changes and events

- ČIA ISO accreditation: in November 2021, the Czech Accreditation Institute successfully conducted a monitoring visit as part of the extension of the accreditation, which is necessary to ensure the proper operation of the Department of Pathology.
- SAK accreditation: The Department of Pathology as part of Na Homolce Hospital participated in successful accreditation by SAK accreditation in January 2020.
- External quality assessment: Since 2011, the pathology laboratory has participated in external quality assessment in cooperation with the contractual company, SEKK spol. s.r.o. The Department of Pathology obtained the certificate. Further assessment is performed by means of sent consultations and interlaboratory comparisons.
- As part of the Centre for Neuro-Oncology section of the Czech Society for Oncology of the Czech Medical Association of J. E. Purkyně, the Department performs biobanking of brain tumours for research purposes.
- The Department of Pathology has the accreditation for the teaching program of medical specialities in the field of pathology from the Czech Ministry of Health.
- The Department of Pathology considers the transition of the normal operations of the Department to the new information system in both biopsy and necropsy operations to be a relatively significant change.

Development perspectives for 2022

- We will maintain and further improve the standard of bioptic diagnostics and clinical and pathological workshops.
- The range of immunohistochemical antibodies has been extended according to the needs of individual hospital departments. We perform most immunohistochemical staining on a semi-automated device – improving and accelerating the diagnostics of tumour and non-tumour lesions.

Section for Nursing Care

The Section for Nursing Care focuses on the methodical management and professional management of nursing care in NHH. These include the Departments of Nutritional Therapy, Central Sterilisation, Health and Social Care, and the Department of Documentation and Hospital Hygiene.

The year 2021 was accompanied by epidemiological measures which, as in the previous year, required rapid organisational changes.

At the beginning of the year, our hospital joined the vaccination against Covid-19 and very quickly built a vaccination centre for the general public in the convention centre. We have re-opened the Covid Units in the Department of Gynaecology, Department of Anaesthesiology and Reanimation and ENT to be ready to receive Covid positive patients at all times.

We used the experience gained last year, so we proceeded efficiently and with confidence. At the end of the year, we also assembled a team and prepared the facilities for the administration of monoclonal antibodies.

The Infection Control Department played a crucial role in the Covid period, coordinating testing of patients and staff, ensuring the distribution of PPE and overseeing compliance with the hospital's hygiene regimes.

Despite all the care for Covid positive patients, we continue to provide high quality and safe care to all patients within each department.

The year 2021 was rich in new projects:

We have introduced the DOCTIS ordering system, which makes ordering of medical supplies more transparent, serves as an internal control tool, and above all is another step towards the computerisation of administrative processes in the hospital.

Another major project is the new hospital system HOOD, of which the electronic nursing documentation is an integral part as an essential tool for nursing care. A perfect record of all interventions and nursing plan forms the basis for quality and safe care.

Thanks to the new information system, we not only meet the requirements of national standards and legislation, but we can better collect, process and evaluate data that serve as quality indicators for nursing research and statistics, etc. A new long-term project of last year is the Support for the education of nursing school students, which aims to enrich nurses' education with practical skills, motivate nurses to work in the hospital and stabilise the non-medical health professions in the long term.

In September, we opened the Teaching and Training Centre in our hospital in the presence of representatives of the 3rd Faculty of Medicine of Charles University – MUDr. David Marx, Ph.D. and PhDr. Hana Svobodová, Ph.D. From the beginning of the 2021/2022 school year, students from the 3rd Faculty of Medicine of Charles University and the Duškova Medical College are being trained here. In the training centre, students prepare for bedside work under the supervision of a mentor. The students' professional practice then continues in the departments where they are professionally guided by our trained mentors.

The newly built teaching and training centre also serves for internal teaching, especially for training courses for our healthcare professionals.

We also continue to hold an Open Day for medical school students, who naturally get to know the medical environment. The programme is always prepared according to the requirements and wishes of the school in such a way as to be most beneficial and at the same time not to disrupt the running of individual departments.

We undertake all such actions with the aim of contributing to the quality education of future health professionals, or to educate new colleagues, and thus support the staff stability of the non-medical health professions.

In order to maintain the high qualifications of our existing non-medical health personnel, we offer continuing education opportunities in the hospital field to enhance their knowledge and skills.

The Intensive Care Medicine in Practice conference on 6 October 2021 was a great success, where, in addition to expert lectures, the launch of a new updated edition of the book Nursing in Intensive Care by our colleague Gabriela Kapounová took place, which is a fundamental teaching tool not only for nurses in intensive care, but also in other disciplines. The book was launched by the hospital director MUDr. Petr Polouček, MBA and psychiatrist MUDr. Radkin Honzák, who also gave one of the lectures at the conference.

We are also making progress in the development of palliative medicine. The Palliative Team works under the expert leadership of MUDr. Ondřej Kopecký from the General University Hospital in Prague. This places us among other health care facilities that provide not only quality professional care, but also social, palliative and spiritual care. We strive to be of the utmost help to patients with serious diagnoses and their families in their bio-psycho-social and spiritual needs.

In order to prepare the NHH healthcare team for this care, the 3rd ELNEC communication course was held, which is conducted in the spirit of "nurses to nurses" and focused on the topic of providing palliative care in a comprehensive concept.

Another step to improve the quality of nursing care was a professional course Dialysis in Practice, where a team of nurses from the ICU Department improved and deepened their skills and abilities in caring for dialysis patients.

We are constantly striving to improve patient care with the help of quality, erudite nurses. We try to positively motivate the staff of the non-medical health professions not only through friendly communication, but also through employee bonuses, and we do not forget to thank them on the occasion of World Nurses' Day.

All of our actions and activities in nursing care are directed towards meeting nursing goals and maintaining quality standards to provide safe, quality care based on quality standards. Of course, it is also necessary to manage the current epidemiological situation associated with many organisational changes.

Department of Biomedical Engineering

Head of Department: Miroslav Halíř, MSc.

Activities of the Department

The main task of the Department is to ensure the operation and servicing of medical equipment and measuring instruments at Na Homolce Hospital. Other activities include monitoring new trends in biomedicine and of technical documents for tenders for new medical device equipment. The Department also prepares applications to commission for the assessment of the deployment of medical instrument funds from the Czech Ministry of Health and applications for grants. The Department of Biomedical Engineering at Na Homolce Hospital is an accredited facility of the Czech Ministry of Health for postgraduate teaching of the Institute for Further Training in Healthcare, including specialisations in biomedical engineering in the Czech Republic.

Prevention and Maintenance Section

It provides preventive safety checks of medical equipment, as provided for by Act No. 89/2021 Coll., on Medical Devices and Act No. 268/2014 Coll., on In Vitro Diagnostic Medical Devices, as amended, as well as SAK standards. It carries out regular internal maintenance, ensures timely prevention and servicing by external equipment providers and keeps documentation on all medical devices. It also provides professional assistance in introduction of new medical technology, monitors progress in medical technology, provides navigation systems for neurosurgery and autotransfusion for vascular surgery. It also cooperates with clinical departments in the preparation of technical specifications for public contracts and checks the tender documentation and tenders for the Department of Procurement and Public Contracts. It takes over the gained medical equipment and provides instruction to the personnel operating the medical equipment. The Department is managed by Mgr. Ondřej Zeman.

Metrology Section

This section makes sure that the metrology standards at Na Homolce Hospital comply with Act No. 505/1990 Coll., on Metrology, as amended, and the related metrology regulations. The above legislation requirements are an essential part of the Metrology Order directive, which stipulates the responsibilities, rights and obligations of employees in the use of measuring instruments and metrology safety with regard to the accuracy and reliability of the measurements of all measuring instruments in all activities of the hospital. The Metrology Section carries out general maintenance and internal calibration of instruments measuring temperature, pressure, humidity and time and ensures the external calibration of etalons and working instruments measuring weight, length and time. It also organises external official verification of devices measuring temperature and weight and eye tonometers. The Authorised Metrology Centre is an essential part of the Metrology Section and provides official verification of the measuring instruments for indirect measurement of pressure – tonometers, within the scope of Decision No. 61/2000 and Authorisation Conditions, Ref. No. 930/00/20 of the Office for Standards, Metrology and Testing. The head of the section is Zdeněk Malý.

Changes / new events in the previous year

- The Department of Biomedical Engineering continued to be intensively involved in the emergency management of the Covid-19 pandemic.
- From the end of 2021, the Biomedical Engineering Department will now fall under the Medical Care Management Department.

SCIENTIFIC AND RESEARCH ACTIVITIES OF THE HOSPITAL

Na Homolce Hospital has fulfilled the definition of an organisation for research and knowledge dissemination according to Commission Regulation (EU) No. 651/2014, Art. 2(83), and has been included on the list of research organisations kept by the Ministry of Education, Youth and Sport on the basis of Section 33a of Act No. 130/2002 Coll., on Research and Development Support.
Research and development at Na Homolce Hospital are supported by means of combined financing – institutional support from the Czech Ministry of Health and targeted support grants which are carried out both by individual departments of the hospital and in cooperation with a number of excellent research facilities across the entire country. The majority of research teams have also been involved in clinical studies over a long period of time, with the Cardiac Centre having the largest share in these studies.
Administrative support for grant projects and clinical studies is provided by the Department of Science and Research, which also includes the Medical Library.

Grant projects

In 2021, Na Homolce Hospital managed a total of 67 grant projects, of which 60 were supported by the institutional support of the Czech Ministry of Health, and 7 targeted support grants were supported by the Agency for Medical Research of the Czech Ministry of Health.

Grants from the Czech Ministry of Health

- In 2021, the hospital received institutional support for the long-term conceptual development of the research organisation, based on the decision of the Czech Ministry of Health (Decision No. 1 RVO-NNH/2021). The support was used and distributed based on the functional system of internal grants, their assessment by a specialised commission and approval by the Scientific Board and the hospital Director.
- In line with the guidelines of the Czech Ministry of Health, 1 research projects which started in 2014, 4 projects initiated in 2015, 7 projects initiated in 2016, 8 projects initiated in 2017, 9 projects initiated in 2018, 11 projects initiated in 2019, 17 projects initiated in 2020 and 3 projects in 2021 were supported by the institutional support of the Czech Ministry of Health for 2021. Na Homolce Hospital again supported a large spectrum of research projects in order to maintain the plan of a broader research basis for the coming years which fully corresponds with the method of evaluation by research institutions used for providing grants. The implementation of new research projects started in May 2021 and continues at present.

Special-purpose grants of the Agency for Medical Research:

Department	Project title	Allocated number	Grant provider (main beneficiary)
Cardiology	Extracorporeal membrane oxygenation in the treatment of cardiogenic shock (study ECMO-CS)	15-27994A	AZV MZ ČR (NNH)
Radiodiagnostics	Detection of gadolinium retention dynamics in the brain after application of contrast agents by altering T1 and T2 relaxation times	NV18-04-00457	AZV MZ ČR (NNH)
Radiodiagnostics	Primary progressive aphasia – clinical, MRI and structural correlations. Prospective multicentre study	NV18-04-00346	AZV MZ ČR (1st School of Medicine)
Vascular Surgery	Application of amniotic membrane in the treatment of long-term non-healing wounds	NV18-08-00106	AZV MZ ČR (1st School of Medicine)

Department	Project title	Allocated number	Grant provider (main beneficiary)
Radiodiagnostics	Overlapping of neurodegenerative dementias and their clinicopathological correlations: a prospective-retrospective multicentre study	NV19-04-00090	AZV MZ ČR (Thomayer Hospital)
Stereotactic and Radiation Neurosurgery	Clinical, imaging and biological predictors of the effects of deep brain stimulation in Parkinson's disease	NV19-04-00233	AZV MZ ČR (1st School of Medicine)
Cardiology	Evaluation of the significance of right-to-left shunt in patients with PFO after suffered systemic embolism	NU20-02-00310	AZV MZ ČR (1st School of Medicine)

Clinical studies

In 2021, a total of 112 active clinical studies/partial health services were recorded, of which 12 clinical studies were completed during 2021.

Number of studies performed in 2021 – by subject and department:

Clinical studies	Medical devices	Medicines	Partial health services	Total number	
Cardiology	59	1	1	61	54%
Cardiac surgery	3	0	0	3	3%
Neurology	0	1	2	3	3%
Oncology	0	3	0	3	3%
Radiodiagnostics	2	0	3	5	4%
Nuclear medicine / PET	0	0	32	32	28%
Neurosurgery	1	1	0	2	2%
Pharmacy	0	0	1	1	1%
Department of Clinical Biochemistry, Haematology and Immunology	0	0	1	1	1%
Internal medicine	0	1	0	1	1%
Total	**65**	**7**	**40**	**112**	**100%**

Performed Audits of Clinical Studies

There were no audits in 2021 of the clinical studies by the State Institute for Drug Control – SÚKL.

Summary

Basic breakdown of research projects in Na Homolce Hospital in 2021:

Scientific project type	Subject	Number
Clinical studies	Medical devices	65
	Medicines	7
	Partial health services for external researcher	40
research grants	Institutional support (internal grants)	60
	Special purpose support (external grants)	7
Research projects – total		**179**

PUBLICATIONS IN 2021

Publications Co-Authored by the Staff of Na Homolce Hospital

Foreign

Articles from Journals with IF

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2) BANACH, M. – PENSON, P. – VRABLÍK, M. – BUNC, M. – DYRBUS, K. – FEDACKO, J. – GAITA, D. – GIERLOTKA, M. – JARAI, Z. – MAGDA, S. – MARGETIC, E. – MARGOCZY, R. – DURAK-NALBANTIC, A. – OŠŤÁDAL, P. – PELLA, D. – TRBUSIC, M. – UDROIU, C. – VLACHOPOULOS, C. – VULIC, D. – FRAS, Z. – DUDEK, D. a REINER, Z. Optimal Use of Lipid-Lowering Therapy after Acute Coronary Syndromes: A Position Paper endorsed by the International Lipid Expert Panel (ILEP). *Pharmacological research*. 2021, 166 (April), 12 p. ISSN 1043-6618.
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QUALITY AND SAFETY

International JCI accreditation

Organization Accredited
by Joint Commision International

The long-term quality of healthcare, the safety of patients and the staff working at Na Homolce Hospital are the main pillars of its stability. From 2005 to 2020, Na Homolce Hospital held the Joint Commission International (JCI).

In 2019, the hospital began preparations for domestic accreditation by SAK o.p.s. In January 2020, it received accreditation from this recognised company.

The year 2021, as well as 2020, was significantly affected by the ongoing global pandemic Covid-19. The Quality Department helped throughout the year with the organisational measures related to the management of the pandemic, and in the first quarter of 2021 it also helped in the hospital's vaccination centre.

On 01/12/2021, the Quality Department was organisationally transferred under the leadership of the Deputy Minister for Nursing Care.

National accreditation by SAK

Accreditation, i.e. the assessment of the set quality system of the hospital by an independent third party – SAK o.p.s, is completely voluntary in the Czech Republic and is the most demanding in our country. It consists of 97 assessed standards, which is much more than the legislative base of 17 standards.

The Joint Accreditation Commission was established in 1998. Its mission is to continuously increase the quality and safety of health care in the Czech Republic through the accreditation of medical facilities, consulting and publishing activities. Since June 21, 2012, Spojená akreditační komise, o. p. s., has been an authorised evaluator of the quality and safety of inpatient health care for types of health care in accordance with provisions of Section 5(2)(f) to (h) of Act No. 372/2011 Coll., according to the restrictions on granting authorisation pursuant to Decree No. 102/2012 Coll.

SAK accreditation standards cover all clinical areas of the activities of the facility: diagnostic care, anaesthesiology and surgery, drug management and, last but not least, coordination and continuity of care. However, requirements are also placed on non-clinical areas related to patient care: e.g. catering, hospital operation (repairs, services, technical wiring), cleaning, hygiene in the hospital environment, fire protection, management.

From 27 to 29 January 2020, an accreditation survey of Spojená akreditační komise, o.p.s., took place at NHH, including an assessment of the quality of care and patient safety in accordance with the relevant provision of Act No. 372/2011 Coll., on Health Services and the Conditions for Providing them, as amended, and Decree No. 102/2012 Coll., on Evaluation of Quality and Safety of Inpatient Health Care, as amended. Based on this survey, NHH obtained accreditation for the period of the following 3 years.

Quality systems at Na Homolce Hospital

ISO 15189

The following laboratories: Department of Clinical Biochemistry, Haematology and Immunology, Biopsy Laboratory of the Department of Pathology and Clinical Microbiology and Antibiotic Centre of Na Homolce Hospital have had a quality management system in place since 2011 (awarded by the Czech Institute for Accreditation) that was accredited in accordance with ISO 15189. ISO 15189 (Medical laboratories – special requirements for quality and competence) focusing on the professional management of laboratories such as the process flow of sample examination, conditions for blood taking, collection of biological material, interpretation and provision of results and the safety and ethics of laboratory work. The accreditation of the quality management system in laboratories in accordance with ISO 15189 implies an increased confidence in compliance with the required level of services provided.

ISO 9001

Since 2004, a system of quality management in accordance with ISO 9001 has been in place in the Department of Nuclear Medicine for the provision of diagnostic services using immunoanalysis laboratory methods and imaging methods such as scintigraphy, computing, single photon and positron emission tomography (CT, SPECT, and PET/CT), including the preparation of radiopharmaceutical drugs. All services are provided according to an approved quality policy. This type of certification covers work organisation, including process management, management of resources, monitoring, and assessment of procedure efficiency.

ISO 13485

Since 2014, the Department of Central Sterilisation has held certification for the system of quality management of medical devices in accordance with the international standard ISO 13485. The Department of Central Sterilisation is a workplace that ensures disinfection, preparation before sterilisation and material sterilisation for all facilities at Na Homolce Hospital, as well as the provision of contractual services for the offices of general and specialist practitioners.

Internal quality and safety audits

Year-round internal audits (process, targeted, consulting) are conducted to determine compliance with established systems/processes in common practice, for example regarding medical records, drug management, hygienic-epidemiological regime, occupational health and safety, environmental and information safety, storage and disposal of chemicals and waste, complement operation and other areas related to the provision of health services.
Around 500 internal audits were carried out in 2021. The plan was modified according to the current epidemiological situation of Covid-19. Only Na Homolce Hospital inpatient departments, operating rooms were visited and the closed documentation was checked.
These audits provide feedback on the level of quality and safety settings in NHH, based on preventive and corrective measures or opportunities to improve ongoing processes.

Patient satisfaction (NHSP)

The National Patient Satisfaction Assessment is the result of a long-term activity of the Ministry of Health, the main objective of which is to set up a unified system of monitoring and evaluation of patient satisfaction in the Czech Republic and to strengthen the voice of the patient in the system of providing inpatient health care.

Na Homolce Hospital was ranked 1st in the first year of the National Patient Satisfaction Assessment project, which took place between 01/10 – 31/10/2021.
It involved 13 Czech and Moravian hospitals, mostly directly managed, which have inpatient units.

The evaluation took the form of a detailed questionnaire survey involving several hundred patients admitted to standard inpatient units.

Patients rated the health care facilities in eight categories:
- Admission of the patient to the facility
- Respect and consideration given to the patient
- Patient care coordination and integration
- Information, education and communication with the patient
- Physical comfort of the patient
- Emotional support of the patient
- Involvement of family and loved ones in the patient's care
- Discharge of the patient from the facility


CERTIFIKÁT

NÁRODNÍ HODNOCENÍ SPOKOJENOSTI PACIENTŮ

NEMOCNICE NA HOMOLCE

96,73 %

ZA OBDOBÍ 10/2021

PŘIJETÍ NA LŮŽKO	95,40 %
RESPEKT, OHLED, ÚCTA	98,45 %
KOORDINACE A INTEGRACE PÉČE	97,83 %
INFORMACE, KOMUNIKACE A EDUKACE	94,34 %
TĚLESNÉ POHODLÍ	95,08 %
CITOVÁ OPORA A ZMÍRNĚNÍ STRACHU A ÚZKOSTI	97,87 %
ZAPOJENÍ RODINY A BLÍZKÝCH DO LÉČBY	96,95 %
PROPUŠTĚNÍ A POKRAČOVÁNÍ PÉČE	98,01 %

Vlastimil Válek
MINISTR ZDRAVOTNICTVÍ

Satisfaction in the individual dimensions influences overall satisfaction. The overall satisfaction for the whole NHH was rated as 1.13 = 96.73%.

Adverse event management (AE)

Monitoring and systematic evaluation of individual events is one of the key approaches that enables NHH to increase the quality and safety of health services provided.
At the end of 2021, the Quality Department, in collaboration with the IT Department, developed a new electronic application for recording unexpected adverse or potentially dangerous events that could have endangered or threatened the health or safety of patients, staff or visitors to the hospital. Nearly 200 reports were recorded in 2021. We did not observe any significant deviations in reporting, compared to 2020.

Adverse event reporting to the Institute of Health Information and Statistics

Na Homolce Hospital has been involved in the central Adverse Events Reporting System aiming at monitoring the incidence of adverse events in clinical practice, central reporting and provision of reporting guidelines in accordance with a single terminology and application of preventive measures, i.e. effective proactive protective strategies. Data are transferred once a year to the Czech Institute of Medical Information and Statistics. On the basis of data obtained from various health care facilities in the Czech Republic, the Institute of Health Information and Statistics makes comparisons in individual event categories (falls, pressure ulcers, etc.) and according to the type of facility. Na Homolce Hospital is included in category – S – specialised hospitals/centres.
In comparison with other medical facilities, we have been achieving very good results for a long time.

The Quality Department is a member of the working group for the creation of national methodologies for adverse event reporting systems, see http://shnu.uzis.cz/.

INFORMATION DISCLOSURE

Information disclosure pursuant to Act No. 106/1999 Coll., on Free Access to Information

Výroční zpráva za rok 2021
o poskytování informací podle zákona č. 106/1999 Sb., o svobodném přístupu k informacím

V souladu s ustanovením § 18 zákona č. 106/1999 Sb., o svobodném přístupu k informacím (dále jen „Zákon“) zveřejňuje Nemocnice Na Homolce, IČO: 00023884, se sídlem Roentgenova 37/2, 150 00, Praha 5 (dále jen „NNH“) tuto výroční zprávu za rok 2021.

V souvislosti s žádostmi o informace přijatými na základě Zákona (dále jen „žádost“) NNH tímto zveřejňuje následující:

a. **Počet podaných žádostí o informace a počet vydaných rozhodnutí o odmítnutí žádosti**
V roce 2021 obdržela NNH osm (8) žádostí o informace. V uvedeném roce NNH vydala dvě (2) rozhodnutí o odmítnutí žádosti.

b. **Počet podaných odvolání proti rozhodnutí**
V roce 2021 neobdržela NNH žádné odvolání proti rozhodnutí o žádosti.

c. **Rozsudky ve věci přezkoumání zákonnosti rozhodnutí o žádosti a přehled výdajů vynaložených v souvislosti se soudními řízeními na základě Zákona**
V roce 2021 neobdržela NNH žádný rozsudek v uvedené věci. NNH neměla v souvislosti se soudními řízeními na základě Zákona v roce 2021 žádné výdaje.

d. **Výčet poskytnutých výhradních licencí**
V souvislosti s žádostmi obdrženými v roce 2021 nebyly poskytnuty žádné výhradní licence.

e. **Počet stížností podaných podle § 16a Zákona, důvody jejich podání a způsob vyřízení**
NNH neobdržela v roce 2021 žádnou stížnost podle § 16a Zákona.

f. **Další informace vztahující se k uplatňování Zákona**
NNH nedisponuje žádnými dalšími informacemi, které se vztahují k uplatňování Zákona v průběhu roku 2021.

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