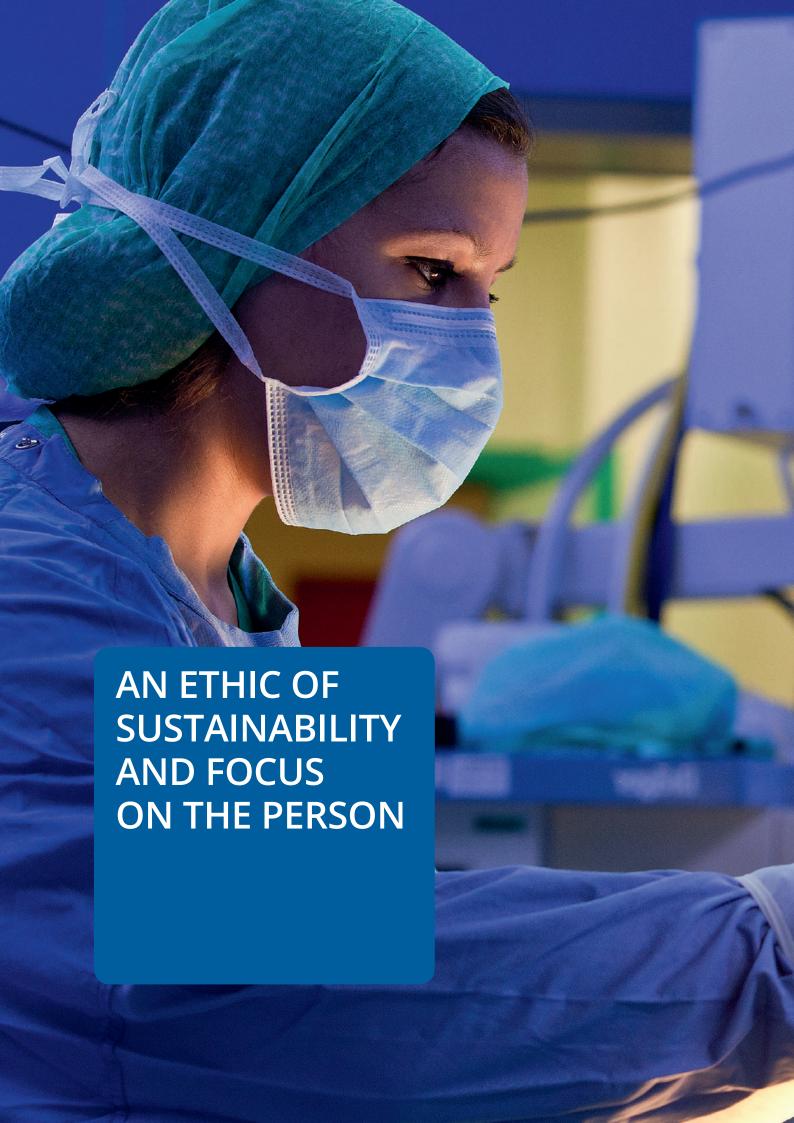
SUSTAINABILITY REPORT

2015



SUSTAINABILITY REPORT







GOVERNANCE & ASSETS



Governance

Board of Directors

Giovanni Raimondi (Chairman)
Franco Anelli
Alessandro Azzi
Rocco Domenico Alfonso Bellantone
Vincenzo Giovanni Cesareo
Carlo Fratta Pasini
Antonio Gasbarrini
Fabio Lenzi
Gianni Letta
Cesare Mirabelli
Alfredo Pontecorvi

Management

Enrico Zampedri (General Manager)

Board of Auditors

Massimo Porfiri Roberto Alessandrini Lelio Fornabaio Adriano Propersi Massimo Vincenti The Fondazione Policlinico Universitario A. Gemelli (Foundation) - established by the Università Cattolica del Sacro Cuore (University) and by the Istituto Giuseppe Toniolo di Studi Superiori manages one of the largest general hospitals in Italy: the Policlinico Universitario Agostino Gemelli (the Hospital).

The Hospital provides healthcare covered by both the National Health System (Servizio Sanitario Nazionale - SSN) and private practice. It also serves as a teaching hospital for the Medical School of the University. Founded in 1964 and dedicated to the founder, the Franciscan friar, physician and psychologist Agostino Gemelli, the Hospital provides healthcare in all areas of clinical specialties, and includes an Emergency Department.

The Hospital is also recognized as one of the leading Italian cancer hospitals and is the Lazio Region's reference centre for many high complexity operations such as healthcare for many pediatric and adult rare diseases including the neuromuscular ones.

The Hospital has been ensuring excellence in both diagnostics and therapeutics for over fifty years: as an academic medical centre operating in all areas of healthcare, the Hospital is at the heart of the Italian healthcare system and continues to evolve and innovate on the wings of its heritage and its vocation towards an innovative operational model aimed at the integration of the processes of care. All the Hospital's activities, which are currently managed by 8 Departments and 21 Areas, are focused on professionalism, excellence and state-of-the-art technology, focused on professional care and technology on the basis of clinical and health needs.

Throughout its history, the Policlinico Gemelli has remained adherent to its mission, where the physical and spiritual well-being of each Person is in the main focus. This has always been the vision commonly shared by the Hospital staff and is the basis of the Hospital's teaching, scientific research and welfare activities, all homogeneously integrated with the School of Medicine of the University.

ONE DAY AT GEMELLI





EMERGENCY VISITS



& STAFF)

DEATHS



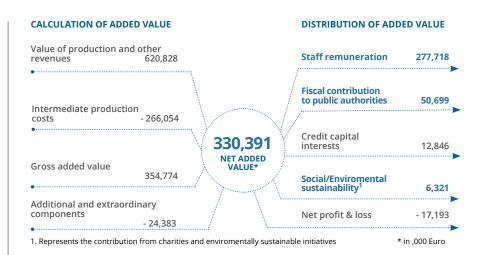


OUTPATIENTS CONSULTATIONS





GOVERNANCE & ASSETS



Since November 1st 2015, the Foundation has increased its work capacity by incorporating the infrastructure, facilities and staff of the Columbus Hospital, responding effectively and sustainably to the increasing challenges arising in the management of the SSN.

Acknowledging the modernity of the project of the founding Father Agostino Gemelli means to reconfirm the primary and coherent commitment of the whole Staff of the Hospital to operate in order to:

- care for the ill individual totally respecting his dignity, needs, suffering, hopes;
- provide a state-of-the-art health service from the point of view of efficacy, pertinence, equity, safety, rapidity, efficiency and accessibility;
- promote innovation and ensure a transparent professional behavior when sharing both general and specific aims, and going beyond pure domain expertise in order to constantly improve the organization;
- stimulate ongoing learning as well as the vocational, scientific and technical education;
- ensure the widespread availability of information, knowledge of the strategic and solid targets of the results achieved and of the experience gained;
- favor cooperation and participation, teamwork and shared responsibility while offering substantial knowledge;
- acknowledge and appreciate the commitment of all of those involved;
- implement aims and values into concrete, constant and coherent actions; this is done via the management's commitment and the active involvement of all professionals.

The 2015-2019 Industrial Plan (the Plan) has been designed to ensure economic sustainability, safeguarding the intrinsic value of the University along with the existing professional and technological platform and resources and, at the same time, achieve a key position in the Regional and National Health System (SSN). The goal of the Plan is to make the processes efficient while reducing costs in both revenues and investments. The main drivers supporting and facilitating this development process include:

- embarking on a radical process to improve the efficiency of production

VALUE TO PEOPLE AND COMMUNITY



processes and consequently reducing the length of hospital stays;

- enhancing the means used to assess clinical and healthcare-related performance, from internal auditing to benchmarking, working alongside tried-and-tested organizations;
- defining policies for investing in medical, computer and construction technology, in order to support the strategic positioning and policies of the Fondazione, and the organizational and management processes needed to implement this strategy.

The key to success in this ambitious and realistic Plan is to achieve a complete coordination between the administrative and medical-scientific sectors of the Foundation itself.

The Foundation has a Code of Ethics which sets out the principles, values, commitments and responsibilities underpinning its functioning and everyday activities. This Code is a binding set of conduct rules for the entire Organization. The Ethics of the Foundation embody and respect the basic principles of bioethics outlined by the Catholic Church. The protection of every stage of life and human dignity are key.

SOCIAL SUSTAINABILITY

Every decision taken considers the specific needs of the Individual who expresses his/her need of Care, and also those of every individual working in the Foundation itself. The people working in the Hospital make up a large community indeed. Their passion, professionalism and dedication are invaluable, and provide those seeking help, treatment and healthcare in the Hospital with the greatest possible guarantee of excellent Care. The corporate mission stresses its commitment to promoting cooperation and involvement, along with a multidisciplinary approach, team-work and shared responsibility.

RISK MANAGEMENT AND HANDLING OF MEDICO-LEGAL DISPUTES. With the establishment of the Foundation, Clinical Risk and hygiene activities were redefined in order to strengthen the links between the traditional "insurance-

Staff training

In 2015, training for employees was organised using various methods and focused on 4 macro-topics. It involved 47,748 hours of training, with a considerable increase on the previous year. This was due above all thanks to the planning of training on health and safety, which concerned all workers. Staff also received 226 days of obligatory external training and 563 optional days, making 6,000 hours over and above those stipulated in the company's training schedule.

VALUE TO PEOPLE AND COMMUNITY

OPERATIVE FIELD OF NON-PROFITS







36% PSYCHOLOGICAL ASSISTANCE AND SHELTER

13%
EDUCATION
AND TRAINING

ACTIVITIES 6%

PREVENTION
RESEARCH



Fondo Carità

In response to critical social and economic situations of patients and their families, the Foundation established a charitable fund, named the "Fondo Carità". This supports the medical needs of individuals experiencing proven financial problems, and needs related to social emergency and existential fragility. Fondo Carità is promoted and backed up financially by the Fondazione, with an initial contribution of 50,000 €, and is open to any donations.

related" professional responsibility approach, and the general "patient safety" approach revolving around service standards. The program for preventing and controlling adverse events in the year 2015 focused on defining the procedures and policies that outline a number of patient care "hot spots", as well as boosting the descriptive quality of sensitive medical documents. Processes for flagging adverse events and procedures for tackling them were redefined. In 2015, the approach for managing disputes of a medico-legal nature was also changed. According to the new Procedure for Managing Accident Disputes, the Risk Management Unit with the support of the Public Health Institute's Forensic section of the University, must assess the impact of the accidents, and suggest the most effective mediation/defense strategies, working in collaboration with the Loss Adjuster and the General and Legal Affairs Offices.

HOSPITAL HYGIENE. In 2015, the Medical Hygiene surveillance group perfomed 40 inspections of the Foundation is Departments: 8 verified hand hygiene compliance using the WHO observation form; 23 checked the compliance with the in-house Guidelines for hospital hygiene, and 10 specifically assessed the appropriateness of waste management procedures. Subsequently, over 500 notifications of infective diseases were gathered and sent to the competent bodies. In a significant number of cases (123), these led to an epidemiological investigation being triggered. Overall, around 700 laboratory diagnostic procedures were carried out.

RELIGIOUS ASSISTANCE. The Hospital acknowledges the nature of the individual as a psychological, physical and spiritual whole. For this reason, a spiritual service is offered by the pastoral assistant and Hospital Chapel Service. A policy which also provides religious assistance to patients of other faiths, religions and cultural backgrounds is being implemented.

NON-PROFIT AND VOLUNTARY WORK. More than 40 non profit organisations work within the Hospital, thanks to over 400 volunteers who offer help to patients and family members for needs beyond medical and nursing care, or support for research activities. The volunteers work alongside doctors and nurses in the departments, providing psychological and physiotherapy support to in-patients with a professional approach. An offer of housing facilities is

VALUE TO PEOPLE AND COMMUNITY

provided to relatives of patients, along with useful items and services during the entire length of the hospitalisation. Workshops and recreational activities for the children are also organised.

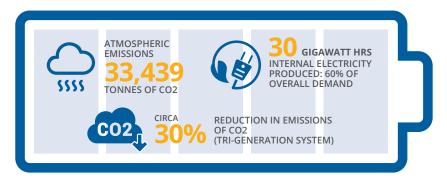
MEDICINEMA. During 2015, in collaboration with the MediCinema Italy Onlus, the Hospital completed and inaugurated the 130 seats MediCinema theatre which can also accommodate patients in wheelchairs and beds . It is the first hospital in Italy to have premises set aside for "cinematherapy" and relief therapy for patients and their family members. Thanks to the University, experimentation and research connected activities are an important component of the MediCinema project.

ENVIRONMENTAL SUSTAINABILITY

With 30 thousand inhabitants, the Policlinico Universitario A. Gemelli is virtually a town. Each year it consumes around 50 million kWh and 16 million cubic metres of natural gas. Its co-generation system provides around 60% of the energy the Hospital needs for electricity, heating and cooling, making it one of the largest infrastructures of this kind in the civil and hospital sectors in Italy. The goal of its global energy model is to manage energy in an intelligent and efficient way which is also environmentally friendly. During 2015, the environmental sustainability process included meeting atmospheric pollution emission (NOX) targets by fitting a "Low Nox" system. This harnesses electronically regulated burners to control oxygen automatically, whilst as at the same time cutting combustion temperatures and limiting the amount of heat-generated NOX gases. Compliance with existing regulations and the awareness of the importance of creating sustainable systems with environmentally-friendly energy efficiency measures have resulted in the Hospital obtaining ISO 50001 certification from the Bureau Veritas agency, certifying that the Energy Management System conforms with legal standards. This crucial goal was reached in December 2015, making the Hospital the first teaching hospital in Italy to receive this prestigious certification. In addition, the medium voltage electricity network is being upgraded to the SMART GRID type, reducing wasted energy (less heat dispersion into the atmosphere) with specific savings of 2% overall.

A donation made by a supplier is enabling us to replace traditional lighting with LED lights, providing financial savings whilst reducing CO2 emissions

ENVIRONMENTAL IMPACT INDICATORS



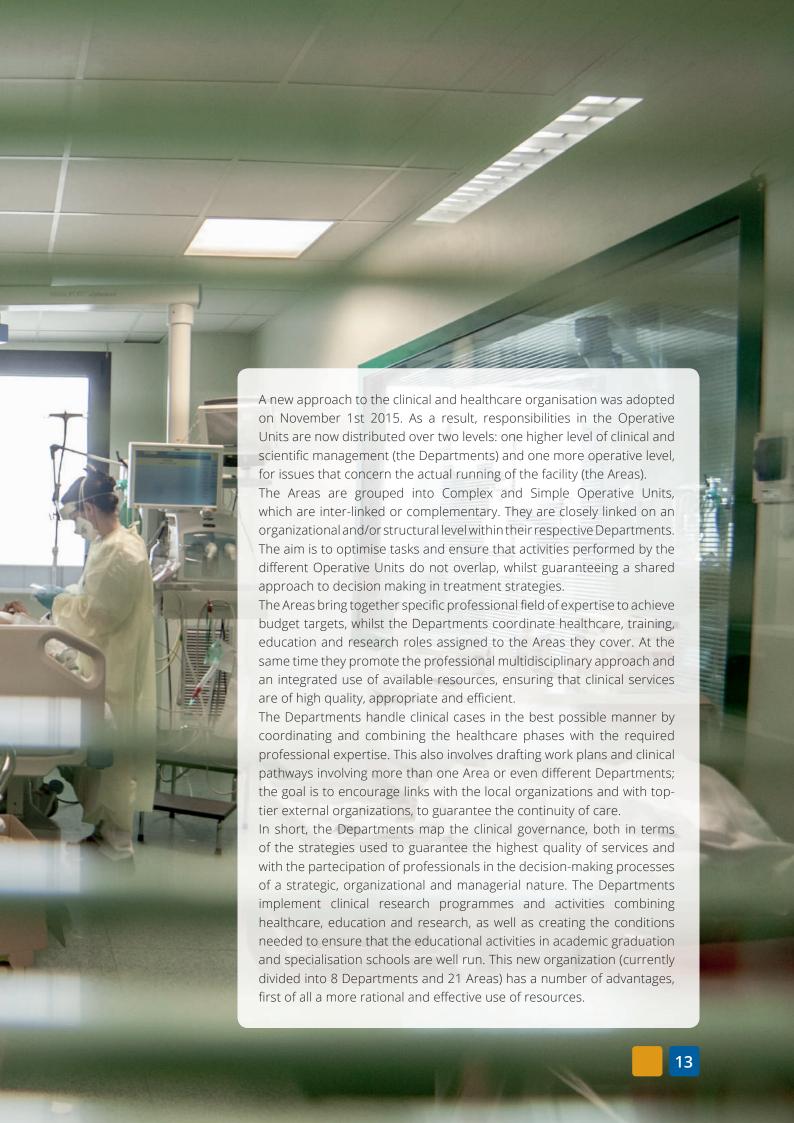
Residenza Gemelli

Residenza Gemelli is an important service offered by the Policlinico Universitario A. Gemelli. It is a model which combines hospital facilities with specialist accommodation, aiming to offer a quality service for citizens/patients and their family members or carers. The hotel facility has 43 rooms, and reception is guaranteed 24 hours a day. The ground floor of the Residence houses the haemodialysis unit with 18 outpatient stations.

Villetta della Misericordia

Throughout 2015, the Fondazione Policlinico Universitario Agostino Gemelli promoted the creation of a shelter for homeless people. The Comunità di Sant'Egidio provides active support by running the centre. The building chosen for the purpose is the Villetta, which belongs to the Foundation; it was made available by the Istituto Giuseppe Toniolo di Scuole Superiori and the Università Cattolica del Sacro Cuore, and can house up to 20 guests.





ORGANIZATIONAL MODEL











SIMPLE OPERATIVE UNITS



Accreditation and certification

- the Analysis Department II -Microbiology and Virology is ISO 9001:2008 certified
- the UNICATT Cord Blood Bank is ISO 9001:2008 certified and accredited with the National Transplant Centre (CNT)
- the Blood Transfusion Service is ISO 9001:2008 certified and accredited with the Regional Health Service
- the Stem Cell Transplant Programme is JACIE and CNT-accredited
- the HLA Blood Typing Laboratory (Haematology Department) is EFI accredited
- the Building and Systems Maintenance Service is ISO 9001:2008 accredited

CRITICAL PATHWAYS

In order to ensure that patient needs receive the best response, a proper interaction between the Hospital and the main diseases and patient networks (locally and nationally) is required for healthcare, training and research purposes. Together with the Lazio Region and the Local Health Authorities (Aziende Sanitarie Locali – ASL), the Hospital uses its Critical Pathways to map, integrate and assess every phase involved in providing care for key health problems.

In 2013, a Critical Pathways Unit, which answers to Clinical Governance, was established. Since then, 26 critical pathways have been introduced. The Hospital periodically holds quality assessment meetings for each of the critical pathways, including the participation of patients, to monitor and assess the performance of the pathway with the professionals, and set out any improvement measures.

FLEXIBLE SHARED USAGE FACILITIES

The Hospital has 40 beds for One Day Surgery and Week Surgery, and 21 beds for Day Surgery and Day Service Surgery. Patients treated in One Day Surgery require one night of hospitalisation, those in week surgery require a "short stay" of 5 days or less and may involve one or more pathways. Week Surgery and One Day Surgery are two complementary, flexible and interfunctional sections of the same logistical structure and require a lower healthcare commitment and less management than traditional hospitalisation. The Day Surgery and Day Service Surgery facilities, which involve surgeons visiting the Operative Units of the different Departments and Areas, has its own operating theatres and autonomous areas for day surgery hospitalisation.

PRIVATE PRACTICE

In addition to the services performed on behalf of the Regional Health Service, the Hospital also offers a wide range of clinical activities and services which are paid for by the patients either, directly or through agreements with funds and insurance companies. These include hospitalisation, specialist outpatient services, as well as laboratory and instrumental services and Day Service Surgery.

LAZIO REGION BEDS

ACUTE

83%

GEMELLI
AND COLUMBUS

8%

REHABILITATION

14%

GEMELLI
AND COLUMBUS

2%

LONG-STAY



94,805

TOTAL DISCHARGED

46,080

SURGICAL OPERATIONS

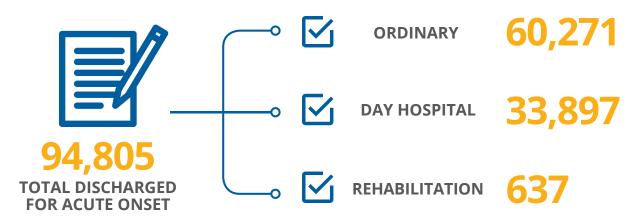
1,547

BEDS

92%

OCCUPATION RATE

ACUTE PATIENTS / DISCHARGES



anno 2015











Thanks to...

Fondazione Roma for supporting the initiatives of the Fondazione Policlinico Universitario Agostino Gemelli.

AREAS: CARDIOVASCULAR; THORAX

The Cardiovascular and Thoracic Sciences Department uses a multidisciplinary approach to place various professionals at the disposal of patients with heart, blood vessel and chest diseases.

The Department combines the most sophisticated diagnostic procedures with cutting-edge medical treatment using the latest intervention, a surgical and anaesthetic techniques whilst maintaining an individual approach. This creates the best diagnostic and therapeutic sequence for each patient.

Regarding its scientific work, it is worth noting that the Cardiovascular Area is the only facility in Italy with a basic research laboratory actually on the hospital premises. This laboratory studies the causes of heart attacks, cardiac stem cells and coronary microcirculation.

Equipped with one of the few innovative hybrid operating rooms in Europe, in 2015 the Hospital managed to miniaturise surgical trauma by adopting the cardiopulmonary bypass procedure and using new generation rapid release prosthetic valves, which also cut surgery times. As a result, they were implanted using surgical mini-incisions just a few centimetres in length. It is also one of Italy's top-ranking centres in the national outcome programme for re-hospitalisation and 30-day mortality rates for patients with recurrent acute exacerbations of COPD.

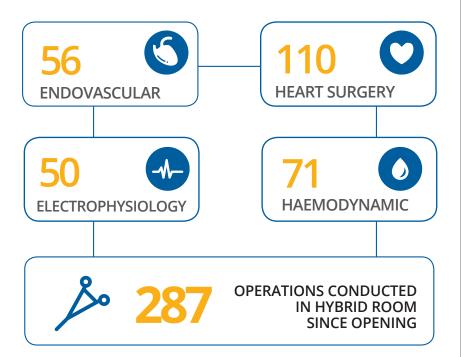
Some of the projects for 2015 in the Cardiovascular Area included developing a mini-invasive technique for treating valve diseases, and the Hansen Sensei Robotics system has been used for both atrial and ventricular surgery to treat arrhythmia in the Arrhythmology Unit.

Ongoing projects include hybridising heart surgery and percutaneous procedures using the Hybrid Room to treat high-risk patients on whom conventional techniques cannot be used. This has involved adopting and standardising the hybrid revascularisation programme (heart surgery/interventions and vascular surgery /interventions).

It should be noted that the Fondazione Roma has funded the research project on "Personalised pharmacological therapy in patients with COPD based on phenotyping" for the Thorax Area.



SURGICAL OPERATIONS IN HYBRID ROOM / SINCE NOVEMBER 2015



HYBRID OPERATION ROOM

In November 2015, Europe's most cutting-edge hybrid operation room was inaugurated in the Cardiovascular and Thoracic Sciences Department. This state-of-the-art operating theatre will make it possible for a multidisciplinary team to perform delicate procedures.

The team is made up of heart surgeons, cardiologists, vascular surgeons and radiologists who work on hard-to-treat patients. Mini-invasive surgery is carried out on heart valves; devices for repairing valves are implanted with access through the groin, neck or small incisions on the chest; procedures for treating complex arrhythmias are carried out, and aortic endoprostheses are implanted (in total, when the theatre is fully operational it will be able to carry out up to 40 operations a month).

The hybrid room also has a new generation angiographic system with a robotic arm: it is the most advanced device of its kind in the world. All the radiological and imaging work is managed from a control room adjacent to the hybrid room, linked in real time to the multimedia room of the Cardiovascular and Thoracic Sciences Department.

In addition, the theatre uses diagnostic images obtained using the very latest means such as ultrasound, endoscopic video systems and high definition cameras. The hybrid room makes it possible to perform several procedures at the same time, in the same surgery session (such as one percutaneous and one surgical). This also reduces post-surgery hospitalisation and costs.

Thoracic Ultrasounds

In the Thorax Area, around 400 thoracic ultrasounds are carried out each year in the management of respiratory illnesses in adults, paediatric patients and pregnant women, in order the use of recourse to ionizing radiation.

Nemo Clinical Center

The result of a partnership between Fondazione Serena Onlus and the Hopsital, the Nemo Clinical Center *is a new state-of-the-art* facility for treating children and adults affected by neuromuscular diseases. The Center has 16 beds (10 for adults, 6 pediatric) and one day-hospital room in "intelligent" rooms fitted with advanced domotic (home automation) to help patients to be more autonomous. It is highly specialised in diagnosing neuromuscular diseases and managing problems linked to the evolution of the disease, particularly in the acute stages. The purpose of the new facility is to improve the quality of life of people affected by neuromuscular diseases with a comprehensive, multidisciplinary approach which ensures that patients and their families receive clinical, healthcare and psychological support. The new Nemo Clinical Center of Rome will work in conjunction with other Nemo centres in Italy.

AREAS: AGEING, ORTHOPAEDICS AND REHABILITATION; NEUROSCIENCES; HEAD & NECK

The care, healthcare, teaching and research fields of this Department revolve around treating elderly patients, and all the problems linked to ageing, including rehabilitation and functional maintenance. It also meets the needs of patients suffering from diseases affecting the central and peripheral nervous system of the neuromuscular apparatus, and Otorhinolaryngology (ENT) illnesses. In the Neurosciences area, healthcare is organised into pathways in order to simplify diagnosis and treatment for outpatients, guaranteeing the access to procedures such as brain stimulation for those suffering from dementia, or early diagnosis and screening for biomarkers of Alzheimer's disease.

Otorhinolaryngology (ENT) focuses on various illnesses that have a considerable impact on the quality of life of both patients and their families. Children and adults of all ages are seen for audiological and otological diagnosis, prescription of rehabilitative prostheses and middle ear and cochlear implant surgery. Around 25 cochlear implants are performed a year, of which at least half are for paediatric patients.

The Head & Neck Area distinguished itself in 2015 by producing a new way of implanting stem cells in the inner ear, as an experimental phase of cell therapy treatment for neurosensory deafness. In addition, in conjunction with the Sant'Anna University of Pisa, the Area has embarked on a project to produce an artificial larynx. Its primary goal is to study physiopathologies of the larynx, and in the future to create an artificial organ which can be implanted.

The Neurosciences area has developed the LifeHand2 project for producing a bionic limb commanded by the patient's brain impulses, which can restore tactile feeling.

During 2015 the Nemo adults clinic was inaugurated; it was made possible thanks to the partnership with the Fondazione Serena Onlus.

The Otorhinolaryngology Clinic of the Head & Neck Area is a centre of excellence in the field of oncological diseases affecting the head and neck. It is the Lazio Region's largest centre in terms of number of oncology patients treated. The Tumour Board, a multidisciplinary group, oversees every aspect of the care of the oncological patient.





WOMAN HEALTH; OBSTETRICS AND NEONATOLOGY; PEDIATRICS

The Department's work in the women's health area aims at improving the quality of care for patients affected by gynaecological and mammary tumours. It achieves this goal by adopting pathways for the diagnosis and pre-operative identification, as well as assessing the quality of the surgical approaches used, in terms of completeness and safety, and continuity of care in antiblastic treatments for Female Tumours administered in the Oncological Gynaecology Day Hospital, with increasing opportunity for patients to have access to innovative drugs.

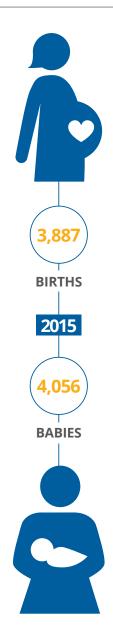
The critical pathways regarding the post-surgical reconstruction of breast and the perineal-genital area play a key role. Particular attention is paid to improving the quality of healthcare for patients with benign gynaecological diseases, in particular endometriosis, chronic pelvic pain, uterine fibromatosis, female sterility and alterations of the pelvic floor.

Within the Obstetrics and Neonatology Area, the aim is to provide a high standard of care in high-risk pregnancies and during parturition birth, reducing the rate of caesarean births. In addition, the Neonatal Intensive Care Unit and the delivery room offer a humane yet safe approach, ensuring that over half the pre-term births linked with foetal pathologies in the Lazio Region, as well as women from outside the Region, are handled in the Hospital.

The Pediatrics Area aims to diagnose and treat respiratory, nephrological, rheumatological, neuropsychiatric and infectious diseases of childhood, childhood blood tumour-related illnesses, congenital malformations of the respiratory, urinary and gastrointestinal systems, surgical disturbances affecting pre-term newborns, malformation syndromes and congenital disabilities. Further projects developed by the Department aim to improve healthcare in at-risk pregnancies and prevent neonatal infections, encourage breastfeeding for healthy and sick newborns, as well as the forthcoming inauguration of Italy's first centre for surgical treatment of lymphedema.

ONCOLOGICAL GYNAECOLOGY DAY HOSPITAL

The Hospital also has a new Oncological Gynaecology Day Hospital for treating patients suffering from gynaecological tumours, including breast tumours. The new facility is also home to the outpatient clinic for post-operative lymphedema that follows up patients who have finished treatment, an outpatient clinic for raising awareness of gynaecological tumours and an area dedicated to experimental clinical protocols, thanks to which patients can use new drugs.



International Scientific Institute (ISI) Paul VI

The ISI operates since 2003 in the field of physiology and pathophysiology of human reproduction, to provide answers to families both in natural regulation of fertility and in diagnosis and the treatment on couple infertility, according to Catholic ethics.

AREAS: GASTROENTEROLOGY; ABDOMINAL SURGERY; **ENDOCRINOLOGY AND METABOLIC DISEASES**

The Gastroenterology Area offers assistance to patients suffering from diseases of the gastrointestinal tract, as well as celiac disease, malabsorption syndrome, and acute and chronic diseases of the liver and pancreas. It offers a programme for treating Hepatitis C with new direct-effect antiviral drugs, a unit for liver transplant candidates with acute and chronic liver failure, and a programme for characterising and transplanting intestinal microbiota.

There is also a Diet and Nutrition Unit for correcting malnutrition and sarcopenia (muscle wasting). The Digestive Endoscopy Unit, in particular, is involved in the diagnosis and treatment of diseases of the biliary system and pancreas, and early neoplastic lesions of the digestive system; the Unit is an international centre of reference for endoscopic surgery on oesophageal dyskinesia (achalasia, Zenker's diverticulum) and the endoscopic treatment of gastro-oesophageal reflux.

The Abdominal Surgery Area offers a vast range of operations for inflammatory, degenerative and neoplastic illnesses affecting the gastrointestinal system, liver and pancreas; in fact it is one of Italy's top centres for the number of resections for colorectal tumours, as well as tumours of the stomach, liver, biliary system and pancreas, and also for transplants. The multidisciplinary tumour boards, dedicated to each of the digestive system tumours, ensure the adherence to international treatment guidelines. For the most part, a mini-invasive and laparoscopic approach is adopted, along with robotic surgery techniques.

The Endocrinology-Metabolic Diseases Area has clinical-surgical units specialised in managing the main endocrine and metabolic illnesses. The Area boasts one of Italy's leading case statistics in terms of management and medical-surgical therapy for diseases of the thyroid, adrenal gland and pituitary gland. It also offers a protocol for managing the main dyslipidemias, particularly the alterations of the lipid profile of patients with diabetes and metabolic syndrome, as well as handling eating disorders and endocrine illnesses in children and pathological obesity, with outstanding clinical expertise.





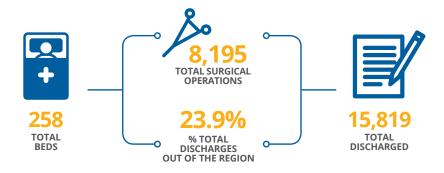


KIDNEY TRANSPLANTS



Excellence

The Gastroenterology Area is one of the leading centres in Italy and Europe as a whole for managing chronic inflammatory diseases of the intestine.





AREAS: EMERGENCY, INTENSIVE CARE AND TRAUMA; ANESTHESIOLOGY AND PAIN CONTROL; INTERNAL AND EMERGENCY MEDICINE

In 2015, the Internal and Emergency Medicine Area received over 4,200 patients, more than 85% of which from the Emergency, including those requiring multi-parameter monitoring or sub-intensive treatment. The main illnesses treated are cardiovascular, pulmonary, metabolic, infective, gastroenterological, haematological, neurological and oncological. Amongst others, the Internal and Emergency Medicine Area treats severe Acute Respiratory Distress Syndrome (ARDS) using advanced protocols and extracorporeal circulation.

In conjunction with the Cardiovascular and Thoracic Sciences Department, a "purple code" protocol has been created for the application of ExtraCorporeal Membrane Oxygenation (ECMO) and ventricular care for patients in refractory cardiac arrest and cardiogenic shock, resulting in seven patients being treated for the first time in Central and Southern Italy.

Emergency Surgery in this Area takes care of patients with acute surgical needs, both traumatic and non-traumatic in nature, arriving from the local area via Emergency, or from other units of the Polyclinic. The Anaesthesiology and Pain Control Area provides perioperative assistance for all patients undergoing surgery for oncological and non oncological diseases. In particular, Intensive Post-Operative Therapy manages hospitalisation immediately after surgery for patients who have undergone particularly challenging operations, or whose conditions do not allow them to be transferred onto the general ward immediately.

The projects which got underway in 2015 include:

- treatment of high risk obstetric patients and the EXIT -Extra Utero Intrapartum Treatment- procedure (in cooperation with the Bambino Gesù Hospital), conducted by the Anaesthesia Unit in Obstetrics and Day Surgery;
- the new Pediatric Trauma Programme and the project for assistance of children affected by neuromuscular diseases in critical conditions conducted by the Pediatric Intensive Care Unit.

Anaesthesiology assistance for obstetric patients

Part of the care the Department provides is for low and high-risk obstetric patients, and patients undergoing Day Surgery, Week Surgery and pain therapy. *In 2015, anaesthesiological* assistance was provided for: - 4,000 births; - epidural analgesia service (around 1,400 procedures in 2015); - obstetric anaesthesia (around 1,500 caesarean sections in 2015).

A RENOVATED EMERGENCY DEPARTMENT

Following major renovation work and extensions funded by the Ministry of Health and the Regional Authorities of Lazio in the run up to the Jubilee in December 2015, the new Emergency Department was inaugurated inside the Department.

The new organisation and architecture meet treatment intensity criteria, making it possible to "separate" patients needing more intense care and to offer greater safety and comfort. From the point of view of the medical organisation, the facility is divided into large treatment rooms according to the access code given.

Some patient categories (e.g. patients with acute onset neurological diseases, chest pain etc.) undergo global triage as well as traditional triage, and tests are immediately conducted and sent off for analysis. Following the initial assessment, once the priority code has been assigned, (carried out at triage), the patients are sent to:

- Higher Intensity Area (red and yellow codes) for particularly critical cases of clinical instability. It has an area for medium-gravity cases (yellow code Area, 17 places) and an area for serious arrivals (red codes Area, 4 places);
- Lower Intensity Area (green and white codes), where lower priority patients are seen; these make up the largest percentage of Emergency patients (around 65%).

The new Emergency has 13 places for green code patients on stretchers awaiting examination, with the utmost attention to safeguarding privacy. A short stay observation area has also been created, with 12 places for patients requiring attention in the Emergency department to complete diagnosis and tests needed for discharge.

Maxi emergencies

The new fully equipped area dedicated to Maxi Emergencies in the new Emergency has up to 500 sqm of space in the outdoor courtyard (for logistics and decontamination) and can hold up to 14 beds in the waiting room after eliminating the removable seating.

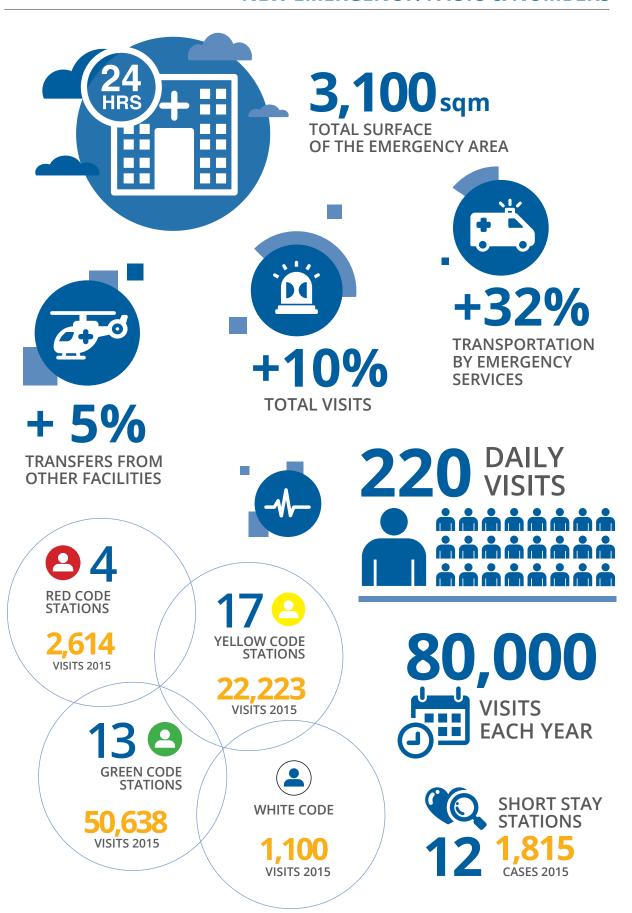
OBSTETRICS EMERGENCY

Since October 2014, the Hospital has an Obstetrics Emergency dedicated to pregnant women which offers short stays, even for just a few hours, in premises fully-equipped to deal with cases that can otherwise lead to unnecessary or untimely hospitalisation.

The presence of midwives as well as a specialised doctor ensure that three or four patients can be observed easily and conveniently at the same time, guaranteeing the best solution for their healthcare needs.

NEW PEDIATRIC EMERGENCY

The inauguration (January 2016) was the last step in the process of renovating the Pediatric Emergency, with its new Brief Intensive Pediatric Observation unit. The new facility has a protected access for ambulances and private vehicles, a specially dedicated triage and two examination rooms, one of which is for isolating infectious patients. There is also a medical "sedation room" designed to limit the anxiety and fear children have of these procedures.









34 ALLOGENIC

OF WHICH

AREAS: RADIATION ONCOLOGY; MEDICAL ONCOLOGY; HAEMATOLOGY

The Department is specifically organised to receive patients from diagnosis to treatment, follow-up and rehabilitation, from all the Hospital Areas. It also offers the necessary psychological and social support to sick people and their families. Palliative care and end-of-life pain relief is key.

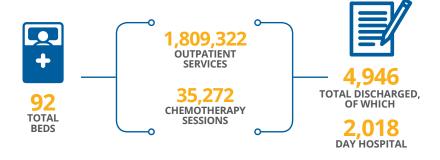
In terms of the number of cases handled, the Oncology and Haematology Department is the most important multidisciplinary oncology centre in the Lazio Region, and indeed in Italy overall. For this reason, as well as the epidemiological significance of the incidence and prevalence of the tumours treated, the Department is strategic both nationally and internationally.

Tumours of the digestive system and those affecting women (gynaecological and breast tumours) are those requiring the most from the hospitalisation services, followed by those involving urology, haematology, lung, endocrine illnesses and ENT.

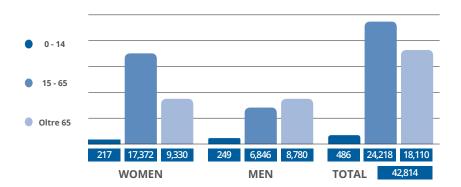
The Haematology Area plays a key role in transplants, and follows GITMO regulations (the Italian Bone Marrow Transplant Group - www.gitmo.it), as well as those issued by the EBMT (European Blood and Marrow transplantation group - www.ebmt.org) and the JACIE (Joint Accreditation Committee-ISCT & EBMT - www.jacie.org). The Haematology Area has around 500 sqm of laboratory space, equipped with the instruments needed to carry out research and diagnostics in the field of haematological illnesses.

GEMELLI ADVANCED RADIATON THERAPY

The Radiation Oncology Area features the Gemelli ART (Advanced Radiation Therapy), a highly specialised centre offering inpatients and outpatients cutting-edge clinical and technological treatment. Gemelli A.R.T. is a facility in which state-of-the-art treatment techniques, research and aesthetics all come together, resulting in the new Oncological Radiotherapy Centre inaugurated in May 2015. On the walls, paintings portraying Rome's breathtaking monuments provide a backdrop for the most sophisticated and innovative technology available today for treating tumours with a multidisciplinary approach.



ONCOLOGICAL PATIENTS TREATED AT THE POLICLINICO GEMELLI



The Gemelli ART facility is unique of its kind in Italy. This highly specialised centre was designed to offer inpatients and outpatients the very latest oncological treatments in a particularly welcoming and comfortable setting. The Centre now also has three Linear Accelerators (one Edge, one Truebeam and one Trilogy) allowing different treatment methods to be adopted. The Radiotherapy Unit also has an inpatient ward with 22 beds and Day Hospital armchairs allowing chemotherapy treatment at the same time as radiotherapy, and support therapy for patients who experience difficulty. It also offers treatment for those who are hospitalised and cannot receive treatment on an outpatient basis.

The Interventional Radiotherapy (Brachytherapy) section is the part of Gemelli ART where radiotherapy procedures for gynaecological and abdominal tumours, as well as those affecting head, neck and endocrine system, are carried out with modern imaging techniques, using exclusive treatments and surgery. Gemelli ART has a hospitalisation ward, and a Day Hospital for simultaneous chemotherapy and target treatments to intensify the radiating effect, and developing palliative programmes for short stays aimed at offering relief.

Gemelli ART is also a reference point for research projects and clinical studies in three primary fields: Clinical, Data Mining and Technology. Two laboratories known as KBO-Labs (Knowledge-Based Oncology Laboratories) are used for research purposes: this new approach aims to offer a decision-making model using clinical, biological and demographic data, diagnostic and treatment images to predict the clinical result for each patient, giving doctors a clearer decision-making system which is easier to reproduce.

The Data Mining Laboratory, on the other hand, specialises in statistics and advanced machine learning methods, making it possible to analyse data on a daily basis while protecting patient privacy. Last but not least, the Radiomics Laboratory is dedicated to studying, representing and handling medical images in a cutting-edge technological setting.

Technological management

At Gemelli ART, the multidisciplinary patient management process is carried out using a computer system which combines technology with mobile devices. This system has been purpose-designed to help facilitate the registration, handling and sharing of data via an intrainternet connection, and it is integrated with instruments to support decision making.



AROUND

10,000

BLOOD DIALYSIS
SESSIONS PER YEAR

191,286
OUTPATIENT VISITS,
OF WHICH

1,464
CHEMOTHERAPY

The Melanoma Consortium gets underway

One of the main projects starting up in 2015 concerned the creation of a "Melanoma Consortium" called Melanostrum. It is an international multidisciplinary organisation whose aim is to identify genes which are susceptible to melanoma, with genetic testing which is partly carried out in Italy and partly at the NIH.

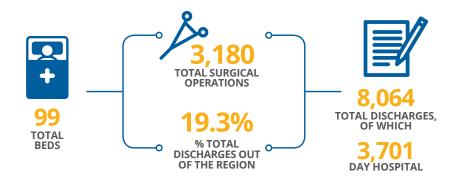
AREAS: UROLOGY AND NEPHROLOGY; RHEUMATOLOGY, IMMUNOLOGY, DERMATOLOGY

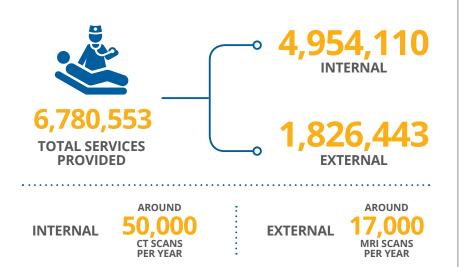
The Department provides care for chronic inflammatory illnesses, as well as rheumatic, autoimmune and allergic diseases affecting all the organs and systems, kidney stones and tumours affecting the urinary system, and kidney transplants. The main types of healthcare offered (over the course of the year) in the Rheumatology, Immunology and Dermatology Area include: -Allergology. In Day Hospital: desensitisation to latex, food and hymenoptera poison in patients at risk of anaphylactic shock; additionally, desensitisation to indispensable and irreplaceable medication;

- Oncological dermatology. Skin tumours, both carcinomas and melanomas, are diagnosed in the early phase using digital dermoscopy. All patients suffering from skin cancer are treated using surgery or topical and systemic medical treatments;
- Rheumatology. Main fields include: defining biological matrices for a precise and personalised treatment (Precision Medicine, Personalized Medicine); bioptic diagnosis of synovitis in complete remission and partial remission in order to decide whether to continue or suspend treatment; innovative treatments for early scleroderma.

The Urology and Nephrology Area proves particularly invaluable in the field of nephrology for treating:

- kidney stones;
- chronic kidney failure, from medical treatment to dialysis and kidney transplant;
- polycystic kidney disease and thrombotic microangiopathy. In the urological sphere:
- urological tumours;
- urinary incontinence in both men and women;
- urinary stones;
- urological disorders treatment with innovative technologies such as: thulium laser (prostatic hypertrophy and tumours of the urinary passages), robotic surgery for urogenital tumours, three-dimensional laparoscopy, hyperthermia of prostate tumours (HIFU) and those affecting the bladder (Synergo, EMDA), integrated ultrasound;
- magnetic resonance imaging (MRI) diagnosis of prostate tumours.





AREAS: LABORATORY DIAGNOSTICS AND INFECTIOUS DISEASES; IMAGING

Radiodiagnostics and Radiology Units play an essential role in diagnosing and treating most diseases, using both "heavy" diagnostic methods (magnetic resonance and computerised tomography) and "light" ones (ultrasound). Its work together with the Nuclear Medicine Unit has made the Area a reference point for tumour diagnosis, urgent and emergency cases in Italy. Medical Physics provides assistance by developing radiotherapy treatment and dosimetric tests during radiotherapy. The role played by the Laboratory Diagnostics and Infectious Diseases Area is also essential: the Clinical Biochemistry and Clinical Molecular Biology Laboratory conducts around 5 million tests a year, and is divided into several functional fields. The Laboratory Area handles the diagnosis and treatment of infectious diseases with the aim of diagnosing, supervising and providing consultancy in the microbiological disciplines. In 2015, two research projects regarding new therapeutic approaches for the treatment of fungal and viral diseases were completed.

The Outpatient Clinic and Day Hospital for Infectious Diseases treat a considerable number of patients with infectious diseases, particularly HIV and hepatitis, as well as all those discharged from inpatient ward. The Integrated Infectivology Consultancy Unit (established in November 2012) is a centre of excellence, guaranteeing prompt consultancy and active follow-up for serious infections in every department of the Hospital. Its work covers 10% of all PICC venous catheters inserted in Italy every year.

In 2015, the operative capacity of the Imaging Area was increased when the new Magnetic Resonance department was established. A team specialising in interventional neuroradiology adopting new regional methods for treating ischemic stroke was created.

INFECTIOUS DISEASES

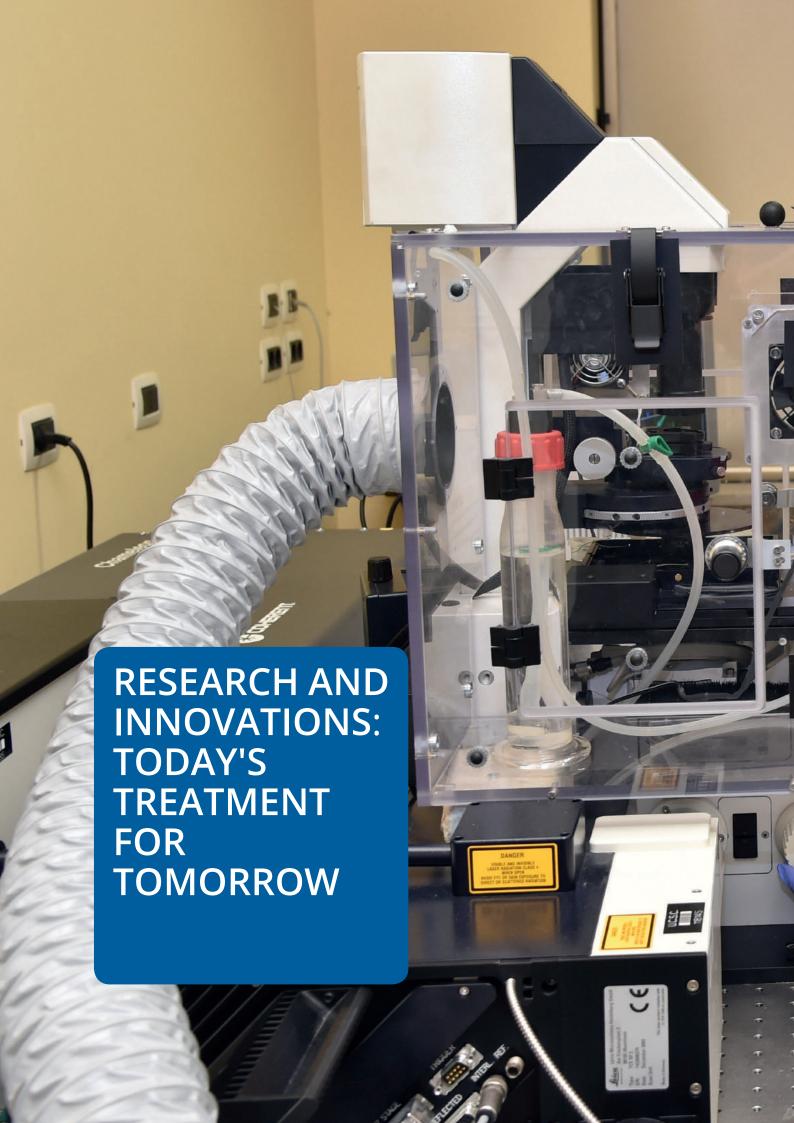


41 BEDS



1,333 TOTAL DISCHARGES







FACTS & NUMBERS

RESEARCH FUNDS PROVIDED BY ITALIAN AGENCIES 100 2013 € 3,342,936 2014 € 4,131,448 2014 +36% 2015 € 4,561,379

17
PATENTS DEVELOPED
BY INTERNAL RESEARCHERS

323
SCIENTIFIC
EXPERIMENTS UNDERWAY

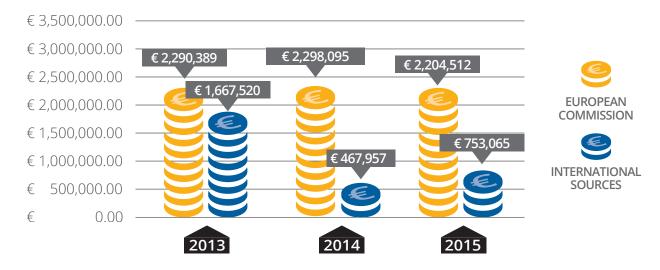
16,000,000 €

RESEARCH FUNDING

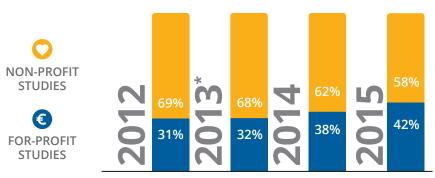
1,500

SCIENTIFIC PAPERS PUBLISHED IN 2015

RESEARCH FUNDS PROVIDED BY INTERNATIONAL AGENCIES



CLINICAL STUDIES ASSESSED BY THE ETHICS COMMITTEE



* in 2013 the Clinical Trial Center was opened

THE CLINICAL TRIAL CENTER

The Clinical Trial Center (CTC) of the Foundation was launched in January 2013 to optimise the management of profit and non-profit clinical research. It also sets out to offer training on how clinical trials must be run in Good Clinical Practice (GCP) to investigators at the Hospital and associated centres. The CTC also operates as an academic Contract Research Organization (CRO) to attract clinical research funds from pharmaceutical and biotechnology companies, or from public organizations and foundations, in order to encourage independent clinical research. With regard to this field in particular, the CTC focuses on early phase studies (1b-2).

Whilst it is open to all treatment areas, a special attention is devoted to oncology and rare diseases, a field of particular interest in recent years for pharmaceutical with a specific vocation for research and development of new treatments. By confirming to the quality of the experiments conducted, the CTC has proven a decisive add-on in the decision of a number of Companies to identify the Hospital as a centre of outstanding clinical research in the Italian sector.

Despite the fall in the number of clinical experiments recorded in recent years both in Italy and (to an even greater extent) Europe, 2015 again saw Hospital ranking amongst the top places of profit and non-profit experimentation. Since September 2015, the CTC has also coordinated the Hospital Pharmacy's functional work on experimental products, and has been reorganised into three separate Units which support profit research, the CRO and the Technical-Scientific Administration of the Ethics Committee. The GCP training is coordinated by the Quality Assurance department.

A development plan has been drafted to reach the objectives set out by the Mission of the CTC, which are monitored each year. This plan predicts the growth of the CTC's facilities, human resources and systems in line with the development of its work.

Considerable use is made of staff in training at the Hospital or external consultants/partners, a choice which makes it possible to react to any operating changes, even when sizeable, whilst maintaining the necessary economic and financial stability.

Ethical Committee

Established in 1988, this consultancy body is made up of members with various types of expertise and experience who are called upon to assess the ethical nature of the experimentation protocols, and ensure that the safety, integrity and rights of patients taking part in the clinical studies are safeguarded.

INNOVATION AND TECHNOLOGY

IN NUMBERS









Thanks to...

The contribution of Fondazione Cariplo for the development of IPSE Center.

IPSE CENTER

The IPSE Center (Interactive Patient Simulation Experience) is a new centre with a surface area of 1,200 sgm dedicated to medical, surgical and diagnostic simulation. It features premises purpose-designed to recreate situations that staff members come across every day in their work. The CELL (Center for Experiential Learning) has been set up inside the Center. This innovative approach to experience-based training has been developed and exported worldwide by the partner company QBGroup wich, since 2008 has staged over 300 educational events, and received positive feedback from over 12 thousand Italian and foreign doctors. Alongside CELL experience-based learning, training methods are based on advanced macro simulation (High Fidelity), skill training (Low Fidelity) and creating integrated processes. The IPSE houses an operating theatre, a delivery room, an emergency room and multipurpose areas.

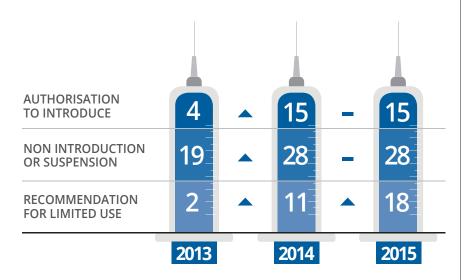
HEALTH TECHNOLOGY ASSESSMENT

The Hospital has always placed emphasis on technological innovation for medical purposes. Its goal is to guarantee to every patient the most effective and appropriate treatment within the financial limitations of the SSN. This complex situation sees the Foundation at the national and international forefront of the Health Technology Assessment (HTA) scenario. HTA is a multidisciplinary approach which supports decisionmaking processes for allocating resources, in order to ensure that the best technologies are chosen and that the best healthcare models are available to patients.

ELECTROMEDICAL TECHNOLOGIES. In the course of 2015, the main investments in new electromedical technologies (replacing obsolete instruments or increasing equipment for new activities) involved:

- updating/replacing two 1.5 Tesla magnetic resonance imaging (MRI) scanners, of which one is located in the Emergency;
- acquiring technologies for the new Intensive Cardiovascular Medicine unit:
- completing the imaging equipment of the new Breast Centre with a digital mammograph with tomosynthesis and an ultrasound with a senology probe on an articulated arm;
- replacing and increasing supplies and operating table accessories for the 25 operating theatres of the central block. In addition, the following actions are planned:
- acquisition of a new surgical microscope for implementing lymphedema surgery; replacing the two portable systems for radiology;
- acquisition of the "non-magnetic" technological equipment needed for the new MRI centre.





MEDICAL DEVICES. Since 2006, The HTA Unit has assessed the effectiveness, the economic and organisational impact of the medical devices. Devices are evaluated during their introduction into clinical practice (ex-ante assessments) and when updating the inventory with a view to disinvestment. Over the last three years, 140 medical devices have been assessed, with a considerable increase in authorisation to introduce devices deemed effective.

NEW PHARMACEUTICAL DRUGS. Since November 2013, the HTA has assessed requests to include new drugs in the Hospital Treatment Manual (Prontuario Terapeutico Ospedaliero - PTO) submitted to the Board for Drug Therapy and Medical Devices (COFT-DM). The risk-benefit profile of the drug is assessed, along with the impact on the patient and the organization. The therapy cost of the new drug is also estimated together with analogous drugs already contained in the Manual. In conjunction with the Hospital Pharmacy, the HTA supplies a technical opinion to the COFT-DM, which decides whether to include the drug in the Manual. From November 2013 to December 2015, 67 drugs were evaluated.

NEW DIAGNOSTIC SERVICES. The HTA provides input for assessing the introduction of new diagnostic services, working with the Medical Management and the COFT. For the most part, this regards laboratory tests which apply the most recent technological/scientific breakthroughs (such as genetic testing) are used, making it possible to bring healthcare processes up-to-date for patients affected by illnesses which are hard to treat and diagnose. In 2015, 10 new diagnostic tests were assessed for introduction into clinical practice.

Core Lab

A project to reorganise a sizeable part of laboratory work got underway in 2015. The aim was to rationalise the analysis work and optimise the human and technological resources, while increasing the quality of the services provided. As a result, a Core Lab - High Automation Area was set up, combining Clinical Chemistry, Haematology and Hemorrhagic and Thrombotic Diseases (over 75% of tests performed). The project has helped improve the operative standards, guaranteeing coverage of the whole range of tests performed by the Laboratory Services with improved usage of human, technological and economic resources. The new organisational model also allows better tracking of processes involving biological samples, resulting in higher safety standards for both patients and staff.

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Notice

The Sustainability Report 2015 contains information concerning projects and intentions which are underway or scheduled for future implementation. Various factors may, however, result in future activities and being in some way different to the intent ions set out here. In addition, this Sustainability Report in no way sets out to request any form of economic support from stakeholders; in this respect, reference should be made to the financial information documents which are available from the Foundation.