

CASA di CURA del POLICLINICO (CCP)

Casa di Cura del Policlinico (CCP) is a fully integrated multi-specialty clinical centre aiming at providing both inpatient and outpatient services mainly directed to neurological patients. The Centre, a 136-bed rehabilitation clinic plus 12-bed day hospital facility, is constituted as a Department of Neurorehabilitation Sciences, accredited by the Italian National Health System, and economically supported by Regione Lombardia.

The Department is composed of three 45-bed Units for hospital stay and four clinical services: (Neuropsychology, Phoniatriy, Neuro-ophthalmology, and Psychiatry). Moreover, the Centre refers to internal Radiology (including CT scan and MRI) and Laboratory services for biological analysis; technogym's rehabilitation facilities and a swimming pool are also available. CCP is pushing to offer chronic neurological patients the highest comprehensive standards of care in a comfortable living environment. This goal will be achieved through a patient management approach organised around a core rehabilitation programme. The Centre draws together the expertise of a large team of specialists, which perform a multidisciplinary service aimed to cover the full range of needs of patients with neurological disorders. The disciplines represented in the team include clinicians (neurologists, physiatrists, pulmonologists, cardiologists, phoniatriests), psychologists, motor and occupational therapists, speech therapist, dieticians, and clinical nurse specialists.

The Neuropsychology activity concerns the assessment of a cognitive profile following a brain lesion and the implementation of specific rehabilitation programs for cognitive deficits. The Phoniatriy service gives a significant support in assessing swallowing deficits in dysphagic patients; taking into account nutritional aspects, specific rehabilitation interventions are provided to patients by varying the consistency of food and using training techniques. The Neuro-ophthamology service assesses deficit in visual acuity and reduction of visual fields following a central nervous system pathology. The Psychiatric service offers clinical and pharmacological support for those patients and relatives who need specific care for mood and psychiatric disorders.

The main objective of our clinical interventions pertains to the rehabilitation of patients with different types of brain-lesions, for instance those lesions due to acute events such as cerebral stroke or traumatic brain injury. Stroke rehabilitation may include some or all of the following activities: strengthening motor skills, mobility training, range of motion therapy, neuropsychological

evaluation and cognitive rehabilitation, therapy for language and communication disorders, electrical stimulation, and virtual reality. Rehabilitation programs are also addressed to subjects requiring high complexity assistance, such as minimally responsive patients, those in a vegetative state or after acute severe brain injuries. On the other hand, an increasing number of admissions also concerns chronic patients with neurodegenerative diseases, such as Parkinson's disease or Amyotrophic Lateral Sclerosis. Lastly, some chronic paediatric neurological patients may attend the Centre, as an 8-bed day hospital facility and an outpatient clinic that have recently been dedicated to Infantile Cerebral Palsy (ICP). CCP has been certified UNI EN ISO 9001:2008 for "*design and provision of training events in the medical field*" and "*provision of specialized rehabilitation services for adults in inpatient, day-hospital and outpatient regimen*".

Our multidisciplinary approach to patients aims to integrate all services, enabling us to provide each patient with an individualized care plan tailored to meet his specific needs. Since improving the patients' Quality of life (QoL) is one of our main goals, in the course of clinical practice we evaluate the effects of our multi-professional approach by using the Customer Satisfaction Survey developed by Regione Lombardia. The analysis of the results collected during the period between January and December 2013 depicts a high level of satisfaction perceived by both patients and caregivers: particularly, for inpatients the total score was 6.46 points out of 7 available on the Regional Scale.

Beyond clinical activities, our Department is actively promoting education and research programs. Education is mainly aimed towards the different professional profiles of the team and provides updates on rehabilitation fields and clinical management of the patients with neurological diseases. Clinical research projects aim to study aspects concerning assessment and rehabilitation techniques for motor, cognitive, linguistic and occupational deficits caused by brain lesions.

A great part of the projects we mentioned thus far are in partnership with Istituto Superiore di Sanità (ISS) and Italian Universities from several main cities in the country, including Milan, Turin, Rome, and Trento. The cooperation between CCP and University Institutions is based upon know-how and technology sharing. We are especially interested in the following areas: Clinical Neuropsychology (attentional disorders and their interaction with the visual loss; aphasia and other language disorders); the effects of the transcranial Direct Current Stimulation (tDCS) in the treatments of brain injuries; the assessment of new tools for a more effective rehabilitation therapy. The Centre is actively involved in a clinical and preclinical research program into neurodegenerative diseases, particularly including biomarker analysis and genetic studies as well as innovative new therapies for affected patients. In the last two years, collaborating with the

Università Cattolica del Sacro Cuore in Milan, we also focused our attention on the *active aging* and the *patients' wellbeing*, two crucial issues for citizens with neurological diseases. In addition, it is worth mentioning that “patient engagement” is the experience resulting from the conjoint emotional (feel), cognitive (think), and conative (act) enactment of individuals in their management of the health issues. Therefore, in this context, we are now investigating on the patients wellbeing and engagement by using *horticultural therapy* protocols and planning a *healing garden*. These strategies may potentially relate to higher quality of care and a better patient-doctor relationship, thus improving the patient's clinical markers and compliance to prescribed therapeutic regimens. Rehabilitation programs are also addressed to subjects requiring home assistance: CCP is involved in implementing therapeutic interventions and services addressed to elderly people and to their caregivers for a better quality of homeliving. The organization is improving ICT enabled projects with social and industrial partners in order to extend the range of services aimed to an effective continuity of care.

The key aim of CCP is to provide an ideal setting for promoting translational research in neurodegenerative diseases in order to facilitate the rapid transfer of research knowledge to the clinical environment. The Centre is actively involved in a clinical and preclinical research program into neurodegenerative diseases, particularly including biomarker analysis and genetic studies as well as innovative new therapies for affected patients.