

MEETING ABSTRACTS

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# Center for Interdisciplinary Research in Health (CIIS) National Meeting 2023

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The Center for Interdisciplinary Research in Health (CIIS) is the research center of the Universidade Católica Portuguesa (UCP) focused on health care. The Center is organized in five platforms, and distributed in four geographies across Portugal: Lisbon, Porto, Viseu and Sintra (Table 1). The center has currently 155 active researchers and attracted funds exceeding 10M€.

For the first time ever, CIIS has organized a National Event that included researchers from all platforms and disciplines, in a truly interdisciplinary and translational scientific event, counting 117 registered participants and 120 abstracts. The meeting took place at the Faculty of Medicine, in the Sintra campus, on the 31<sup>st</sup> March and 1<sup>st</sup> April 2023. The Scientific Committee of the CIIS National Meeting decided that the theme for the meeting is *Interdisciplinary Health Care*. Rather than clustering researchers by platform or discipline, we decided to create three working sessions that are inclusive to everyone and not restricting the presentations by discipline, being therefore, interdisciplinary. These are: 1 – *Translational Care*; 2 – *Clinical Care*; and 3 – *Community Care*.

The meeting was held in the presence of the Universidade Católica Portuguesa Rector Professor Isabel Capelo Gil, the Vice-Rector Professor Peter Hanenberg, the Director of the CIIS, Professor Marlene Barros, the Director of the Faculty of Medicine, Professor António Almeida and the guest speaker Professor Tomáš Zima, Charles University, Prague, Czech Republic, and hosted by the Deputy Director of the CIIS, Professor Paulo J. G. Bettencourt.

For two days, papers were presented by invited speakers within each session, and posters were presented by CIIS researchers and students, in a highly anticipated poster session. All abstracts were peer-reviewed. To bring further excitement to the poster session, the Meeting Scientific Committee selected the best poster from each platform to receive the Best Poster Award. Finally, the CIIS platform coordinators presented their plans and vision for the future.

Following the success of this meeting, the Scientific Committee of the National Meeting, decided to implement yearly meetings of the Center.

We would like to acknowledge all CIIS members, staff and students that accepted the challenge of participating in this event, presenting their most recent data, sharing their knowledge, and making this truly an interdisciplinary health care event.

We hope this meeting has contributed to share the latest scientific achievements of all members and promoted the beginning of new collaborations for the future, keeping in mind the main goal of improving health care with an interdisciplinary view, to ultimately improve quality of life, with humanity and spirituality at the center of all scientific quests.

## Acknowledgements

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**Table 1 Platforms of the Center for Interdisciplinary Research in Health**

Name	Location	Head
Neurosciences	Lisbon and Porto	Prof. Ana Mineiro
Nursing	Lisbon and Porto	Prof. Paulo Alves
CatólicaMed	Sintra	Prof. Paulo Bettencourt
SalivaTec	Viseu	Prof. Nuno Rosa
Precision Dental Medicine	Viseu	Prof. André Correia



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thus urging an adequate, early and integrated nutritional intervention throughout the disease course and treatments.

The main objective of nutritional intervention is to optimize your energy intake, with the purpose of improving your well-being, quality of life and better tolerate of antineoplastic treatments. To achieve this goal, it is mandatory to carry out the nutritional assessment to detect the needs of the patient and later a personalized food plan, aiming at: the objective of antineoplastic treatment, expected toxicities, energy needs, symptoms in need of modulation, swallowing capacity, psychosocial factors and above all the wishes and preferences of the patient. Early nutritional support has the potential to reduce the risk for therapy-threatening adverse events and optimise the likelihood of treatment success and long-term survival. Although the optimal nutrient content for "an anti-cachexia diet" is still not defined, ESMO and ESPEN guidelines stress the need for maintaining calorie and protein intake. Clinical studies do show potential benefits for some specific nutrients, especially when combined with exercise training.

**Protein:** a range of protein intake between 1.5-2.0 g/kg/day seems needed to promote muscle mass balance, with beneficial effects in patients' body composition.

**Fish oil and eicosapentaenoic acid (EPA):** could help to improve appetite, food intake, body weight, and muscle mass in individuals at risk for body composition alterations. High protein oral nutrition supplements enriched with EPA may help ameliorate weight and muscle mass loss to a greater extent than isocaloric control supplements.

**Vitamins and minerals** during the disease trajectory, there is risk of micronutrient deficiency. To date there is insufficient evidence to support the use of vitamin or mineral supplements. Studies showed that side effects of therapy such as vomiting or diarrhea might deplete vitamins A and E. Zinc supplementation has been studied in the context of dysgeusia with possible positive impact in improving intake. Sufficient vitamin D might be needed for other supplements to be effective. Ensuring adequate levels may be advantageous in the prevention or treatment of low muscle mass.

## O7

### - Clinical Wound Support I Decision-making in wound monitoring and treatment

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### Background

The World Health Organization considers wounds and all their problems as the new hidden epidemic. Ageing associated with chronic diseases and other morbidities are a common factor in this phenomenon, considered a national and international public health problem and a concern for the safety of patients, with clinical and socio-economic impact. Health professional assistance tools to manage information and support their decision are seen as an important resource because they reduce time, reduce costs, provide security to the professional and improve their decisions.

### Objective

Build a digital and portable system to support monitoring and clinical decision-making in prevention and treatment of chronic wounds.

### Methods

Qualitative and quantitative approach with a series of different methodologies: first a prospective observational multicentric study to develop a tool for capturing the image of the wounds/dressings applied, with the ability to focus and detect the wound/dressings, as well as to identify the perilesional skin, edges and measures of the

wound, types of tissue on the wound bed and the areas of exudate transfer (dressings); Develop algorithms for semi-automatic determination of wound properties based on acquired images; and build decision trees for the monitoring and treatment of chronic wounds; second with a qualitative approach was a based on individual interviews, Focus group, usability tests, ideation and co-creation sessions with experts with the goal of identifying system actors, guidelines, best practices in wound monitoring, and algorithm development to diagnosis and treatment; the third the validation of clinical algorithms through a prospective observational multicentric cohort study. At the end a system of clinical decision-making support can be created in the diagnosis and treatment of chronic wounds.

### Results

Validation of the different components built for clinical algorithms, alerts, recommendations for the treatment and a wound imaging tool with ability to focus, detection, acquisition, and automatic image correction, speeding up the semi-automatic recording of wound characteristics (size, types of tissue, perilesional skin).

### Conclusion

With the use of this technology will be made possible to achieve better care to people with chronic wounds, predictably faster healings and, consequently, greater satisfaction and quality of life of people.

### Funding

This work is financially supported by project ClinicalWoundSupport: Wound Analysis to Support Clinical Decision (POCI-01-0247-FEDER-048922; LISBOA-01-0247-FEDER-048922)

### Keywords

Chronic wounds; decision making; prognosis; treatment; wounds and injuries.

## O8

### - HOPE2BRAIN+: Evaluating the effectiveness of a hope-promoting multilevel intervention program for increasing executive functions and quality of life in children with cancer disease

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### Background

Hope2Brain+ is a research project of Hope2Care integrated into the Nursing Research Platform in association with the Translational Neuroscience Platform - Brain and Behavior Research Lab. Studies conducted in Portugal have highlighted the fragility of the health condition and general well-being of children with cancer disease and their parents<sup>1-3</sup>. The project evaluates an approach supported by Hope Therapy (HT). It has as its objectives: i) test the effect of a hope therapy program for parents operationalized in individual and group intervention on the levels of hope, comfort, quality of life, and the burden of parents of the child with oncologic disease; ii) test the effect of the HT program on children operationalized in group intervention (storytelling - Storytime) on the dimensions of executive functioning and anxiety; iii) test the effect of the combination of the two programs of HT.

### Materials and methods

Descriptive and comparative study targeting children aged 6 to 10 and their parents. The different phases of the project include stage I (pre-experimental study), stage II (experimental study), and stage III (qualitative study). In stage II, we plan to implement and test the effect of HT operationalized in individual and group interventions. The group intervention carries eight weekly (2-month) sessions, each lasting 02h00 (duration of the intervention foreseen for a group of 12 participants). To the experimental group (G1), hope therapy applies to the parents. The experimental group (G2) will receive the children's HT (also every week) using storytelling with stories selected for this purpose. For the experimental group (G3), the HT will simultaneously apply to parents and children. For the control group (G4), a group intervention based on the "free" sharing of experiences among the participants (therapy

in use) in different periods. The review of this study by the Ethics Commission is ongoing.

#### Results

By evaluating the effectiveness of a multilevel program based on HT, we hope to improve well-being in the dimensions of comfort, quality of life, and prevention of emotional overburdening of parents. The storytelling intervention with children is also expected to empower them to solve problems. Children receive reassurance from their parents and are accompanied by guided reflections on the obstacles of the characters in the stories worked on, will lead to an increase in resilience during their hospital stay.

#### Conclusions

The research will provide an opportunity to improve emotional support care and the general well-being of this population.

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#### O9

##### - Cognition in psychiatric disorders

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Excluding dementia, cognition is usually not considered a core feature of psychiatric disorders. However, it is one of the most important factors associated with short- and long-term impairment.

Acute cognitive changes, a concept similar to “hot cognition”, are related to emotional and mood symptoms, e.g., depressed patients tend to have cognitive distortions towards pessimism [1] or OCD patients have a different pattern of risk assessment when compared to nondepressed and non-OCD persons, respectively.

Persistent cognitive deficits (“cold cognition”) are extremely important because they can be preventable, either through the treatment of psychiatric disease or through specific interventions on the underlying biological mechanisms. Depression is a risk factor for dementia and is amenable to prevention. However, only some types of depression have been associated with dementia, probably due to its biological and clinical heterogeneity [2]. Understanding the mechanism of this cognitive impairment has been one of our targets. We are now trying to understand the roles of the endocannabinoid system and NMDA receptors in the persistent cognitive impairment of depressive disorders. Cognitive impairment in another psychiatric disorder, schizophrenia, has also been associated with NMDA receptors. The modulation of these receptors can attenuate some cognitive deficits, especially those related to the frontal lobe, in animals [3]. Clinical trials targeting this receptor have already started.

In alcohol use disorders, cognitive deficits are well known, and they can hamper alcohol dependence treatment. The pattern of cognitive impairment can guide the choice of treatment of the disorder, as some patients remain longer without drinking if a certain pattern is dealt specifically with cognitive rehabilitation.

Although cognitive symptoms are not the core symptoms of most psychiatric disorders, we are very interested in how they can be prevented.

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#### O10

##### - MAIEC Project- Research on Community empowerment at the service of the sustainable development goals

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#### Background

The Community Assessment, Intervention and Empowerment Model (MAIEC) was developed in 2016 in the context of the PhD in Nursing at the Catholic University of Portugal. In 2017, the project MAIEC: Community Empowerment and Nursing decision-making" was created, based at the Centre for Interdisciplinary Research in Health of the Universidade Católica Portuguesa. The aim of this project is to evaluate the impact of using MAIEC in improving community management and empowerment from different communities in different issues.

#### Methodology

The project has four work packages (WP), where the MAIEC research protocol is developed. The protocol begins with assessing the level of community empowerment using the Portuguese version of the Empowerment Assessment Rating Scale (with Focus Group as methodological strategy). Then, the diagnostic activity proposed by the MAIEC clinical decision matrix is applied and the interventions prescribed by the same matrix are developed and the results are assessed. With an interval of at least 1 year, the level of community empowerment is reassessed. WP1 relates to school communities, WP2 relates to hospital communities, WP3 relates to Epidemiological Surveillance of Nursing Diagnoses and WP4 relates to environmental processes. Each WP has multiple projects.

#### Results

MAIEC project made it possible to identify the level of community empowerment and the diagnosis of community management in various communities and different issues. It also made it possible to identify the improvement in the level of community empowerment regarding MAIEC application. In the set of 4 WP, the project responds to 10 of the 17 Goals for Sustainable Development of the UN.

#### Conclusion

MAIEC project is a multidisciplinary, innovative project that responds to the production of evidence, particularly in Community Health and Public Health Nursing and contributes to respond to more than half of the Goals for Sustainable Development proposed by the UN.

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#### O11

##### - Epigenetics in hematological malignancies

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