JORNADA CIENTÍFICA CIBERESP 2019

Aula Pittaluga, Escuela Nacional de Sanidad
Instituto de Salud Carlos III
14 de noviembre, Madrid

Libro de comunicaciones

Comité de Dirección

Marina Pollán Santamaría	Directora Científica
Ángela Domínguez García	Subdirectora científica
Mª José Sánchez Pérez	P1. Epidemiología y prevención de enfermedades crónicas
Pere Godoy García	P2. Prevención, Vigilancia y Control de Enfermedades Transmisibles (PREVICET)
Jordi Casabona Barbará	P3. Determinantes Biológicos, Conductuales y Estructurales en la Adquisición y Propagación de Enfermedades Transmisibles en Poblaciones Vulnerables (DAPET)
Mª José López Medina	P4. Determinantes sociales de la salud
Adonina Tardón García	P5. Epidemiología y prevención de enfermedades de origen ambiental y laboral
Jordi Alonso Caballero	P6. Evaluación de Servicios de Salud
José Ignacio Pijoán Zubizarreta	P7. Epidemiología Clínica
Beatriz Pérez Gómez	Programa de Formación
Margarita Blázquez	Representante del ISCIII
Manuel Sánchez Delgado	Gerente

Comité Científico Asesor Externo

Henrique Barros	University of Porto Medical School
Ana Navas Acién	Columbia University
Javier Nieto	Oregon State University
Jose María Valderas	University of Exeter
Teymur Noori	European Centre for Disease Prevention and Control
Ana Pilar Betrán Lázaga	World Health Organization

Grupos

Grupo	Jefe/a de Grupo
1	Ángela Domínguez García
2	Andrés Moya Simarro
3	Carme Borrell Thio
4	Enrique Calderón Sandubete
5	Eduard Rodríguez Farré
6	Francisco Bolumar Montrull
7	Marina Pollán Santamaría

8	Ignacio Ferreira González
9	Jordi Alonso Caballero
11	Jesús Castilla Catalán
12	Cristina Rius Gibert
13	Juan Emilio Echevarría Mayo
14	Adolfo Figueiras Guzmán
15	Victoria Serra Sutton
16	Miguel Delgado Rodríguez
17	María Manuela Morales Suárez-Varela
18	María José López Medina
19	Nicolás Olea Serrano
20	Ricard Marcos Dauder
21	María José Belza Egozcue
22	Eulalia Martí Puig
23	Agustín Gómez de la Cámara
24	Mª Dolores Chirlaque López
25	Fernando Rodríguez Artalejo
26	Blanca Lumbreras Lacarra
27	Jordi Casabona Barbará
28	Jesús Ibarluzea Maurolagoitia
29	Clara Menéndez Santos
30	Helmut Schröder
32	Amparo Larrauri Cámara
33	Fernando Baquero Mochales
34	María José Sánchez Pérez
35	Miquel Porta Serra
36	Mª Eulalia Alemany Vilches
38	Emmanouil Kogevinas
39	José Ignacio Emparanza Knörr
40	Jordi Sunyer Deu
41	Carmen Iñiguez Hernández
42	Javier Zamora Romero
43	Xavier Bonfill Cosp
44	Aurora Bueno Cavanillas
46	Antonio Daponte Codina
47	Fernando García Benavides
50	Isabel Ruiz Pérez
51	Marc Sáez Zafra
53	Adonina Tardón García
55	Víctor Moreno Aguado
56	Jordi Figuerola Borras
57	María Carmen Muñoz Almagro
58	Antonio Serrano Blanco
Grupo asociado	Julia del Amo Valero

Presentación

Los investigadores CIBERESP nos reunimos de nuevo para poner en común algunos de los resultados que hemos obtenido fruto de la colaboración ya consolidada de nuestros grupos. Nos satisface comprobar que el CIBER (Centro de Investigación Biomédica en Red) de Epidemiología y Salud Pública sigue siendo un referente nacional. Tras el éxito de la jornada 2018, el formato este año sigue dando prioridad a los resultados científicos y a facilitar una mirada hacia otras áreas CIBER con las que poder iniciar o fortalecer la colaboración.

En esta ocasión, hemos decidido establecer un diálogo entre dos representantes de otras áreas CIBER con investigadores CIBERESP. El Dr. Eduard Vieta, de CIBERSAM y el Dr. Jordi Alonso de CIBERESP hablarán de posibilidades de colaboración en el ámbito de la Salud Mental. Por su parte, el Dr. Xavier Forns de CIBEREHD y el Dr. Pere Godoy hablarán de la Hepatitis como un ámbito de colaboración posible entre estas dos áreas CIBER.

CIBERESP cuenta con un nuevo Comité Científico Asesor Externo y hemos aprovechado la presencia de dicho comité para reservar un espacio de encuentro con ellos en esta jornada. Además, presentaremos los resultados de la encuesta de satisfacción que todos los investigadores CIBERESP hemos tenido la oportunidad de contestar. Tanto los resultados de la encuesta como la opinión del nuevo Comité Científico Asesor Externo serán elementos clave a tener en cuenta en el Plan Estratégico a elaborar durante 2020.

Como el año pasado, en las mesas de comunicaciones, los siete programas CIBERESP mostrarán los trabajos seleccionados que muestran la diversidad de temas de salud pública y la calidad de la investigación de CIBERESP. En los pósteres, una vez más, hemos tratado de dar visibilidad al trabajo realizado por los investigadores jóvenes. Os animamos a todos a dedicar un espacio de tiempo para leer los trabajos presentados este año y comentar impresiones con sus autores.

En CIBERESP trabajamos para proporcionar información relevante sobre las desigualdades en salud, el impacto de las políticas sanitarias, los factores de riesgo implicados en las principales enfermedades con vistas a la prevención y la evaluación de la práctica clínica. Con ello prestamos apoyo al Sistema Nacional de Salud y a las autoridades sanitarias para que el conocimiento generado ayude a perfilar las políticas sanitarias. Por ello, la clausura de la jornada correrá a cargo de una autoridad sanitaria de ámbito nacional: la Directora General de Salud Pública del Ministerio de Sanidad, Consumo y Bienestar Social.

Como siempre, es un placer acogeros en el Instituto de Salud Carlos III, que en definitiva es nuestra casa común.

¡Bienvenidos!

Marina Pollán Santamaría.

Directora Científica de CIBERESP

Programa JORNADA CIENTÍFICA CIBERESP 2019

	Jueves, 14 de noviembre de 2019 **Escuela Nacional de Sanidad, Aula Magna Gustavo Pittaluga. Instituto de Salud Carlos III. Madrid**
10:30 h. am	**Inauguración de la Jornada** Dª. Margarita Blázquez Herranz. Subdirectora Gral. de Redes y Centros de Investigación Cooperativa. Instituto de Salud Carlos III. Dª. Marina Pollán Santamaría. Directora Científica del CIBER área de Epidemiología y Salud Pública (CIBERESP).
11:00 h. am	**Comunicaciones de los programas - 1ª parte** P5. Epidemiología y prevención de salud ambiental y laboral: Dª. Marieta Fernández Cabrera (Grupo 19 CIBERESP): "Biomonitorización, vigilancia y evaluación de la exposición ambiental: HBM4EU". P1. Epidemiología y control de enfermedades crónicas: Dª. Pilar Amiano Etxezarreta (Grupo 28 CIBERESP): "Dietary inflammatory index, dietary non-enzymatic antioxidant capacity and colorectal and breast cancer risk (MCC-Spain study)". P2. Prevención, vigilancia y control de enfermedades transmisibles (PREVICET): Dª. Ana Vázquez González (Grupo 56 CIBERESP): "Arbovirus surveillance: first dengue virus detection in local Aedes albopictus mosquitoes in Europe, Catalonia, Spain, 2015". P3. Determinantes biológicos y conductuales en la adquisición y propagación de enfermedades transmisibles en poblaciones vulnerables (DAPET): Dª. Elisa Martró Catalá (Grupo 27 CIBERESP): "New testing strategies to reach vulnerable populations and characterize the hepatitis C epidemic". Moderadora: Dª. Adonina Tardón García.
12:30h. am	**Ampliando fronteras dentro del CIBER: Diálogos** D. Eduard Vieta Pascual. Director Científico CIBER área de Salud Mental (CIBERSAM). Posibilidades colaboración SAM y ESP – D. Jordi Alonso Caballero. CIBERESP. D. Xavier Forns Bernhardt. Coordinador de Epidemiología, prevención y tratamiento de la infección por virus de la hepatitis del CIBER área de Enfermedades Hepáticas y Digestivas (CIBEREHD). Hepatitis – D. Pere Godoy García. CIBERESP. Moderadora: Dª. Ángela Domínguez García. Subdirectora Científica CIBERESP.
13:30 h. pm	**Comida + "Café en los posters" (Aulas 9 y 10)**
14:30 h. pm	**Coloquio: CIBERESP, la visión desde el Comité Científico Asesor Externo** D. Henrique Barros. University of Porto Medical School. D. Javier Nieto. Oregon State University. D. Jose María Valderas. University of Exeter. D. Teymur Noori. European Centre for Disease Prevention and Control. Dª. Ana Pilar Betrán Lázaga. World Health Organization. Moderador: D. Jordi Alonso Caballero.
15:10 h. pm	**La visión desde CIBERESP: Resultados de la encuesta de satisfacción CIBERESP**. Dª. Montserrat Ferrer Forés.
15:30 h. pm	**Comunicaciones de los programas - 2ª parte** P4. Determinantes sociales de la salud: D. Antonio Daponte Codina (Grupo 46 CIBERESP): "Economic Crisis and Health Research: results and tools for the future". P6. Evaluación de servicios de salud: Dª. Victoria Serra Sutton (Grupo 15 CIBERESP): "Evaluation of the methodological quality and the impact of Act on Dementia Joint Action". P7. Epidemiología clínica: D. Miguel Menéndez Orenga (Grupo 23 CIBERESP): "MedDietCalc: multi calculator to compute scores of adherence to Mediterranean Diet". Moderador: D. Jordi Casabona Barbará.
16:35 h. pm	**Asamblea** D. Manuel Sánchez Delgado. Gerente CIBER. Dª. Ángela Domínguez García. Subdirectora Científica CIBERESP y Dª. Marina Pollán Santamaría. Directora Científica CIBERESP.
17:05 h. pm	**Clausura** Dª. Pilar Aparicio Azcárraga. Directora General de Salud Pública, Calidad e Innovación. Ministerio de Sanidad, Consumo y Bienestar Social.

Pósteres	
Programa 1. Epidemiología y control de enfermedades crónicas	D. Joan Mas Lloret (Grupo 55 CIBERESP): "The gut microbiome as a tool for colorectal cancer screening". *Poster joven* D. José Mª Huerta Castaño (Grupo 24 CIBERESP): "Incidence of dementia in the European Prospective Investigation into Cancer and nutrition (EPIC)-Spain study". *Poster joven* Dª. Marcela Guevara Eslava (Grupo 11 CIBERESP): "Recent trends in cancer survival in adult patients in Spain. Results from thirteen population-based cancer registries". D. Pablo Fernández Navarro (Grupo 7 CIBERESP): "GEO_CIBER: a geocoding tool for the cancer surveillance program (VICA)". Cristina Villanueva Belmonte (Group 38 CIBERESP): "Pilot study on chemical pollution of drinking water sources in rural Mozambique".
Programa 2. Prevención, Vigilancia y Control de Enfermedades Transmisibles (PREVICET)	Dª. Amparo Larrauri Cámara (Grupo 32 CIBERESP):" Influenza vaccine effectiveness in pregnant women to prevent severe infection in children under 6 months of age. Spain, 2017-2019". D. Cristian Launes Montaña (Grupo 57 CIBERESP): "Outbreak of brainstem encephalitis associated with enterovirus-A71 in Catalonia, Spain (2016): a clinical observational study in a children's reference centre in Catalonia". *Poster joven* D. Cristina Rius Gibert (Grupo 12 CIBERESP): "Acceptability and effectiveness of using mobile applications to promote HIV and other STI testing among men who have sex with men in Barcelona, Spain".
Programa 3. Determinantes Biológicos y Conductuales en la adquisición y propagación de enfermedades transmisibles en poblaciones vulnerables (DAPET)	Dª. Laura Martínez-García (Grupo 33 CIBERESP): "Temporal evolution of lymphogranuloma venereum cases in Madrid during 7 years". *Poster joven* Dª. Juliana Reyes-Urueña (Grupo 27 CIBERESP): "Inconsistency between population that have been offered an anti-HVC test and those that are HVC seroprevalent in primary care, Catalonia 2011-2016". *Poster joven* Dª. Laia Alemany Vilches Serret (Grupo 36 CIBERESP): "Sweetie project: prevalence and determinants of sexually transmitted infections in a high risk population".
Programa 4. Determinantes sociales de la salud	Dª. Marta Solans Margalef (Grupo 51 CIBERESP): "Assessing the role of dietary patterns in the etiology of lymphoid neoplasms". *Poster joven* D. Marc Marí-Dell'Olmo (Grupo 3 CIBERESP): "Energy poverty and health: trends in the European Union before and during the economic crisis, 2007-2016". *Poster joven* Dª. Belen Sanz Barbero (Grupo 21 CIBERESP): "Prevalence, Associated Factors and Health Impact of Intimate Partner Violence Against Women in Different Life Stages".
Programa 5. Epidemiología y prevención de salud ambiental y laboral	D. Rubén Corpas Expósito (Grupo 5 CIBERESP): "Long-term physical activity induces brain resilience in middle-aged adults". *Poster joven* Dª. Maria Jose Lopez Espinosa (Grupo 41 CIBERESP): "The INMA-Valencia cohort: A new health survey after 15 years of follow-up". *Poster joven* Dª. Carmen Freire Warden (Grupo 19 CIBERESP): "Concentración de metales en orina, niveles hormonales y presión arterial en adolescentes de la cohorte INMA-Granada".
Programa 6. Evaluación de servicios de salud	Dª. Yolanda Pardo Cladellas (Grupo 9 CIBERESP): "A new online system for the standardized appraisal of PRO instruments: the EMPRO platform". *Poster joven* D. Philippe Mortier (Grupo 9 CIBERESP): "Transitions from suicidal ideation to suicide plans and/or suicide attempts among incoming college students – results from the WMH-ICS Initiative". *Poster joven* D. Ignacio Aznar Lou (Grupo 58 CIBERESP): Economic evaluation of a complex primary care intervention developed in 7 CC.AA combining Real World Data and patient questionnaires: EIRA Project". *Poster joven*
Programa 7. Epidemiología clínica	D. José Ignacio Pijoán Zubizarreta (Grupo 39 CIBERESP): "Impact of late neonatal sepsis by coagulase negative staphylococci in very low birthweight infants (NeokissEs cohort)". Dª. Ingrid Arévalo Rodríguez (Grupo 42 CIBERESP): "A Scoping Review Indicates That Rapid Reviews Of Medical Tests Are More Comprehensive Than Expected". *Poster joven* Dª. María del Carmen Romero Ferreiro (Grupo 23 CIBERESP): "Ultra-processed consumption as a new mortality risk factor in DRECE Cohort". *Poster joven*

ÍNDICE:

COMUNICACIONES ORALES

PÓSTERES

P5. HBM4EU: SCIENCE AND POLICY FOR A HEALTHY FUTURE.

Marieta Fernández

CIBERESP, GRUPO 19. Universidad de Granada- Hospital Universitario San Cecilio, Granada.

The HBM4EU project is the result of the joint effort of 28 EU countries, together with the European Environment Agency (EEA) and the European Commission (EC), funded under the Horizon 2020 program, from 2017-2021. Its aim is to generate the knowledge necessary for the safe management of chemical products in order to protect the health of Europeans. This human biomonitoring initiative was launched as a result of the interest shown by both the European Parliament and the Commission.

HBM4EU project coordinates and promotes the human biomonitoring of chemical compounds of interest and produces information on the exposure of European citizens to these substances. In addition, it helps interpret biomonitoring data, including the effects of exposure on human health, using modern scientific tools. It is also a priority in HBM4EU to communicate the results to the authorities, guaranteeing the exploitation of data for the design of new policies on chemical products and the evaluation of threats. Moreover, several ways are being designed to make the generated chemical exposure data accessible through the Chemical Control Information Platform (IPCHEM) to Europe.

Spain is a partner of this initiative through the consortium coordinated by the National Center for Environmental Health and formed by several groups attached to the Instituto de Salud Carlos-III, some of them belonging to CIBERESP. Moreover, Group 19- CIBERESP (HUSC-UGR) heads Work package 14, one of the 16 established WPs. WP14 activity focuses on the development and implementation of "Effect Biomarkers", complementing chemical exposure data.

Key objectives of HBM4EU are:

1. Harmonization of procedures for the human biomonitoring to selected chemical compounds (and mixtures), to provide, to those responsible for protection policies, comparable data on exposure.
2. Link data on internal exposure, with those of aggregate external exposure, and identify routes and sources of exposure.
3. Generate the necessary scientific evidence on the causal relationship between human exposure to chemical compounds and health effect consequences.
4. Provide tools to detect emerging chemicals and identify chemical mixtures of greatest concern and interest for European population.
5. Adapt chemical risk assessment methodologies so that they can use the information provided by the biomonitoring initiative, which relates the contribution of multiple external exposure pathways to the total internal load of chemical compounds.
6. Provide solid information on routes of exposure to policymakers aimed at reducing human exposure to chemical contaminants.

https://www.hbm4eu.eu/the-project/

PRESENTACIONES ORALES

P1. DIETARY INFLAMMATORY INDEX, DIETARY NON-ENZYMATIC ANTIOXIDANT CAPACITY AND COLORECTAL AND BREAST CANCER RISK (MCC-SPAIN STUDY).

Mireia Obón-Santacana1,2, Esther Gracia-Lavedan1,3, Amaia Molinuevo4, Gemma Castaño-Vinyals1.3, Javier Llorca1,5, Rafael Marcos-Gragera1,6, José Juan Jimenez1,7, Juan Alguacil1,8, Vicente Martín1,9, Beatriz Perez1,10, José Mª Huerta1,11, Eva Ardanaz1,12, Dolores Salas1,13, Adonina Tardón1,14, Dora Romaguera15, Victor Moreno 1,2, Silvia San José1,16, Nuria Aragonés1,17, Marian Pollán1,10, Manolis Kogevinas1,3 Pilar Amiano 1,4,18

1. Consortium for Biomedical Research in Epidemiology and Public Health (CIBERESP), Madrid, Spain.
2. Oncology Data Analytics Program (ODAP), Catalan Institute of Oncology (ICO), and ONCOBELL Program, Bellvitge Biomedical Research Institute (IDIBELL), L'Hospitalet del Llobregat, Barcelona, Spain.
3. Instituto de Salud Global de Barcelona (ISGlobal), and Universitat Pompeu Fabra (UPF), Spain.
4. BioDonostia Health Research Institute, Donostia-San Sebastian, Spain.
5. Universidad de Cantabria – IDIVAL, Santander, Spain.
6. Epidemiology Unit and Girona Cancer Registry, Descriptive Epidemiology, Genetics and Cancer Prevention Group, IdIbGi, Catalan Institute of Oncology, Girona, Spain.
7. Department of Preventive Medicine and Public Health, University of Granada, Granada, Spain.
8. Centro de Investigación en Recursos Naturales, Salud y Medio Ambiente (RENSMA), Universidad de Huelva, Huelva, Spain.
9. The Research Group in Gene - Environment and Health Interactions (GIIGAS) / Institut of Biomedicine (IBIOMED), Universidad de León, León, Spain.
10. Cancer & Environmental Epidemiology Unit, Department of Epidemiology of Chronic Diseases, National Centre for Epidemiology, Carlos III Institute of Health, Madrid, Spain.
11. Instituto Murciano de Investigación Biosanitaria (IMIB)
12. Public Health Institute of Navarra, IDISNA, Pamplona, Spain.
13. Cancer and Public Health Area, FISABIO – Public Health. Valencia, Spain.
14. Department of Medicine, University of Oviedo, Oviedo, Spain.
15. Instituto de Investigación Sanitaria Illes Balears (IdISBa), and CIBER Fisiopatología de la Obesidad y Nutrición (CIBEROBN), Spain.
16. Catalan Institute of Oncology (ICO), L'Hospitalet del Llobregat, Barcelona, Spain
17. Cancer epidemiology Section, Public Health Division, Department of Health of Madrid, Madrid, Spain.
18. Public Health Division of Gipuzkoa, Donostia-San Sebastian, Spain.

Introduction: Colorectal cancer is the third most common cancer worldwide in both sexes. Among females, breast cancer and colorectal cancer are the two most frequently diagnosed cancers and the two most common causes of cancer-related mortality in developed countries. Inflammation and anti-oxidant capacity have been associated with both tumor locations.

Objective: We estimated the dietary inflammatory index (DII®), and the total dietary non-enzymatic antioxidant capacity (NEAC) and associated them with colorectal and breast cancer risk in the population-based Multi Case-Control Study in Spain (MCC-Spain).

Methods: We included 1852 colorectal cancer and 1567 breast cancer cases, and 3447 and 1486 population controls, respectively. DII® score and NEAC were derived using data from a semi-quantitative validated food frequency questionnaire. The energy-adjusted DII® (E-DII) was analyzed as a continuous and as a categorical variable, expressed as quartiles based on the sex-specific distribution in the control group. Unconditional logistic regression models were used to estimate odds ratios (OR) and 95% confidence intervals (95%CI) for E-DII, and a score combining E-DII and NEAC.

Results: E-DII was associated with colorectal cancer risk (ORQ4vsQ1 =1.93, 95%CI: 1.60-2.32; p-trend: <0.001); this increase was observed for both colon and rectal cancer. Less pronounced increased risks were observed for breast cancer (ORQ4vsQ1= 1.22, 95%CI: 0.99-1.52, p-trend: >0.10). The combined score of high E-DII scores and low antioxidant values were associated with colorectal cancer risk (OR Q4vsQ1=1.48, 95%CI: 1.26-1.74; p-trend: <0.001), but not with breast cancer.

Conclusions: This study provides evidence on the association between colorectal cancer risk and the inflammatory potential of the diet, as well as the combination effect between the inflammatory potential of the diet and the total dietary antioxidant capacity. Findings for breast cancer were less consistent.

PRESENTACIONES ORALES

P2. ARBOVIRUS SURVEILLANCE: FIRST DENGUE VIRUS DETECTION IN LOCAL AEDES ALBOPICTUS MOSQUITOES IN EUROPE, CATALONIA, SPAIN, 2015.

Ana Vazquez1,2, Carles Aranda3, Miguel J. Martínez4, Tomas Montalvo5,2, Roger Eritja3, Jessica Navero-Castillejos4, Eva Herreros3, Eduard Marqués6, Raúl Escosa7, Irene Corbella8, Esther Bigas8, Lluís Picart8, Mireia Jané2,9, Irene Barrabeig9, Núria Torner2,9, Sandra Talavera10, Mari Paz Sánchez-Seco1, Núria Busquets10

1 Laboratorio de Arbovirus y Enfermedades Víricas Importadas. Centro Nacional de Microbiología. Instituto de Salud Carlos III.
2 Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), Madrid, Spain.
3 SCM, Baix Llobregat Council, Sant Feliu de Llobregat, Spain.
4 Department of Microbiology, Hospital Clínic of Barcelona, Universitat de Barcelona, Barcelona, Spain.
5 Servei de Vigilància i Control de Plagues Urbanes, Agencia de Salud Pública de Barcelona, Barcelona, Spain.
6 SCM, Badia de Roses i Baix Ter, Empuriabrava, Spain.
7 Consorci de Polítiques Ambientals de les Terres de l'Ebre (COPATE), Amposta, Spain.
8 Secretaria de Salut Pública, Departament de Salut, Generalitat de Catalunya, Barcelona, Spain.
9 Sub-directorate of Surveillance and Response to Public Health Emergencies, Public Health Agency of Catalonia, Barcelona, Spain.
10 IRTA, Centre de Recerca en Sanitat Animal (CReSA, IRTA-UAB), Campus de la Universitat Autònoma de Barcelona, Bellaterra, Spain.

Objetive: Dengue has emerged as the most important viral mosquito-borne disease globally. The current risk of dengue outbreaks in Europe appeared with the introduction of the vector Aedes albopictus mosquito in Mediterranean countries. Considering the increasing frequency of dengue epidemics worldwide and the movement of viraemic hosts, it is expected that new autochthonous cases will occur in the future in Europe and consequently it is necessary to implement surveillance and control strategies.

Methods: Arbovirus surveillance started in Catalonia in 2015 to monitor imported cases and detect possible local arboviral transmission. Surveillance included both the detection of disease cases in humans and screening of mosquitoes for viruses.

Results: During 2015, 131 patients with a recent travel history to endemic countries were tested for dengue virus (DENV) and 65 dengue cases were detected. Twenty-eight patients with a febrile illness were viraemic, as demonstrated by a positive real-time RT-PCR test for DENV in serum samples. Entomological investigations around the viraemic cases led to the detection of DENV in a pool of local Ae. albopictus captured in the residency of one case. The sequence of the DENV envelope gene detected in the mosquito pool was identical to that detected in the patient.

Conclusions: Our results show how entomological surveillance conducted around viraemic travellers can be effective for early detection of DENV in mosquitoes and thus might help to prevent possible autochthonous transmission.

P3. *NEW TESTING STRATEGIES TO REACH VULNERABLE POPULATIONS AND CHARACTERIZE THE HEPATITIS C EPIDEMIC.*

Elisa Martró [1,2]

[1]*Servicio de Microbiología, Laboratori Clínic Metropolitana Nord, Hospital Universitari Germans Trias i Pujol, Institut d'Investigació Germans Trias i Pujol (IGTP), Universitat Autònoma de Barcelona, Badalona.*
[2]*Grupo 27, Consorcio de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), Instituto de Salud Carlos III, Madrid.*

Introduction and aim. In 2016 the WHO approved a global strategy for the elimination of viral hepatitis as a public health threat in 2030. Among its main targets, a 90% diagnostic rate and 80% treatment rate need to be achieved. In Spain, about one third of people that attend primary care and have a viremic infection with hepatitis C virus (HCV) are unaware it. Additionally, some of the most vulnerable groups, such as people who inject drugs (PWID), migrants and sex workers, have low access to the healthcare system, while they use services offered by community centres. We aimed to improve the diagnosis of viremic infection by bringing HCV-RNA testing into the community.

Methodology. We developed and validated a molecular assay for the detection of HCV-RNA in dried blood spots (DBS), which can be collected by non-medical staff and shipped at room temperature to our laboratory for testing. In collaboration with epidemiologists, clinicians and community workers, and with the support of the Public Health Agency of Catalonia and CIBERESP (DAPET Program), we have used this testing strategy to reach men who have sex with men and sex workers (HepCdetect I Project), PWID (HepCdetect II Project), and migrants from endemic countries (HepC-link Project) in the community.

Results. These alternative samples have enabled us to characterize the local HCV epidemic, by describing the prevalence and determinants of infection in these vulnerable populations. We have also performed molecular epidemiology studies in PWID by next-generation sequencing from DBS in order to identify and characterize new HCV infections.

Conclusion: DBS samples represent a valuable tool to facilitate access to the diagnosis of hepatitis C by vulnerable groups, and to characterize and monitor the local epidemic. Both of these components are especially relevant within the context of the Catalan and Spanish Plans against HCV.

PRESENTACIONES ORALES

P4. ECONOMIC CRISIS AND HEALTH RESEARCH: RESULTS AND TOOLS FOR THE FUTURE.

Daponte A[1], Saez M[2], Ruiz I[3], Borrell C[4], Lopez MJ[4], De la Fuente L[5], Espelt A[6] and subprogram of research in "Crisis and Health".

[1]*Observatorio de Salud y Medio Ambiente de Andalucía (OSMAN)- EASP, Granada.*
[2]*Grupo de Recerca en Estadística, Econometria i Salut (GRECS), Universidad de Girona.*
[3]*Escuela Andaluza de salud Pública (EASP), Granada.*
[4]*Agència de Salut Pública de Barcelona (ASPB), Barcelona.*
[5]*Centro Nacional de Epidemiología, Instituto de Salud Carlos III, Madrid.*
[6] *Universitat de Manresa, Barcelona.*

Justification. Between the years 2015 to 2018, both inclusive, the subprogram of research in "Crisis and Health" of the Ciberesp was developed. In these years, the participating groups have generated an important scientific production in terms of scientific projects and publications. In addition, a new tool was built, which will allow deepening research on the differences and inequalities in the social determinants of health in Spain.

Methodology. A review of articles published by the subprogram groups has been made. In addition, the evidence provided by other studies and international scientific literature selected for the Spanish reality was also reviewed. Finally, an atlas of the social determinants of health has been constructed.

Results. In the years of development of the subprogram, more than forty scientific articles have been published. The scientific production is distributed in articles on mental health, perceived health, mortality and suicide, consumption of alcohol and other drugs, and other health problems. In addition, a revision has been made from the perspective of the methods and identifiers of exposure to the crisis. Finally, the Atlas of Social Determinants of Health in Spain collects and illustrates the differences in the evolution and variability of the social determinants of health among the Spanish Autonomous Communities. This Atlas aims to be an instrument of the future, which makes it possible to include the great social and economic variability existing among the Autonomous Communities, as well as the differences in their public policies, in future studies on social and economic changes, social inequalities, and the results in Health.

Conclusions. The accumulated evidence shows that the crisis has affected some health indicators, especially in some social situations aggravated or triggered by the crisis, such as unemployment or eviction processes.

PRESENTACIONES ORALES

P6. EVALUATION OF THE METHODOLOGICAL QUALITY AND THE IMPACT OF ACT ON DEMENTIA JOINT ACTION.

Vicky Serra-Sutton (1,2), Maria-Dolors Estrada (1,2), Nuri Cayuelas (1), Jorge Arias de la Torre (1,2), Gemma Cabré (1), Mireia Espallargues (1,3) in name of Act on Dementia Joint Action.

(1) *Agència de Qualitat i Avaluació Sanitàries de Catalunya (AQuAS).*
(2) *CIBER Epidemiología y Salud Pública (CIBERESP).*
(3) *Red de Investigación en Servicios de la Salud en Enfermedades Crónicas (REDISSEC).*

Background and aims: the EU Commission Joint Action *(Act on Dementia)* project includes two phases (scientific evidence, and implementation of best practices) around four thematic areas: diagnosis and post-diagnosis support, crisis and care coordination, quality of residential care and dementia friendly communities. Here we describe the evaluative approach of the project (the methodological quality of its products and the global impact assessment of Act on Dementia) and present a summary of key results.

Methodology: Two main approaches were made: 1) for the evaluation of methodological quality of products, a tool with six dimensions (evidence of best practices, selection, implementation of best practice models, website, leaflet, layman version) with Likert scale items (score range from 1 to 7, 7 high quality) was developed by the research team with consensus of an expert panel; 2) for the impact assessment, a conceptual impact framework aiding in the proposal of impact measures was agreed on (including impacts in terms of dissemination / knowledge transfer, health policy, improvement in the quality of healthcare and empowerment of people with dementia and their caregivers among other). An adapted Delphi study in two waves was carried out to reach consensus on short, medium and long-term impact global measures to evaluate future impact assessment of Act on Dementia Joint Action through the Health Consensus platform. It was defined that an impact measure reached a high level of consensus, when it presented an interquartile range (IQR) between 0 and 1 and a median score between 4 and 6.

Results: a moderate to high methodological quality score was obtained for the evidence reports in the four thematic areas (scores between 5 and 7) and dissemination products. The learnings from evidence phase have improved the process of evaluation of implementation phase increasing the common understanding of the evaluation and the quality standards (formal quantitative evaluation of the quality of implementation reports in process). Of the 50 impact measures voted by 39 experts in the first wave of consensus, 28 reached a high level of agreement to be voted in a second wave of experts throughout Europe (in progress). Of these, 10 were considered cross-sectional measures to evaluate the global impact of Act on Dementia.

Conclusions: the methodological approach has allowed promoting a quality culture of the products that include policy based on implementation of best practices based on the evidence in the field of dementia such in Act on Dementia. The evaluation of methodological quality and

impact of joint actions is relatively innovative and steps forward from traditionally monitoring the objectives achieved. The evaluation has been a participatory process along the project, reaching common understandings and agreement of standards. It has also allowed generating collective knowledge and generating impacts of the most relevant aspects for action aimed at improving the quality of life of people with dementia and their caregivers. The project will be ending in October 2019, and thus an open discussion of final findings will be an opportunity to make process and disseminate.

P7. MEDDIETCALC: MULTI CALCULATOR TO COMPUTE SCORES OF ADHERENCE TO MEDITERRANEAN DIET.

Miguel Menéndez-Orenga1,2; David Lora-Pablos1,2,3, Carmen Romero-Ferreiro1,2, Antonio Serrano-Hernández1,2,4, Pedro Ruiz-López1,2,5, Agustín Gómez-de-la-Cámara11,2,3.

1. Instituto de Investigación i+12, Hospital Universitario 12 de Octubre, Madrid, Spain.
2. CIBER de Epidemiología y Salud Pública (CIBERESP).
3. Universidad Complutense de Madrid, Spain.
4. Universidad San Pablo CEU, Madrid, Spain.
5. Unidad de Calidad, Hospital Universitario 12 de Octubre, Madrid, Spain.

Introduction. Mediterranean Diet (MedDiet) is broadly aknowledged as healthy. Different scoring systems of adherence to MedDiet have been developed. These indexes share components, but also disagree and don't correlate as expected. So, methodological issues arise when comparing studies using different MedDiet adherence scores. Furthermore, scoring calculus is time consuming and prone to error. We develop this package as a reproducible and easy-to-use way of calculating different scores of adherence to MedDiet and provide a methodological improvement to nutriepidemiological studies using adherence scores.

Methods. Each function in MedDietCalc R package computes a single score according to its authors published scoring schema.

Features. Main feature is a group of calculators of 14 literature available MedDiet scores. Several functionalities were implemented to ease their use, making data transformation or intermediate calculus internally. Formulas output can be obtained as their original published score, as a percentage ready to be compared or as a detailed table with individual item scoring. The package also includes a sample dataset from DRECE 6 study and FRESCO cardiovascular risk score calculator. Long term availability from the Comprehensive R Archive Network [CRAN.R-project.org] under the name "MedDietCalc", licensed with General Public License 3.

Discussion. We provide the first software to compute and compare different MedDiet scores, which can also be used with datasets. Different scores to measure adherence to MedDiet exist, with no gold standard. In the provided sample just 3 score pairs were highly correlated, and most of them were moderately or poorly correlated. This disagreement limits our understanding of the effects of MedDiet on health status. Comparability of studies could be improved if adherence to MedDiet were reported with more than a single score.

PÓSTERES

P1. THE GUT MICROBIOME AS A TOOL FOR COLORECTAL CANCER SCREENING.

Mas-Lloret J*, Obón-Santacana M*, Ibáñez-Sanz G*, Carreras-Torres R*, Guinó E*, Pimenoff VN*, Moreno V*^

* Oncology Data Analytics Program, Catalan Institute of Oncology (ICO). Hospitalet de Llobregat, Barcelona, Spain. Colorectal Cancer Group, ONCOBELL Program, Bellvitge Biomedical Research Institute (IDIBELL). Hospitalet de Llobregat, Barcelona, Spain. Consortium for Biomedical Research in Epidemiology and Public Health (CIBERESP), Spain.
^ Department of Clinical Sciences, Faculty of Medicine, University of Barcelona, Barcelona, Spain

Background: The gut microbiome conforms a community of bacteria and other microorganisms populating the human gut, with broad genetic and metabolic potential. Its composition has been linked to the development of several ilnesses, including colorectal cancer. Metagenomics allows the characterization of gut microbiome composition through culture-indpendent methods.

Methods: 50 colorectal cancer patients, 50 adenoma patients (diagnosed by colonoscopy) and 50 healthy donors have been recruited from the colorectal cancer screening program in South Barcelona. DNA from faeces has been extracted and is currently being sequenced. Positive and negative controls, as well as technical duplicates, have been added. Epidemiological and diet information from food frequency questionnaires for these individuals is available. Prior to the sequencing of these 150 samples, 9 samples have been sequenced as a pilot study.

Results: DNA sequences are expected from the sequencing facilities by September 2019. Bioinformatics tools for the analysis of these sequences have been developed and tested using 9 samples from the pilot cohort, allowing full taxonomic and functional characterization from raw DNA samples.

Perspectives: A metagenome-wide association study (MWAS) will allow the detection of bacterial species with higher presence in colorectal cancer and adenoma samples. These species might be subject to detection from fecal material in order to improve the precision of early detection methods.

PÓSTERES

P1. INCIDENCE OF DEMENTIA IN THE EUROPEAN PROSPECTIVE INVESTIGATION INTO CANCER AND NUTRITION (EPIC)-SPAIN STUDY.

José María Huerta (1,2,3), María Encarnación Andreu-Reinón (2), Carmen Navarro (2), Fernando Navarro-Mateu (2,3,4), Pilar Amiano (3,5), Mikel Tainta (6), Eva Ardanaz (3,7), María Dolores Chirlaque (1,2,3,8).

(1) Department of Epidemiology, Murcia Regional Health Council,
(2) Instituto Murciano de Investigación Biosanitaria (IMIB)-Arrixaca, Murcia, Spain.
(3) CIBER Epidemiología y Salud Pública (CIBERESP), Spain.
(4) Unidad de Docencia, Investigación y Formación en Salud Mental (UDIF-SM). Servicio Murciano de Salud. Murcia, Spain
(5) Public Health Division of Gipuzkoa, Instituto BIO-Donostia, Basque Government, Donostia-San Sebastián, Spain.
(6) Center for Research and Advanced Therapies, Fundación CITA-Alzheimer Fundazioa, San Sebastian, Spain
(7) Public Health Institute of Navarra, IDISNA, Pamplona, Spain.
(8) Department of Health and Social Sciences, Universidad de Murcia, Spain.

Background: Dementia is a Public Health priority worldwide, but incidence data is scarce in countries like Spain. Our aim was to estimate incidence rates of dementia and Alzheimer disease for different populations participating in the EPIC-Spain study.

Methods: Prospective cohort study which recruited adult volunteers (30-70 years) between 1992 and 1992 in five Spanish regions. The incidence of dementia was ascertained in 25,015 subjects (57% women) from Gipuzkoa, Navarra, and Murcia, using a two-step identification and validation protocol. Potential cases were identified by record linkage with health databases (primary care, hospital records and mortality registers) using a combination of ICD-9 and -10, ICPC2 and ATC codes, who were further validated through the expert revision of all available medical records. Follow-up was complete until 2015-2017, depending on the center. Baseline data on sociodemographic, lifestyle, and health-related variables was obtained for all participants.

Results: After 21.5 (±3.6) years of follow-up, a total of 774 cases of dementia (67% Alzheimer) were validated. Age-standardised incidence rates (and 95% confidence intervals) for the age band of 65+ years were 4.6 (3.3-5.9) cases per 1000 person-years (py) for men, and 6.2 (4.8-7.6) per 1000 py for women (2013 European standard population), and 3.8 (2.9-4.6) and 5.0 (4.2-5.9) cases per 1000 py for men and women, (world population standard). The estimated 20-years cumulative risk of dementia for the 60-65 years old group was 9% (7.4-11.1%) among men and 12.5% (10.6-14.6%) among women. Incidence was higher among participants of low educational level, obese, and not drinking alcohol, and in patients with chronic co-morbidities.

Conclusions: The incidence of dementia was higher in women than men participating in the EPIC-Spain cohort, and lower than neighboring countries. 12% of women and 9% of men between 60-65 years would develop dementia in a 20-year period. This has important implications for dementia prevention.

PÓSTERES

PÓSTERES

P1. RECENT TRENDS IN CANCER SURVIVAL IN ADULT PATIENTS IN SPAIN. RESULTS FROM THIRTEEN POPULATION-BASED CANCER REGISTRIES.

M. Guevara (1), A. Molinuevo (2), D. Salmerón (3), R. Marcos-Gragera (4), M. J. Sánchez (5), M. D. Chirlaque (6), A. Lopez de Munain (7), J. R. Quirós (8), F. Almela (9), M. Chico (10), R. Jiménez (11), J. Perucha (12), M. C. Sánchez-Contador (13), D. Rojas (14), A. Alemán (15), J. Galceran (16), E. Ardanaz (1) and N. Larrañaga (17)

(1) Registro de Cáncer de Navarra, CIBERESP. (2) Biodonostia Research Institute. (3) Universidad de Murcia, CIBERESP. (4) Registro de Cáncer de Girona, CIBERESP. (5) Registro de Cáncer de Granada, CIBERESP. (6) Registro de Cáncer de Murcia, CIBERESP. (7) Registro de Cáncer de Euskadi. (8) Registro de Cáncer de Asturias. (9) Registro de Cáncer de Castellón. (10) Registro de Cáncer de Ciudad Real. (11) Registro de Cáncer de Cuenca. (12) Registro de Cáncer de La Rioja. (13) Registro de Cáncer de Mallorca. (14) Registro de Cáncer de Canarias (Gran Canaria). (15) Registro de Cáncer de Canarias (Tenerife). (16) Registro de Cáncer de Tarragona. (17) Registro de Cáncer de Euskadi. CIBERESP.

Background: Cancer survival is a key indicator of the effectiveness of a health system in management of cancer. We aimed to examine recent trends in cancer survival in Spain.

Methods: Population-based data from thirteen REDECAN cancer registries, covering 27% of the Spanish population, were provided for ~600,000 adult patients diagnosed with primary cancer over two periods, 2002–2007 and 2008–2013, and followed up to 2015. Data quality control procedures were applied. We constructed area-specific life tables to control for background mortality. For thirty groups of cancers, 5-year net survival (NS) was estimated through the Pohar-Perme method, by sex, age and period. We used the international cancer survival standard weights to calculate age-standardized estimates.

Results: Among cases diagnosed in 2008–2013, the 5-year NS ranged from 6.9% (mesothelioma) to 89.8% (prostate) in men, and from 10.0% (pancreas) to 93.1% (thyroid) in women. Over the two periods, the 5-year NS improved for all cancers combined and for several, but not all, cancer groups. Focusing on the most frequent cancers, the most remarkable improvements in NS were observed for colon (from 57.5% to 63.1% in men and from 59.8% to 63.9% in women) and rectum cancers (from 55.8% to 60.4% in men and from 58.1% to 62.7% in women). Significant increases in NS were also observed for prostate cancer (from 87.9% to 89.8%) and female breast cancer (from 83.2% to 85.5%). Lung cancer NS only improved in men (from 11.2% to 12.7%), remaining stable but higher in women (17.6%).

Conclusions: Short-term survival improved for most common cancers over 2002–2013, especially the survival of colon and rectum cancers (increase of >4% points). These improvements are probably due to advances in cancer management, i.e. earlier diagnosis and better treatment. Poor prognosis still found in some tobacco-related cancers highlights the continuing need for prevention efforts.

PÓSTERES

P1. GEO_CIBER: A GEOCODING TOOL FOR THE CANCER SURVEILLANCE PROGRAM (VICA).

Pablo Fernández Navarro1,2, Javier González Palacios1,2, Mario González Sánchez1,2, Daniel Redondo Sánchez, Miguel Rodríguez Barranco, Olivier Nuñez1,2,3, Miguel Ángel Luque Fernández (CIBERESP, EASP, ibs.Granada), Rafa Marcos Gragera (Girona; CIBERESP), Jaume Galcerán (Tarragona), Eva Ardanaz (Navarra, CIBERESP), Nerea Larrañaga (Guipúzcoa, CIBERESP), Antonio Mateos (Albacete), Rosario Jiménez (Cuenca), Fernando Almela (Castellón), Marina Pollán1,2, María José Sánchez (Granada, EASP, CIBERESP, ibs:GRANADA)

1Área de Epidemiología Ambiental y Cáncer, Centro Nacional de Epidemiología. Instituto de Salud Carlos III.
2Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP).

Introduction: Address geocoding can be very useful in the context of cancer surveillance developed by population-based cancer registries in Spain (REDECAN). There are numerous geocoding systems, with different capacities and limitations. The objective of this work as part of the VICA cancer surveillance sub-program (inside the Non-communicable Diseases Programin CIBERESP) is to develop a free application of geocoding based on reliable results.

Methods: In order to develop the geocoding tool, a pilot study was designed. It consisted in a) Implementation and feature evaluation of several free geocoding softwares working together in a sample of 214 addresses randomly selected from the databases of the cancer registries participating in VICA. b) Development phase, where a Java geocoding application using R language was created based on previous results. It provides latitude, longitude and the probability of success according to the results of the previous phase. c) Validation phase, using a geocoded and validated database of 2,722 addresses from Granada Cancer Registry.

Results: According to the best configuration of the geocoding software used, 87% of the 214 addresses in the first phase had at least 90% of probability of success. In the validation phase, 81% of the coordinates assigned by the application were correct.

Conclusion: The application provides enough information and reliable geocoding results to be useful in cancer surveillance. However, the quality of the information on the addresses to be geocoded is still important in order to obtain a better performance. This work has been possible thanks to the collaboration of different groups of the CIBERESP as well as the cancer registries.

PÓSTERES

P1. PILOT STUDY ON CHEMICAL POLLUTION OF DRINKING WATER SOURCES IN RURAL MOZAMBIQUE.

Cristina M Villanueva1,2,3,4, Iro Evlampidou1, Fernando Goñi2,5,6, Jochen Kuckelkorn7, Lourdes Arjona1,2,3,4, Berta Grau1,8,9, Jose Muñoz1

1. *Barcelona Institute for Global Health, ISGlobal, Barcelona, Spain.*
2. *CIBER Epidemiología y Salud Pública (CIBERESP), Madrid, Spain*
3. *Universitat Pompeu Fabra (UPF), Barcelona, Spain.*
4. *IMIM ((Hospital del Mar Medical Research Institute), Barcelona, Spain*
5. *Public Health Laboratory in Gipuzkoa, Basque Government, San Sebastian, Spain.*
6. *Biodonostia Health Research Institute, San Sebastian, Spain.*
7. *German Environment Agency, Toxicology of Drinking Water and Swimming Pool Water, Bad Elster, Germany.*
8. *Centro de Investigaçao em Saúde de Manhiça-CISM, Manhiça, Mozambique.*
9. *Fundación Mundo Sano, Madrid, España.*

Background and aims. There is limited knowledge of the chemical quality of drinking water in low and middle-income countries. Manhiça is a rural village in southern Mozambique with a sugar cane factory and sugar cane fields where pesticides are used. In addition, pyrethroids and DDT are widely used for malaria control. We conducted an exploratory study to measure chemical contaminants and toxicity in drinking water sources in Manhiça.

Methods. We defined 20 locations to collected drinking water samples and measured nitrate, fluoride, 20 metals, 85 pesticides (organochlorines, organophosphates, triazines and phenoxies), 19 disinfection by-products, and 2 industrial organochlorinated chemicals. In-vitro bioassays were conducted with the native water samples, including mutagenicity (Ames test), micronuclei (MN-FACS), and endocrine disruption (ER-CALUX, antiAR-CALUX).

Results. We included 5 samples from fountains, 5 from manual pumps, 5 protected and 5 unprotected wells. Nitrate was detected in all samples (mean 13.8, SD 11.5, min-max 1.1-33 mg/L). Fluoride was only detected in one sample (0.11mg/l). Arsenic, lead, cadmium, zinc, nickel, antimony, copper, silver, mercury, iron, and selenium were mostly undetected or levels around the detection limit. Manganese (median 32.0μg/l), chromium (2.0μg/l), aluminum (61.0μg/l), cobalt (0.6μg/l), barium (249.5μg/l), sodium (54.4mg/l), magnesium (5.9mg/l), potassium (5.5mg/l), and calcium (7.5mg/l) were detected in 90-100% samples. Trihalomethanes, haloacetic acids, haloacetonitriles, and haloketones were mostly undetected or detected in few samples (5-28%) at low concentrations. DDT, dieldrin, diuron, and pirimiphos-methyl were detected, respectively, in 2, 3, 4, and 2 samples, at levels around the detection limit (10-25ng/L). Trichloroethene and tetrachloroethene were not detected. Samples were negative for the genotoxicity tests (Ames, MN-FACS) and ER-CALUX. The antiAR-CALUX±S9 and the ER-CALUX+S9 are pending.

PÓSTERES

Conclusions. The measured chemicals in drinking water sources show concentrations below the maximum contaminant levels established by the European Drinking water Directive except for manganese (9 out of 20 samples above 50 µg/L).

Pósteres

P2. Influenza vaccine effectiveness in pregnant women to prevent severe infection in children under 6 months of age. Spain, 2017-2019.

C Mazagatos1, Pere Godoy2, Carmen Muñoz Almagro3,4, Francisco Pozo5, A Larrauri1 y el Grupo de trabajo de la EV antigripal en embarazadas

1 Centro Nacional de Epidemiología, ISCIII; CIBER Epidemiología y Salud Pública (CIBERESP).
2 Agencia de Salud Pública de Cataluña; CIBER Epidemiología y Salud Pública (CIBERESP).
3 Instituto de Recerca Pediátrica, Hospital Sant Joan de Déu; CIBER Epidemiología y Salud Pública (CIBERESP).
4 Dpto de Medicina, Universitat Internacional de Catalunya.
5 Centro Nacional de Microbiología, ISCIII; CIBER Epidemiología y Salud Pública (CIBERESP).

Background/Objectives: Influenza vaccination is recommended for pregnant women and children older than 6 months with any risk factor. The aim of this study was to estimate the influenza vaccine effectiveness (IVE) during pregnancy to prevent severe hospitalized influenza confirmed cases in children under 6 months of age.

Methods: We obtained information from hospitalized children <6 months notified to the Severe Hospitalized Confirmed Influenza Cases (SHCIC) surveillance system in seasons 2017/18 and 2018/19, and we collected additional information about the vaccination status of the mothers during pregnancy. The IVE was calculated using the screening method, by comparing the proportion of children with vaccinated mothers (PCV) with the proportion of vaccinated pregnant women in the Spanish general population (PPV), provided by the Ministry of Health. As described in the Farrington model, we used a binomial logistic regression with the PCV as dependent variable and the PPV logit as offset variable.

Results: 69 SHCIC aged <6 months were included, 45 from season 2017/18 and 24 from 2018/19. 19 (30%) children were confirmed with influenza B, 9 (14%) with A(H3N2), 10 (16%) with A(H1N1)pdm09 and 25 (39%) were A cases not subtyped. Eight children (13%) had chronic diseases, 39 (68%) developed complications, 38 (59%) were admitted to ICU and 2 (3%) died. Twelve mothers were vaccinated during pregnancy (17%), and the influenza vaccination coverage in pregnant women in Spain was 28% (2017-18) and 38% (2018-19). The IVE to prevent SHCIC in children <6 months was 71% (CI95%: 25-88%) in season 2017/18, and 35% (IC95%: -57-73%) in 2018/19. For the whole period we estimated an IVE of 57% (IC95%: 20-77%).

Conclusions/recommendations: Influenza vaccination in pregnant women is effective to prevent severe influenza infection in hospitalized children under 6 months of age. These findings support the current influenza vaccine recommendations.

[1] Farrington CP. Estimation of vaccine effectiveness using the screening method. Int J Epidemiol 1993;22:742-6.

P2. OUTBREAK OF BRAINSTEM ENCEPHALITIS ASSOCIATED WITH ENTEROVIRUS-A71 IN CATALONIA, SPAIN (2016): A CLINICAL OBSERVATIONAL STUDY IN A CHILDREN´S REFERENCE CENTRE IN CATALONIA.

Casas-Alba D1, de Sevilla MF 1,2,3,4, Valero-Rello A2, Fortuny C1,2,3,4, García-García JJ1,2,3,4, Ortez C5, Muchart J5, Armangué T5, Jordan I7, Luaces C8, Barrabeig I9,3,González-Sanz R10, Cabrerizo M10,3, Muñoz-Almagro C2,3,11,12, Launes C1,2,3,4.

1 Department of Paediatrics, Hospital Sant Joan de Deu, Barcelona, Spain.
2 Institut de Recerca Sant Joan de Déu, Barcelona, Spain.
3 CIBER en Epidemiología y Salud Pública, CIBERESP, Spain.
4 Universitat de Barcelona, Barcelona, Spain.
5 Department of Paediatric Neurology, Hospital Sant Joan de Deu, Barcelona, Spain.
6 Department of Diagnostic Imaging, Hospital Sant Joan de Deu, Barcelona, Spain.
7 Paediatric Intensive Care Unit, Hospital Sant Joan de Deu (University of Barcelona), Spain.
8 Emergency Department, Hospital Sant Joan de Deu (University of Barcelona), Spain.
9 Epidemiological Surveillance Unit of Health Region, Barcelona-South, Public Health Agency of Catalonia, Hospitalet de Llobregat, Spain.
10 Enterovirus Unit, National Centre for Microbiology, Institute of Public Health "Carlos III", Madrid, Spain.
11 Molecular Microbiology Department, Hospital Sant Joan de Deu, Barcelona, Spain
12 Department of Medicine, Universitat Internacional de Catalunya, Barcelona, Spain

Objectives: To describe the characteristics of an outbreak of brainstem encephalitis and encephalomyelitis related to enterovirus (EV) infection in Catalonia (Spain), a setting in which these manifestations were uncommon.

Methods: Clinical and microbiological data were analysed from patients with neurological symptoms associated with EV detection admitted to a reference paediatric hospital between April and June 2016.

Results: Fifty-seven patients were included. Median age was 27.7 months (p25-p75 17.1–37.6). Forty-one (72%) were diagnosed with brainstem encephalitis, seven (12%) with aseptic meningitis, six (11%) with encephalitis, and three (5%) with encephalomyelitis (two out of three with cardiopulmonary failure). Fever, lethargy, and myoclonic jerks were the most common symptoms. Age younger than 12 months, higher white-blood-cell count, and higher procalcitonin levels were associated with cardiopulmonary failure. Using a PAN-EV real-time PCR, EV was detected in faeces and/or nasopharyngeal aspirate in all the patients, but it was found in cerebrospinal fluid only in patients with aseptic meningitis. EV was genotyped in 47 out of 57 and EV-A71 was identified in 40 out of 47, being the only EV type found in patients with brainstem symptoms. Most of the detected EV-A71 strains were subgenogroup C1. Intravenous immunoglobulins were used in 34 patients. Eight cases (14%) were admitted to

the intensive care unit. All the patients but three, those with encephalomyelitis, showed a good clinical course and had no significant sequelae. No deaths occurred.

Conclusions: The 2016 outbreak of brainstem encephalitis in Catalonia was associated with EV-A71 subgenogroup C1. Despite the clinical manifestations of serious disease, a favourable outcome was observed in the majority of patients.

PÓSTERES

P2. ACCEPTABILITY AND EFFECTIVENESS OF USING MOBILE APPLICATIONS TO PROMOTE HIV AND OTHER STI TESTING AMONG MEN WHO HAVE SEX WITH MEN IN BARCELONA, SPAIN.

Alarcón-Gutiérrez, M1,2; Fernández-Quevedo, M1; Martín-Valle, S1; García de Olalla, P1,3; Rius, C1,3

1. Agència de Salut Pública de Barcelona (ASPB)
2. Máster de Salud Pública, Universitat Autònoma de Barcelona/Universitat Pompeu Fabra
3. Consorcio de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP)

Objective: To evaluate the acceptability and effectiveness of a pilot intervention programme using gay geosocial mobile applications (apps) to offer rapid HIV and other STI tests to men who have sex with men (MSM) in Barcelona from December 2015 to March 2016.

Methods: We offered rapid HIV, syphilis and hepatitis C testing by sending private messages on apps for sexual and social encounters. Acceptance was defined as the proportion of users who favourably responded to the message and effectiveness was defined as the proportion of users who attended our facilities among those who were interested in attending. To identify variables associated with the response to the messages, adjusted OR (ORa) and 95% CIs were calculated. We collected information on sociodemographics, sexual behaviours and app usage from the contacted user profiles and from users who attended our facilities. A descriptive analysis was carried out.

Results: 2656 individual messages were sent. Overall, a 38.4% response rate was obtained, 83.0% of them found it acceptable to receive the unsolicited message, and 73.2% effectiveness was obtained. Responders had higher odds of being 45 years or older (ORa=1.48; 95% CI:1.06-2.08), being connected at the moment the message was sent or during the previous hour (ORa=1.92; 95% CI:1.38-2.68), having a profile photo not exposing bare chest or abdomen (ORa=1.44; 95% CI:1.07-1.92) and using the Grindr app (ORa=1.39; 95% CI:1.12-1.73). Of those who were tested and took the survey (n=77), 45.5% had not taken an HIV test in over a year, 24.7% had had a previous STI diagnosis, 51.4% had reported anal sex without condom and 52% had consumed alcohol or drugs for sex.

Conclusions: The response rate, acceptance and effectiveness observed in this study indicate that this strategy could be a useful tool for promoting STI testing among high-risk MSM population.

PÓSTERES

P3. TEMPORAL EVOLUTION OF LYMPHOGRANULOMA VENEREUM CASES IN MADRID DURING 7 YEARS.

Martínez-García L(1), Puerta T(2), González-Alba JM(1), Rodríguez C(2), Rodríguez-Domínguez M(1), del Romero J(2), and Galán JC(1).

(1) Grupo 33 CIBERESP. Servicio de Microbiología. Hospital Ramón y Cajal.
(2) Centro Sanitario Sandoval. Madrid.

Background: The current lymphogranuloma venereum (LGV) epidemic in Europe began 15 years ago, but the epidemic situation is far from being controlled. The last ECDC report suggests that four countries, including Spain, are responsible for 86% of all European cases. The aims of this study were to analyze the temporal evolution of LGV epidemic in Spain.

Materials/methods: During the 2012-2018 period, all clinical samples in which *C. trachomatis* DNA was detected, were subsequently genotyped for detecting the presence of LGV. The *ompA* and *pmpH* genes were sequenced in those positive samples for LGV genotypes. Finally, a phylogenetic analysis using PhyML 3.0 allowed us to infer potential transmission nodes. In those LGV+ patients, other infectious diseases were also screened.

Results: The LGV cases were increasing 25% every year of the study, until to reach 4-fold more number of cases in 2018 compared to 2012. Moreover, the proportion LGV-positive/CT-positive evolved from 10.2% to 21%. During this period, the percentage of HIV+/LGV+ was constant (74% vs 76%), but practically all patients had undetectable viral load in 2018 compared to HIV+/LGV+ patients in 2012 (20%). We did not observe a global increasing in the percentages of concomitant STIs (~50%); while the number of cases of HCV and syphilis decreased significantly, gonococcal infection increased (15%-to-25%). The phylogenetic analysis of *pmpH* and *ompA* sequences (442 samples) revealed the sequential appearance of up to four transmission nodes evolved from L2b (L2b *sensu-stricto*, L2 and SPA112 and nSPA). The dynamic of partial replacement among these variants is also described.

Conclusions: The Spanish epidemiological situation now seems more complex due to an increase in the number of cases but also because of the spreading of new variants. These data suggest that it will be increasingly difficult to eradicate LGV infections in the population.

PÓSTERES

P3. INCONSISTENCY BETWEEN POPULATION THAT HAVE BEEN OFFERED AN ANTI-HVC TEST AND THOSE THAT ARE HVC SEROPREVALENT IN PRIMARY CARE, CATALONIA 2011-2016.

Juliana Reyes-Urueña, Nuria Vives, Ana Celly, Sergio Moreno, Jordi Casabona.

Centre d'Estudis Epidemiològics sobre les Infeccions de Transmissió Sexual i Sida de Catalunya (CEEISCAT), CIBERESP.

In an era of effective, safe, all-oral HCV medications, generate robust strategic information must be indispensable to simplify the test and treat strategy. Therefore the objectives of this study were to compare the characteristics of people who have been tested for HCV with those who were seroprevalent in primary care (PC) Catalonia (2011-2016), as well as, to identify a proxy rate of linkage to specialized care from PC.

We analyzed data from the clinical records of patients registered in 274 PC centres, which are incorporated into the Information System for the Development of Research in Primary Care, which contains longitudinal patient information of over 5.6 million people. The variables analysed included socio-demographic characteristics, anti-HCV request, result and date of linkage diagnosis of HCV infection (ICD-10).

The HCV testing offer rate was 26.7 for the whole period, with an increase of 14.5% from 2011 to 2016. The highest offer rates were among women (30 test per 100.000 women), people age between 25 and 34 (52.5 test per 100.000 pop) and migrants from Latin America (47.6 test per 100.000 migrants) and Asia (47.1 test per 100.000 migrants). Conversely, the seroprevalence were stable during the whole study period (0.62), with the highest values found among men (0.7), people age between 45 and 54 (1.2) and 57 and 84 (1.3) years old and Spanish population. Finally, it was found that only 50% of the positive anti-HCV did have an associated HVC diagnosis to be linkage to GI-specialized care.

HCV testing offer in PC has not been addressed to people who were found to be at risk to be diagnosed with and anti-HVC. PC is the gateway to give timely access to HCV treatment, however once the anti-HVC positive result was known; only half of the cases were linkage to GI-specialized care.

P3. SWEETIE PROJECT: PREVALENCE AND DETERMINANTS OF SEXUALLY TRANSMITTED INFECTIONS IN A HIGH RISK POPULATION.

L. Alemany[1,2º], L. Ferrer[2,3º], V. Rodriguez[1] , V. González[2,3], E. Martró[2,4], R. Muñoz[3], V. Saludes[2,4], MA. Pavón[1,5], S. Paytubi[1], M. Torres[1], S.Tous[1,5], C. Folch[2,3], F. Pérez[6], M. Cebrián[7], C. Fons[6,7], M. Villar[6], L. Villegas[6], M. Meroño[7], S. de Sanjose[1,2,8], J. Casabona[1,2*] y Grupo Sweetie*

[1] *Programa d'Investigaciód'Epidemiologia del Càncer, InstitutCatalàd'Oncologia (ICO), L'Hospitalet de Llobregat (Barcelona).*
[2] *Consorcio de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), Instituto de Salud Carlos III, Madrid.*
[3] *Centre d'Estudis.Epidemiològics sobre les ITS i la Sida de Catalunya (CEEISCAT), Agència de Salut Pública de Catalunya (ASPCAT).*
[4] *Servicio de Microbiología, Laboratorio Clínico Metropolitana Norte, Hospital Universitario GermansTrias i Pujol, Instituto de Investigación GermansTrias i Pujol (IGTP), Badalona (Barcelona).*
[5] *Consorcio de Investigación Biomédica en Red de ONCología (CIBERONC), Instituto de Salud Carlos III, Madrid.*
[6] *STOP SIDA, Barcelona.*
[7] *Fundació AMBIT Prevenció, Barcelona.*
[8] *PATH, Seattle.*
(º) Co-main autors
(*) Co-Seniors

Background: Transgender women and men sexual workers (TW and MSW, respectively) are hard-to-reach populations that are difficult to involve in prevention and screening programs of sexually transmitted infections (STIs).

Objective: To describe the prevalence and determinants of STIs in TW and MSW populations.

Methods: The Sweetie project recruited 148 participants between 2017-2018 in two community-based centers in Barcelona. A nurse located in each center carried out the voluntary screening of STIs and collected epidemiological data. A venous blood sample was collected for the detection of Human Papillomavirus (HPV), Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) and urine for the detection of Chlamydia trachomatis (CT), and Neisseria gonorrhea (NG). In addition, oral, anal, perianal and penile samples were collected for HPV and pharyngeal and anal for CT and NG. The epidemiological and behavioral data were collected through a questionnaire. The positive cases were referred to health centers for follow-up.

Results: Sixty-five percent of the participants identified themselves as trans women compared to 34.5% men and more than 90% were migrants. The highest prevalences by location were anal HPV, pharyngeal and anal NG (88.4%, 14.3%and 9.6%, respectively). 2.4% had been

exposed to HCV and resolved the infection and 0.8% had an active infection with HBV. The HIV prevalence was 25.9%. 40% stated that they did not always use the condom in passive anal penetration with the occasional partner and 20% had not visited a health center in the last year.

Conclusions: TW and MSW are vulnerable populations for STIs. Opportunities for health care improving in this population are to: (1)incorporate screening of the most prevalent STIs, besides from HIV and syphilis that is already being offered in community services, (2)refer positive people to the health system, as well as (3)collect behavioral information and health needs.

P4. ASSESSING THE ROLE OF DIETARY PATTERNS IN THE ETIOLOGY OF LYMPHOID NEOPLASMS.

Marta Solans[1,2,3], Yolanda Benavente[1,4], Adela Castelló[1,5,6], Marina Pollán[1,5], Rafael Marcos-Gragera[1,3,2], Marc Saez[2,1], Delphine Casabonne[1,4] on behalf of the EPIC and MCC-Spain groups.

1. *Centro de Investigación Biomédica en Red: Epidemiología y Salud Pública (CIBERESP), Madrid, Spain.*
2. *Research Group on Statistics, Econometrics and Health (GRECS), University of Girona, Girona, Spain.*
3. *Epidemiology Unit and Girona Cancer Registry, Catalan Institute of Oncology, Girona, Spain.*
4. *Unit of molecular epidemiology and genetic in infections and cancer (UNIC-Molecular), Cancer Epidemiology Research Program, IDIBELL, Catalan Institute of Oncology, L'Hospitalet De Llobregat, Spain.*
5. *Environmental and Cancer Epidemiology Unit, National Center of Epidemiology, Instituto de Salud Carlos III, Madrid, Spain.*
6. *Faculty of Medicine, University of Alcalá, Alcalá de Henares, Madrid, Spain.*

Background: Previous studies examining the association between diet and lymphoid neoplasms (LN) have focused on nutrients or single-food items, yielding inconclusive results. This study aimed to evaluate the association between several dietary patterns and LN, using data from the European prospective investigation into cancer and nutrition (EPIC) and the multicase-control Spanish (MCC-Spain) studies.

Methods: i) The adapted relative Mediterranean diet index (arMED), ii) the inflammatory score of diet (ISD), iii) a Western, Prudent, and Mediterranean *a posteriori* dietary patterns, and iv) the 2018 Word Cancer Research Fund/American Institute for Cancer Research (WCRF/AICR) score were reconstructed in the EPIC (i. and ii.) and MCC-Spain (iii. and iv.) studies.

Results: Results from the EPIC study showed that a 1-unit increase in the arMED score was associated with a decreased risk of overall lymphoma of 2% (95% CI: 0.97; 1.00), but not with any specific subtype. A more pro-inflammatory diet was modestly associated with mature B-cell non-Hodgkin lymphoma [HR for a 1-SD increase: 1.07 (95%CI: 1.01; 1.14)]. Albeit with smaller numbers of cases, both the arMED and ISD showed suggestive (although statistically non-significant) associations with Hodgkin lymphoma. In the MCC-Spain study, we reported a positive lineal association between adherence to a Western dietary pattern and chronic lymphocytic leukemia [OR per 1-SD increase: 1.19 (95% CI: 1.03; 1.37)]. By contrast, no associations were found for a greater adherence to a Mediterranean, Prudent dietary patterns, as well to the 2018 nutrition-based WCRF/AICR cancer prevention guidelines.

Conclusions: Overall, our results suggest that dietary patterns may have a modest role in lymphoma etiology. These novel findings provide new insights into the possible link between modifiable lifestyle factors and lymphomagenesis, especially for Hodgkin lymphoma, which

seems to be a subtype prone to be influenced by dietary exposures. Further large prospective studies with lymphoma subtype-specific data are warranted to confirm these findings.

P4. ENERGY POVERTY AND HEALTH: TRENDS IN THE EUROPEAN UNION BEFORE AND DURING THE ECONOMIC CRISIS, 2007-2016.

Laura Oliveras1,2,3, Andrés Peralta1,4,5 Laia Palència1,2,6, Mercè Gotsens1,2, María José López1,2,3,6, Lucia Artazcoz1,2,3,6, Carme Borrell1,2,3,6, Marc Marí-Dell'Olmo1,2,6

[1]Agència de Salut Pública de Barcelona, Lesseps 1, 08023, Barcelona, Catalonia, Spain.

[2]Institut d'Investigació Biomèdica Sant Pau (IIB Sant Pau), Sant Quintí 77, 08041, Barcelona, Catalonia, Spain.

[3]Department of Experimental and Health Sciences. Universitat Pompeu Fabra, Doctor Aiguader 88, 08003, Barcelona, Catalonia, Spain.

[4]Health Inequalities Research Group, Employment Conditions Knowledge Network (GREDS-EMCONET). Department of Political and Social Sciences. Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005, Barcelona, Catalonia, Spain.

[5]Johns Hopkins University - Pompeu Fabra University Public Policy Centre, Ramon Trias Fargas 25-27, 08005, Barcelona, Catalonia, Spain.

[6]CIBER Epidemiología y Salud Pública (CIBERESP)

Background. Energy poverty (EP) can be understood as the inability of a household to secure a socially and materially necessitated level of domestic energy services in the home.[1] Several studies have shown how EP negatively affects people's health and well-being.[2]

Objective. The aim of this study is to analyse the time trends in the European Union before and during the economic crisis in 1) the EP prevalence; 2) the association between EP and health and 3) the impact of EP on health.

Methods. This is an individual-based trends study which analyses three cross-sectional waves of the European Quality of Life Surveys, corresponding to the years 2007,2012 and 2016. We fitted Poisson regression models with robust variance to assess the association between EP and health through prevalence ratios (PR) and the impact of EP on health through population attributable risk percent (PAR%). We assessed trends among women and men in two EU macro regions, defined by a novel index of structural vulnerability to EP.[3]

Results. The study shows how EP and its impact on health worsened during the economic crisis and identifies groups at higher risk such as women and people living in Mediterranean and Eastern European countries, which have been found to be countries with higher structural vulnerability to EP.

References:

1. Bouzarovski S, Petrova S. A global perspective on domestic energy deprivation: Overcoming the energy poverty-fuel poverty binary. *Energy Res Soc Sci*. 2015;10:31-40. doi:10.1016/j.erss.2015.06.007.
2. Marmot Review Team. *The Health Impacts of Cold Homes and Fuel Poverty*. Vol 342.; 2011. doi:10.1136/bmj.d2807.

PÓSTERES

3. Recalde M, Peralta A, Oliveras L, et al. Structural Energy Poverty Vulnerability and Excess Winter Mortality in the European Union: Exploring the Association Between Structural Determinants and Health. *Energy Policy*. (Under review).

Pósteres

P4. Prevalence, Associated Factors and Health Impact of Intimate Partner Violence Against Women in Different Life Stages.

Belén Sanz-Barbero1,2 , Natalia Barón1,3 , Carmen-Vives-Cases2,3.

1. *National School of Public Health, Institute of Health Carlos III. Madrid, Spain*
2. *Consortium for Biomedical Research in Epidemiology & Public Health (CIBERESP),Madrid, Spain*
3. *Public Health Research Group, Department of Community Nursing, Preventive Medicine and Public Health and History of Science, Alicante University, Alicante, Spain*

Objectives: The effect of age on intimate partner violence (IPV) against women has received little attention. The objective of this study is to analyze the prevalence, risk factors and health impact of current IPV in different life stages.

Methods: We analyzed a sub-sample of 8,935 ever-partnered women aged 16 years and older from the Spanish Macrosurvey on Gender Violence of 2014. Main outcomes: current physical/ sexual IPV and current psychological-only IPV. The impact of IPV on health was analyzed using the variables self-perceived health, mental health and activity limitations. Risk factors were assessed using the prevalence ratio (PR) from Poisson regression models with robust variance. Analyses were stratified by age (young people, adults, and elderly people).

Results: Abuse in childhood increases the likelihood of IPV in any life stage. A higher education level decreases the probability of physical/sexual IPV across all ages. Unemployment increases the probability of IPV in adult women (physical/sexual-IPV, PR:1.7; psychological-IPV, PR:1.3). Being an immigrant increases the likelihood of physical/sexual IPV in adult women (PRwomen:1.91). Women exposed to current physical/sexual IPV have a greater likelihood of reporting poor self-perceived health (PRyoungpeople:2.59; PRadults:1.68; PRelderly:1.28), poor mental health (PRyoungpeople:3.10; PRadults:2.61; PRedlerly:2.17) and activity limitations (PRyoungpeople:2.44;PRadults:1.98). For psychological IPV only, there is an increase in the probability of poor self-perceived health (PRadults:1.37; PRelderly:1.19), poor mental health (PRyoungpeople:2.24; PRadults:2.16; PRelderly:1.69), and activity limitations y (PRadults:1.30; PRelderly:1.18).

Conclusions: We found both common factors and differential factors when looking at IPV by age group. This shows the need to link gender violence prevention with the social circumstances of the population across different life stages.

PÓSTERES

P5. LONG-TERM PHYSICAL ACTIVITY INDUCES BRAIN RESILIENCE IN MIDDLE-AGED ADULTS.

Rubén Corpas1, Elisabeth Solana2, Adrian De la Rosa3, Sara Sarroca1, Christian Griñán-Ferré4, Mireia Oriol5, Emili Corbella6, Eduard Rodríguez-Farré1, Jose Viña3, Mercè Pallàs4, David Bartrés-Faz2, Mari Carmen Gomez-Cabrera3, Coral Sanfeliu1.

1. *Institut d'Investigacions Biomèdiques de Barcelona (IIBB), CSIC, IDIBAPS and CIBERESP, Barcelona, Spain.*
2. *Departament de Medicina, Facultat de Medicina, Universitat de Barcelona; and Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain.*
3. *Freshage Research Group. Department of Physiology. Faculty of Medicine, University of Valencia and CIBERFES. Fundación Investigación Hospital Clínico Universitario/INCLIVA. Valencia, Spain.*
4. *Unitat de Farmacologia i Farmacognòsia, Facultat de Farmàcia i Ciències de l'Alimentació, Universitat de Barcelona, and CIBERNED, Barcelona, Spain.*
5. *Hospital Clínic, Barcelona, Spain.*
6. *Hospital de Bellvitge, Barcelona, Spain.*

AIM: Physical activity practiced regularly is known to improve the well-being and to reduce the risk of age-related diseases. We aimed to determine the impact of long-term physical activity on memory maintenance and search for peripheral blood markers related to cognitive function in middle-aged men.

METHODS: We performed neuropsychological analyses to healthy veteran rugby players (n = 24, age in years; 46–68) and control subjects with low physical activity (n = 25, age in years: 47–67).

We analyzed neurotrophins serum levels, and the expression of selected genes in whole blood mRNA.

Young sedentary subjects (n = 21, age in years: 17–25) and a young trained group (n = 16, age in years: 18–25) were added to compare the analyzed blood markers with the middle-aged group.

RESULTS AND DISCUSSION: The neuropsychological analysis reported higher memory score in the free and cued immediate recall tests, in middle-aged trained group as compared to sedentary middle-aged group.

Moreover, both middle- and young-aged trained subjects exhibited a decrease in peripheral resting levels of the neurotrophins BDNF and CTSB, indicating similar adaptive changes to long-term exercise training.

Interestingly, middle-aged sedentary subjects showed lower gene expression levels of SIRT1, SIRT3 and CAT than young-aged group, whereas rugby players maintained the expression levels of these genes at a young-like level.

CONCLUSION: This study suggests that long-term physical exercise induces a rejuvenating effect in middle-aged adults, indicative of brain resilience against aging. Interestingly SIRT1, SIRT3 and CAT genes can be detected as peripheral blood biomarkers of resilience.

Pósteres

P5. The INMA-Valencia cohort: A new health survey after 15 years of follow-up.

MJ Lopez-Espinosa1,2,3, A Ferrero1,3, S Llop1,3, T Oltra4,5, R Soler-Blasco1, L Gonzalez1,3, A Beneito1, A Esplugues1,2,3, O Costa1, M Murcia1,3, M Lozano4, P Carrasco1, M Estarlich1,2,3, L Margaix6,1,2, J Vindel5, R Roldán5, A Farga7, J Ferrando8, A Saa4, C Carrizosa4, A Garay4, M Salvador4, R Bermúdez4, M Rebagliato1,3, F Ballester1,2,3, C Iñiguez1,3,9

[1]Epidemiology and Environmental Health Joint Research Unit, FISABIO–Universitat Jaume I–Universitat de València, Valencia, Spain.
[2]Department of Nursing, University of Valencia, Valencia, Spain.
[3]Spanish Consortium for Research on Epidemiology and Public Health (CIBERESP), ISCIII, Madrid, Spain.
[4]FISABIO- Public Health, Valencia, Spain.
[5]Health Center of Paterna, Valencia, Spain.
[6]Health Center of Puçol, Valencia, Spain.
[7]Department of Microbiology, Hospital Arnau de Vilanova, Valencia, Spain.
[8]Department of Pathological anatomy, Hospital Arnau de Vilanova, Valencia, Spain.
[9]Department of Statistics and Computational Research, University of Valencia, Valencia, Spain.

OBJETIVES: The general aims of the multicenter prospective cohort study INMA-Infancia y Medio Ambiente (www.proyectoinma.org) are: i) To evaluate environmental exposure to contaminants and their related factors in adolescents and their mothers; ii) To study the health effects of biological, socioeconomic, dietary and environmental factors, and lifestyle throughout the life cycle and how these factors can modify the effects of contaminants on health.

METHODOLOGY: The INMA-Valencia cohort is undertaking its 11th follow-up, starting in 2019. The participants (n≈400) are adolescents and their mothers (14–16 and 31–58 years old, respectively).

Data are being collected through questionnaires, physical examination (anthropometric measurements, lung function, blood pressure and pubertal development), neuropsychological development tests, and collection of biological samples (blood, urine, hair, fecal microbiota, and cervicovaginal mucosa, the latter only in adult women).

EXPECTED RESULTS: The survey of 14–16-year-olds will consider: i) Socioeconomic level, diet quality, living environment, physical activity, sleep patterns, and habits of use of technologies regarding participants' health status; ii) Exposure to pollutants and biomarker levels of effect concerning health; and iii) Health role of gut microbiota.

In the mothers, cervicovaginal microbiota composition will be correlated with i) infections by oncogenic human papillomavirus (HPVs), HPV-related dysplasias and other cervical lesions during perimenopause; and ii) quality of life during the climacteric.

CONCLUSIONS: The relevance of the INMA Project lies in its longitudinal design with health information on toxic exposure, diet, and socioeconomic context collected since the beginning

of life. Additionally, it is a multicenter study of cohorts in different Spanish regions and participates in many international projects and networks.

INMA contributes to knowledge about the health effects of environmental, socioeconomic and lifestyles factors throughout life. This information could be of special relevance for the preparation of Public Health guidelines and policies aimed at protecting health in Spain and Europe.

P5. ASSOCIATION OF URINARY METAL CONCENTRATIONS WITH BLOOD PRESSURE AND SERUM HORMONES AMONG MALE ADOLESCENTS IN THE INMA-GRANADA COHORT.

Francesca Castiello, Fernando Gil, Pablo Olmedo, Marina Molina, Antonio Mundo, Raquel Rocío Romero, Carlos Ruíz, José Gómez-Vida, Mariana F. Fernández, Carmen Freire.

Instituto de Investigación Biosanitaria de Granada (ibs.GRANADA); Universidad de Granada; Hospitales Universitarios de Granada; Consorcio de Investigación Biomédica de Epidemiología y Salud Pública (CIBERESP).

Objective: To examine the association of urinary concentrations of five well-known toxic metals (arsenic [As], cadmium [Cd], mercury [Hg], nickel [Ni], and lead [Pb]) and two essential but potentially toxic metals (manganese [Mn] and chromium [Cr]) with blood pressure (BP) and serum hormone levels in a sub-sample of male adolescents belonging to the INMA (Environment and Childhood)-Granada cohort .

Methods: Participants were selected from the INMA-Granada cohort of boys at their follow-up visit when aged 15-17 years. Metal concentrations were measured in urine samples using inductively coupled plasma mass spectrometry. Outcomes were BP measurements (systolic, diastolic, and pulse pressure) recorded during the visit and concurrent serum levels of hormones, including thyroid hormones (FT4, TT3, TSH), sex steroids (testosterone, 17β-estradiol, DHEA), non-steroidal sex hormones (LH, FSH, SHBG, anti-Müllerian hormone, prolactin), adrenal hormones (ACTH, cortisol), human growth hormone (hGH), and insulin-like growth factor-1 (IGF-1). Associations were assessed by regression analysis in 133 boys with available data on urinary metals, outcomes, and relevant covariates.

Results: Models simultaneously adjusted for all metals and other potential confounders showed that urinary As and Cd were both associated with elevations in systolic BP (0.70 mmHg, 95%CI=0.11; 1.29 and 1.47, 95%CI=0.30; 2.63, respectively, per each 50% increase in metal concentrations), and urinary As was also associated with an increased risk of elevated systolic BP (≥120 mmHg) (OR=1.28, 95%CI=1.04; 1.56). The presence of detectable levels of 4 and 5 versus 2-3 non-essential metals (As, Cd, Hg, Ni, Pb) per boy was associated with elevations in systolic BP of 5.84 mmHg (95%CI=0.40; 11.3) and 7.01 mmHg (95%CI=1.01; 13.0), respectively (p-trend=0.05). Significant associations were also found between Hg and increased testosterone and luteinizing hormone (LH) and decreased thyroid-stimulating hormone (TSH); between the combination of As and Hg and increased LH and insulin-like growth factor 1; between Cr and decreased TSH; and between Cd and increased adrenocorticotropic hormone.

Conclusions: These findings suggest that environmental exposure to toxic metals, especially As and Cd, may contribute to BP elevation in male adolescents and that exposure to Hg, Cd, and Cr may affect their hormone levels.

PÓSTERES

P6. A NEW ONLINE SYSTEM FOR THE STANDARDIZED APPRAISAL OF PRO INSTRUMENTS: THE EMPRO PLATFORM.

Yolanda Pardo, Olatz Garin, Gemma Vilagut, Itxaso Alayo, Victor Zamora, Cristina Oriol, José María Valderas, Carlos Garcia-Forero, Jordi Alonso, Montse Ferrer, and the EMPRO Group.

IMIM (Hospital del Mar Research Institute); CIBER en Epidemiologia y Salud Pública CIBERESP (G09), CIBER en Salud Mental CIBERSAM, CIBER en Enfermedades Neurodegenerativas CIBERNED, Health Services Research on Chronic Patients Network REDISSEC.

AIMS: The EMPRO (Evaluating the Measurement of Patient-Reported Outcomes) was designed to perform a standardized assessment of the quality of PROs. It has demonstrated to have good validity and reliability and has been applied on a dozen conditions to facilitate the selection of the most appropriate PRO. EMPRO evaluations are conducted by independent appraisers who need to achieve an agreement. Our aim was to developed an online platform which enables the management of a huge amount of data, and facilitates international studies

METHODS: An online platform was created to perform two different procedures. An administrator profile to design each EMPRO evaluation, specifying: the PROs to be evaluated and the number of appraisals by PRO; the selected EMPRO attributes (concept and measurement model, cultural adaptation, reliability, validity, sensitivity to change, interpretation, burden, alternative modes of administration); and the PRO materials (scientific articles, instrument itself and its manual,…). A user profile where the appraisers can check the materials and complete the EMPRO items for the PRO they were assigned for evaluation.

RESULTS: The new EMPRO online platform is accessible via a URL with a login. Once in the application the user can see the list of EMPRO evaluation projects in which they participate, and their current status. When starting a new evaluation, the appraisers are guided through the EMPRO items. Each item is shown on a screen with its evaluating criteria, scoring recommendations, and response options based on the AGREE system. During the item assessment, PRO materials can be consulted in parallel on a split screen. Once all pappraisers assigned to a specific PRO have finished their evaluation, they can proceed to the consensus screen, where all the anonymized responses are given by appraiser, to achieve an agreement. In case any discrepancy remains, appraisers can add comments explaining their concerns. Thus, several consensus rounds may occur until achieving a final agreement.

CONCLUSION: The new EMPRO online platform allows the standardized assessment of the quality of PRO instruments by expert consensus. It facilitates the exchange of information among appraisers, recording every step in the process, and simplifies collaborative and international studies.

P6. TRANSITIONS FROM SUICIDAL IDEATION TO SUICIDE PLANS AND/OR SUICIDE ATTEMPTS AMONG INCOMING COLLEGE STUDENTS – RESULTS FROM THE WMH-ICS INITIATIVE.

Mortier, P.1,2,3, Auerbach, R.P.4, Alonso, J.1,2,5, Bantjes, J.6, Benjet, C.7, Cuijpers, P.8, Ebert, D.D.9, Green, J.G.10, Hasking, P.11, Nock, M.K.12, O'Neill, S.13, Pinder-Amaker, S.14, Sampson, N.A.15, Vilagut, G.1,2, Zaslavsky, A.M.15, Bruffaerts, R.3, Kessler, R.C.15

1. *Health Services Research Group, IMIM (Hospital del Mar Medical Research Institute), Barcelona, Spain*
2. *CIBER Epidemiología y Salud Pública (CIBERESP), (G09) Madrid, Spain*
3. *Research Group Psychiatry, Department of Neurosciences, KU Leuven University, Leuven, Belgium*
4. *Department of Psychiatry, Columbia University, New York, NY, USA; Division of Clinical Developmental Neuroscience, Sackler Institute, New York, NY, USA.*
5. *Department of Health & Experimental Sciences, Pompeu Fabra University (UPF), Barcelona, Spain*
6. *Psychology Department, Stellenbosch University, South Africa*
7. *Division of Epidemiological and Psychosocial Research, National Institute of Psychiatry Ramón de la Fuente Muñiz, Mexico City, Mexico.*
8. *Department of Clinical, Neuro- and Developmental Psychology, Vrije Universiteit Amsterdam, Amsterdam, the Netherlands; Amsterdam Public Health Research Institute Amsterdam, Amsterdam, the Netherlands.*
9. *Department of Clinical, Neuro- and Developmental Psychology, Vrije Universiteit Amsterdam, Amsterdam, the Netherlands; Department of Psychology, Chair for Clinical Psychology and Psychotherapy, Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany*
10. *Wheelock College of Education & Human Development, Boston University, Boston, MA.*
11. *School of Psychology, Curtin University, Perth, Australia.*
12. *Department of Psychology, Harvard University.*
13. *School of Psychology, Ulster University, Coleraine, Northern Ireland.*
14. *Harvard Medical School, Boston, and McLean Hospital, Belmont, MA.*
15. *Department of Health Care Policy, Harvard Medical School, Boston, MA.*

Study objectives: little is known about the epidemiology of Suicidal Thoughts & Behaviours (STB) among incoming college students. Using data from a large sample of first-year college students, we investigated not only the full range of STB outcomes (i.e., ideation, plans, and attempts) but also STB transitions (i.e., plans among ideators, attempts among ideators with and without plans).

Methods: in the initial round of the WHO World Mental Health (WMH-ICS) Initiative, web-based self-report questionnaires were administered between October 2014 and February 2017 to representative samples of first-year students from 19 colleges and universities, located in 8 mostly high-income countries. A total of 14,371 questionnaires were completed; the weighted (by achieved sample size) mean response rate across surveys was 45.5%.

Results: most STB cases had onset before age 16 (Q3 = 15.8); persistence of STB (i.e., ratio of 12-month to lifetime prevalence) ranged between 43% and 53%. Over half (53.4%) of lifetime ideators had transitioned to a suicide plan and 22.1% of lifetime planners had transitioned to an attempt as of the time of survey. Lifetime attempts among lifetime ideators without plan were less common (3.1%). Nonheterosexual orientation (aOR range 3.3-7.9) and heterosexual orientation with some same-sex attraction (aOR range 1.9-2.3) were the strongest correlates of transitioning from ideation to plans and/or attempts (aOR range 1.6-6.1).

Conclusion: results will be compared with related research from our group, i.e., (1) a meta-analysis focussing on college student STB prevalence, including 36 samples representing 634,662 college students worldwide, and (2) work from the WHO WMH Surveys, reporting on STB prevalence among 5750 young adults aged 18–22 spanning 21 countries. We will discuss how these findings contribute to a more fine-grained understanding of STB transitions among college students, and how these can inform the preventive interventions that are included in the WHO WMH-ICS Initiative.

Pósteres

P6. Economic evaluation of a complex primary care intervention developed in 7 CC.AA combining Real World Data and patient questionnaires: EIRA Project.

Ignacio Aznar-Lou 1,2, Maria Rubio-Valera1,2,3, Cristina Carbonell-Duacastella1, Marc Casajuana4,5 y Antoni Serrano-Blanco1,2.

1. *Grupo de Tecnologías Sanitarias y Resultados en Atención Primaria y Salud Mental (PRISMA)*
   Research and Development Unit /Parc Sanitari Sant Joan de Déu, Barcelona, España
2. *Consorcio de Investigación Biomédica en Red Epidemiología y Salud Pública (CIBERESP) (G 58)*
3. *Departamento de Farmacología, Toxicología y Química terapéutica. Facultad de Farmacia. Universidad de Barcelona, España*
4. *Instituto Universitario de Investigación en Atención Primaria Jordi Gol (IDIAP Jordi Gol), Barcelona, España.*
5. *Red de Investigación en Actividades Preventivas y Promoción de la Salud (redIAPP), Barcelona, España.*

Introduction: Chronic diseases represent a high burden and one of the biggest challenges for the healthcare systems. Interventions addressed to promote healthy behaviours in the population who attend the primary care system are powerful tools to decrease the prevalence of most of chronic diseases and maximize healthy ageing. The aim of this presentation is to assess the cost-utility of a complex intervention developed in Primary care addressed to power healthy behaviours.

Methodology: An economic evaluation from society and healthcare system perspective was developed in seven CC.AA. This evaluation was performed based on cluster-randomized controlled study. Effects were assessed from quality adjusted life years and costs were recorded combining Real World Data, medical records reviews and questionnaires to patients based on the availability in each CC.AA. Cost considered were use of healthcare services (primary care and hospital), sick leaves, physical activities cost and tobacco cost. Time horizon was one year. Main analyses will consider unitary cost of each CC.AA, sensitivity analysis will consider maximum, and minimum unitary cost found in these regions. Difference in costs and effects will be done using multilevel adjusted lineal regressions and cost-utility planes and curve will be performed using bootstrapping.

Results: Developing an economic evaluation in seven CC.AA implies important challenges. These challenges are related with the cost information, unitary cost sources, missing information, data protection between others. Potential solutions to these challenges will be exposed on the final poster.

Analysis have not been performed yet because we are waiting for information in two CC.AA. In any case, results will be exposed at the final presentation.

PÓSTERES

P7. IMPACT OF LATE NEONATAL SEPSIS BY COAGULASE NEGATIVE STAPHYLOCOCCI IN VERY LOW BIRTHWEIGHT INFANTS (NEOKISSES COHORT).

Pijoan JI, Madrid M, Perez Lopez J, Roqué M, Fernandez BM, Santiago P, Barcelona C, Lopez Herrera MC, Villate JI.

Pijoan JI: Unidad de Epidemiología Clínica-Hospital Universitario Cruces. Asociación Instituto de Investigación Sanitaria Biocruces-Bizkaia. CIBERESP; Madrid M: Red SAMID. Asociación Instituto de Investigación Sanitaria Biocruces-Bizkaia; Perez Lopez J: Asociación Instituto de Investigación Sanitaria Biocruces-Bizkaia; Roqué M: Servicio de Epidemiología y Medicina Preventiva-Hospital Universitario de la Santa Creu i Sant Pau. Centro Cochrane Iberoamericano. Instituto de Investigación Sanitaria Sant Pau. CIBERESP; Fernandez BM: Unidad de Bioestadística Clínica-Hospital Universitario Ramón y Cajal. IRYCIS. CIBERESP; Santiago P: Unidad Neonatal-Hospital Universitario Cruces; Barcelona C: Unidad Neonatal-Hospital Universitario Cruces; Lopez Herrera MC: Unidad Neonatal-Hospital Universitario Cruces; Villate JI: Servicio de Medicina Preventiva-hospital Universitario Cruces. Asociación Instituto de Investigación Sanitaria Biocruces-Bizkaia.

Background: coagulase-negative staphylococci (CNS) are the most common cause of late onset sepsis (LOS) in very-low-birth-weight-infants (VLBWI). There is current controversy regarding its actual clinical impact in terms of mortality and short and long-term morbidity as compared with sepsis due to other germs (mainly Gram negative bacteria and fungi).

Objective: to describe in-hospital mortality and morbidities in VLBWI with an episode of CNS-associated LOS and to compare them with those with clinically suspected sepsis (negative cultures) and sepsis caused by other germs.

Methods: observational study of the NeokissEs cohort in the period 2014-2018. NeokissEs collects standardized data on perinatal variables, use of antibiotics and medical devices and incidence of both overall and device-associated LOS in VLBWI (≤1.500 grams at birth) from more than 40 Spanish Neonatal Intensive Care Units (NICUs). Data from 2014-5 have been linked to the SEN-1500 dataset, which collects additional in-hospital mortality and morbidities. Only the first LOS episodes of VLBWI from a NICU providing data for at least four years have been included in the analysis. Neonates transferred from other hospital are excluded. Chi square and Kruskal-Wallis tests are used.

Results: 1,700 episodes of LOS were included: 822 caused by CNS (48.3%), 491 by other germs (28.9%) and 387 culture-negative LOS (22.8%). NeokissEs follow-up mortality rates were lower for CNS sepsis (5.0%) as compared to sepsis caused by other germs (19.6%) and culture-negative sepsis (13.4%) p<0.001. Bronchopulmonary dysplasia was more frequent in sepsis associated with other germs (p=0.040) whereas no significant differences were found in incidence or severity of other in-hospital morbidities (Necrotizing Enterocholitis, Periventricular Leukomalacia, Intraventricular Hemorrhage, Retinopathy of Prematurity)

Conclusion: CNS-associated sepsis are associated to lower short-term mortality and less frequent bronchopulmonary dysplasia as compared to sepsis caused by other germs or culture negative sepsis.

PÓSTERES

P7. A SCOPING REVIEW INDICATES THAT RAPID REVIEWS OF MEDICAL TESTS ARE MORE COMPREHENSIVE THAN EXPECTED.

Ingrid Arevalo-Rodriguez1, Paloma Moreno-Nunez2, Barbara Nusbaummer-Streit3, Karen Steingart4, Laura del Mar González Peña5, Diana Buitrago-Garcia6, David Kaunelis7, José Ignacio Emparanza8, Pablo Alonso-Coello9, Andrea C. Tricco10, Javier Zamora11

1. *Clinical Biostatistics Unit, Hospital Ramon y Cajal (IRYCIS), CIBER of Epidemiology and Public Health, Madrid, Spain. Email: inarev7@yahoo.com, ingrid.arevalo@salud.madrid.org.*
2. *Department of Preventive Medicine, Hospital Ramon y Cajal (IRYCIS), Email: pmorenon@salud.madrid.org.*
3. *Cochrane Austria, Department for Evidence-based Medicine and Clinical Epidemiology, Danube University Krems, Krems, Austria. Email: barbara.nussbaumer-streit@donau-uni.ac.at.*
4. *Honorary Research Fellow, Department of Clinical Sciences, Liverpool School of Tropical Medicine, Liverpool, UK. Email: karen.steingart@gmail.com.*
5. *Especialización en Epidemiología Clínica, Fundación Universitaria de Ciencias de la Salud (FUCS), Hospital de San José, Bogotá, Colombia. Email: ldgonzalez2@fucsalud.edu.co.*
6. *Especialización en Epidemiología Clínica, Fundación Universitaria de Ciencias de la Salud (FUCS), Hospital de San José, Bogotá, Colombia. Email: dcbuitrago@fucsalud.edu.co.*
7. *Canadian Agency for Drugs and Technologies in Health (CADTH), Ottawa, Canada. Email: davidk@cadth.ca.*
8. *Clinical Epidemiology Unit, Hospital Universitario Donostia, BioDonostia, CIBER of Epidemiology and Public Health, San Sebastian, Spain. Email: joseignacio.emparanzaknorr@osakidetza.eus.*
9. *Centro Cochrane Iberoamericano-Servicio de Epidemiología Clínica y Salud Pública, Instituto de Investigación Biomédica Sant Pau (IIB Sant Pau), Barcelona, Spain. CIBER of Epidemiology and Public Health, Barcelona, Spain. Email: palonso@santpau.cat.*
10. *Li Ka Shing Knowledge Institute, St. Michael's Hospital. Epidemiology Division, Dalla Lana School of Public Health, University of Toronto, Toronto, Canada. Queen's Collaboration for Health Care Quality, Joanna Briggs Institute Centre of Excellence, Queen's University. Email: triccoa@smh.ca.*
11. *Clinical Biostatistics Unit, Hospital Ramon y Cajal (IRYCIS), CIBER of Epidemiology and Public Health, Madrid, Spain. Email: javier.zamora@hrc.es.*

Background: Rapid reviews provide an efficient alternative to standard systematic reviews in response to a high priority or urgent need. Although rapid reviews of interventions have been extensively evaluated, little is known about the characteristics of rapid reviews of diagnostic evidence.

Study design and setting: We performed a scoping review for rapid reviews of medical tests published from 2013 to 2018. We extracted information on review characteristics and methods used to assess the evidence.

Results: We identified 191 rapid reviews. All reviews were developed within a short time (less than 12 months) and were relatively concise (less than 10 pages). The reviews involved multiple index tests (44%), multiple outcomes (88%), and several test applications (29%). Well-known methodological tailoring strategies were infrequently used. Although reporting of several key features was limited, we found that, in general, rapid reviews have similar characteristics to broader knowledge syntheses.

Conclusion: Our scoping review is the first to describe the characteristics and methods of rapid reviews of diagnostic evidence. Future research should identify the most appropriate methods for performing rapid reviews of medical tests. Standards for reporting of rapid reviews are needed.

Pósteres

P7. Ultra-processed consumption as a new mortality risk factor in DRECE Cohort.

Romero Ferreiro, Carmen1,2; Martín-Arriscado Arroba, Cristina2,3; Cancelas Navia, Pilar2,3; Garcia Morales, Maria Teresa2,3; Lora Pablos, David1,2,3; Gomez de la Cámara, Agustín1,2,3.

1. *CIBER de epidemiología y salud pública (CIBEResp)*
2. *Clinical research Unit (I+12), Hospital Universitario 12 de Octubre. Madrid, Spain*
3. *Plataforma de Unidades de Investigación Clínica y Ensayos Clínicos (SCReN)*

INTRODUCTION: DRECE study (Diet and Risk of Cardiovascular Diseases in Spain) began in 1991 with the aim of knowing the lipid profile, the prevalence of cardiovascular risk factors in the Spanish population and its relationship with dietary habits.

Malnutrition in all its forms is a major cause of death and disease worldwide. Globally, between 1990 and 2010, the consumption of healthy food items has improved while at the same time consumption of unhealthy food items has worsened. Current investigations related to diet, nutrition and health base their findings and recommendations on the nutritional profile and chemical composition of food. Thus, the impact of industrialized food processing on dietary patterns remains overlooked and underestimated.

PURPOSE: Update mortality risk factors in the Spanish population and study consumption of ultra-processed foods, according to the NOVA classification.

METHODS: Mortality rates were estimated by Poisson regression, adjusting for age, sex and years of follow-up. The construction of Cox proportional hazards regression models was carried out to evaluate the relationship between mortality and the different risk factors. Initially, the association was studied through bivariate models between the risk factors considered traditional to subsequently build a final multivariable model, using the hazard ratio (HR) and 95% confidence intervals. All analyses were conducted in SAS 9.4.

RESULTS: According to data provided by the National Statistics Institute from the initial DRECE population of 4,787 individuals, 462 subjects died in the period between 1991 and 2017. The resulting mortality rate was 3.68 per 1,000 habitants-year (124,771 person-years).

The main risk adjusted factors associated with overall mortality are the diabetes, creatinine> 1.5 mg/dL, age, sex, HTA, tobacco and intake of ultra-processed food (Table).

Table: Mortality risk factors

Risk factors	HR (CI95%)
Age	1,102 (1,091-1,113)
Sex (man)	1,898 (1,537-2,344)
creatinine> 1.5 mg/dL	3,099 (1,642-5,849)
Diabetes	1,746 (1,345-2,666)
HTA	1,245 (1,014-1,528)
Tobacco	1,423 (1,157-1,750)
Ultraprocessed food	1,528 (1,119-2,087)

CONCLUSIONS: Risk factors associated with mortality remain similar to previous analysis of the cohort, with the exception of a new component: ultra-processed consumption.