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Prof. Carmelo Nobile

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ABSTRACT BOOK OF THE ORAL COMMUNICATIONS OF YOUNG PUBLIC HEALTH PROFESSIONALS

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CALABRIA REGIONAL SECTIONS (CALABRO-SICULO)
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Prescriptive appropriateness of folic acid supplementation in pregnancy: preliminary results of a cross-sectional study in Calabria, Southern Italy

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Introduction Taking folic acid (FA) in pregnancy is an essential practice to reduce the fetal risk of developing neural tube defects. The primary objective of the study was to evaluate the appropriateness of FA prescription during pregnancy.

Methods A self-administered anonymous questionnaire was distributed to a randomly selected sample of pregnant women in Calabria Region, in the Southern part of Italy. Socio-demographic and anamnestic data and information on FA intake were collected. The appropriateness of FA prescription was judged according to the Scientific Advisory Committee on Nutrition guidelines updated in February 2023, which stated that women who are pregnant or are planning to become pregnant should get at least 0.4 mg of FA daily before conception and for at least 3 months afterward.

Results Preliminary results refer to 91 pregnant women. Within the sample 80.5% women took FA prescribed by gynecologist (85.7%) or by a general practitioner (5.5%). Approximately half (53.9%) of the pregnancies were planned (PP), and in only 26.5% of these, the initiation of intake can be considered appropriate. In the majority of PPs, the duration of intake extended well beyond the first trimester (in 85.7% of cases until the end of pregnancy and in 10.2% until the end of breastfeeding). Only 34.7% of pregnant women reported taking

the recommended dosage, as per international guidelines. Overall, only 16.3% of all FA prescription were appropriate for dosage and duration of supplementation. Relative to unplanned pregnancies (UPPs), in the majority of cases FA supplementation extended beyond the 1st trimester, in particular, in 64.3% of cases until the end of pregnancy, in 16.6% until the end of breastfeeding. FA dosage was appropriate in 42.8% of those cases. The overall appropriateness of prescription in UPPs was 45.2%.

Conclusions Preliminary results have highlighted an opportunity for improvement in the appropriateness of FA prescription in pregnancy, particularly with regard to periconceptional intake in PPs and to dosage in all pregnancies. It is, therefore, imperative to devote resources to training health care personnel who meet pregnant women. Pregnancy represents an opportunity to perform counseling activities geared toward the prevention of neural tube defects in the unborn children, as well as of other pregnancy-related complications in both mothers (e.g., anemia) and fetuses (e.g. congenital abnormalities).

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Use of antibiotic therapy in pediatric age in southern Italy: preliminary results

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Introduction Antibiotic-resistance is one of the ten main global threats to public health that human beings must face. Infections due to resistant microorganisms represent a considerable burden for public health for the related deaths and number of years of life corrected for disability. Antibiotics represent one of the groups of most pre-

scribed drugs in children all over the world, during hospital stay or in the community. Factors influencing frequent use of antibiotics in children are little known.

Methods The study involved the administration of an anonymous questionnaire to a random sample of parents of children under 18 to evaluate their knowledge, aptitudes and attitudes toward antibiotic use.

Results The study involved 137 parents from Calabria with average age 39.3 (SD +/-6.36); 106 (77.4%) had given an oral antibiotic to one or more of their children in the previous 12 months. 54.7% of the parents knew that only bacteria are the target of antibiotics and 60% agreed to antibiotic use during flu. Antibiotic self-prescription (18%) or purchase in Pharmacy without medical prescription (47.4%) were common. 74.5% had heard about antibiotic resistance and of these 27.5% from their paediatrician, 48% from other sources, 16.7% from social media and 7.9% from their GP (General practitioner). 70.9% were concerned about the impact of antibiotic resistance on their own and family health.

Conclusions This study suggests that parental knowledge, behaviour and attitudes about use and prescription of antibiotics are not yet sufficient. The reduction of excessive use of antibiotics in children is necessary in the global strategy to prevent antimicrobial resistance. We hope to improve public health interventions to raise parental awareness and increase access regulation to antibiotics.

####

Climate change knowledge and behaviour in the general population: preliminary results.

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Introduction This study aims to investigate the general population's knowledge of the causes and health effects of climate change, the main sources of information used and possible counteracting measures. Climate change (CC) refers to long-term changes in temperature and weather patterns. They can seriously affect the environment, human and animal health and can occur naturally, but they can also have anthropogenic origins: since the 19th century, human activities have been the main factor behind CC. **Materials and methods** The cross-sectional study involved the administration of an anonymous online questionnaire to a sample of the general population aimed at investigating knowledge, attitudes and behaviour on CC.

Results The results refer to a sample of 94 participants with a mean age of 38.8 (SD ±11.5). Almost the entire sample (97.9%) thought that CC could have an impact on human health. 71% think that the entire population is vulnerable to the effects of CC, especially the poor (36.2%) and the sick (30.9%). Carbon emissions are considered the main cause of CC (89.4%). Internet and social media are the main source of information (73.4%). 93.6% are in favour of information campaigns on the issue, 73.4% are in favour of applying a carbon tax to industries, 18.1% would not limit the use of air conditioners.

Conclusions Preliminary results indicate that the majority of the sample has good knowledge about CC, a good level of awareness and the propensity to take actions to mitigate its effects. Knowing the level of public awareness and risk perception about CC is therefore a crucial preliminary step to highlight gaps and pave the way for counter measures and awareness-raising campaigns that address climate

change issues, also from a global health perspective.

####

Disposable or reusable medical devices? Attitudes and knowledge in a sample of medical students.

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Introduction Most greenhouse gas emissions in the healthcare sector originate in the supply chain, making it the area of the greatest impact for the decarbonisation of healthcare. Over the past three decades, the healthcare sector has become increasingly dependent on disposable medical devices, which are emblematic of a linear economy that contributes to global ecological destruction, depleting natural resources and generating an excessive amount of solid waste and global greenhouse gases.

Materials and methods The study involved the administration of an anonymous on-line questionnaire to a sample of medical students aged ≥ 18 years, aimed at collecting socio-demographic data and information to investigate awareness and knowledge about the rational use of resources.

Results The results refer to a sample of 638 healthcare students with an average age of 26.8 (SD \pm 6.5). 44% of the participants prefer reusable devices, about one third of the sample (33.4%) prefer disposable devices, 22.6% have no preference. What determines the choice of those who

use disposable devices is infection control for half of the sample (58.7%), followed by availability on the ward (26.3%), environmental sustainability (23.5%), habit (23.5%) and concern for cost (15.9%). Among the proposals to reduce pollution generated by the health sector and to promote sustainability, 90.4% believe that transparency from the industries on the ecological footprint of supplies, procedures and services is essential.

Conclusions It appears necessary to change the behaviour and the choices of healthcare personnel through measures that can increase awareness and knowledge. Universities, in this regard, could intervene to ensure and improve the training of future professionals also regarding good practices to be referred to and initiatives to be taken to reduce the ecological footprint of health services.

####

Validation of a screening test on exclusive breastfeeding propension: results of a prospective study among mothers residing in Palermo administrative province.

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Introduction Exclusive breastfeeding rates, during the first six months of age, in Italy, and in Sicily, are low and they are about 44% and 18%, respectively. Currently, any of the most used tools to evaluate the breastfeeding propension, has been

recognized as golden standard.

Materials and methods This study applied a questionnaire based on the Di Clemente and Prochaska TransTheoretical Model (TTM) to evaluate the correlation between maternal intention to breastfeed after delivery, and their self-efficacy to continue exclusively breastfeed, once they were discharged from hospital to home. Therefore, 318 mothers have been interviewed from November 2022 and May 2023. They were classified, according to this model, into one of the four stages of awareness: Precontemplation, Contemplation, Determination and Action. Based on the result of the TTM, mothers have been supported with a tailored fittest counseling. After discharge, recall was due in one week, one month, three months, and six months, by phone call, to monitor breastfeeding practice.

Results The sociodemographic characteristics of the interviewed mothers showed that the more prevalent age class was 30-39 years for 61% of mothers, they were mainly married (65%) and with high education level (75%). The majority (76%) were assisted by a private gynecologist. There were many factors that may have influenced exclusive breastfeeding: the habit of smoking for 17%, the lack of skin to skin practice for 18% or the lack of rooming-in practice for 20% of cases. According to the TTM, Cronbach's alpha is predictive of the intention to breastfeed ($\alpha=0.412$) and maternal knowledge of breastfeeding benefits ($\alpha=0.268$).

Conclusions The screening test tool was highly predictive of the exclusive breastfeeding propension among mothers in the Palermo area. Moreover, the counselling would be even more efficacious if adopted in the first months of pregnancy. Further studies are necessary to evaluate the outcomes of the early use of this screening tool in the first month of pregnancy.

####

Exclusively breastfeeding surveillance pilot system in Sicily

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Objective Exclusively breastfeeding is the adequate nutrition to develop the greatest health of newborns until six months of age. According to the national Surveillance 0-2 System of 2022, in Italy only 46.7% newborns are breastfed, while in Sicily rates decrease up to 29.6%. The low values have motivated to create a breastfeeding surveillance pilot system, evaluating its determinants.

Materials and methods A cross-sectional study has been conducted at the birth centers of AOUP P. Giaccone, and Civico Hospitals of Palermo, Sicily. A survey based on the Transtheoretical Model (TTM) of Di Clemente and Prochaska has been administered to new mothers attending the wards after the deliver. The 26 questions concerned about social, educational context, occupation, type of delivery, exclusively breastfeeding believes/knowledges. A follow-up phone interview has been completed after 1 week, 1 month, 3 months, 6 months after the delivery, in order to monitor the exclusively breastfeeding practice.

Results A sample of 501 new mothers have been enrolled. 61% (n=307) of them aged between 30-39 years old, the prevalent educational level was the bachelor 35% (n=173). Before discharge from hospital, 52% (n=261) of new mothers exclusively breastfeed. Multivariate analysis show that

the associated determinants with exclusively breastfeeding were the practice of rooming in (OR=2.32 p=0.004), and the enrollment to birthing classes (OR=2.04, p=0.004). Instead, breastfeeding advices given by not properly formed personnel, were inversely associate to exclusively breastfeeding (OR=0.50, p=0.001).

Conclusions Results demonstrate that exclusively breastfeeding prevalence is quite low at discharge at home. Moreover, the results show that the practice of WHO recommendations increase exclusively breastfeeding adherence. On the other hand, breastfeeding advices given by not properly formed personnel decrease exclusively breastfeeding adherence. The surveillance pilot system aims to build a stable monitoring system, implementing actions promoting exclusively breastfeeding.

####

Retrospective study on the efficacy of the anti-HBV vaccine booster in health workers attending the A.O.U.P. "Paolo Giaccone" of Palermo outpatient vaccination service: evaluation of the antibody titer before and after administration of the booster dose

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Introduction The anti-HBV vaccine is essential for healthcare workers (HCW), who have a higher occupational risk of infectious disease than general population. This study aimed to evaluate the immune response to the anti-HBV vaccine (with antibody titre < 10 mIU/ml) among non-

responders HCW after administration of a booster dose, compared to the baseline vaccine schedule. HCW attend in the vaccination service were evaluated after counselling of the occupational medicine service.

Materials and methods It was conducted a cross-sectional study including HCWs attended the vaccination service from November 2019 to June 2023. Demographical and clinical information were collected by outpatient record after obtaining the consent of the HCWs. A total of 267 subjects were enrolled. These data were analyzed using STATA software.

Results Of the 267 subjects surveyed among health workers, 87% received a booster dose and 13% did not. Of these 232, 55% had their humoral titer checked 4/6 weeks after administration of which 14% had protective values, 86% still had a humoral titer below the <10 mu/ml threshold. The sample were more represented by women (64.4%, n=172) with a mean age of 26.5 years. The working activity more frequent was Students (63.7%; n=170) followed by Physician (16.5%; n=44). The smoking habit was declared for 25.8 (n=69) subjects. At multivariate analyses the only variable found to be statistically significant associated with being responders to the additional doses of HBV vaccination was age with OR 1.05 (95% CI 1.004 - 1.103, p=0.030). Consequently, with an increasing age there is a lower proportion of subjects with HbsAg positivity.

Conclusions The sample analysis shows that health care workers who are no respondents to the HBV vaccination turn out to be the majority. The factor most associated with having a lower response to HBV vaccine booster shots appears to be younger. Therefore, special attention should be paid to assessing the risk of contracting HBV in the workplace for low experienced health care workers. Health care providers should therefore intensify health surveillance activities targeting these types of health care workers.

####

The quality of sleep: evaluation among university students in Southern Italy

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Objective It is well known that sleep is regulated by several physiological and genetic processes, but also by social, subjective and environmental factors. In recent years, the Covid-19 pandemic and the related social restrictions have been a source of stress for the entire population and especially for younger people. It seemed, therefore, interesting to assess the quality of sleep in a sample of university students in the South of Italy.

Materials and methods A cross-sectional study was conducted using a self-administered questionnaire constructed on Google Form^a and submitted online. The questionnaire was divided into 4 sections that aimed to collect the following information: 1) socio-demographic characteristics; 2) knowledge on Sars-Cov2 infection; 3) assessment of sleep quality; and 4) assessment of some mental conditions such as, depression, anxiety and stress.

Results Preliminary data from a sample of 300 students, showed that 66 % were females with an average age of 25. One relevant finding is related to social relationships during the lockdown. Specifically, 63.3% of respondents reported that social relationships decreased and 70% reported that they increased their use of social media. As concerns to quality of

sleep, 92% were found to have poor sleep with a PSQI (Pittsburgh Sleep Quality Index) score >5, with a mean of 9.1 ± 3 . 80.3% of respondents had extremely severe depression, 97% anxiety, and 89% stress. The results of multivariate analysis showed that students with severe or extremely severe depression and stress scores had high overall PSQI scores.

Conclusions Preliminary results suggest the need to implement public health interventions to improve healthy lifestyle and specifically sleep quality in young adults.

####

Food knowledge, attitudes and behaviour among students in Southern Italy: preliminary results

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Introduction The relationship between nutrition, proper nutrition and health is naturally very close. Correct nutrition constitutes, together with adequate physical activity and the control of other risk factors such as smoking or alcohol, a fundamental element in the prevention of numerous pathological conditions. It has, in fact, been demonstrated that dietary choices have an incisive effect on the possibility of avoiding the development of diseases, controlling their evolution or, on the contrary, provoking their onset.

Materials and methods The study involved the administration of an anonymous on-line questionnaire addressed to a sample of university students in Southern Italy, aimed at investigating their knowledge, attitudes and behaviour on the subject of diet and lifestyle.

Results The results refer to a sample of 206 students with a mean age of 24.3 (SD ± 4.98). The BMI calculation showed that 24.7% were underweight, 48.5% normal weight, 24.2% overweight and 2.4% obese. 36% of the sample exercise 1-2 hours per day, in line with current WHO recommendations. The obese perform on average slightly more than half an hour of physical activity/week. 15.6 per cent of the sample do not eat breakfast and of these, 28.1 per cent claim not to have time to do so, while 68.8 per cent report not being hungry. Despite WHO recommendations, 50% of the sample only eat two meals, 14.6% do not consume fresh fruit and 5.3% do not consume vegetables.

Conclusions In order to develop programmes and practices to influence eating patterns, it is necessary to know what the eating habits are in young people and what factors influence these eating patterns significantly.

It appears to be necessary to change eating behaviours, habits and knowledge through measures that can raise awareness about nutrition. In this regard, the university could cooperate through educational activities to improve awareness in young people.

####

Public health strategies adopted to recover HPV vaccination coverage rates and incomplete cycles implemented among adolescents and young adults in the Local Health Authority of Trapani, Italy

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Objective Human Papillomavirus is a worldwide common oncogenic virus that affects both sexes. World Health Organization (WHO) has set a global goal of eradicating HPV-related cancers by 2030 by vaccinating 90% of the female population. In Italy HPV vaccination in adolescents shows unsatisfactory coverage data, in comparison with required coverage rates recommended by National and International Health Authorities, suffering from further decline during the COVID-19 pandemic. LHA of Trapani adopted several strategies to recover HPV vaccination coverage rates in the 2008/2009/2010 birth cohorts and interrupted vaccination cycles during the Pandemic years (2019-2022), in the 11-18 age groups.

Materials and methods In the first half of 2023, LHA of Trapani started active call for "naive" individuals or those with interrupted vaccination cycles, informative campaigns with dedicated vaccination sessions at schools, creation of a single reservation center and dedicated e-mail.

In addition, informational brochures were distributed at counseling and vaccination centers, community pharmacies and General Practitioners/pediatricians, and starting a collaboration with the Hospital Unit of Gynecology and Obstetrics and the screening center of the city of Trapani.

Results Comparing data of the first half of 2023 with the same period in 2022, an increase in doses performed (+54% among Female, +71% among Male) was observed for all eligible cohorts. A recovery of more than 55% of anti-HPV cycles, discontinued during the pandemic, was also observed. In the first half of 2023, the 2008-2010 cohorts achieved and average vaccination

coverage rate of 40.5% in males and 50.33% in females.

Conclusions Considering the low adolescent HPV vaccine coverages, worsened during the COVID-19 pandemic, LHA of Trapani started a series of Public Health strategies leading to increase vaccine coverages in both sexes, allowing the recovery of more than half of the interrupted cycles and consequently, through co-administration and counseling carried out during vaccination sessions, the increase of coverages for Men B, MenACWY and DTPa. In future, it is desirable to continue these recovery strategies by trying to standardize them in other LHAs of Sicily.

####

Health risks associated with eating meat: a comparative analysis of American, British and Italian online information

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Objective Excessive meat consumption is an alarming public health issue due to its impact on human health and environmental sustainability. The quality of online information regarding the risks associated with meat consumption could play a crucial role in shaping consumers' behavior. The aim of this study is investigating the quality of Italian, British, and US webpages obtained in response to searches for 'Is meat bad for you?' and the Italian equivalent 'La carne fa male?'

Materials and methods We downloaded the top 100 English and the top 100 American webpages in response to the query "Is

meat bad for you?", and the top 100 Italian webpages in response to "La carne fa male?". We assessed the trustworthiness of each web page using the JAMA score. The JAMA score is a tool made up of the following four binary conditions to be met: Authorship (Authors and contributors, their affiliations, and relevant credentials should be provided), Attribution (References and sources for all content should be listed clearly, and all relevant copyright information noted), Disclosure (Web site ownership should be prominently and fully disclosed, as should any sponsorship, advertising, underwriting, commercial funding arrangements or support, or potential conflicts of interest) and Currency (Dates in which the content was posted and updated should be indicated). Furtherly, the completeness of information on the relationship between meat and health was assessed based on the following criteria chosen by a panel of professional nutritionists: authority (the content was drafted by a trained nutritionist, life-scientist or dietician); guidelines (precise quantitative indications corresponding to the meat requirement were provided); diet sustainability (the impact of meat production on the environment was mentioned); general health prevention (the impact of excessive meat consumption on global health was mentioned); cancer and chronic diseases prevention (the risk of cancer and chronic diseases associated with increased meat consumption was clearly stated); meat substitutes (clear indications regarding the replacement of meat in the diet were provided). We also classified websites according to their category (commercial, non-profit, journalism, professional, government, health portal) and their judgment towards meat consumption (neutral, promoting, demonizing). Descriptive statistics and a multinomial regression model were used to investigate between-country difference in terms of website characteristics.

Results One-hundred American, 96 British and 94 Italian websites were analyzed. The quality of US websites was found to be

high in 61% of cases (95% CI: 50.7-70.6%), while only 22.3% (95% CI: 14.4-32.1%) of the Italian sites were classified as high quality. When compared to US websites, multinomial regression (table 1) showed how Italian websites demonized meat consumption less (RRR: 0.336; $p=0.012$) and less frequently had healthcare professionals as authors (RRR: 0.236; $p<0.001$). Additionally, Italian sites less frequently mentioned risks to the environment (RRR: 0.241; $p=0.001$) and the development of chronic diseases (RRR: 0.384; $p=0.013$) associated with excessive meat consumption. The quality of Italian sites was significantly lower compared to American ones (RRR: 0.332; $p=0.009$). When compared to US websites, UK websites exhibited a lower frequency in promoting meat consumption (RRR: 0.322; $p=0.019$) and contents were less likely written by qualified healthcare professionals (RRR: 0.292; $p=0.003$). The reporting of chronic disease risks was less common (RRR: 0.387; $p=0.013$), while the mention of cancer risks was more prevalent on UK sites (RRR: 2.708; $p=0.008$). Moreover, UK websites demonstrated a higher frequency of being of high quality (RRR: 4.431; $p<0.001$).

Conclusions In general, Italian websites provide less reliable and lower-quality information regarding the link between health and meat compared to American and British websites. It is concerning to note the frequency of online content written by individuals who are not nutritionist, life-scientist or dietician, and the low occurrence of information regarding the environmental impact of meat consumption. Conversely, UK and US websites demonstrate comparable quality. The diversity in the quality of online information across countries is present in other fields of knowledge. The observed differences in our study may be attributed, at least in part, to the high volume of content produced in the United States and the Italian cultural and culinary peculiarities. Ensuring the quality control of online health information remains a pressing issue.

####

Human Papillomavirus vaccination uptake: preliminary results of a cross-sectional study in Italy

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Objective Human papillomavirus (HPV) vaccination is a well-known strategy in the prevention of HPV infection and related diseases. However, HPV vaccination rates are still below the level required for community immunity. The aim of this study is to assess the uptake of HPV vaccination among young adults and its potential predictors.

Material and methods This cross-sectional study was conducted among a sample of young adults (aged 18-30 years) in Southern Italy. Data was collected through an anonymous self-administered questionnaire designed to retrieve sociodemographic information, knowledge about HPV infection and vaccine, attitudes towards HPV and sexual behaviours.

Results Among 264 respondents, 69.7% were women, 4.5% identified themselves as homosexual and 4.5% as bisexual. The majority knew that HPV vaccination is effective to prevent cervical cancer (91.7%) and believed that it is useful to prevent HPV infection (95.8%), but just 41.7% were worried to contract HPV infection. The main sources of information were school/university (76.5%) and healthcare workers (HCWs) (52.3%). Less than half (47.3%) received HPV vaccination and female gender and younger age were the strongest predictors of HPV vaccination uptake. A

later sexual debut, having had multiple sexual partners, homosexual orientation, believing that HPV vaccine is useful to prevent HPV infection and having received information from HCWs and/or school/university were positively associated with HPV vaccine uptake. **Conclusions** HPV vaccination uptake was lower in the sample than the primary target of coverage in girls (>80%). Improving HPV vaccination coverage in adolescents is a relevant public health goal that must be pursued through multicomponent intervention. Public health systems should work on the integration of several approaches, such as individual reminders, information and education activities. The finding that prevalence of male HPV vaccine uptake was lower than female highlight the need to have more male-specific HPV campaign to reduce the overall prevalence of HPV infection.

####

Pediatric intranasal influenza vaccination in the province of Palermo: a real world study of adherence and safety data observed in the field by a sample of pediatricians of free choice in Palermo and province

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Objective Influenza virus infection is a significant cause of morbidity and mortality globally: annually affecting between 5% and 15% of the world adult population (350 mln -1 bn people), while this incidence reaches 20%-30% in children. This causes millions of cases of influenza each year, with 0.5% of these evolving into lethal complications in 10% of cases (250,000 - 500,000 people). At-risk population groups include children under 5 years of age, among whom the mortality and morbidity rates are comparable to those over 65.

Materials and methods A quasi-experimental field trial was conducted with a training and comparison event with a group of Family Paediatricians (FPs) in the province of Palermo in September 2022. Subsequently, the FPs joined the influenza vaccination campaign, in collaboration with the Department of Prevention of Palermo Local Health Authority, by administering influenza vaccination to the paediatric population they cared for at their practice. During the campaign, vaccination safety data were collected in an active manner through a web portal for the personal use of participating Paediatricians while data on vaccinations given were collected from March 1, 2023.

Results The total number of registered caregivers was 4850, among whom 518 received intranasal vaccination. The vaccination coverage achieved in the over-18 population was 10.7%, significantly higher than the Sicilian regional average, which is 6.4% in the same population. The ratio of the number of patients vaccinated with the intranasal formulation to those who received intramuscular vaccination was 1:4.25. Of the 518 patients vaccinated with intranasal, only 17 reported adverse reactions (3.28% of the total), including fever, headache and general malaise, which resolved within 24 to 48 hours after vaccination without the need for hospitalization or outpatient visit.

Conclusions The intranasal influenza vaccine has demonstrated several advantages, including ease of administration and im-

proved patient and pediatrician compliance due to the mode of administration. Promotion of this vaccine strategy could improve vaccination coverage in the pediatric population and reduce the incidence of influenza-related complications. Finally, it is appropriate to consider the persistent issue, at least the Region of Sicily, related to the limited involvement of FPs in seasonal influenza vaccination at their clinics.

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Analysis of injuries among healthcare workers of a local health authority in the three-year period 2019-2021

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Introduction The healthcare profession exposes workers to multiple health risks. The types of injuries most frequently recorded among healthcare workers are accidental puncture wounds, cuts, contact with potentially infected material, trauma and musculoskeletal disorders. The aim of this study is to analyze the trend of occupational injuries among healthcare workers of ASL1 Abruzzo in the three-year period 2019-2021.

Materials And Methods The total number of occupational injuries in the different areas of local health authority were considered. The data was acquired from the emergency room registers, where the first workplace accident certificate was produced.

Results 722 occupational injuries were analysed, 45.7% in the Marsica area, 31.9% in the L'Aquila area, 22.4% in the Peligno-Sangrina area. This different geographic

distribution was statistically significant ($p < 0.0001$). Dividing the causes of injury by area, the main cause of injury in all areas is "unspecified". Not considering this case, the most represented cause was significantly ($p < 0.0001$) different for each area: in the L'Aquila area it was "aggression" (13.9%); in the Marsica area it was "in itinere" that means "going to/returning from work" (10.3%); in the Peligno-Sangrina area it was "falls" (14.8%). There was no significant difference in the proportion of occupational injuries between gender ($p = 0.4583$). The average number of days of prognosis was 7.2 ± 8.2 days. There were no significant differences in prognosis days between gender ($p = 0.9257$).

Conclusions Monitoring the trend of occupational injuries is of great importance for the adoption of corrective and preventive measures that will have to be area specific.

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Foodborne diseases: a still current public health problem

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Objective Foodborne diseases include several pathologies of various etiologies characterized by purely food and water transmission and typical, above all, of countries with low hygienic-sanitary standards. However, some of them are still present even in high-income countries, mainly due to particular eating habits. The aim of

this work was to evaluate the trend of these pathologies in a high hygienic-sanitary standards area in order to highlight critical issues to be faced in terms of prevention and public health.

Materials and methods The analysis was conducted on data relating to the period 2001-2022. In particular, the electronic platforms and paper registers of the Messina Local Health Authority were examined to evaluate the number of notifications of these infections. Statistical analyzes were carried out using STATA 18 software.

Results During the analyzed period, 1566 cases of these pathologies were notified, of which 890 cases of brucellosis, 480 of non-typhoid Salmonellosis, 113 of typhoid fever and 83 of hepatitis A. Overall, we observed a percentage decrease for all these pathologies. However, brucellosis is still highly endemic in our territory with an average incidence of 7.9 cases/100,000 in the considered period and a major outbreak in 2016 with 137 notified cases. The other pathologies were also constantly present with small outbreaks.

Conclusions Foodborne diseases are still a significant public health problem in our territory, especially due to some eating habits such as the widespread consumption of raw or undercooked shellfish and, as regards brucellosis, the spread of small farms escaping the official control. Adequate health education and a closer relationship with veterinary public health services certainly represent a fundamental tool in the fight against these pathologies.

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Adherence to the Mediterranean diet pattern in athletes: a comparative analysis across three continents

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Objective Given its positive effects on health, Mediterranean diet is recommended as a healthy dietary pattern, and it could be suitable for people practicing sport. This study aimed to assess dietary habits and adherence to the Mediterranean diet among athletes from different nations.

Materials and methods Adherence to the Mediterranean diet was assessed among soccer players participating to the XXX Universiade in Naples. The "Mediterranean Diet Serving Score questionnaire" was used to measure the quantity and frequency of consumption of typical Mediterranean diet foods, and the "24-hour recall" questionnaire was employed to evaluate the participants' daily diet.

Results A total of 143 soccer players participated in the study, with 60 from Europe, 60 from the Americas, and 23 from Africa. Considering the overall adherence score to the Mediterranean diet, no significant differences were found among groups. African athletes showed the highest adherence to the recommendations for fruit consumption, with 100% of them consuming 1 to 2 servings per main meal. European participants also exhibited the highest adherence to the consumption of 2 white meat servings per week (91.5%). European soccer players also showed significantly higher consumption of cereals at each meal compared to the other groups, while Americans reported significantly higher consumption of sweets during breakfast.

Conclusions Overall, the study highlights differences in dietary habits among soccer players from different world regions, although living in Europe was not proven to be associated with a higher adherence to the Mediterranean diet. Interventions aimed at increasing adherence to this die-

tary pattern among athletes would be advisable, especially in specific geographic areas.

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Safe gyms: the role of the prevention department in an experience conducted in the Local Health Unit of Ragusa, Sicily

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Objective Within the prevention department, the SIAV (Prevention service in life environment) is the structure responsible for protecting the health of the community from the risks associated with the various polluting factors present both in residential environments and in those for collective use, in healthcare facilities and in external environments. The SIAV of the province of Ragusa pays particular attention to all structures for collective use, specifically as regards gyms after a period of careful research and analysis of all health and hygiene regulations and referring to both ministerial decrees and CONI regulations, it has created a real *Vademecum* in order to standardize the procedure also at the provincial level involving the entire ASP Ragusa. Below is the handbook with the various references and requirements.

Materials and Methods

Reference standards: a. DM of 18/1996: safety regulations for the construction and operation of sports facilities; b. Resolution 851 of 15/July/1999: CONI regulations for sports facilities; c. UNI 10339 standard (air conditioning systems); d. L.R. of the Sicily Region of 29/12/2014 n°16 regulations regarding the promotion and protection of

physical-motor and sporting activity; and any local rules and regulations;

It should be noted that: for gyms affiliated with the National Olympic Committee the requirements of the specific legislation apply, for gyms also used for public entertainment the requirements of CONI legislation apply. The following requirements apply to new or renovated gyms.

Results Inside the gyms, among major Health and hygiene requirements, the following minimum types of spaces are distinguished: 1. Gym room; 2. Services block composed of: a. from changing rooms, b. Toilet, c. showers, both for users and staff; 3. Offices; 4. Storage/storage room; 5. Infirmary room.

The gyms are subject to use licenses required by local regulations, subject to the hygienic-sanitary opinion of the SIAV Office. competent for the territory.

To open a gym it is necessary to communicate via SCIA to the S.U.A.P. of the Municipality with attachments: 1. Planimetric plans in triplicate with the intended uses of the various rooms indicated; 2. Technical Reports in triplicate; 3. Declaration by which the applicant certifies: a) Possession of the professional requirements of the Technical Manager and instructors; b) Plant Certification; c) The overall capacity of the gym including all the staff in charge; d) Compliance with current legislation on the protection of noise pollution; e) The Technical Manager if different from the owner; f) Possession of an insurance policy for damages resulting from activities practiced in the gym; g) Service Charter (description of the physical practices carried out); h) Fire risk documentation (if applicable); i) Anti-mafia certificate; l) Certificate of habitability.

Conclusions The purpose of this handbook was to standardize the procedures in order to make them the procedure clear for both technicians and users and try to provide an excellent service to the community.

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Knowledge about dietary supplements among individuals engaged in physical activity and sport

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Objective Dietary supplements are often used in the sport setting to enhance physical performance and overall health. However, it is crucial for those who use them to have a proper understanding of their properties and their impact on health. The aim of this study was to assess the knowledge about dietary supplements among individuals engaged in exercise or sport and to highlight possible differences between these two categories.

Materials and methods Two validated questionnaires were employed to evaluate the respondents' knowledge about dietary supplementation: the "Knowledge about Dietary Supplements" (KaDS) and the "Supplement Knowledge Score" (SKS). The first questionnaire, Kads, aims to assess general knowledge about dietary supplements, while the second, SKS, aims to evaluate the specific information about supplements used for sport-related purposes. The questionnaires were administered online to adult subjects practicing exercise in a gym and athletes.

Results As for general knowledge, the group of gym-goers achieved a significantly lower mean score (4.06) compared to the athletes (5.40) ($p < 0.001$). A positive and significant correlation was found between participants' age and total KaDS score ($r = 0.240$, $p < 0.001$). The mean SKS was slightly lower in the gym-goer group (8.51) compared to the sports participant

group (9.17) ($p = 0.215$). Educational level was negatively related with SKS ($r = -0.099$, $p < 0.001$).

Conclusions The study revealed lower knowledge about dietary supplements in the group of gym-goers compared to the group of athletes. Greater efforts are needed in educating physically active individuals, especially those who frequent gyms, about the correct use of dietary supplements.

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Pandemic fatigue: a challenge to resilience

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Objective The COVID-19 pandemic has had an unprecedented impact on global society, leading to a wide range of psychological and emotional consequences. One of the phenomena that has emerged during this health crisis is the so-called "pandemic fatigue", a condition characterized by a decrease in motivation, psychological well-being, and adherence to preventive measures. This article aims to conduct a narrative review of key factors associated with pandemic fatigue, analyzing recent studies and research to gain a better understanding of its causes and potential strategies to address it.

Materials and methods Numerous scientific articles, systematic reviews, and meta-analyses published in scientific journals were consulted. The selected studies explore the psychological, social, and behavioral effects of the pandemic on the general population.

Results The results of this narrative review

indicate that pandemic fatigue is a complex and multifactorial phenomenon. Several studies have highlighted how prolonged exposure to pandemic-imposed restrictions can lead to emotional fatigue, disinterest in following preventive behaviors, and a sense of social isolation. Additionally, uncertainty about the future, economic insecurity, and job loss represent additional factors contributing to pandemic fatigue.

Conclusions Pandemic fatigue presents a significant challenge in the management of the COVID-19 pandemic. Understanding the underlying mechanisms and contributing factors to this phenomenon is essential for developing effective strategies, ensuring that we are not caught unprepared for potential future pandemics. Interventions should focus on public education, clear and consistent communication of information, as well as psychological and social support to mitigate the effects of pandemic fatigue on the mental and behavioral health of individuals.

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HPV vaccination in schools, an important public health tool to increase vaccination coverage in the target population: pre-post intervention analysis of vaccination knowledge, attitudes, and adherence in secondary schools in the local health authority of Trapani

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Objective Cervical and HPV-related cancers are among the most frequently microorganism-associated cancers worldwide, surpassing even those caused by HBV and HCV. WHO has promoted a global strategy to eliminate HPV-related cancers, which aims to vaccinate 90 percent of girls under 15 years of age with at least one dose by 2030. Despite supportive scientific evidences, HPV coverage rates in Italy are below the minimum targets set by the National Immunization Plan. The present study aims to assess knowledge, attitudes and barriers to anti-HPV vaccination in a sample of adolescents in the Local Health Authority (LHA)

of Trapani and to evaluate the impact of school-based vaccination programme.

Materials and Methods From March to May 2023, health care professionals of Trapani's LHA and University

of Palermo conducted a cross-sectional survey using two anonymous Google® Form questionnaires, administered before and after the implementation of a training intervention in 63 classrooms of 9 secondary

schools in 3 municipalities in the LHA of Trapani. At the end of the training, vaccination against HPV and other recommended vaccines for adolescents (MenACWY, dTpa) were offered after appropriate counselling and vaccination history evaluation.

Results A total of 993 students were involved (776 F; 78.1%), 95.9% were aware of HPV and 74.6% reported having been previously vaccinated against HPV. Among those not vaccinated, 26.1% refused vaccination because of personal choice, 28.3% due to the opposition of at least one of their parents. At the end of the intervention, 35.3% of students not yet vaccinated (n=65) accepted the administration of HPV vaccination at school. Moreover 26.2% (n=17) received another vaccine in co-

administration (MenACWY, dTpa).

Conclusions School-based vaccination campaigns are a fundamental public health tool that contributed during past decades to achieve great results in the prevention of vaccine-preventable diseases in Italy (see the Hepatitis B campaign in the 1990s). The results of the present study during conducted in the Trapani's LHA support the role of school-based vaccination programme in increasing vaccination coverage rates and in the "vaccine catch-up" in the target population. Finally, it would be desirable to organize and restart this activity in all the 9 Sicilian LHAs.

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REAL LIFE EXPERIENCE OF KNOWLEDGE, ATTITUDES AND ACCEPTANCE RATE OF COVID-19 AND INFLUENZA VACCINE ADMINISTRATION IN ONE OF THE MAIN VACCINATION HUB OF SICILIAN REGION AT THE UNIVERSITY HOSPITAL OF PALERMO, ITALY

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Objective During 2021/22 season, the Italian Ministry of Health has recommended co-administration of seasonal influenza vaccines with other vaccines, including COVID-19 vaccines. In the same season, at the vaccination Hub of the University Hospital (UH) of Palermo, over 900 influenza vaccines were co-administered with COVID-

19 vaccines. The objective of this work was to analyse, in the following 2022/23 season, prevalence and factors associated with co-administration of anti-influenza and anti-Covid-19 vaccines, in accordance with National and Regional recommendations.

Material and methods From October 2022 to February 2023, an anonymous questionnaire consisting of 15 items was administered, in digital form (QR Code) or in person (Google® Form), to a sample of subjects who accessed the vaccination center of the UH of Palermo, with the aim of evaluating knowledge, attitudes and adherence to influenza and covid-19 vaccines co-administration. All data collected was recorded in a password-protected Excel file to guarantee privacy. Study informative and informed consent form were previously approved by the Ethics Committee of the UH of Palermo.

Results Overall, 1263 out of 2450 subjects who had access to the vaccination center responded to the questionnaire (RR: 51.5%). The large majority were ≥40 years old (77.4%) and without comorbidities (72.8%). Moreover, 87.7% of respondents were aware of the possibility of receiving the two vaccinations in the same session and in 944 subjects (74.7%) the two vaccines were co-administered. The main reasons for co-administration were having received the two vaccines in the same session during the previous season (2021/22), followed by the trust in the official recommendations.

Conclusions Data obtained show that having received co-administration in the 2021/2022 season was decisive in the choice of co-administration for the 2022/2023 season, supporting its absolute safety and effectiveness. Moreover, the official recommendations of the Ministry of Health before the seasonal influenza and covid-19 vaccination could play a key role among general population acceptance of co-administration.

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