

eligible for vaccinations are not comprehensively reached by out-of-hospital health services, particularly frail people with immunization deficits. The aim of this study was to evaluate the effectiveness of a model of shared management between hospital (IRCCS Fondazione Policlinico Universitario A. Gemelli) and out-of-hospital health services (ASL Roma 1) of fragile patients with an indication for herpes zoster (HZ) vaccination, based on counseling carried out by a multidisciplinary team in the hospital setting.

**Methods:** From June 2022 to November 2022, patients with congenital and/or acquired immunodepression, who were treated at the IRCCS Fondazione Policlinico Universitario A. Gemelli in the Units of Hematology, Geriatrics, Infectious Diseases, Rheumatology were selected and offered vaccination with the recombinant Zoster vaccine. At the time of enrollment, all patients completed the Vaccination Attitudes Examination (VAX-I) scale, for the purpose of assessing vaccine hesitancy. Patients received multidisciplinary counseling focusing on HZ and contrasting vaccine hesitancy. Multiple linear regression was used to analyze the impact of demographic and clinical characteristics on the VAX-I items.

**Results:** Thirty-five fragile patients were included. Mean vaccine hesitancy score was  $2.3 \pm 1.0$ . A significant correlation between vaccine hesitancy and the age group of 45 to 64 years was demonstrated ( $p=0.0001$ ). Patients with ages between 45 and 64 years had significantly higher score of "mistrust of vaccine benefits", "worries about unforeseen future effects", "concerns about commercial profiteering" and "preference for natural immunity". After counseling, all patients adhered to the vaccination with two doses of a recombinant zoster vaccine. No serious adverse events or breakthrough HZ infections were observed during a median follow-up of 62 days (IQR=23).

**Conclusions:** Although vaccine hesitancy in some age groups is high, hospital-based multidisciplinary counseling achieved full HZ vaccination compliance.

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### Human Papillomavirus (HPV) vaccination recovery campaign in Emilia-Romagna region, Italy: impact on vaccination coverage in women up to 25 years

Valentina Giampà<sup>1</sup>, Stefania Paduano<sup>2</sup>, Gabriella Frasca<sup>3</sup>, Giovanna Mattei<sup>3</sup>, Giuseppe Diegoli<sup>3</sup>, Annalisa Bargellini<sup>4</sup>, Christian Cintori<sup>3</sup>

<sup>1</sup>Department of Biomedical, Metabolic and Neural Sciences, Section of Public Health, University of Modena and Reggio Emilia, Modena, Italy,

<sup>2</sup>Section of Public Health, Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy, <sup>3</sup>Regional Health Authority, Emilia Romagna Region, Bologna, Italy, <sup>4</sup>Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy

**Background:** Vaccination is the main intervention for primary prevention against HPV-related cancers, such as cervical cancer. The most recent vaccine, used in Italy and Emilia-Romagna Region (RER), is a nine-valent vaccine that prevent more than 90% of precancerous lesions. In Italy, vaccination has been offered for 11-year-olds since 2008 (birth cohort 1997); RER, from June 2019, offers HPV-vaccination to all 25-year women, not previously vaccinated, by Regional Act 1045/2019 (RA). This study aims to evaluate the vaccination coverage in women up to 25 years-old, after 3 years from RA.

**Methods:** We analysed vaccination coverage data before and after RA with SAS-enterprise. We considered women of 1995, 1996, 1997 birth cohorts, with HPV-vaccination cycle started from July 2019, in the year of their 25th birthday. According to RA active call is at 25th birthday and the vaccination cycle should be started before 26 years-old to be entitled to free admission.

**Results:** From July 2019 to November 2022, 4025 women have started HPV-vaccination cycle in RER and 55.5% of them have already completed it. We found an increase of vaccination coverage for 1995-1996-1997 cohort of 7.7%, 7.6% and 4.6% for 1st dose, respectively, and 5.8%, 4.1% and 1.1% for completed cycle. The mean current coverage is 35.8%, 60.0%, 72.9% for 1st dose and 26.4%, 52.4%, 67.7% for a full course, for 1995-1996-1997 cohort respectively.

**Conclusions:** Preliminary data show increased vaccination coverage on all considered cohorts. The greatest increase was for 1995-1996 cohorts, while 1997 cohort may have been more affected by the delays due to the COVID-19 pandemic. Active call policies may be associated with this increased coverage. The first effects of HPV vaccination have already been visible on secondary prevention programs for the prevention of cervical cancer. Therefore, it is necessary to continue the implementation of policies for increasing vaccination coverage.

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### Routine immunization of older adults and frail people during the

### SARS-COV2-pandemic in Italy: a national survey by Italia Longeva

Andrea Poscia<sup>1</sup>, Daniel Fiacchini<sup>2</sup>, Davide Vetrano<sup>3</sup>, Claudio Angelini<sup>2</sup>, Daniela Cimini<sup>2</sup>, Claudio Costantino<sup>4</sup>, Giancarlo Icardi<sup>5</sup>, Rosa Prato<sup>6</sup>, Andrea Siddu<sup>7</sup>, Andrea Silenzi<sup>7</sup>, Antonietta Spadea<sup>8</sup>, Roberto Bernabei<sup>9,10</sup>, Agnese Collamati<sup>11</sup>

<sup>1</sup>Public Health Department, Asur Marche AV2, Ancona, Italy, <sup>2</sup>Public Health Department, Asur Marche, Ancona, Italy, <sup>3</sup>Aging Research Center, Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, Stockholm, Sweden, <sup>4</sup>Department of Health Promotion Sciences, Maternal and Infant Care, Internal Medicine and Medical Specialties (PROMISE) "G. D'Alessandro", University of Palermo, Palermo, Italy, <sup>5</sup>Department of Health Sciences, University of Genoa, Genoa, Italy, <sup>6</sup>Hygiene Unit, Policlinico Foggia Hospital, Department of Medical and Surgical Sciences, University of Foggia, Foggia, Italy, <sup>7</sup>General Directorate for Health Prevention, Ministry of Health, Rome, Italy, <sup>8</sup>UOC Vaccinations, Department of Prevention, Local Health Authority Roma1, Rome, Italy, <sup>9</sup>Department of Geriatrics and Orthopaedics, Università Cattolica del Sacro Cuore, Rome, Italy, <sup>10</sup>Italia Longeva, Italy, <sup>11</sup>Asur Marche AV2, Ancona, Italy

Despite the availability of safe and effective vaccines, older adults and frail people (OAFs) remain far from accomplishing the recommended coverage targets. The SARS-CoV-2 pandemics strongly affected the supply and coverage of routine vaccines, especially for OAFs, but it also suggested innovative solutions to catch up with the immunization schedules we were late with. Italia Longeva, the National Association for Active Longevity established in 2011 by the Ministry of Health, realized this research aiming to collect and share local good practices for the routine immunization of OAFs implemented during the SARS-CoV-2 pandemic. We surveyed 12 local health directors from 9 Regions (with a potential covered area of about 24 million inhabitants) between January and March 2021. Starting from the 2018 Thomas and Lorenzetti's Cochrane Review, a "snowball" search of scientific and grey literature was performed to create and validate a 27-items semi-structured questionnaire used to collect information during the interviews. Full methods are available online (<https://www.italialongeva.it/>). A wide range of organizational models and settings for immunization supply to OAFs were found across regions. The local implementation of the 27 interventions to increase vaccination coverage among OAFs identified through the literature review ranges from 0% to 100%, with higher rates for interventions targeting the professionals (i.e. audits), lower when aimed to increase the vaccine offer (i.e. active calls) or its accessibility (i.e. home vaccination). Seven good local practices have been identified and described: Mass Vaccination Centre; drive-through Vaccination; Mobile vaccination clinics; co-administration; collaboration within different organization; Electronic immunization registries; standardized immunization pathways. Literature suggests many effective interventions to improve immunization of OAFs, but their implementation at local level shows huge heterogeneity. Providers should combine several interventions adequate to the specific context (organizational models, interoperability, urban or rural context, etc) and share good practices.

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### Pediatric COVID-19 vaccine hesitancy based on parents' attitudes towards mandatory and recommended vaccination in Southern Italy

Luigi Angelis<sup>1</sup>, Francesco Baglivo<sup>1</sup>, Mariano Magri<sup>2</sup>, Ingrid Nicola<sup>2</sup>, Pietro Palco<sup>3</sup>, Caterina Rizzo<sup>1</sup>, Alberto Fedele<sup>4</sup>

<sup>1</sup>University of Pisa, Italy, <sup>2</sup>Dipartimento di Prevenzione ASL Lecce, Italy, <sup>3</sup>University of Salento, Italy, <sup>4</sup>Dipartimento prevenzione ASL Lecce, Italy

**Background and Objective:** The Comirnaty-Pfizer anti-COVID19 vaccination for 5-11 years population was approved in Italy on 01/12/21. In this study, we investigate the anti-COVID19 vaccine hesitancy in eligible children in Lecce (Apulia, Italy) based on parents' attitudes towards mandatory and recommended vaccination, according to the National Immunization Plan (NIP) and the National Law Decree that introduced mandatory vaccinations in infants and adolescents in Italy. **Methods:** Using data collected within the vaccination registry of Apulia Region (Southern Italy) up to 15/11/2022 for birth cohorts 2011-2017, we evaluated for each subject the adherence to the NIP vaccine schedule. Since we wanted to investigate attitudes towards vaccination, we considered the first shot of each schedule relevant for our analysis, regardless of when it was administered. Multiple logistic regression was used to analyze associations between age, sex, adherence to mandatory vaccinations, number of recommended vaccinations and anti-COVID19 vaccination.

**Results:** A total of 42,173 subjects were included in the study, 21,361 (50.7%) of which received at least one dose of anti-COVID19 vaccine. The number of