



Summary of work activities

Alberto Mateo Urdiales

Intervention Epidemiology path (EPIET), 2019 cohort

Background

The ECDC Fellowship Programme is a two-year competency-based training with two paths: the field epidemiology path (EPIET) and the public health microbiology path (EUPHEM). After the two-year training, EPIET and EUPHEM graduates are considered experts in applying epidemiological or microbiological methods to provide evidence to guide public health interventions for communicable disease prevention and control.

Both curriculum paths provide training and practical experience using the 'learning by doing' approach in acknowledged training sites across European Union (EU) and European Economic Area (EEA) Member States.

According to Articles 5 and 9 of ECDC's founding regulation (EC No 851/2004) 'the Centre shall, encourage cooperation between expert and reference laboratories, foster the development of sufficient capacity within the community for the diagnosis, detection, identification and characterisation of infectious agents which may threaten public health' and 'as appropriate, support and coordinate training programmes in order to assist Member States and the Commission to have sufficient numbers of trained specialists, in particular in epidemiological surveillance and field investigations, and to have a capability to define health measures to control disease outbreaks'.

Moreover, Article 47 of the Lisbon Treaty states that 'Member States shall, within the framework of a joint programme, encourage the exchange of young workers. Therefore, ECDC initiated the two-year EUPHEM training programme in 2008. EUPHEM is closely linked to the European Programme for Intervention Epidemiology Training (EPIET). Both EUPHEM and EPIET are considered 'specialist pathways' of the two-year ECDC fellowship programme for applied disease prevention and control.

This report summarises the work activities undertaken by Alberto Mateo Urdiales, cohort 2019 of the Intervention Epidemiology path (EPIET) at Istituto Superiore di Sanità.

Pre-fellowship short biography

Alberto Mateo Urdiales is originally from Valladolid (Spain) and graduated in Medicine from the University of Navarra. Once Alberto finished university he moved to the UK and ended up in the city of Blackburn working as a junior doctor in the local hospital for two years. After that time, he decided that he preferred to help people stay out of hospital rather than treating them there, so Alberto started a specialisation in Public Health in Liverpool. During the five years he spent specialising he was able to work in very different fields. Working at the University of Liverpool and at the Liverpool School of Tropical Medicine helped him to progress in his academic skills and become passionate about health inequalities. He also worked in Local Health Authorities and in Public Health England, which gave the perspective on what public health was 'in the field'.

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Stockholm, November 2021

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Alberto applied to the EPIET programme whilst doing a few months at the National Centre of Epidemiology of the Instituto de Salud Carlos III (Spain).

Methods

This report accompanies a portfolio that demonstrates the competencies acquired during the EPIET fellowship by working on various projects, activities and theoretical training modules.

Projects included epidemiological contributions to public health event detection and investigation (surveillance and outbreaks); applied epidemiology field research; teaching epidemiology; summarising and communicating scientific evidence and activities with a specific epidemiology focus.

The outcomes include publications, presentations, posters, reports and teaching materials prepared by the fellow. The portfolio presents a summary of all work activities conducted by the fellow, unless prohibited due to confidentiality regulations.

Results

The objectives of these core competency domains were achieved partly through project or activity work and partly through participation in the training modules. Results are presented in accordance with the EPIET core competencies, as set out in the ECDC Fellowship Manual¹.

1. Epidemiological investigations

Outbreak investigations

1.1 GO.DATA implementation to investigate outbreaks of SARS-CoV-2 in Italy

Supervisors: Patrizio Pezzotti, Flavia Riccardo

Summary: On March 2020, SARS-CoV-2 started to spread throughout Italy, posing a health, social and economic risk to the country. Regions and local health units had to quickly adapt their human and technological resources to fight this unprecedented threat. In this context, WHO proposed GO.DATA globally as a tool to systematically collect information on cases and contacts of COVID-19. This was an opportunity for those areas where an electronic system was not in place.

A WHO GO.DATA team member came to Rome and helped us install a server at the institute and remained as the reference person at WHO. She also gave us training material.

Role:

- Adapt the platform to the Italian context.
- Offer GO.DATA to every region and local health unit in Italy.
- Create training material in Italian, including a manual and a web tutorial.
- Carry out online webinars explaining the main features of the platform.
- Once implemented in some regions/local health units, he was the lead person to clarify technical issues as well as to clarify which information and how it should be collected.
- Alberto set up a system to automatically feed GO.DATA information into the main surveillance platform.
- Alberto assessed local health units in how to analyse data to translate it into public health action.

1.2 National guide for contact tracing of COVID-19

Supervisors: Patrizio Pezzotti, Flavia Riccardo

Summary: At the beginning of the COVID-19 pandemic it became essential to understand how outbreaks needed to be investigated. This included theoretical aspects on who is a close contact and who is a casual one, as well as defining terms such as quarantine or isolation. Besides, a very relevant aspect was to guide local health units on how they should practically investigate outbreaks. This means what questions to ask cases and contacts, how to collect and analyse data and how to manage quarantine/isolation.

Alberto's role in this project was to write up, with two other colleagues, the national guide for contact tracing of cases of COVID-19 as well as to promote it to all regions of Italy.

¹ European Centre for Disease Prevention and Control. European public health training programme. Stockholm: ECDC; 2020. Available from: <https://www.ecdc.europa.eu/en/publications-data/ecdc-fellowship-programme-manual-cohort-2021>

1.3 Contact tracing project coordinated by ECDC

Supervisors: Patrizio Pezzotti, Stefania De Angelis, Erika Duffell, Emmanuel Robesyn

Summary: ECDC launched a project that aimed to better understand transmission dynamics of COVID-19 and how local health units across Europe were collecting, collating and analysing data for contact tracing. Three EPIET fellows participated in the project, one for Spain, another for Ireland and Alberto for Italy. The project involved contacting regions and local health units to ask for the data they routinely collect on cases and contacts of COVID-19. We analysed the data using a set of indicators defined by ECDC and, with the results, we created a technical report for ECDC and a draft paper on lessons learnt which aim to help public health authorities to homogenise data collection regarding contact tracing in Europe.

Role:

- To contact local health units across Italy, for those which agreed to take part of the project, collect data regarding contact tracing.
- Analyse the data for Italy.
- Draft a technical report and a paper (alongside the other colleagues).
- Write an individual report for each local health unit which took part of the project.

Training modules related to assignment/projects

EPIET/EUPHEM Introductory Course - This course helped to review basic concepts of epidemiology which helped in the analysis of data, as well as the use of statistical software which was used in the analysis. It also helped in reviewing how cases are normally notified in surveillance systems and the data collection instruments used to retrieve information.

Outbreak Investigation Module - This module was key for all activities. For example, how important is to create a case-definition (and a contact definition) in the first instances. All the other steps for outbreak investigations were used to design GO.DATA and the national contact tracing guide, as they needed to be adapted for these steps.

Multivariable Analysis Module - This module helped to think about key confounders when analysing data from contact tracing. Although we did not carry out multivariate analysis, we stratified by some of the confounding factors to avoid bias in the interpretation of the results.

Educational outcome

The involvement in these activities has helped Alberto to develop both technical and so-called 'soft' skills. Technically, he has learnt how to apply theoretical frameworks of outbreak investigation into a practical collection tool such as Go.data. He has also learnt how one needs to think carefully in every aspect of outbreak investigation to create a guide that will be used as a manual for this purpose. The project with ECDC has also taught him how important it is to standardise data collection and how to 'clean' databases to extract useful information that can be translated into public health action. With regards to the soft skills, Alberto has had to interact with several other professionals working at regional and local level. He has learnt how important is to understand their priorities and their 'realities' so that instruments designed at national level can be effectively implemented.

2. Surveillance

2.1 COVID-19 surveillance: design, implementation and analysis

Supervisors: Patrizio Pezzotti, Flavia Riccardo, Antonino Bella, Massimo Fabiani, Xanthi Andrianou

Summary: With the start of the COVID-19 pandemic a new surveillance system was quickly needed to collect and analyse the necessary data to support decision-making. The ISS set up an online integrated surveillance system which collected individual variables on demographic, clinical and epidemiological characteristics of laboratory-confirmed cases of SARS-CoV-2 infection. Data from this surveillance system has been routinely analysed and interpreted to support public health decisions at national, regional and local level.

Role: Alberto has had several roles within this system. At the design/implementation level he gave input as part of a wider team on what information we should collect from cases. Also, he helped to implement the system in different regions, taking into account the complexity and emergency situation. For example, he created a process by which regions using GO.DATA did not have to make double entries, so their data was automatically fed into the ISS surveillance. An important part of his day-to-day work during these two years has been analysing the data of the surveillance system to translate it into meaningful information. This includes: cleaning the raw data into clean databases that are then shared with others; production of a daily dashboard and open data file; production of daily outputs on descriptive epidemiology; analysing data for scientific purposes; ad hoc reports on topics of interest (e.g. schools, healthcare workers, vaccination).

2.2 Monitoring of COVID-19 in phase 2

Supervisors: Flavia Riccardo, Patrizio Pezzotti

Summary: After the first wave of COVID-19 in Italy (February-April 2020) there was a need to set up a system to monitor the pandemic at subnational level to help decision-makers decide what measures to implement, when and how. In this context, on the 30 of April 2020, the national government signed a new decree defining a set of indicators that would define the epidemiological risk and impact of the pandemic in each Italian region. These indicators would be used, alongside other parameters, to set up non-pharmacological interventions (NPI) at regional level.

The ISS was given the responsibility to collect data to calculate these indicators and to produce, with the Ministry of Health, a weekly risk assessment of every region. The system used the ECDC methodology to assess 21 indicators, looking at the probability of infection and the impact of the pandemic.

Role:

- To give input on what the monitoring system should collect and how to do it.
- To use data from different sources (COVID-19 integrated surveillance system, aggregated data from the Ministry of Health and ad hoc data collected directly through the regions) to calculate and analyse the indicators.
- To prepare a weekly draft report of the weekly risk assessment that was then reviewed by his supervisors and presented to the committee designated by the national government.
- To help to adapt the monitoring system during spring of 2021 for a new simplified monitoring system.

Training modules related to assignment/projects

EPIET/EUPHEM introductory course - The EPIET/EUPHEM introductory course familiarised the fellows with the core concepts in surveillance. It covered the development and evaluation of a surveillance system as well as key aspects of the analysis of surveillance data. This knowledge allowed Alberto to be aware of the key aspects of a surveillance system and give input about it.

Time Series Analysis module – The Time Series Analysis module built on the EPIET/EUPHEM introductory course and the Multivariable Analysis Module. It was a cornerstone in preparing the fellows for a more in-depth analysis of surveillance data. This helped Alberto to plan and carry out analysis on the impact of several measures (e.g. COVID-19 vaccination) on COVID-19 related outcomes.

Multivariable Analysis Module - The Multivariable Analysis Module builds on the EPIET/EUPHEM Introductory Course and deepened the fellows' statistical skills. The module introduced a variety of regression methods that we applied for surveillance data analysis to produce institutional reports and scientific articles.

Educational outcome

The design and implementation of the systems in both projects has taught Alberto how to set up surveillance in an emergency situation and in a very complex, from the administrative point of view, context. It has also taught him how different stakeholders have different priorities and how to take these into consideration. Analysing large databases has taught him a lot about how to automatise processes. Finally, the analysis side has been an opportunity to develop further his methodological skills learning what methods are appropriate for each type of situation.

3. Applied public health research

3.1 Health inequalities and COVID-19 outcomes

Supervisors: Patrizio Pezzotti, Massimo Fabiani

Summary: Some reports have hypothesised that the COVID-19 pandemic could have a disproportionate effect on the most disadvantaged population. We carried out a retrospective cohort study using surveillance data in which we analysed the association between living in a deprived municipality and COVID-19 related outcomes (incidence, hospitalisation and death). We used negative binomial regression models to adjust for several confounding variables. We found that the risk varied throughout the different phases of the pandemic, with those living in the most deprived municipalities being at higher risk of infection in the post-lockdown phase. We did not find an association between living in a deprived municipality and being at higher risk of hospitalisation and death from COVID-19.

Role: Alberto's role was to lead the design, analysis and writing of the study. He is the first author for the paper which is published in pre-print and we are now replying to the reviewers' comments.

3.2 Initial impact of SARS-Cov-2 vaccination on healthcare workers in Italy

Supervisors: Patrizio Pezzotti, Massimo Fabiani

Summary: In Italy, the COVID-19 vaccination campaign started in December 2020 with the vaccination of healthcare workers (HCW). To analyse the real-life impact that vaccination is having on this population group, we measured the association between week of diagnosis and HCW status using log-binomial regression. By the week 22-28 March, we observed a 74% reduction (PPR 0.26; 95% CI 0.22-0.29) in the proportion of cases reported as HCW and 81% reduction in the proportion of symptomatic cases reported as HCW, compared with the week with the lowest proportion of cases among HCWs prior to the vaccination campaign (31 August-7 September). The reduction, both in relative and absolute terms, of COVID-19 cases in HCWs that started around 30 days after the start of the vaccination campaign, suggesting that COVID-19 vaccines are effective in preventing infection in this group.

Role: Alberto took part in the design of the study, the analysis and writing the manuscript. Alberto is the first author on a paper that is being considered for publication. At this point we have just replied to the reviewers' comments.

3.3 Risk of SARS-CoV-2 infection and subsequent hospital admission and death at different time intervals since first dose administration; an analysis of the first 7.3 million vaccinated people in Italy

Supervisors: Patrizio Pezzotti, Massimo Fabiani

Summary: There is need to assess the real-world impact that vaccines have on COVID-19 related outcomes. We analysed data on over seven million persons vaccinated. Compared with the period 0-14 days post-first dose, we found risk reductions for SARS-CoV-2 infection, hospitalisation and death of 78% (95% confidence interval (CI): 0.21-0.24), 89% (95% CI: 0.09-0.15) and 93% (95% CI: 0.04-0.11) 35-49 days post-first dose, respectively. These results provide an opportunity for public health authorities to promote participation in the ongoing COVID-19 campaigns.

Role: Alberto took part in the design, analysis and writing up the manuscript. He is the first author in a paper published in Eurosurveillance.

3.4 Epidemiological characteristics of COVID-19 cases in non-Italian nationals diagnosed in Italy: results from the national integrated surveillance system

Supervisors: Massimo Fabiani, Flavia Riccardo

Summary: International literature suggests that disadvantaged groups could be at higher risk of morbidity and mortality from SARS-CoV-2 infection due to poorer living/working conditions and barriers to healthcare access. Yet, there was no concrete evidence of this disproportionate impact on non-national individuals, including international migrants, short-term travellers, and refugees. We analysed data from the Italian integrated surveillance system of all COVID-19 cases diagnosed from the beginning of the local epidemic (20th of February) to the 3rd of May 2020. We used multilevel negative-binomial regression models to compare the attack rate, the case-fatality rate and the rate of admission to hospital and intensive care unit (ICU) between the Italian and non-Italian nationals. The analysis was adjusted for differences in sociodemographic characteristics and differences in the week and region of diagnosis.

Overall, we analysed 179 361 COVID-19 cases, including 10 286 (5.7%) non-Italian nationals. Compared to Italian nationals, non-Italian nationals had a lower attack rate [adjusted rate ratio (ARR)= 0.65, 95% confidence interval (CI): 0.52-0.81]. However, non-Italian cases were more likely to be hospitalised (ARR=1.44, 95% CI: 1.32-1.57) and admitted to ICU (ARR=1.66, 95% CI: 1.46-1.89), with differences being more pronounced in those coming from countries with lower human development index (HDI). We also observed an increased risk of death in non-Italian cases from low-HDI countries compared to Italian cases (ARR=1.49, 95% CI: 1.03-1.18).

Role: Alberto took part in the design and in the writing up of the manuscript. He is the second author of a paper published in the European Journal of Public Health

Training modules related to assignment/projects

EPIET/EUPHEM Introductory Course- The EPIET/EUPHEM introductory course familiarised the fellows with the core concepts of operational and applied research. It covered the development of study protocols and the drafting of aims and objectives relevant to a national public health institute as well as data analysis and presentation for the other modules to build on.

Multivariable Analysis Module - The Multivariable Analysis Module builds on the EPIET/EUPHEM Introductory Course and deepened the fellows' statistical skills. The methods covered in this module were used to carry out the analysis in these articles

Time Series Analysis module – The Time Series Analysis module built on the EPIET/EUPHEM introductory course and the Multivariable Analysis Module. The methods covered were particularly useful in the work of “Initial impact of SARS-Cov-2 vaccination on healthcare workers in Italy

Educational outcome:

Being part of these research projects and leading some of them was an important educational experience. Alberto learnt new epidemiological methods, as well as data management. Furthermore, it has been a learning opportunity to work with others, especially cross-department.

4. Teaching and pedagogy

4.1 Distance learning course on contact tracing in Italy

After finishing the national guidelines for contact tracing of COVID-19 in Italy we created a distance learning course. This course was aimed at all contact tracers in the country. Alberto participated in the overall course structure and content, leading in some of the modules. The course was completed by over a thousand people.

4.2 Epidemiology course for the Universidad de los Altos Estudios de Quito

This Ecuadorian university offered a course on epidemiology and biosecurity to all civil servants in the country, and they asked the ISS for participation. Alberto delivered a module on the health aspects of emergencies, crisis and disasters. It involved creating the content, delivering it online and evaluating the participants.

Training modules related to assignment/projects

EPIET/EUPHEM Introductory Course - This course taught us communication skills when delivering presentations, which was relevant for the preparation of the courses. The good presentation skills of some coordinators were also a source of inspiration when delivering the presentations.

Educational outcome:

Alberto has always enjoyed teaching and this was a very useful opportunity to develop his skills. This was the first time doing distance teaching, which was challenging but helped him to learn this mode of communication. Evaluating the participants was also a good educational opportunity, which has taught him some ‘dos’ and ‘don’ts’ that Alberto will implement in future teaching experiences.

5. Communication

Publications related to the EPIET fellowship

- 1. Mateo-Urdiales A, Spila Alegiani S, Fabiani M, Pezzotti P, Filia A, Massari M, et al. Risk of SARS-CoV-2 infection and subsequent hospital admission and death at different time intervals since first dose of COVID-19 vaccine administration, Italy, 27 December 2020 to mid-April 2021. *Eurosurveillance* [Internet]. 2021 Jun 24 [cited 2021 Jun 29];26(25):2100507. Available from: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2021.26.25.2100507>
- 2. Fabiani M, Mateo-Urdiales A, Andrianou X, Bella A, Del Manso M, Bellino S, et al. Epidemiological characteristics of COVID-19 cases in non-Italian nationals notified to the Italian surveillance system. *Eur J Public Health*. 2021 Feb 1;31(1):37–44.
- 3. Mateo-Urdiales, A.; Fabiani, M.; Rosano, A.; Vescio, M.F.; Del Manso, M.; Bella, A.; Riccardo, F.; Pezzotti, P.; Regidor, E.; Andrianou, X. Socio-Economic Patterns of COVID-19 During the Pandemic in Italy. *Preprints 2021*, 2021020187 (doi: 10.20944/preprints202102.0187.v1).
- 4. Fabiani M, Ramigni M, Gobetto V, Mateo-Urdiales A, Pezzotti P, Piovesan C. Effectiveness of the Comirnaty (BNT162b2, BioNTech/Pfizer) vaccine in preventing SARS-CoV-2 infection among healthcare workers, Treviso province, Veneto region, Italy, 27 December 2020 to 24 March 2021. *Eurosurveillance* [Internet]. 2021 Apr 29 [cited 2021 May 4];26(17):2100420. Available from: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2021.26.17.2100420>
- 5. Riccardo F, Ajelli M, Andrianou X, Bella A, Del Manso M, Fabiani M, et al. Epidemiological characteristics of COVID-19 cases and estimates of the reproductive numbers 1 month into the epidemic, Italy, 28 January to 31 March 2020. *Eurosurveillance* [Internet]. 2020 Dec 10 [cited 2021 Jan 17];25(49):2000790. Available from: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.49.2000790>
- 6. Bellino S, Punzo O, Rota MC, Del Manso M, Urdiales AM, Andrianou X, et al. COVID-19 Disease Severity Risk Factors for Pediatric Patients in Italy. *Pediatrics* [Internet]. 2020 Jul 14 [cited 2020 Sep 7];e2020009399. Available from: <https://pediatrics.aappublications.org/content/early/2020/07/16/peds.2020-009399>
- 7. Guzzetta G, Riccardo F, Marziano V, Poletti P, Trentini F, Bella A, et al. Impact of a nationwide lockdown on SARS-CoV-2 transmissibility, Italy. *Emerg Infect Dis* [Internet]. 2021 Jan 1 [cited 2021 Jun 29];27(1):267–70. Available from: <https://doi.org/10.3201/eid2701.202114>

- 8. Del Manso M, Andrianou X, Urdiales AM, Vescio MF, Rota MC, Fabiani M, et al. COVID-19 integrated surveillance in Italy: Outputs and related activities. *Epidemiol Prev*. 2020 Sep 1;44(5–6):70–80.
- 9. Bellino S, Rota MC, Riccardo F, Andrianou X, Urdiales AM, Del Manso M, et al. Pediatric COVID-19 cases prelockdown and postlockdown in Italy. *Pediatrics* [Internet]. 2021 Feb 1 [cited 2021 Jun 29];147(2). Available from: <https://doi.org/10.1542/peds.2020-035238>
- 10. Pezzotti P, Punzo O, Bella A, Del Manso M, Urdiales AM, Fabiani M, et al. The challenges of the outbreak: the Italian COVID-19 integrated surveillance system. *Eur J Public Health* [Internet]. 2020 Sep 1 [cited 2021 Jun 29];30(Supplement_5). Available from: https://academic.oup.com/eurpub/article/30/Supplement_5/ckaa165.356/5915905
- 11. Punzo O, Bellino S, Palmieri L, Lo Noce C, Giuliano M, Meli P, et al. Clinical characteristics of individuals under 40 years of age who died with COVID-19 in Italy [Internet]. Vol. 93, *Journal of Medical Virology*. John Wiley and Sons Inc; 2021 [cited 2021 Jun 29]. p. 1932–6. Available from: <https://onlinelibrary.wiley.com/doi/full/10.1002/jmv.26788>
- 12. Grippo F, Grande E, Maraschini A, Navarra S, Pappagallo M, Marchetti S, et al. Evolution of Pathology Patterns in Persons Who Died From COVID-19 in Italy: A National Study Based on Death Certificates. *Front Med* [Internet]. 2021 Mar 22 [cited 2021 Jun 29];8:645543. Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/bi>
- 13. Palmieri L, Palmer K, Lo Noce C, Meli P, Giuliano M, Florida M, et al. Differences in the clinical characteristics of COVID-19 patients who died in hospital during different phases of the pandemic: national data from Italy. *Aging Clin Exp Res* [Internet]. 2021 Jan 1 [cited 2021 Jun 29];33(1):193–9. Available from: <https://doi.org/10.1007/s40520-020-01764-0>
- 14. Raparelli V, Palmieri L, Canevelli M, Pricci F, Unim B, Lo Noce C, et al. Sex differences in clinical phenotype and transitions of care among individuals dying of COVID-19 in Italy. *Biol Sex Differ* [Internet]. 2020 Dec 1 [cited 2021 Jun 29];11(1):1–9. Available from: <https://doi.org/10.1186/s13293-020-00334-3>
- 15. Manica, M., Guzzetta, G., Riccardo, F. et al. Impact of tiered restrictions on human activities and the epidemiology of the second wave of COVID-19 in Italy. *Nat Commun* 12, 4570 (2021). <https://doi.org/10.1038/s41467-021-24832-z>

Reports

- Guide to contact tracing for COVID-19. Version of June 25, 2020. Antonietta Filia, Alberto Mateo Urdiales, Maria Cristina Rota 2020, ii, 41 p. Rapporto ISS COVID-19 n. 53/2020 (in Italian)
- Case fatality rate of SARS-CoV-2 infection at regional level and across different phases of the epidemic in Italy. Version of January 20, 2021. Massimo Fabiani, Graziano Onder, Stefano Boros, Matteo Spuri, Giada Minelli, Alberto Mateo Urdiales, Xanthi Andrianou, Flavia Riccardo, Martina Del Manso, Daniele Petrone, Luigi Palmieri, Maria Fenicia Vescio, Antonino Bella, Patrizio Pezzotti 2021, ii, 51 p. Rapporto ISS COVID-19 n. 1/2021 (in Italian)
- Apertura delle scuole e andamento dei casi confermati di SARS-CoV-2: la situazione in Italia. Versione del 30 dicembre 2020. Maria Cristina Rota, Stefania Bellino, Maria Fenicia Vescio, Martina Del Manso, Xanthi Andrianou, Alberto Mateo Urdiales, Matteo Spuri, Massimo Fabiani, Antonino Bella, Flavia Riccardo, Patrizio Pezzotti 2020, ii, 28p. Rapporto ISS COVID-19 n. 63/2020
- Impatto della vaccinazione COVID-19 sul rischio di infezione da SARS-CoV-2 e successivo ricovero e decesso in Italia (27.12.2020-30.05.2021) (<https://www.epicentro.iss.it/vaccini/covid-19-report-valutazione-vaccinazione>)
- Prevention and response to COVID-19: evolution of strategy and planning in the transition phase for the autumn-winter season. English version.

Other presentations

- 1. ESCAIDE 2020: 6.7. Epidemiological characteristics of COVID-19 cases in non-Italian nationals diagnosed in Italy: results from the national integrated surveillance system. A. Mateo Urdiales, M. Fabiani, F. Riccardo, S. Declich, X. Andrianou, M. Del Manso, A. Bella, P. Pezzotti. In: European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE). 2020.
- 2. ESCAIDE 2020: 6.1. 'In-action' evaluation of the Italian COVID-19 surveillance system. M. Del Manso, X. Andrianou, A. Mateo Urdiales, M. Spuri, A. Bella, F. Riccardo, P. Pezzotti, Italian Integrated surveillance system of Covid-19. In: European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE). 2020.

Other activities

- Activities of preparation in the response to the COVID-19 pandemic in Italy. 15 July 2020. COVID-19 webinar Italo-american. Rome, Italy.
- Think tank. 01 March 2021 First results of the impact of the COVID-19 vaccination campaign on healthcare workers in Italy. Virtual.
- Think tank. 01 June 2020. EPIET fellows' involvement during the COVID-19 response in Italy. Virtual.

6. Other activities

During these two years Alberto has had the opportunity to interact with media press and participate in a promoting video of the ISS.

- <https://www.eldiadevalladolid.com/Noticia/ZBB449D77-DC33-E424-43E0A2A5341242ED/202003/Hay-que-estudiar-cuanto-tiempo-es-sostenible-la-cuarentena>
- <https://www.redaccionmedica.com/secciones/sanidad-hoy/poblacion-ve-medidas-salud-publica-coercitivas-7084>
- https://www.ondacero.es/programas/mas-de-uno/audios-podcast/entrevistas/alberto-mateo-urdiales-epidemiologo-italia-coronavirus_202003055e60b4c07795c70001893a50.html?so=so%3Aour-facebook%3Aacn-ondacero
- https://www.ansa.it/english/news/lifestyle/travel/2020/07/10/coronavirus-iss-releases-video-for-a-safe-summer_a6161d50-2fde-4cfe-93bb-459fad72cf5f.html

7. EPIET/EUPHEM modules attended

1. Introductory Course, 23/09/2019 – 11/10/2019, Spetses, Greece
2. Outbreak Investigation, 09/12/2019-13/12/2019, Nicosia, Cyprus
3. Multivariable Analysis, 20/04/2020 – 24/04/2020, Online
4. Project Review 2020, 24/08/2020 – 28/08/2020, Online
5. Time series Analysis, 25/01/2021 – 29/01/2021, Online
6. Rapid Assessment and Survey Methods, 27/04/2021, 05-06/05/2021, Online
7. Vaccinology, 14/06/2021-18/06/2021, Online
8. Project Review 2021, 23/08/2021 – 27/08/2021, Online

Discussion

Coordinator's conclusions

I have had the great pleasure to coordinate Alberto during his fellowship program, watching him acquire all the required competencies, and becoming an expert in applied epidemiology for providing evidence to guide public health interventions for communicable disease prevention and control.

Alberto's fellowship coincided with the COVID-19 pandemic in Europe, where Alberto was heavily involved in Italy's response, which was a great learning experience for him in field epidemiology. Alberto was an invaluable team player in his public health institute, supported by his excellent supervisors, and many of their outcomes were implemented and published as national guidelines, and in international journals and presented at meetings and conferences. Alberto's ability to quickly adopt to online meetings, trainings, and networking, as well as his improved understanding of public health agencies and institutions in Europe, and the influences of political systems and political leadership on health matters, was a key to success. His contribution to the fellowship COVID-19 Think Tank and contact tracing project, coordinated by ECDC, was also highly appreciated. In conclusion Alberto's fellowship was remarkably successful and I wish him all the best and hope that he will have the opportunity to continue working with providing evidence to guide public health interventions for communicable disease prevention and control.

Supervisor's conclusions

Alberto is one of the most highly motivated public health researchers I have encountered in my career, and I hope he will be able to further pursue a bright career in public health. He combines a bright and inclusive personality with technical competence and a strong sense of duty that makes him an extremely reliable and flexible co-worker. These skills were strongly visible during the pandemic-related emergency we faced during his fellowship.

During his two-year fellowship, Alberto developed a good overview and understanding of public health activities in our department, although he was mainly involved in those related to the Covid-19 pandemic, for which he was among those in the frontline for epidemiological matters.

In particular, he was able to work in a profitable way also in very stressful conditions while developing and maintaining a harmonious interaction with all other staff members. During these two years he has become one of the reference points of our team for aspects ranging from surveillance to quantitative risk assessments to analytical epidemiology.

Alberto was a pleasure to supervise and contributed much to the surveillance, monitoring and all public health activities during the EPIET fellowship. As well as his technical excellence, he has shown leadership qualities both leading investigations and complex activities such as the weekly risk assessments for COVID-19 that largely determined response actions in Italy in 2021. In doing this, he was able to positively engage and effectively manage multi-professional teams.

He collaborated in many scientific publications always providing an important contribution in terms of study design, data collection, analysis and interpretation. His papers about impact of Covid-19 vaccination in Italy are the outline for the public health Italian response to Covid-19 epidemic.

I believe the EPIET fellowship allowed him to modify his career path in a way that has given him many opportunities. I wish him all the best in the future and have no doubt he will contribute immensely to field epidemiology in his career.

Personal conclusions of fellow

These have been two of the most intense years of my professional career and will not forget them. The pandemic put every expectation and every plan upside down, bringing both opportunities and challenges. I couldn't have wished for a better experience in the training site. I was able to work within a team of fantastic people and to be involved in very interesting and impactful pieces of work. I gained a lot of knowledge and was able to develop massively my technical and 'soft' skills. I really hope that I get to work with them for longer.

On the other hand, the pandemic was a challenge in allowing me to develop further the relations I created during the first months at the face-to-face modules. Still, thanks to the available technology I still could learn a lot from the online modules and maintain contact with many people of the cohort.

Overall, this has been a very good experience and I encourage anyone who wants to work in field epidemiology in Europe to apply for it.

Acknowledgements of fellow

I want to thank my supervisor, Patrizio. I do not think I could have had a better 'boss' during these two years. In a very challenging period, you have always been kind and supportive. Professionally, I have learnt a massive amount of epidemiology from you. But, more importantly, in the personal aspect you are for me an example to follow.

I also want to thank my co-supervisor, Flavia, from whom I have learn every single day these two years and our other office-mate, Antonino. Thanks also to Massimo, for your availability, patience and for sharing your knowledge. It is a pleasure working with you. Thanks to Martina. If I ever manage to be half as good person as you, I will consider my life a success. Thanks to Matteo and Daniele, for motivating me to keep up to date. Thanks to the rest of the Epi team at the ISS.

To Xanthi, nothing you don't already know, but all I have learnt from you and all we have shared cannot be summarised in a sentence.

Finally, I want to thank my FLC, Amelie, and all my EPIET/EUPHEM fellows, especially the PPE ones. See you around, this is just the beginning.