

# CURRICULUM VITAE

## *Personal Data*

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<b>FIRST NAME</b>	Sanjin
<b>FAMILY NAME</b>	Musa
<b>DATE/ PLACE OF BIRTH</b>	24.12.1976. Sarajevo, Bosnia and Herzegovina
<b>SEX</b>	male
<b>NATIONALITY</b>	Bosnia and Herzegovina
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## *Education*

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<b>2016</b>	PhD in Epidemiology, Faculty of Medicine University of Sarajevo
<b>2013</b>	Fogarty Program Scholar, the 2013 fall session, The University of Iowa College of Public Health
<b>2013</b>	Master of Science in Epidemiology, Faculty of Medicine University of Sarajevo
<b>2009 -2012</b>	Specialization in Epidemiology, Institute of Public Health of the Federation of Bosnia and Herzegovina, Sarajevo  Epidemiology specialist
<b>2007-2008</b>	Program of Additional Training in Family Medicine for Bosnia and Herzegovina (Queen's University Canada). Sarajevo, B&H.
<b>2005-2006</b>	Internship – Clinical Center University of Sarajevo, Bosnia and Herzegovina
<b>1997-2005</b>	Faculty of Medicine University of Sarajevo, Bosnia and Herzegovina

Doctor of Medicine

1992-1996

High school VII Gimnazija, Zagreb, Croatia

### *Professional experience*

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**NOVEMBER 2009 – PRESENT:** Public Health Institute of the Federation of Bosnia and Herzegovina, Department of epidemiology – From January 2013 to present Head of the Immunization department, from June 2019 to present Head of the Department of epidemiology

**JANUARY 2019 – PRESENT:** Sarajevo Medical School SSST University – Assistant professor of epidemiology

**OCTOBER 2006 – 2009:** Primary Health Care Center Sarajevo

### *Projects*

**JUNE 2020 – PRESENT:** The Unity Studies (WHO): Population-based age-stratified seroepidemiological investigation for COVID-19 infection and Household transmission investigation for COVID-19 infection in Federation Bosnia and Herzegovina.

**NOVEMBER 2018 – JUNE 2019:** Interpersonal Communication on Immunization, trainings for health care workers in Bosnia and Herzegovina.

**AUGUST 2018 – PRESENT:** Project team member: European Joint Action on Vaccination – EU-JAV.

**APRIL 2017 – PRESENT:** Project coordinator “Tailoring Immunization Programmes (TIP) in the Federation of Bosnia and Herzegovina” - Public Health Institute of the Federation of Bosnia and Herzegovina and WHO.

**FEBRUARY 2017-PRESENT:** Project team member “Surveillance and Response to Avian and Pandemic Influenza in Bosnia and Herzegovina” – CDC.

**APRIL – DECEMBER 2017:** Project team member “Improving early detection and response of country and cross border diseases, events and risks by digitalization of priority surveillance sources” – Southeast European Centre for Surveillance and Control of Infectious Diseases (SECID).

**SEPTEMBER 2015 – 2016:** Project team member “Surveillance and Response to Avian and Pandemic Influenza by National Health Authorities of Countries of South East Europe” – CDC and Southeast European Centre for Surveillance and Control of Infectious Diseases (SECID).

**FEBRUARY 2012 – JUNE 2016:** Project Coordinator PHI Federation B&H – Strengthening the DOTS strategy and improving the National Tuberculosis Programme (NTP), including multidrug resistant and infection control, in Bosnia and Herzegovina (Global Fund to Fight TB, HIV/AIDS and Malaria).

### Journals

**JANUARY 2016 – DEC 2017:** Editorial advisor, Eurosurveillance.

### Additional education

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- FEBRUARY 2020:** Vaccine Safety Basics. WHO, e-learning course.
- DECEMBER 2019:** Multivariable Analysis 2019, MediPIET, Tirana, Albania
- SEPTEMBER 2019:** Computer Tools for Outbreak Investigation, MediPIET, Belgrade, Serbia
- APRIL 2019:** WHO Regional Training Workshop on Strengthening Evidence-Based Decision Making in Immunization, Budva, Montenegro.
- SEPTEMBER 2018:** Interpersonal Communication on Immunization, UNICEF, Belgrade, Serbia
- MARCH 2018:** Improving Surveillance Management Course, CDC/CSTE, Zagreb, Croatia
- JANUARY 2018:** Emergency Risk Communication in Health Crises, WHO, Sarajevo, B&H
- SEP/DEC 2017:** WHO Scholar Vaccine coverage survey online course
- DECEMBER 2017:** Sub-regional training workshop on responding to vaccine deniers in public, Copenhagen, Denmark
- OCTOBER 2017:** Sub-regional advanced training workshop on AEFI causality assessment for middle income countries, Bucharest, Romania
- SEPTEMBER 2017:** Behavioural Insights Summer School (BISS), Erfurt University, Erfurt, Germany
- JUNE 2017:** ECDC workshop: HIV modelling tool, Stockholm, Sweden
- JULY 2016:** Epidemiological evaluation of vaccines: efficacy, safety and policy. London School of Hygiene and Tropical Medicine, London, UK.
- MARCH 2016:** WHO Regional workshop on the global oral polio vaccine „switch“, Wien, Austria.
- DECEMBER 2015:** WHO Workshop on vaccine procurement performance and access to vaccine pricing information, Copenhagen, Denmark.
- DECEMBER 2015:** WHO National workshop on vaccine safety and contraindication in Yerevan, Armenia.

- OCT/NOV 2015:** Online course “Improving the Health of Women, Children and Adolescents: From Evidence to Action”, London School of Hygiene & Tropical medicine
- OCTOBER 2015:** Sub-regional training workshop on institutionalizing best vaccine management practices, Ankara, Turkey.
- JUNE 2015:** WHO Workshop on resource mobilization for immunization, Istanbul, Turkey
- APRIL/MAY 2015:** Online course “Vaccines”, Perelman School of Medicine, The University of Pennsylvania, USA
- MARCH 2014:** Online course "Design and Interpretation of Clinical Trials", Johns Hopkins University, Baltimore, USA
- NOVEMBER 2012:** Workshop on introducing Vaccination Supplies Stock Management software, Chisinau, Republic of Moldova.
- OCTOBER 2012:** Regional workshop on national strategic planning for tuberculosis control WHO/Euro. Chisinau, Republic of Moldova.
- FEBRUARY 2012:** Workshop in Analysis and Interpretation of Data from Respondent-Driven Sampling using RDSAT. WHO Collaborating Centre for Capacity Development in HIV Surveillance. Zagreb, Croatia.
- NOVEMBER 2011:** WHO Workshop on Implementation of Guidelines for Lot Release of Vaccines. Riga, Latvia
- JULY 2011:** Regional Health Communication Workshop. Almaty, Kazakhstan.
- FEBRUARY 2011:** Evaluation of HIV surveillance, and data use and reporting. WHO Collaborating Centre for Capacity Development in HIV Surveillance. Zagreb, Croatia.
- NOVEMBER 2010:** NATO Advanced Research Workshop: Exploring synergies between bioterrorism preparedness and general public health measures. Belgrade, Serbia.
- OCTOBER 2010:** Respondent-Driven Sampling and HIV surveillance in High-Risk Groups. WHO Collaborating Centre for Capacity Development in HIV Surveillance. Zagreb, Croatia.
- MARCH 2009:** Seminar - Post-traumatic stress disorder for physicians of Family medicine in the Sarajevo Canton.
- APRIL 2007:** Seminar - Education of physicians in primary care about treatment of patients with mental health problems. Sarajevo, Bosnia and Herzegovina.

## ***Language***

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<b>ENGLISH</b>	IELTS Academic, British Council Sarajevo
<b>FRENCH</b>	DELFI (A1 – A4), Ministry of Education of the Republic of France
<b>GERMAN</b>	Level B2, Goethe Institute Sarajevo

## ***Computer Skills***

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Word, Excel, Access, Power Point, SPSS, RDSAT, R (basics), Stata

## ***Research experience***

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Qualitative formative research to inform policies for engaging health workers to ensure successful uptake of COVID-19 vaccination – Federation Bosnia and Herzegovina, 2020.

Population-based age-stratified seroepidemiological investigation for COVID-19 infection in Federation of Bosnia and Herzegovina, 2020.

Household transmission investigation for COVID-19 infection in Federation BiH, 2020.

Behavioral insights on COVID-19 in the Federation of Bosnia and Herzegovina, 4 rounds 2020.

Parent study - Understanding barriers and drivers to vaccination among caregivers in the Federation of Bosnia and Herzegovina, 2018/19.

Patient File study – Assessing vaccination coverage and identifying the characteristics of caregivers in different vaccination groups, in the Federation of Bosnia and Herzegovina, 2017/18

Interview study – Understanding influences on health workers' childhood vaccination practices in the Federation of Bosnia and Herzegovina, 2017/18

Research on behaviour in relation to HIV/STI prevalence among members of Roma population in Federation B&H, 2014.

Street-working Children: An Assessment of Child Begging and Other Street Work in Bosnia and Herzegovina, 2014.

HIV stigma and discrimination among health care workers in public and private health sectors in Bosnia and Herzegovina, 2014.

Behavioral and biological surveillance among injection drug users, Bosnia and Herzegovina, 2012.

Survey on knowledge, attitudes and behaviors related to tuberculosis, 2012.

Outcome of treatment of persons suffering from tuberculosis: comparing directly observed therapy and self-administered therapy, 2012.

Public attitudes towards people with mental disorders in Bosnia and Herzegovina, 2012.

Pilot study: Practical approach to lung health, Phase I (2011), Phase II (2012).

Estimating the size of population Most at risk to HIV, 2012.

Research on risk behaviour of prison inmates in relation to HIV/STI, Bosnia and Herzegovina, 2011.

HIV stigma and discrimination among health care workers in public and private health sectors in Bosnia and Herzegovina, 2011.

Survey on accessibility of VCCT Centers in Bosnia and Herzegovina, 2011.

### ***Conferences and Meetings***

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**OCTOBER 2019:** Annual meeting of the European Joint Action on Vaccination, Istituto Superiore di Sanita in Rome, Italy, 2-3 October 2019.

**APRIL 2019:** 28th European Congress of Clinical Microbiology and Infectious Diseases, Amsterdam, Netherlands, 13 - 16 April 2019.

**OCTOBER 2018:** UNICEF Digital Communication Training – Immunization, Bangkok, Thailand.

**AUGUST 2018:** Rotavirus symposium 2018, Minsk, Belarus.

**JUNE 2018:** Global Immunization Meeting, Kigali, Rwanda.

**APRIL 2018:** 28th European Congress of Clinical Microbiology and Infectious Diseases, Madrid, Spain, 21 - 24 April 2018.

**DECEMBER 2017:** Analysis of Time to Detect and Time to Respond of Outbreaks and Surveillance System Digitalization, SECID, Belgrade, Serbia.

**OCTOBER 2017:** Sixth Meeting of the Global Vaccine Safety Initiative (GVS), Kuala Lumpur, Malaysia

**OCTOBER 2017:** Vaccine Procurement Practitioners Exchange Forum, Unicef, Copenhagen, Denmark

**JUNE 2017:** Annual Influenza Meeting, ECDC and WHO Regional Office for Europe, Stockholm, Sweden

**MAY 2017:** The joint meeting of the ECDC National Focal Points for Preparedness and Response and the NFP for Threat Detection, Early Warning and Response Systems and International Health Regulations, Stockholm, Sweden.

**APRIL 2017:** Time to detect and time to respond on outbreaks & surveillance digitalization challenges in SEE countries, Regional workshop SECID, Tirana, Albania

- FEBRUARY 2017:** Consultation with Member States in Europe on EHO/UNICEF Joint Reporting Form, Athens, Greece
- NOVEMBER 2016:** MediLabSecure Regional meeting and technical workshop on public health
- OCTOBER 2016:** Annual Meeting of National Focal Points for Threat Detection and Global Epidemic Intelligence Meeting, Stockholm, Sweden
- MAY 2016:** Influenza Annual Meeting, ECDC and WHO Regional Office for Europe. Budapest, Hungary.
- APRIL 2016:** ECDC Meeting: Zika virus infection and review of surveillance and control measures. Paris, France.
- MARCH 2016:** ECDC/WHO Meeting of the networks for sexually transmitted infections and HIV, Bratislava, Slovakia.
- SEPTEMBER 2015:** Road to Success: Regional high level dialogue on successful transition to domestic funding of HIV and TB response in EECA, Tbilisi, Georgia.
- SEPTEMBER 2015:** WHO regional meeting of national immunization programme managers, Antwerp, Belgium.
- MARCH 2014:** WHO regional meeting of national immunization programme managers, Antalya, Turkey.
- DECEMBER 2012:** Regional conference „Stop Tuberculosis“ - Oral presentation: The role and importance of Institute of Public Health FB&H. Sarajevo, B&H.
- SEPTEMBER 2012:** International conference on trauma and injury prevention – Oral presentation: Accidents in the workplace and protective measures in the context of HIV and other blood-borne infections among health care workers in the Federation of Bosnia and Herzegovina. Zenica, B&H.
- SEPTEMBER 2012:** Annual Congress. European Respiratory Society. Vienna, Austria.
- MAY 2012:** Lošinj Days of Bioethics - Oral presentation: Stigma and discrimination related to HIV and AIDS – Review of the problem and proposed solutions. Mali Lošinj, Croatia.
- MAY 2012:** Influenza Annual Meeting. ECDC and WHO Regional Office for Europe. Warsaw, Poland.
- APRIL 2012:** WHO regional Copenhagen, Denmark.
- SEPTEMBER 2011:** International Union against Sexually Transmitted Infections-Europe Congress. Riga, Latvia.
- OCTOBER 2010:** Meeting WHO EURO evaluation of how pandemic preparedness aided the response to pandemic (H1N1) 2009. Copenhagen, Denmark.

**OCTOBER 2010:** 2nd Croatian Congress on Preventive Medicine and Health Promotion with international participation – Oral presentation: Our experience with surveillance of pandemic flu A(H1N1)v. Zagreb, Croatia.

### ***Membership and activities in professional associations***

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Vaccine Acceptance Research Network	Steering committee member
Medical Chamber of Canton Sarajevo	Vice president
European Joint Action on Vaccination Committee	Member

### ***Publications***

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1. Musa S, Kulo A, Bach Habersaat K, Škrijelj V, Smjecanin M. A qualitative interview study with parents in the Federation of Bosnia and Herzegovina to identify barriers and drivers to childhood vaccination and inform public health interventions, *Human Vaccines & Immunotherapeutics*, submitted.
2. Musa S, Blazevic M, Durmisevic J, Kapic A, Kavazovic A. The public health response to COVID-19 outbreak in the Federation of Bosnia and Herzegovina, March-August 2020, *Journal of Public Health Polica*, submitted.
3. Goletic et al. Phylogenetic pattern of SARS-CoV-2 from COVID-19 patients from Bosnia and Herzegovina: lessons learned to optimize future molecular and epidemiological approaches. doi: <https://doi.org/10.1101/2020.06.19.160606> preprint
4. Musa S, Habersaat KB, Jackson C, Kulo A, Primorac E, Smjecanin M, Funk S. Tailoring Immunization Programmes: using patient file data to explore vaccination uptake and associated factors, *Human Vaccines & Immunotherapeutics*, DOI: 10.1080/21645515.2020.1769396
5. Musa S, Škrijelj V, Kulo A, Bach Habersaat K et al. Identifying barriers and drivers to vaccination: a qualitative interview study with health workers in the Federation of Bosnia and Herzegovina. *Vaccine* 38 (2020) 1906-1914. DOI: 10.1016/j.vaccine.2020.01.025
6. Musa S, Topalović B, Čatić S, Smajlović Z. Assessment of vaccine effectiveness during measles outbreak in the Federation of Bosnia and Herzegovina, 2014-2015. *Cent Eur J Public Health*. 2018 Jun;26(2):79-82. doi: 10.21101/cejph.a4754.
7. Musa Sanjin. Life in vaccine science – a conversation with Stanley Plotkin at the 4th Conference on Vaccines in Dubrovnik, Croatia, September 2017. *Euro Surveill*. 2018;23(17):pii=18-00147. <https://doi.org/10.2807/1560-7917.ES.2018.23.17.18-00147>
8. Musa S, Peek-Asa C, Jovanović N, Selimović E (2018) Association of adverse childhood experiences and health risk behaviors among young adults visiting a regional primary healthcare center, Federation of Bosnia and Herzegovina. *PLOS ONE* 13(3): e0194439. <https://doi.org/10.1371/journal.pone.0194439>



9. Musa S. Book review On immunity: an inoculation, Eula Biss. *Central Eur Paed* 2017, 13 (1): 81-83.
10. Junuzović A, Musa S, Pilav A. Pertussis-like syndrome in primary care practice. *Central Eur Paed* 2017, 13 (1):46-54.
11. Musa S, Mulaomerović. Impact of immunization on epidemiology of vaccine-preventable diseases in the Federation of Bosnia and Herzegovina. *Central Eur Paed* 2017, 13 (1):73-77.
12. Musa S, Peek-Asa, Young T, Jovanović N. Needle Stick Injuries, Sharp Injuries and other Occupational Exposures to Blood and Body Fluids among Health Care Workers in a general hospital in Sarajevo, Bosnia and Herzegovina. *International Journal of Occupational Safety and Health*, Vol 4. No 1 (2014) 31– 37.
13. Paralija B, Musa S, Krsmanović S, Cilović-Lagarija Š. The treatment outcome of tuberculosis patients: comparison of directly observed therapy and self-administered therapy. *Medical Journal* Oct-Dec 2014, Vol. 20 Issue 4, p233-237.
14. Musa S. Curriculum: Statistical Data Analysis. *Partnerships in Health: Sarajevo*, 2014.
15. Cilović-Lagarija Š, Musa S, Brankovic S, Selimović-Dragaš M. Knowledge About Spread of HIV Infection Among Dentists Employed in Private and State Practice. *Mater Sociomed*. 2014 Apr; 26(2): 96-99.
16. Cilović-Lagarija Š, Musa S. Injury surveillance in the Federation of B&H. *Book of abstracts - ICTIP*. Zenica, 2013;58-59.
17. Musa S, Jovanović N. Needle Stick Injuries, Sharp Injuries and other Occupational Exposures to Blood and Body Fluids among Health Care Workers - General Hospital Sarajevo. 2nd Annual Iowa Global Health Symposium. *Book of abstracts*, University of Iowa College of Public Health, 2013.
18. Dakic Z, Musa S. Hepatitis A outbreak in Bijeljina, Bosnia and Herzegovina, August 2012 - April 2013 . *Euro Surveill*. 2013;18(21):pii=20486. Available: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20486>
19. Alajbegović-Halimić J, Musa S. Faktori koji utiču na uspješnost hirurškog tretmana konkomitantnog strabizma kod djece/Influencing factors to success of surgical tretment of concomitant strabismus in children. *Medicinski žurnal* 2013;19(3);180-186.
20. Musa S, Cilović-Lagarija Š. Knowledge, attitudes and practices related to HIV among health workers in the Federation of Bosnia and Herzegovina. *Albanian Medical Journal*. 2013;3:14-24.
21. Dančević M, Musa S, Sarihodžić M. Knowledge, attitudes and practices related to tuberculosis (Comparison KAP survey 2009 i 2011). *Zavod za javno zdravstvo Federacije BiH*, 2012.
22. Vučina I, Musa S, Dizdarević-Maksumić A, Niškanović J, Popović T, Lakić B. The survey of public attitudes towards people with mental disorders. *Ideologija*, Sarajevo, 2012.
23. Musa S, Cilović-Lagarija Š. PAL survey (Practical approach to lung health) - I i II Pilot survey. *Zavod za javno zdravstvo FBiH*, 2012.
24. Musa S, Cilović-Lagarija Š. Accidents in workplace and protective measures in the context of HIV and other blood-borne infections among health care workers in the Federation of Bosnia and Herzegovina. *Knjiga sažetaka – ICTIP*. Zenica, 2012;90-91.
25. Musa S, Cilović-Lagarija Š. Stigma and discrimination related to HIV and AIDS – Review of the problem and proposed solutions. 11th Lošinj days of bioethics, Mali Lošinj, Croatia, 2012; 92-93.

26. Musa S. Historijat eradikacije endemskih zaraznih bolesti na području Bosne i Hercegovine – Knjižni fond Zavoda za javno zdravstvo Federacije Bosne i Hercegovine. DES – Sarajevo, 2011;84-88.
27. Musa S, Ravlija J, Mulaomerović M, Zeljko M. Naša iskustva u nadzoru nad pandemijskom gripom A(H1N1)v. 2. Hrvatski kongres preventivne medicine i unaprjeđenja zdravlja s međunarodnim sudjelovanjem. Zagreb, Hrvatska, 2010;115.