



Daniel Adrian Lungu

WORK EXPERIENCE

Associate professor in prehospital critical care

University of Stavanger [01/01/2022 – Current]

City: Stavanger

Country: Norway

- Teaching at the Master's in Prehospital Critical Care. I am the course coordinator for the novel course in **Applied Scientific Methods** (10 ECTS) that started in spring 2022. The course aims at providing students with the knowledge and skills in order to apply different and appropriate scientific methods in their study and work, including their master thesis. I am also the course coordinator of the Master´s Thesis (30 ECTS).
- Mentoring students of the Master's in Prehospital Critical Care with their master's thesis topic (MPHMAS course)
- Supervision of Master students and PhD candidates with their research work.

Postdoctoral researcher

University of Stavanger - Department of Quality and Health Technology [12/11/2020 – 31/12/2021]

City: Stavanger

Country: Norway

- In charge of the activities of WP3 of the COVCOM project (<https://covcom.org/>). The project aims at investigating the determinants of effective communication during pandemics. I am responsible for the design, conduction, and analysis of randomized controlled trials aimed at measuring the reaction of people (behaviour, comprehension, trust) to video communication about pandemics.
- EU positioning coordinator at SHARE - Centre for Resilience in Healthcare. I am the link between the 70+ researchers at SHARE and EU funding opportunities, mainly Horizon Europe. My objective is to help researchers familiarise with the different EU funding schemes and support those who are interested with information, training opportunities, relevant networks and events in order to be able to attract increasing EU funding to SHARE and the Faculty of Health Sciences.
- Supervision of Master's thesis students (in Health Science and in Prehospital Critical Care).

Postdoctoral researcher

Scuola Superiore Sant'Anna [01/10/2019 – 31/10/2020]

City: Pisa

Country: Italy

Research

- Main topic of interest: healthcare performance measurement and management.
- Specific topics: medical practice variation, performance evaluation and benchmarking, waiting times, equity, and patient reported outcomes and experience measures (PROMs & PREMs).
- **Methods adopted:** quantitative analysis and modelling (e.g. correlation analysis, variation and Median Odds Ratio, surveys, difference-in-difference longitudinal analysis), systematic review and meta-analysis, and some qualitative approaches (focus groups and longitudinal case studies analysis).

Project management

- Coordination of the European Commission Programme "Support to the development of patient reported experience measures for health system performance assessment in Latvia".
- Coordination of the regional ePROMs project (electronic Patient Reported Outcome Measures) for the oncological (prostate, lung, and colorectal cancer) robotic surgery pathway in Tuscany, Italy.
- Design and responsibility of the indicators aimed at evaluating the research performance of teaching hospitals. By using the ISI WoS and Scopus, the scientific output of over 20.000 physicians was evaluated annually.
- Organiser of the international workshop on "The value of Big Data in Healthcare" - Pisa - 26.11.2019.

Teaching

- Teaching to professionals in executive Master courses for clinical doctors and to the MSc. students in Innovation Management.
- Topics taught: Performance evaluation in Healthcare, the evolution of healthcare systems, geographical variation and waiting times, Patient reported Experience and Outcome Measures (PREMs & PROMs), and diffusion of innovations in healthcare.

Supervision

- Tutorship and training of young research fellows and PhD students at the Management and Health Laboratory.
- Supervision of MSc. thesis students in Innovation Management.

Research fellow in Healthcare Management and Performance Evaluation

Management and Health Lab - Scuola Superiore Sant'Anna [01/09/2016 – 30/09/2019]

Address: Via San Zeno, 2, 56127 Pisa (Italy) - www.meslab.santannapisa.it

- Coordination of the Network of Teaching Hospitals (THs), a specific focus for THs. The network started in 2014 and nowadays the 27 THs share a specific Performance Evaluation System designed to take into account the three-fold mission (care, research and training) of these organizations;
- Joint coordination of the Network of Italian Regions, where 12 (out of 20) regions that share the same Performance Evaluation System by constantly measuring benchmarking more than 300 indicators;
- Co-coordination of ERASMUS + KA 107 2019 International Credit Mobility project with Astana Medical University (Kazakhstan);
- EU funded project SRSS/S2017/019 "Developing Health System Performance Assessment for Slovenia and Latvia";
- EU funded project SRSS/C2019/082 "Developing Health System Performance Assessment in Croatia";
- Member of the organising committee of the BRIGHT 2019 event, 27.09.2019.

EDUCATION AND TRAINING

International PhD in Innovation, Sustainability and Healthcare Management

Scuola Superiore Sant'Anna [02/10/2016 – 30/09/2019]

Address: Pisa (Italy)

Level in EQF: EQF level 8

- Focus on the main management theories, with special emphasis put on the New Public Management principles applied to the healthcare sector;
- Performance management and measurement applied to the evaluation of the regional healthcare systems;
- Immersive focus on research methodologies, both quantitative and qualitative.

Ph.D. thesis defended on 04.02.2020.

Ph.D. thesis title: Managing performance in Healthcare organisations: Tools, strategies, and policy implications.

Visiting period

Health Quality & Safety Commission [04/2019 – 05/2019]

Address: Wellington (New Zealand)

International MSc. in Innovation Management

University of Trento & Scuola Superiore Sant'Anna [22/08/2014 – 22/06/2016]

Address: Trento-Pisa (Italy)

Final grade : 110/110 cum Laude – Level in EQF: EQF level 7

Main learning outcomes:

- Management theories, especially oriented towards innovation and healthcare management;
- Business administration elements, applied mainly to entrepreneurship and public administration;
- Healthcare performance evaluation, with a focus on medical practice variation.

Thesis title: Opportunities and Risks for the Introduction of Microsurgical Robots in the Healthcare System: the case of Tuscany Region.

BSc. in Mechanical Engineering (biomedical engineering curriculum)

University of Florence [15/10/2009 – 11/07/2014]

Address: Florence (Italy)

Level in EQF: EQF level 6

Main learning outcomes:

- Mathematical analysis and data analysis;
- Quantitative problem-solving skills;
- Biomechanics and Bioimaging signal processing basics.

LANGUAGE SKILLS

Mother tongue(s): **Romanian** | **Italian**

Other language(s):

English

LISTENING C2 READING C2 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Norwegian

LISTENING B1 READING B1 WRITING B1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

PUBLICATIONS

The Role of Recipient Characteristics in Health Video Communication Outcomes: Scoping Review

[2021]

<https://pubmed.ncbi.nlm.nih.gov/34967758/>

Lungu DA, Røislien J, Wiig S, Shortt MT, Ferrè F, Berg SH, Thune H, Brønnick KK. *J Med Internet Res* 2021;23(12):e30962

The paper reviews available evidence in literature about the factors affecting health video communication outcomes. It identifies a theoretical framework and amends it to suit health video communication, thus contributing to theory development.

Method: Scoping review.

Shortcomings in Public Health Authorities' Videos on COVID-19: Limited Reach and a Creative Gap

[2021]

<https://www.frontiersin.org/articles/10.3389/fcomm.2021.764220/full>

Shortt MT, Smeets I, Wiig S, Berg SH, **Lungu DA**, Thune H and Røislien J (2021)

The article compares the communication videos about COVID-19 created by Public Health authorities and by professional social media creators. Creative differences are highlighted, and performance indicators (in terms of reach) probably argue the need for learning of successful creative techniques.

Method: Qualitative comparative assessment

A continuous PREMs and PROMs Observatory for elective hip and knee arthroplasty: study protocol

[2021]

<https://bmjopen.bmj.com/content/11/9/e049826>

De Rosis S, Pennucci F, **Lungu DA**, et al. A continuous PREMs and PROMs Observatory for elective hip and knee arthroplasty: study protocol. *BMJ Open* 2021;11:e049826. doi: 10.1136/bmjopen-2021-049826

This is the study protocol of the implementation of a systematic observatory to collect patient reported outcome and experience measures for hip and knee replacement interventions. This is the first attempt to implement a systematic collection of PROMs and PREMs at a regional level.

Method: Protocol.

The impact of new surgical techniques on geographical unwarranted variation: The case of benign hysterectomy

[2021]

<https://www.mdpi.com/1660-4601/18/13/6722>

Lungu, D.A.; Foresi, E.; Belardi, P.; Nuti, S.; Giannini, A.; Simoncini, T. *Int. J. Environ. Res. Public Health* **2021**, *18*, 6722.

The paper shows that the introduction of new technologies does not increase medical practice variation, while bringing better health outcomes. Therefore the causes of variation are mainly behavioural, of both patients who ask/refuse surgery and clinicians who have different propensity to prescribe surgery instead of other therapies.

Method: 3 years of data on hysterectomy and analysis of variation, trend, use of different surgical technique, complications, waiting times, correlation analysis, and use of an *ad hoc* framework for treatment rate/waiting time analysis.

Health authorities' health risk communication with the public during pandemics: a rapid scoping review

[2021]

<https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-021-11468-3>

Berg, S.H., O'Hara, J.K., Shortt, M.T., Thune, H., Brønnick, K.K., **Lungu, D.A.**, Røislien, J., Wiig, S. *BMC Public Health* (2021).

In order to make communication effective in times of pandemics, it must take into account a set of scientifically-proven features. This will ensure trust and will lead to protective and responsible behaviour from the citizens. The main features for effective communication published in the international literature are discussed in this scoping review.

Method: Scoping review.

Caesarean sections in teaching hospitals: Systematic review and meta-analysis of hospitals in 22 countries

[2021]

<https://bmjopen.bmj.com/content/11/1/e042076>

Hoxha I, Zhubi E, Grezda K, Kryeziu, B., Bunjaku, J., Sadiku, F., Agahi, R., **Lungu, D.A.**, Bonciani, M., Little, G. *BMJ Open* 2021.

This systematic review includes evidence from more than 8 million births worldwide and investigates whether teaching hospitals outperform general non-teaching hospitals when it comes to caesarean sections. The final conclusion is that yes, they do.

Method: Systematic review & meta-analysis.

Measuring research in the big data era: The evolution of performance measurement systems in the Italian teaching hospitals

[2020]

<https://www.sciencedirect.com/science/article/pii/S0168851020302554?via=ihub>

Horenberg F, **Lungu DA**, Nuti S. *Health Policy* 2020.

Health research is essential for practice, and research performance is often eclipsed by other health performance measures such as outcomes. The advancements of Big Data offers reliable and convenient measurement opportunity. The paper explores the differences between two online repositories and the potential threats they could pose on public healthcare systems.

Method: extraction of the publications of approx. 20.000 researchers from Scopus and ISI WoS, ranking analysis for quantity and quality (Impact factor and Field-Weighted Citation Impact), correlation analysis and confidence intervals.

Implementing successful systematic Patient Reported Outcome and Experience Measures (PROMs and PREMs) in robotic oncological surgery - The role of physicians

[2020]

<https://onlinelibrary.wiley.com/doi/full/10.1002/hpm.2959>

Lungu DA, Pennucci F, De Rosis S, Romano G, Melfi F. *Int J Health Plann Mgmt*. 2019;1–15.

The paper describes the managerial levers that led to the successful introduction of systematic patient reported measures. It represents a great mindset shift, as clinicians are used to rely on clinical measures only, and generally resist change that empower patients.

Method: 3-steps mixed methods: First, descriptive statistics of enrollment and response rates to PROMs&PREMs; second, focus group with responsible clinicians to unveil barriers and opportunities; third, quantitative questionnaire to further explore and quantify the findings emerged during the focus group.

Decision making tools for managing waiting times and treatment rates in elective surgery

[2019]

<https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4199-6>

Lungu, D.A., Grillo Ruggieri, T., & Nuti, S. (2019). BMC Health Services Research, 19(1), 369.

The paper takes into account 9 elective surgery procedures and assesses variation in terms of treatment rates (how many patients receive surgery) and waiting times (how long patients need to wait before receiving surgery). It introduces a set of useful tools to help decision making for policy makers, clinicians, and patients.

Method: Variation analysis of treatment rates and waiting times, correlation analysis, and use of an *ad hoc* framework to jointly analyse geographical variation and waiting times.

Insights on the effectiveness of reward schemes from 10-year longitudinal case studies in 2 Italian regions

[2018]

<https://onlinelibrary.wiley.com/doi/full/10.1002/hpm.2496>

Vainieri M, **Lungu DA**, Nuti S. Int J Health Plann Mgmt. 2018;1-11.

The paper investigates whether rewarding health managers can improve performance. Indeed, pay-for-performance is still largely adopted internationally, while evidence about effectiveness is mixed. Through 2 study cases from Italy, we confirm that rewarding managers has no impact on the performance of health organisations as money has a very limited impact on motivation. Intrinsic motivation is greatly more significant, and strategic decisions should be made to ensure the intrinsic motivation of health workers, including managers, clinicians and other health professionals.

Method: Longitudinal over 10 years analysis of 2 case studies of healthcare regional performance with different financial rewards mechanisms.

NETWORKS AND MEMBERSHIPS

Member of the reviewer board of the International Journal of Environmental Research and Public Health

Affiliate researcher - Scuola Superiore Sant'Anna, Pisa

[01/11/2020 – Current]

International network and collaborations

- Wennberg International Collaborative (active members from 25 countries, <https://wennbergcollaborative.org>)
- Health Quality & Safety Commission, New Zealand (visiting)
- Astana Medical University, Kazakhstan (ERASMUS + mobility project)
- The Dartmouth Institute - USA (medical practice variation, joint publication)
- The Norwegian Air Ambulance Foundation (joint COVCOM project)
- The Health Department of Latvia, Croatia, and Slovenia (joint EU-funded project)
- European Commission, Directorate-General for Health and Food Safety (EU-funded projects)
- Regional Health Administration of Tuscany, Italy
- The Network of Italian Regions (12 Regions working together to improve healthcare performance)

CONFERENCES AND SEMINARS

Conferences

- The data challenge: How and why do we measure patient outcomes? – 16 December 2016, London.
- Wennberg International Collaborative Fall Research Conference, 12-14 September 2016, Oxford.
- International Health Policy Conference, 16-19 February 2017, London School of Economics.
- Wennberg International Collaborative Fall Research Conference, 11-13 September 2017, Oxford.
- Wennberg International Collaborative Spring Research Conference, 11-13 April 2018, Zurich.
- Publish or Perish - Scientific Research between integrity and competition, 17 December 2018, Lucca.
- Tools of Practice: Points of Convergence and Divergence, 12 November 2020, online.

Local seminars

- Seminar cycles on Organisational culture and Performance. Prof. Russell Mannion, 26-27 October 2017, Pisa.
- Dynamic capabilities & related paradigms: a general theory of the firm and its management. 20 November 2017.
- Geoinformatics algorithms based on machine learning and high performance computing. 20 December 2017.
- Behavioural Economics and Technology to improve health. Prof. Michael Weinrich, 22-23 March 2018, Pisa.
- The role of the patient in care outcomes measurement, 17 May 2018, Pisa.
- Seminar cycles on Human Resources Management (10 hours) - Dr. Paul Battaglio - June 2018, Pisa.
- The performance evaluation system of the New Zealand healthcare system, 3 September 2018, Pisa.
- All men naturally desire knowledge, a jester's journey - Alessandro Colombo, 7 February 2019, Pisa.
- Data Management Planning workshop for Life Science Projects – Trondheim, 30.11-01.12.2020, online.

HONOURS AND AWARDS

Awards

2020 - Selected among the top5 Romanian students abroad (GalaLSRS 2020)

2019 - Best PhD presentation - Institute of Management - Scuola Superiore Sant'Anna, Pisa (out of 24)

2018 - Best PhD presentation - Institute of Management - Scuola Superiore Sant'Anna, Pisa (out of 28)

2017 - Merit award and money prize - University of Trento for the MSc. degree (completed with 110/110 cum laude)

2015 - Winner of the start-up lab competition (out of 14 teams participating) organized by the University of Trento and represented Italy at the international competition held at VirginiaTech (Blacksburg, USA)

2009 - Only graduate of the Alessandro Volta high school with the maximum grade 100/100. Award + money prize

ORGANISATIONAL SKILLS

Skills

- **Teamwork** - Developed during the working experience at the Management and Health Lab, a highly multidisciplinary research team that counts more than 50 researchers, and continued at the SHARE centre of the University of Stavanger where more than 70 researchers work;
- **Coordination** - Learnt from the coordination of EU funded projects in Pisa and continued with the coordination of activities of WP3 of COVCOM project at the University of Stavanger;
- **Multicultural mindset** - Acquired in an international environment during the MSc (international degree) and the PhD program (international degree as well), and put in practice by joining the University of Stavanger;
- **Leadership** - Gained from the experience as a Representative of the PhD students of the Scuola Superiore Sant'Anna (15.01.2018 - 06.05.2018), as a Representative of the PhD students in the Governance Board of the Institute of Management of the Scuola Superiore Sant'Anna (18.12.2017 - 30.09.2019), and as a Representative of the Postdoctoral researchers in the Governance Board of the Institute (20.01.2020 - 31.10.2020).

COMMUNICATION AND INTERPERSONAL SKILLS

Communication of research results to non-academic communities to:

- **Clinicians:** As a result of the continuous sharing of performance results in 12 Italian regions.
- **General public:** Partially acquired during the EU project BRIGHT in 2019 and currently strengthened within COVCOM, which aims at creating and delivering effective communication about pandemics to the general public.
- **Patients:** To oncological patients who were informed about the ePROMs project results every 6 months. In addition, elective surgery patients (especially orthopaedics) for the results of the medical practice variation study.
- **Policy-makers:** From regular meetings with regional and national Italian policy-makers on health performance results and with national (Latvia, Croatia, and Slovenia) and EU Commission policy-makers within the EU-funded projects.

INVITED PRESENTATIONS

Invited presentations of research works

[12/03/2021 – 12/03/2021]

- "Trust Me!" Truthfulness and Truth Claims across Media - Linnæus University - 2021 (online)
- Wennberg International Collaborative Fall Research Meeting 2019, Oxford
- International Research Society for Public Management (IRSPM) Conference, Victoria University, Wellington, New Zealand - 2019
- Wennberg International Collaborative Spring Research Meeting 2018, Zurich
- Wennberg International Collaborative Fall Research Meeting 2017, Oxford
- International Health Policy Conference 2017, London School of Economics
- Wennberg International Collaborative Fall Research Meeting 2016, Oxford

EXTERNAL FUNDING

Horizon Europe - Marie Skłodowska-Curie Actions - Postdoctoral Fellowships

Application with UiS as a host submitted on 11.10.2021. Communication of results is expected in March 2022.

Horizon Europe and EC Tenders

Although the funding is not in my name but in the name of my former lab director, I substantially contributed obtaining and delivering the following EU funded projects:

- EU SRSS/S2019/035 " Support to the development of patient reported experience measures for health system performance assessment in Latvia""
- EU SRSS/S2017/019 "Developing Health System Performance Assessment for Slovenia and Latvia"
- EU SRSS/C2019/082 "Developing Health System Performance Assessment in Croatia"
- ERASMUS + KA 107 2019 International Credit Mobility project with Astana Medical University (Kazakhstan)

Currently as a EU positioning coordinator I am working to increase the funding received by the SHARE centre and the Faculty of Health Sciences of UiS by acting as a link between the relevant calls/actors/networks and the researchers.