How to improve cross-border cooperation in the field of health in the case of the Greater Region through Data-Driven Policy Support?

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Extended abstract (1 306 words)

The Greater Region is one of the first recognized cross-border areas in Europe; it was created in 1971 under the name Saar-Lor-Lux. Located between Belgium, France, Germany and Luxembourg, it covers 65 400 km² and is home to 11.7 million inhabitants (2022). Its borders are crossed by many flows, especially for work. Nowadays, more than 220 000 people cross borders to work in the Greater Region, a unique large labor market. But other flows are less known and less studied such as those for health or tourism, both fields where cross-border cooperation is important, but there is a lack of data concerning these border flows. We will focus on the development of health flows, which are constantly increasing. The Directive 2011/24/EU on cross-border healthcare has paved the way for patient mobility within the EU

How can we know that there is a rise in the number of people crossing the border, whether patients or professionals? How can we measure them? They are many data in the field of health such as the number of general practitioners per 100 000 inhabitants, number of dentists, of nurses, of hospital beds and so on. There are indicators on the state of health of populations based on various pathologies. But it is harder to get data on the interconnection between border territories in the field of health.

This academic data-driven research started during the pandemic period and the need of open borders and stronger cross-border cooperation in the field of health. Then, research continued on the observation of territorial inequalities development between border regions in terms of access to healthcare. Nowadays, in each country, we can observe the creation of what are called “medical deserts”, that is to say geographic areas affected by a shortage of healthcare professionals and facilities. In general, these areas are concentrated in rural and peripheral sectors, such as in suburbs, but also near borders. The Greater Region is concerned by this phenomenon. The attractiveness of Luxembourg on medical staff accentuates the creation of “medical deserts” on its neighboring countries. 70% of medico-social staff in Luxembourg are made up of cross-border workers; therefore there is a very strong dependence of the Grand Duchy on border mobility or rather interdependence. If the borders are closed, the Luxembourg health system could collapse! According to the State of Health in the EU for Luxembourg in 2021, 29% of nurses come from France, 24 % from Germany and 12 % from Belgium and the number of doctors practicing in Luxembourg, but living on the other side of the border increased from 15.6 % to 26.4 % between 2008 and 2017 (Lair-Hillion, 2019).

The first step of this data-driven research was to find official statistics to understand this border health mobility and how important it was. Who could provide data? National and regional social security organisms (e.g. Health Insurance Association in Saarland) provide data, but also hospitals, nursing schools and other institutions such as Health Observatories (Regional Health Observatory of the Grand-Est, the Franco-Belgian Health Observatory, and so on) or data from "Organized Areas of Access to Cross-border Care" (ZOAST) and various organizations and institutions at national and regional levels (e.g. Ministry of Health, Regional Health Agency of the Grand Est). The list of organisms that can provide data is long and it is difficult to be exhaustive, but to find relevant data to measure health mobility was not easy.

Concerning people mobility, the research focused on three groups of people who use the border as a resource for health care, study and work: patients, students (medical studies) and health professionals.

There is data about health professionals at national and regional levels; among these 220 000 cross-border workers in the Greater Region, nearly 10 % work in medico-social sectors (data from IGSS - General Social Security Inspection - Luxembourg, 2023). Luxembourg is attractive due to higher wages especially in the liberal sector, better working conditions, better recognition of the arduousness of work and earlier retirement, and so on. There is also data about mobility of patients. In Luxembourg, according to the Luxembourg National Health Fund (CNS), 35 % of people covered by the CNS are cross-border workers (CNS, 2020) and healthcare is partly provided in the country of residence (France, Belgium and Germany). The CNS expenditure to cover health costs outside Luxembourg represented 20 % of total expenditure (2019). Saarland has to face a dearth of doctors and welcome those from abroad (French but also Syrian, Russian, etc.). The reports published by hospitals provide interesting data on the geographical origin of their staff. Finally, data can also be found for students (e.g. French students in medical and dental sciences or nursing schools in Belgium) provided by universities or nursing schools.

There was then the question of comparability. Is the data comparable and relevant from each side of the border? Not all. One of the first obstacles was also to define the words in order to know if data can be compared. There are many examples showing that a same word can have different signification such as "general practitioners" (in Belgium internists are taking into account in the number of general practitioners, but not in France).

The data is available at different scales, different geographical levels. Alongside the administrative divisions, there are more specific divisions linked to health, so different "health territories" on each side of the border: for example in France "territories of health democracy", "territorial hospital groups" and so on. Therefore the comparison of data is complicated.

Moreover, some data provided in one country does not exist on the other side of the border. Data from private health sectors is more difficult to get. So there is also a lack of data to have a precise view of cross-border health mobility. Several interviews were conducted with cross-border workers, practitioners and specialists, nursing schools, medical analysis laboratories and so on in order to get more precise data and to understand the reasons for cross-border mobility. Asking nursing schools for example, the aim was to get data about where nurses find their first job in France or abroad, but there is no data available.

The question of data accessibility for researchers arises. There is a need to strengthen access to data usable by researchers, institutions or companies under precise conditions of use and in compliance with EU data protection standards, for example the European Health Data Space (EHDS) presented in May 2022 and adopted in January 2025 and built on the General Data Protection Regulation (GDPR). The Covid-19 crisis has underlined the importance of having digital infrastructures dedicated to health. However, there are still many obstacles. The complexity and diversity of rules, structures and processes in force in different Member States make access and sharing of data difficult.

But anyway, policymakers need reliable data to develop a cross-border health scheme. There are already several health observatories in the Greater Region at different scales. The last step was the proposition of a Cross-border Health Observatory at the Greater Region level, able to collect and transmit data from different sources. Among the INTERREG projects that have been carried out in the field of health, we can mention that the creation of a Cross-Border Health Observatory in the Greater Region was proposed by the INTERREG VA COSAN (2019-2022). The Greater Region needs to have a centralizing data structure to disseminate information to as many people as possible and of course where policymakers can find resources in order to develop a common strategy and make this cross-border region a laboratory for the building of the European Health Union. Researchers from the Greater Region should be involved in the project of a Cross-Border Health Observatory, which is the case for the project of creating a Cross-Border Housing Observatory in 2026 led by the Luxembourg Institute of Socio-Economic Research (LISER). But will such Cross-Border Health Observatory be created?