HEALTH DATA TALK SERIES:

The Community Pharmacist as a key, trusted partner in the secondary use of health data in Belgium

Primary healthcare providers are in frequent contact with patients, allowing them to collect significant amounts of health data. When it comes to the dispensing of medications and other healthcare products, the data are primarily gathered by community pharmacists[1]. The recording and use of this sensitive information are crucial for ensuring the quality of pharmaceutical care provided in the pharmacy. These processes are conducted daily in full compliance with the General Data Protection Regulation (GDPR), enabling pharmacists to always guarantee the security and confidentiality of their patients' data.

A PIONEERING ROLE IN DATA SHARING

Every patient deserves access to high-quality pharmaceutical care and support, no matter which pharmacy they choose to visit, or when they need to visit it. To achieve this, all community pharmacies across the country must be able to consult the patient's medication history, provided informed consent has been given by the patient[2]. Consulting the patient's medication history enables the pharmacist to avoid dispensing medications that could, for example, interact with or be contraindicated by other medicines the patient is taking.

Belgian community pharmacists, who have long been pioneers in the computerization and later the digitalization of healthcare, have also led the way in health data sharing. For more than a decade, the secure exchange of sensitive medication history information between community pharmacies has been made possible through the Shared Pharmaceutical Record (SPR - see also Boxes 1 and 2).

To develop, implement, and manage the technical infrastructure required for such information sharing – while also ensuring the security and consistency of data exchanges between pharmacies and taking legal responsibility for safeguarding patient privacy – community pharmacies established FarmaFlux, a specialized, autonomous, non-profit entity. The Pharmaceutical Care Data Hub (PCDH) – the central database of the SPR where relevant encrypted patient data are safely stored – was created and is maintained by FarmaFlux[3].

BOX 1: Which data are recorded in the patient's Shared Pharmaceutical Record (SPR), and how are these data stored and shared?

- The patient's name, the code of the dispensed medication, the dispensing date, the quantity dispensed, and the dosage are recorded in the patient's Shared Pharmaceutical Record.
- The quality and accuracy of the data recorded by the pharmacist are verified by the central TIP (*Trusted Intermediate for Pharmacist*) system before being encrypted and stored in the central database of the Shared Pharmaceutical Record (PCDH).
- Medication data stored in the PCDH may only be accessed in the pharmacy where the patient collects their medicines, unless a therapeutic relationship[4] has been established with another community pharmacy and the patient has given informed consent.
- The recording and consultation of the patient's consent, as well as the authentication of pharmacists, and the encryption of SPR data, rely on modules from the Belgian eHealth platform, ensuring optimal data security and confidentiality.

Source: **www.farmaflux.be/fr-BE/Solutions/GFD-DPP/le-dossier-pharmaceutique-partage~69FR**

1 A community pharmacist is a healthcare professional who works in a community pharmacy – also known as a retail pharmacy or local drugstore –, as opposed to the hospital pharmacist, who works within hospitals or clinical settings. This article focuses solely on the primary and secondary use of health data within the context of community pharmacy, considering that community and hospital pharmacists operate in fundamentally distinct environments when it comes to data collection and sharing.

2 For more information about the informed consent, see the Guide du consentement éclairé pour le partage électronique des données de santé (FPS Public Health) or Tout savoir sur le consentement au partage des données de santé (Brussels Health Network)

3 Over the years, FarmaFlux has become an essential partner, not only for qualitative data sharing within the community pharmacy sector and for the recording and processing of health data to support the provision of new pharmaceutical care services, but also for data sharing with authorities, other healthcare providers, and patients. On the FarmaFlux website, you will find a detailed description of the various services and solutions offered to Belgian community pharmacists, as well as an overview of the many pharmaceutical care initiatives FarmaFlux has supported in pharmacies. The two parts of the agreement with NIHDI regarding the sharing of health data from pharmacies are also briefly outlined.

4 When a patient visits a pharmacy for the first time, the pharmacist can create a therapeutic relationship by scanning the patient's eID or manually entering the eID number and national registry number. This therapeutic relationship, which is established with the pharmacy, remains valid for 15 months.

BOX 2: Shared Pharmaceutical Records (SPR) in Belgium

- Belgium has just over **4,500** community pharmacies open to the public, and more than **99.5%** of them use the SPR infrastructure daily.
- The number of dispensations fluctuates around **1 million per working day**, totaling approximately 20 million per month. Data recorded in the SPR is retained for **12 months** to enable pharmacists to offer high-quality pharmaceutical care. After that period, the data remain secured in the local database of the dispensing pharmacy.
- Community pharmacists consult the SPR around **500,000 times per day**.

Source: FarmaFlux

Today, more than eight million of our fellow citizens trust their pharmacist and have a Shared Pharmaceutical Record (SPR), whose effectiveness not only improves the quality of care, but also fosters collaboration with other care providers and empowers patients to take a more active role in their treatment.

Thanks to an innovative agreement between FarmaFlux and the National Institute for Health and Disability Insurance (NIHDI), the medication data stored in the SPR's central database are now accessible beyond community pharmacies. For the past few months, patients have been able to consult online the list of all medications dispensed to them over the previous six months in Belgian community pharmacies[5]. Provided they have given their informed consent, healthcare professionals with whom they have a therapeutic relationship can also access this medication dispensing history online. This enables general practitioners, for example, to gain a clearer view of their patients' treatment adherence. This tangible example of secure data sharing highlights the vital role of interdisciplinary collaboration, reinforcing the shared commitment to placing the individual patient's needs at the center of care.

SECONDARY USE[6] IN THE MAKING: OPTIMAL SECONDARY USE OF DATA STARTS WITH CAPTURING HIGH-QUALITY PRIMARY DATA.

While the primary use of health data in pharmacies has already proven highly valuable and effective, the data recorded daily by community pharmacists also offer significant opportunities for scientific research, health policy evaluation, and population health management activities that can be implemented directly within the pharmacy setting.

With an appropriate dashboarding tool that leverages dispensing data, community pharmacists could identify risks and gaps in care among their patients – for example, a low influenza vaccination rate among the most vulnerable patients – enabling them to take proactive, targeted action to improve health outcomes. This promising approach is currently being tested as part of an integrated care project, for which a population health management dashboard displaying anonymized dispensing data for a specific patient group (e.g. patients with diabetes) has been developed[7].

A similar tool is under development to allow every community pharmacist to access their patients' vaccination status, enabling them to target awareness-raising efforts at the end of the influenza vaccination season to improve vaccination rates among their vulnerable patients. This initiative should be viewed within a broader context where healthcare providers with a therapeutic relationship to the patient are granted access to vaccination records administered by pharmacists – fostering more coordinated care and targeted public health efforts.

BEYOND THE COMMUNITY PHARMACY SETTING

As part of the innovative agreement with the NIHDI, FarmaFlux has also committed to facilitating the secondary use of health data from community pharmacies by other stakeholders, in full compliance with data protection regulations. Under this initiative, anonymized datasets will be made available to federal authorities and their network of relevant institutions (such as FPS Public Health, NIHDI, FAMHP, Sciensano, etc.) for statistical analysis and scientific research. Additionally, pseudonymized data[8] will be provided at a later stage, enabling more detailed and insightful analyses to support the evaluation and refinement of existing health policies.

5 See the press release from NIHDI - Effective from the end of June 2025, the duration has been extended from 6 to 12 months.

6 For more information about secondary use, see the article Value of secondary use of data for health care users

7 For more information about the 'Diabetes Barometer' used by the 'Zorgzaam Leuven' Integrated Care Project, see www.zorgzaamleuven.be.

8 Pseudonymisation is defined in Art. 4(5) GDPR as "*the processing of personal data in such a manner that the personal data can no longer be attributed to a specific data subject without the use of additional information, provided that such additional information is kept separately and is subject to technical and organisational measures to ensure that the personal data are not attributed to an identified or identifiable natural person.*"

Take policies addressing antibiotic resistance, for example. Antibiotic consumption levels in Belgium remain a cause for concern[9]. Timely access to accurate data on the volumes of antibiotics prescribed and dispensed for human use in outpatient settings could empower the competent authorities to better monitor, evaluate, and, when necessary, adjust the measures and initiatives aimed at promoting the responsible use of antibiotics and reducing their consumption in our country.

By enabling this relevant secondary use of health data, while upholding patient confidentiality, community pharmacists can contribute to improving health policies and, in this specific case, strengthen their role in the fight against antibiotic resistance, which remains one of the most serious threats to public health today[10]. Moreover, if necessary, such timely access to accurate data would also enable the authorities to take more targeted and rapid measures to address shortages of certain antibiotics.

BETTER HEALTH OUTCOMES

Through FarmaFlux, Belgian community pharmacists are once again taking a pioneering role – this time in enabling the responsible and secure secondary use of health data, with full respect for their patients' privacy. By unlocking the potential of anonymized dispensing data, they are helping to shape a more informed, efficient, and patient-centered healthcare system. Whether the goal is to improve the quality of care, support public health initiatives, or guide evidence-based policymaking, every secondary use of pharmacy data shares a common purpose: **to deliver better health outcomes for all.**

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9 European Centre for Disease Prevention and Control. Antimicrobial consumption in the EU/EEA (ESAC-Net) - Annual Epidemiological Report 2023. Stockholm: ECDC; 2024.

10 European Centre for Disease Prevention and Control. Antimicrobial resistance in the EU/EEA (EARS-Net) - Annual Epidemiological Report 2023. Stockholm: ECDC; 2024.