

Immunoglobulin use in France 2013 to 2022: real world data from the French claims database

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OBJECTIVES

Europe faces shortages in the supply of life saving medicines such as immunoglobulins (Ig) and this can worsen in times of crisis such as Covid-19. Knowledge of Ig supply and demand by indication at a national and regional level is vital in order to forecast future use and avoid such shortages. In France, the annual consumption of immunoglobulins (Ig) has been increasing for at least forty years. In order to secure patients' access to Ig treatment, particularly when there is no therapeutic alternative, French public authorities have put in place prioritisation protocols by indication for Ig administration. However, the health crisis due to Covid-19 has exacerbated supply tensions due to the decline in plasma collection nationally and globally. This research takes France as an example using the SNDS* in order to estimate annual Ig usage in terms of number of patients treated by Ig and the overall costs.

METHODS

We conducted a repeated cross-sectional study to describe trends in Ig use between 2013 and 2022.

An exhaustive list of the Ig products used in France from 2015 to 2022 was established. An algorithm to extract hospital and ambulatory claims information from the SNDS was developed for all patients delivered Ig within this period for the different patient pathways i.e. whether the Ig is administered to a patient in the hospital (inpatient or outpatient), or in ambulatory care. The diagnosis (ICD10), diagnostic related group (for hospitalisations), dosage, volume (kg) and type of immunoglobulin (Intravenous (IV) or Subcutaneous (SC)) were extracted for each patient-prescription. The aim was to aggregate the data by indication or family of disease according to the European Medicines Agency guidelines.

Frequencies, means and standard deviations were calculated using SAS software (version 9.4) for data management, RStudio (version 2023.03.0-daily+82.pro2) for statistical analysis and Excel (Microsoft Office Professional Plus 2016) for the presentation of the results.

RESULTS

This is an exploratory study and first results show that between 2013 and 2022, the number of patients administered Ig in France rose by 23% with between 28,000 and 35,000 patients being treated.

Since 2019, there has been a rise in the number of Ig administrations that take place during hospital outpatient consultations, possibly due to an increase in the tariff that can be charged. Figure 1 shows the evolution of the use of different settings over the ten years studied. In 2013 approximately 83% of patients were administered Ig in the acute hospital setting versus 60% in 2022.

It is currently not possible to analyse the data at the indication level since the SNDS does not currently store the ICD10 code for ambulatory administration. In addition, some ICD10 codes are non-specific and do not identify the indication or pathology leading to the Ig administration. Our preliminary results from the SNDS estimate the national Ig expenditure in 2021 in the acute hospital sector and ambulatory sector to be 434 M€ with 58% spent in the acute care hospital sector and 42% in ambulatory care (table 1). Over the ten-year period 2013 to 2022, 92% of hospital prescriptions were made in the public hospital setting and 8% in the private and private not-for-profit sector.

CONCLUSIONS

Accessing Ig dispensation data is cumbersome and impossible in many countries due to a lack of centralised databases and data protection laws. The French SNDS database stores pseudonymised healthcare information collected by public bodies. However, it is not currently possible to have good estimates of Ig use in terms of number of patients treated, volume used and cost in France. Additional data needs to be systematically collected in order to ascertain usage by indication and specialty, identify unmet need, plan for the future with the forecasted increase in plasma demand, and to enable a stable and adequate supply of medicines. To understand the full picture of Ig use, exhaustive national data at the patient level is required.

Table 1

France 2013 to 2022 - Population administered Ig per year (SNDS data)											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Age											
Mean	52	53	53	54	54	55	55	55	54	54	
Median	58	59	60	60	61	61	62	62	61	61	
Gender											
Women	48%	48%	48%	48%	49%	49%	49%	49%	48%	49%	
Men	52%	52%	52%	52%	51%	51%	51%	51%	52%	51%	
Ig administration - Intravenous (IV) or Subcutaneous (SC)											
IV	86%	84%	83%	83%	81%	78%	76%	75%	77%	77%	
SC	14%	16%	17%	17%	19%	22%	24%	25%	23%	23%	
Home hospitalisation											
Public	-	76%	79%	86%	83%	83%	81%	76%	77%	66%	
Private	-	24%	21%	14%	17%	17%	19%	24%	23%	34%	

Figure 1

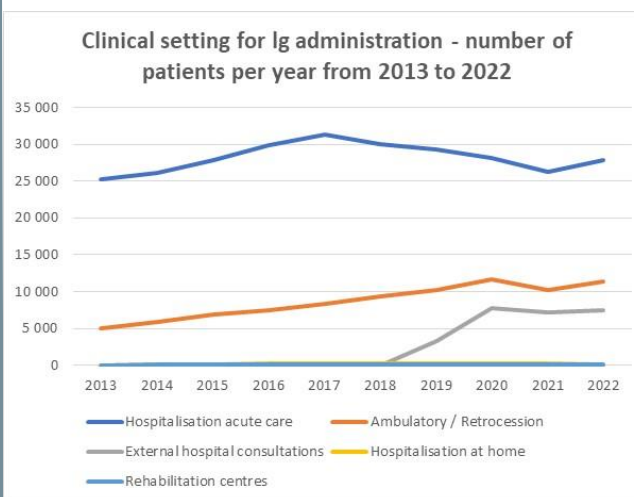


Table 2

Annual Total Expenditure (M€)										
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Ambulatory										
	67	82	93	104	118	136	151	189	181	
Hospitalisation (acute private)										
	7	9	10	11	12	12	12	12	11	
Hospitalisation (acute public)										
	208	212	233	249	261	239	239	231	242	
Total	282	303	337	364	390	386	402	432	434	

* The French hospital and ambulatory data are deposited in the National Health Data System (SNDS; Système National des Données de Santé). <https://www.snds.gouv.fr/SNDS>. The SNDS, a merger of a number of databases, is managed by the National Health Insurance Fund (CNAM; Caisse Nationale de l'Assurance Maladie).