

Epidemiology of Pulmonary Arterial Hypertension in France: a Real-World Study Using the French National Healthcare Database (SNDS)



Abstract
RWD75

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Introduction

Pulmonary arterial hypertension (PAH) is a rare and progressive disease [1]. This study aims to address the informational gap about PAH epidemiology and ambulatory care in France. **There is no recent French epidemiological data on PAH**, and a need to better understand how these patients are currently managed.

Objective

This study aimed to assess the **annual number of existing and newly diagnosed PAH patients in France**, their main characteristics, as well as their general management.

Methods

This claims cohort study used data from the **SNDS** (French national database covering healthcare reimbursement data for ~99% of residents) between 2014 and 2022. In the absence of a specific ICD-10 code for PAH in the SNDS database, a **dedicated algorithm** was developed with French specialized experts to identify the PAH population (Fig. 1).

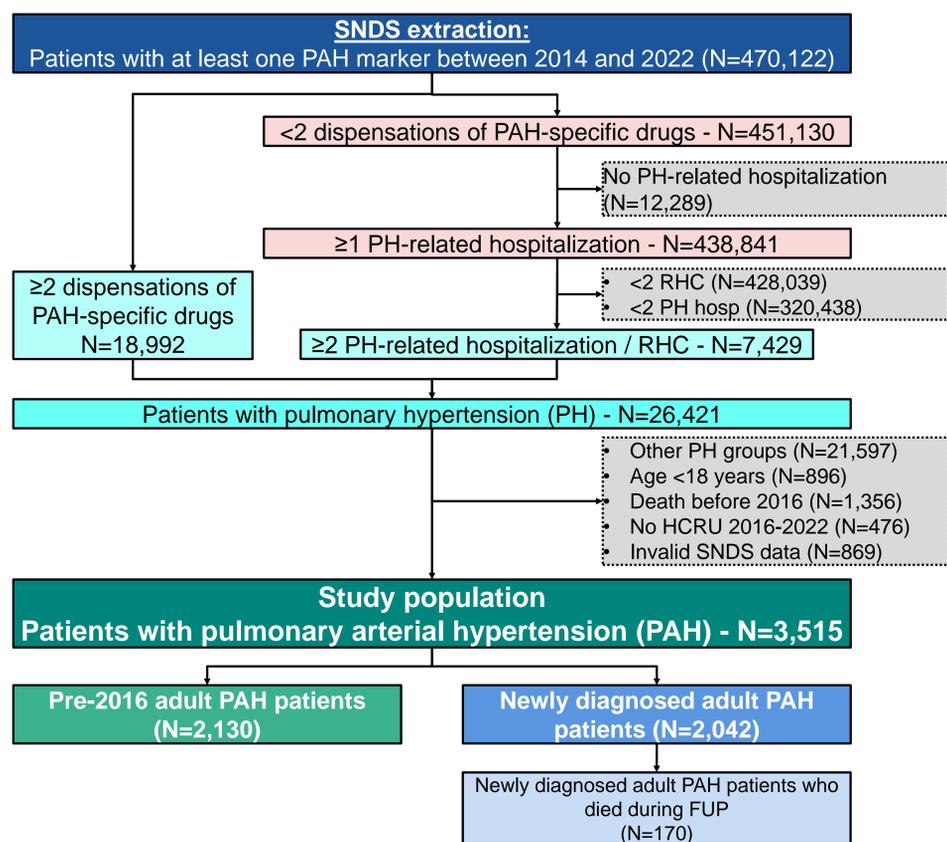
Study Population: Adults patients with PAH in France between 2016 and 2022.

Selection Criteria: ≥ 2 dispensations of PAH drugs at different dates AND/OR ≥ 2 hospitalization with main/associated/related diagnosis of PH Exclusion of patients with other PH groups (groups 2 to 5), aged < 18 years, or insufficient follow-up.

Follow-up: Patients were followed from their first PAH marker (PAH drug, PH hospitalization or right heart catheterization) until the end of follow-up or death.

Analyses: Outcomes included yearly **prevalence** and **incidence**, patient characteristics, **healthcare resource use** (medical visits, procedures, imaging exams, medical transportations) and **follow-up in reference centers**. Patient characteristics included age, sex, comorbidities, geographic area of residence and PAH-associated diseases. Healthcare resource used were described by year of follow-up among newly diagnosed patients, as well as during the last months before death among patients who died.

Fig.1 Patient disposition

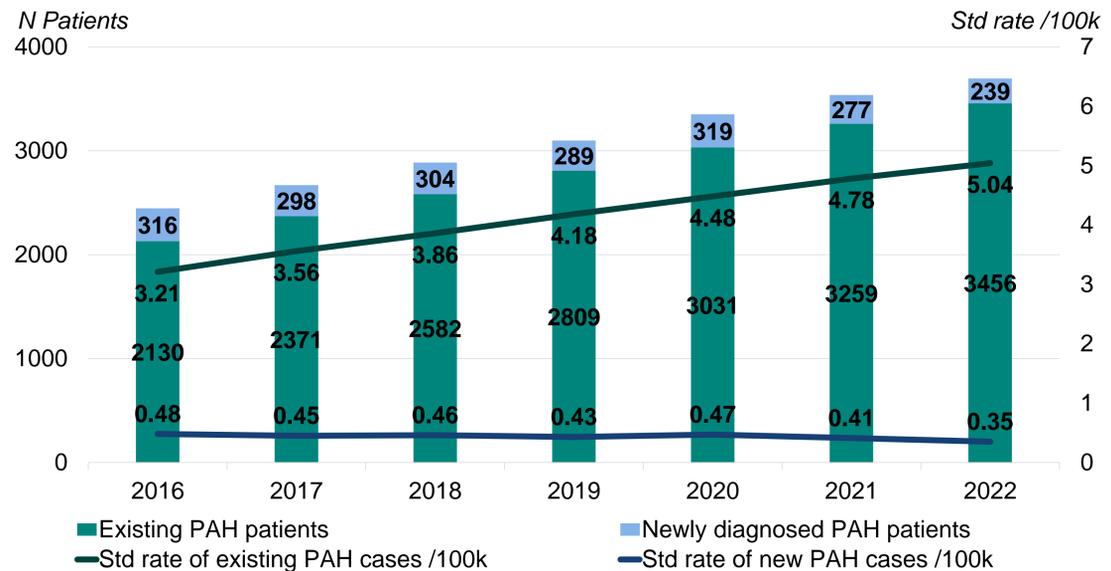


Results

Study Population: 4,172 patients were included from initial extraction of 470,122 patients. 51.1% were existing PAH cases (pre-2016) and **48.9% newly diagnosed** patients (2016-2022). Median follow-up duration was 71.5 (34.5 - 84.0) months.

Epidemiology: In 2021, **3,259 prevalent PAH patients were identified**, with 277 newly diagnosed cases annually. PAH prevalence increased from 3.21 per 100,000 in 2016 to 4.78 per 100,000 in 2021, while incidence remained stable (0.41-0.48 per 100,000) (Fig. 2). The year 2022 is not described as it was not comprehensive due to the algorithm selection requiring multiple interventions (RHC/hospitalizations).

Fig.2 Number of existing and new PAH cases, per year, between 2016-2022

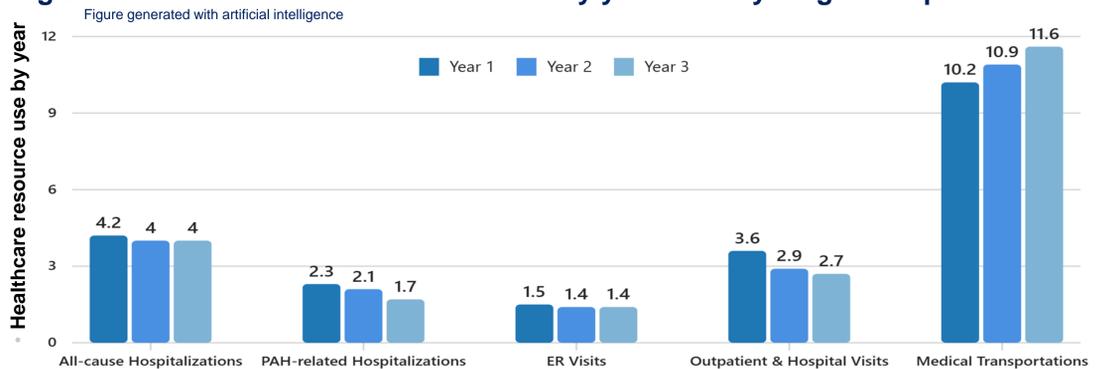


Prevalent patients' characteristics: Most of the new and existing PAH cases in 2021 were **female** (65.7% and 68.5%, respectively). Mean age (\pm SD) was patients 55.5 (± 16.3) years for new PAH cases and 52.2 (± 15.7) years for existing PAH cases in 2021. The regions with the largest proportions of patients were Auvergne-Rhône-Alpes followed by Île-de France. The proportion of patients with at least one comorbidity of interest at index date was 60% in existing PAH cases and 46% in new PAH cases in 2021, with arterial hypertension as the most frequent comorbidity. Approximately 26% and 13% of existing and new PAH cases in 2021 had one PAH-associated disease of interest at index date.

Medical management: Healthcare resource utilization (HCRU) **peaked during the first year following the index date** and gradually declined thereafter. In year 1, patients experienced an average of **4.2 all-cause hospitalizations**, decreasing to 4.0 in years 2 and 3. **PAH-related hospitalizations followed a similar trend**, from 2.3 in year 1 to 2.1 and 1.7 in years 2 and 3, respectively. Emergency room visits not resulting in hospitalization slightly declined from 1.5 in year 1 to 1.4 in subsequent years. **Outpatient and hospital visits decreased from 3.6 in year 1** to 2.9 and 2.7 in years 2 and 3. While the proportion of patients requiring medical transportation slightly decreased over time, **the average number of transports increased** from 10.2 in year 1 to 11.6 in year 3. Among the 170 patients who died during follow-up, healthcare utilization **increased in the final month of life**, with notable rises in hospitalizations, treatments, procedures, and other services (Fig. 3).

Follow-up in Specialized Centers: 61% of patients were followed in French PAH reference or competence centers.

Fig.3 Number healthcare resources used by year – newly diagnosed patients



Conclusions

This study provides a comprehensive overview of PAH epidemiology and healthcare resource utilization in France.

A clear peak in care consumption was observed during the 1st year post-index, followed by a gradual decline. These findings highlight the burden of PAH patients not exhaustively followed in reference centers and the importance of early management.

These results should be interpreted with caution, as they rely on an identification algorithm developed in the absence of a specific ICD-10 code for PAH, which may lead to potential misclassification.

Disclosures

OS: honoraria from AOP, MSD, Ferrer Int, Patientys, Janssen Cilag, UTC; MH: honoraria from MSD, Novartis, Regeneron, Ferrer Int, UTC; JB: honoraria from MSD; LCh, SB, CC: employees of stève consultants, a Cytel company, under research contract with MSD France; CH, LCa: employees of MSD France

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