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French data from the nursing module of the French-Language Peritoneal Dialysis Registry. 2022-2023 report

(Données françaises du module infirmier du Registre de Dialyse Péritonéale de Langue Française. Rapport 2022-2023.)

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Summary

The database of the French-speaking peritoneal dialysis registry (RDPLF) is made up of several specialized, interconnected modules. Since 1980, the nursing module has recorded key aspects of nursing training for over 16,000 patients. We report a descriptive analysis of the information included in the nursing module of the RDPLF over the two years 2022 and 2023, in order to avoid the bias that might have been present during the SARS Cov2 pandemic period that preceded the previous two years. To ensure a homogeneous population, we only included patients from metropolitan France. The mean age of patients was 69.5±16 years. It was higher in continuous ambulatory peritoneal dialysis (69.7 years) than in automated peritoneal dialysis (APD) (57.8 years). Autonomous patients accounted for 60% of the study population. The majority of patients knew how to adapt their fluids to their clinical condition. A modification of the information recorded in the module will be necessary to adapt it to modern training tools.

Keywords: peritoneal dialysis, registry, RDPLF report, nurse, training

Résumé

La base de données du registre de dialyse péritonéale de langue française (RDPLF) est constituée de plusieurs modules spécialisés et interconnectés. Depuis 1980, les centres du RDPLF ont enregistré les principaux aspects de la formation infirmière, pour plus de 16.000 patients, dans un module infirmier destiné aux équipes soignantes. Nous rapportons une analyse descriptive des informations incluses dans le module infirmier du RDPLF sur les deux années 2022 et 2023, afin d'éviter le biais qui aurait pu être présent pendant la période de pandémie de SRAS Cov2 qui a précédé. Afin d'avoir une population homogène, nous n'avons inclus que des patients de France métropolitaine. L'âge moyen des patients était de 69,5±16 ans. Il était plus élevé en dialyse péritonéale continue ambulatoire (69,7 ans) qu'en dialyse péritonéale automatisée (DPA) (57,8 ans). Les patients autonomes représentaient 60% de la population étudiée. La majorité des patients savaient adapter leurs fluides à leur état clinique. Une modification des informations enregistrées dans le module sera nécessaire pour l'adapter aux outils de formation modernes.

Mots-clés : dialyse péritonéale, registre, rapport RDPLF, formation infirmière



Introduction

The French-Language Peritoneal Dialysis Registry (RDPLF) is divided into two parts: one specialized in monitoring patients treated by peritoneal dialysis, the other in monitoring patients treated by home hemodialysis. The peritoneal dialysis data are divided into various interconnected files, called modules. The main module is 98% complete for all patients treated in mainland France, while the other modules are optional, with varying degrees of completeness. The precise description of this database organization has been described previously [1].

One of the optional modules created in 1980 was a nursing module specializing in patients' characteristics at the end of their training to be treated on PD at home. Of a total of 47 300 patients from Belgium, France, and Switzerland included in the database since 1980, 16 900 have had a nursing module recorded.

We report below on the main raw results of the nursing module observed in the recent years of 2022 and 2023. The aim here is not to carry out a statistical analysis on a specific subject but to provide an overview of the recent data available in order to stimulate future work by nursing teams wishing to do so. Each result is therefore presented in the form of graphs or tables that can be freely used, provided that the source is quoted, with simply a legend or a short explanatory comment.

Methods

Nurses at centers participating in the RDPLF nursing module enter a 52-question questionnaire at the time of home initiation only; there is no subsequent updating of this questionnaire. The following results therefore reflect the training and management of patients at the start of peritoneal dialysis treatment.

Selection of centers and patients: Patients aged 18 and over in mainland France who began treatment with peritoneal dialysis, namely continuous ambulatory peritoneal dialysis (CAPD) or automated peritoneal dialysis (APD), between January 1, 2022, and December 21, 2023.

As practices may vary from one country to another or from one French-speaking territory to another, for the sake of homogeneity, only patients in mainland France were studied.

Results

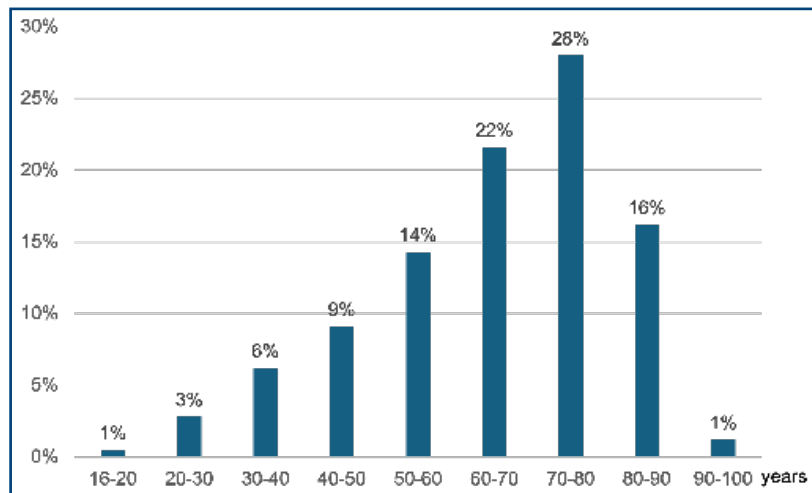
Number of patients and gender

During the study period, 2554 patients started PD treatment at 156 centers in mainland France. Nine hundred and forty patients in 66 centers were registered in the nursing module. Thus, 42% of nursing teams completed the module, and the number of patients included represented 37% of incident patients.

Sex ratio: 32% of incident patients were female and 67% male.

Age and autonomy

The patients' average age was 69.5±16 years. It was higher in CAPD (69.7 years) than in APD (57.8 years). The age pyramid is summarized in *Figure 1*, and the level of autonomy in *Table I*.



↑ *Figure 1. Age pyramid for incident PD patients (2022-2023)*

↓ *Table I. Patients' level of autonomy*

Autonomy	Numbers	Percentage
Autonomous	1460	60.4%
Assisted by a registered nurse	844	34.9%
Assisted by family	103	4.3%
Assisted (unspecified)	10	0.4%

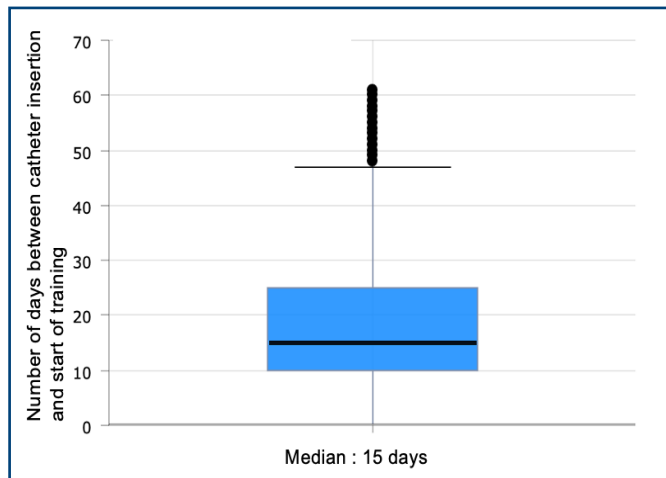
Professional or domestic activity

One question asks for a subjective description of activity during the 3 months preceding the start of dialysis. Activity is defined as either professional activity or its equivalent at home. A housewife, for example, taking care of all household activities is counted as a full-time activity.

- 26% felt they had the equivalent of a full-time job
- 7% felt they had the equivalent of a part-time job
- 67% felt they had almost no activity

Training dates and catheter implantation

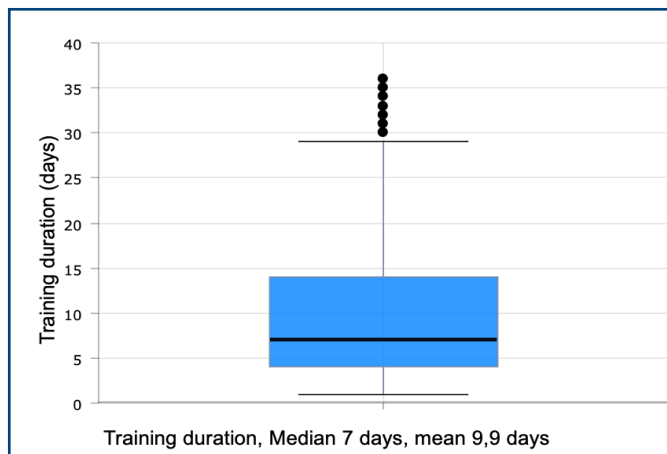
Ninety-six percent of patients started training after catheter insertion, and 4% before. When patient training was started after catheter insertion, the average time between catheter insertion and the start of training was 9.1 days, although there are wide variations (*Figure 2*).



↑ Figure 2. Waiting time between catheter implantation and start of training, when training is started after catheter implantation

Training duration

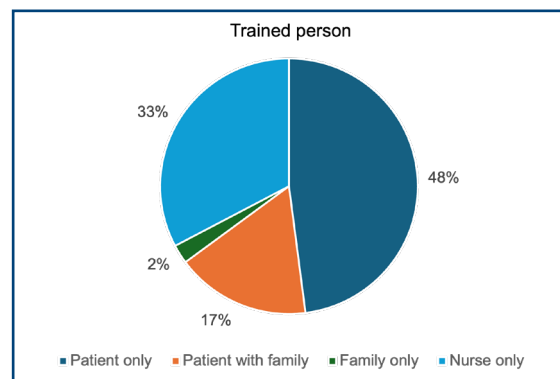
The average training time was 10 days. Some patients, however, required more than 39 days of training before starting home treatment (Figure 3).



↑ Figure 3. Durations of patient training times before being allowed to be treated at home

People trained in peritoneal dialysis

Training was given exclusively to the patient in 48% of cases; in 17% of cases, training was given to both a family member and the patient; in 2% of cases, only to a family member; and in 33%, exclusively to a nurse (Figure 4).



↑ Figure 4. Person trained to treat the patient at home

Pre-training disabilities

Patients in our care may have single or multiple disabilities, which affect their ability to become independent and explain the frequent need for third-party assistance. The relatively high average age probably explains the frequency of disabilities. Deficient visual acuity despite correction existed in 11% of cases (*Table II*).

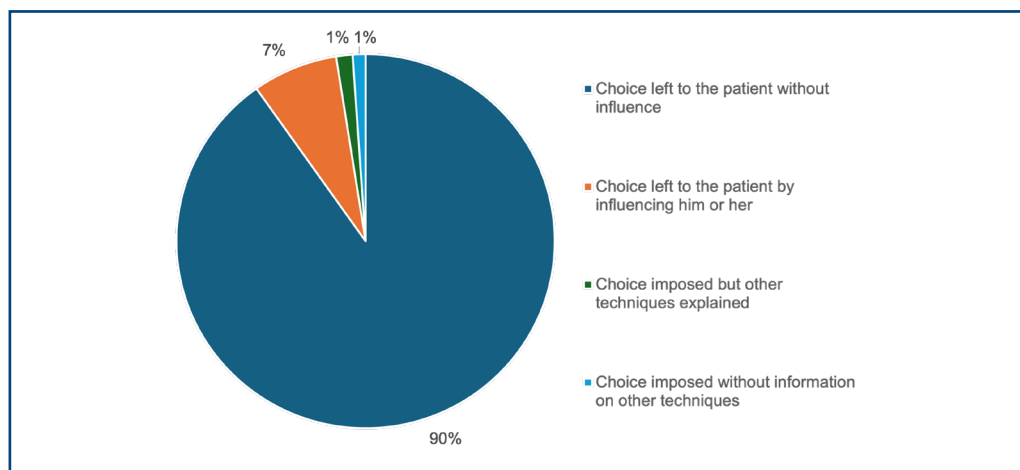
↓ *Table II. Presence of a disability at the time of training*

Handicap	Numbers	Percentage
Visual	106	11.0%
Manual	48	5.0%
Auditory	43	4.4%
Moderate intellectual	42	4.3%
Auditory and visual	29	3.0%
Severe cognitive impairment	3	0.3%

Regardless of language, 1.7% of patients had never learned to read or write.

Free choice of peritoneal dialysis

The majority of patients (90 %) had complete freedom of choice of the dialysis technique, without the team seeking to influence their decision. In a small number of cases, the method was imposed, sometimes without information about other techniques. The reasons for this are not known in the database. *Figure 5* summarizes the choice process.



↑ *Figure 5. Choice of dialysis technique for PD patients*

Patient position prior to peritoneal dialysis training

Eighty-seven percent of patients who started PD during this period were in favor of the technique, 9.5% had no opinion, and 3.4% were opposed.

Training tools

The training tools recorded by the centers in the database are the use of an education booklet,

an evaluation grid, a training booklet, and an audiovisual support. The training booklet is a comprehensive document explaining the principles of PD and its various aspects, the education notebook is used to write down what has been done at the end of each training session, and the evaluation grid is a table containing everything that has been covered in the training, with each box ticked as it goes along.

For each patient, the nurse records the different types of tools used. This is summarized in *Table III*.

↓ *Table III.*

Education notebook	66.3%
Evaluation grid	59.3%
Booklet	81.1%
Audiovisual support	53.2%

Basic knowledge assimilated by independent patients

At the time of discharge:

- 92% of patients had assimilated the theoretical concepts taught by the team
- 78% of patients knew how to adapt the types of solutions to their status
- 90% knew how to measure their own blood pressure

Recognition of peritoneal infection by autonomous patients

Ninety-nine percent of autonomous patients received explanations on how to recognize an infection in their peritoneal dialysis fluid; these explanations could be purely theoretical, or practical by showing a cloudy bag.

- In 1% of cases, the patient was not told how to recognize peritonitis.
- In 49% of cases, only theoretical explanations were given.
- In 4% of cases, only a practical explanation was given, showing a cloudy pouch.
- In 47% of cases, recognition of peritonitis was taught using both theoretical explanations and a practical example.

If antibiotics are to be added to the bags:

In certain circumstances, for example when monitoring a peritoneal infection, it may be necessary to add medication to the bags, which can sometimes be done at home. Some patients, or a family member, may be trained to do this during their training. Below are the percentages of patients for whom one type of person is trained to do this at home.

The injection technique in bags ,for autonomous patients :

- is not taught in 83% of cases
- is taught only to the patient in 13% of cases
- is taught to both the patient and a family member in 4% of cases

Discussion

As stated earlier, the aim of this work was not to carry out a specific study on the nursing module but to present the different information available in addition to the medical information recorded in the other modules of the RDPLF database. Most of the data entered concerns autonomous patients only. This module is linked to the other modules of the database, so it is possible to carry out studies grouping together a large amount of information. When a center participates in the nursing module, the information is exhaustive for all patients in that center.

In the early 1980s, France became the first country to introduce nurse-assisted peritoneal dialysis. This was made possible by a large network of private nurses who could help patients at home, with funding from the French social security system [2]. For this reason, the French PD population is relatively elderly, and patients often have more or less severe physical or intellectual handicaps, so teaching techniques have been adapted. The fact that some patients have difficulty reading and writing in no way hinders training, as shown by the 1.7% proportion of illiterate patients. This proportion is the same as in the general population [3].

The strong point of this module is that it was created at the same time as the database over 40 years ago, and the nature of the information recorded has remained stable; this enables results to be tracked over a very long period for over 16 000 patients. This stability, however, is also its weak point: more recent teaching techniques, whether using mannequins, recent software, or virtual reality, are not recorded in the database. On the other hand, only 40% of centers participate in the nursing module, and practices may be slightly different in centers that do not participate. Recording PROMs would also provide useful information and could form part of this module [4,5]. Given the high proportion of assisted peritoneal dialysis, a series of specific headings on the training of private nurses should also be added. One solution would be to define a new module, taking over the still relevant sections of the old one, deleting obsolete sections, and adding new ones in line with modern methods. This would only be possible if a group of volunteer nurses from different centers were to work on the new project. An attempt was made a few years ago, but it failed due to travel difficulties. Today's ability to organize virtual meetings would avoid this handicap.

Conclusions

The nurses' module of the RDPLF database makes it possible to add value to the training work of peritoneal dialysis nurses and is available to them to carry out future work, for which the Bulletin de la Dialyse à Domicile would enable wide distribution to both nursing and medical teams in their mother tongue, whether in French or English.

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Declaration of interest

The authors declare that they have no conflicts of interest in this work.

Financing

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Authors' contributions

Ghislaine Veniez, quality control nurse at the RDPLF and head of the nursing module: helped write the article and made corrections.

Pierre-Yves Durand, nephrologist: reviewed the article and provided suggestions and corrections.

Emmanuel Fabre, anesthesiologist and software developer: wrote the software and reviewed the article.

Christian Verger, nephrologist: helped write the article and extract the data.

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