# $m{B}$ ulletin de la $m{D}$ ialyse à $m{D}$ omicile

## Assessment of the interest of an open-access French-language journal specializing in home dialysis

(Évaluation de l'intérêt d'une revue de langue française spécialisée en dialyse à domicile)

Christian Verger<sup>1</sup>, Max Dratwa<sup>2</sup>, Pierre-YvesDurand<sup>3</sup>, Jacques Chanliau<sup>4</sup>, Eric Goffin<sup>5</sup>, Thierry Petitclerc<sup>6</sup>, Belkacem Issad<sup>7</sup>, Ghislaine Veniez<sup>1</sup>, Isabelle Vernier<sup>8</sup>, Fatouma Toure<sup>9</sup>, Cécile Courivaud<sup>10</sup>

<sup>1</sup>RDPLF (Pontoise, France), <sup>2</sup>CHU Brugmann (Bruxelles, Belgique), <sup>3</sup>ECHO (Vannes, France), <sup>4</sup>ALTIR (Vandoeuvre, France), <sup>5</sup>UCL (Bruxelles, Belgique), <sup>6</sup>AURA (Paris, France), <sup>7</sup>Pitié-Salpétrière (Paris, France), <sup>8</sup>Clinique Languedoc (Narbonne, France), <sup>9</sup>CHU (Limoges, France), <sup>10</sup>CHU (Besançon, France),

Note: ce texte est disponible en Français à la même adresse url: https://doi.org/10.25796/bdd.v3i4.58833

#### Résumé

Le Bulletin de la Dialyse à Domicile (BDD) est la revue officielle du registre de dialyse à domicile de langue française (RDPLF). Le but du présent travail était, au moyen d'un sondage anonyme en ligne, d'évaluer son appréciation auprès des néphrologues et équipes soignantes francophones. Les réponses ont confirmé l'intérêt des infirmières et néphrologues pour une revue spécialisée en dialyse à domicile et l'importance d'abroger les barrières linguistiques d'accès à la connaissance.

La plupart des revues qui possèdent un facteur d'impact élevé sont naturellement privilégiées par les auteurs, pour la diffusion internationale de leurs travaux, leur carrière et les financements de recherche qu'elles favorisent ; néanmoins beaucoup apprécient également d' utiliser un media dans leur langue maternelle, pour toucher une plus grande audience dans leur propre pays tout en bénéficiant d'une diffusion large permise par la mise en ligne bilingue.

Les lecteurs souhaitent le maintien d'une revue proche de leurs préoccupations cliniques, permettant les échanges d'expérience, de compétences et la connaissance des recommandations internationales. Ils apprécient l'accès facile et sans restriction à une revue qui leur permet l'usage de leur langue maternelle tout en conservant un lien avec la littérature scientifique en anglais.

Le BDD est à parution trimestrielle, en accès libre. Il adhère aux normes internationales d'éthique et bonnes pratiques de l'édition médicale, est indexé dans le «Directory of Open Access Journals (doaj.org)» ainsi que les bibliothèques universitaires françaises.

Cette étude démontre, pour une communication médicale efficace, l'intérêt d'une cohabitation des revues en langue anglaise et celle propre à chaque pays, dans un système garantissant libre accès et qualité.

Mots clés: dialyse à domicile, français médical, open access, dialyse péritonéale, accès ouvert

#### Summary

The Bulletin de la Dialyse à Domicile (BDD) is the official journal of the French-language home dialysis register (RDPLF). The aim of this work was, by means of an anonymous online survey, to assess its appreciation among French-speaking nephrologists and healthcare teams. The analysis of the responses to the survey highlighted a high degree of appreciation by readers for a journal specialized in home dialysis as well as the importance to abrogate language barriers to access knowledge.

Journals that have a high impact factor are naturally favored by the authors, for the international dissemination of their work, their career and the research funding they promote; however, many also appreciate using a media in the native language of their country, to reach a larger audience in their own country while keeping a wide distribution due to the bilingual free open access.

Readers wish the sustainability of a journal close to their clinical concerns, allowing the exchange of experience, skills and knowledge of international recommendations. They appreciate the easy and unrestricted access to a journal that allows them to use their own language while maintaining a link with English scientific literature.

The BDD is a quarterly open access journal. It adheres to international standards of ethics and good practice in medical publishing, and is indexed in the «Directory of Open Access Journals (doaj.org)» and numerous university libraries.

This study demonstrates, for an effective medical communication, the interest of cohabitation between medical journals in English and those using the language of each country, in a system guaranteeing free access and quality.

Key words: home-dialysis, peritoneal dialysis, French medical,open access

Coordonnées:

Christian Verger

RDPLF, Pontoise (France)

## INTRODUCTION

The Bulletin de la Dialyse à Domicile (Home Dialysis Bulletin) (BDD) is a bilingual open-access journal which was created 2 years ago to allow nurses and nephrologists in charge of patients treated by dialysis at home easy access to useful information for their daily practice. The aim of this work was to assess whether this medium corresponded to the expectations of caregivers and practitioners, whether it duplicated existing medical or nursing literature, and if the use of the French language was then of interest, as there are already many publications in English. Finally, it seemed interesting to us to assess whether the lack of indexing in PubMed represented a handicap for authors willing to publish and share their experience.

## MATERIAL AND METHODS

## 1. Content of the questionnaire

A questionnaire was prepared comprising the 19 questions summarized in Table I.

**♣** Table I: List of questions included in the survey form

#### Profession

Your primary mode of practice (university, general hospital, nonprofit clinics, private practice).

How long have you been practicing?

For your profession, do you read medical or nursing articles?

Do you feel the need for a French-language medical and nursing journal specializing in home dialysis?

During the past two years, have you published a study or been associated with a publication a medical or nursing journal in French or English?

Before this survey, did you know the RDPLF journal Bulletin de la Dialyse à Domicile (BDD), whose address is https://www.bdd.rdplf.org?

Have you read the summary of at least one BDD article?

Have you downloaded the entire PDF of an article from the BDD in order to read it in full?

Do you think that, in the future, you will log on from time to time to the BDD site to see if any article interests you?

What is your feeling about the Bulletin de la Dialyse à Domicile?

Do you think the BDD duplicates other journals?

Do you think that the BDD provides you with a service that you cannot find elsewhere?

Would you be ready to submit an article to the BDD?

Knowing that the journal will remain in the field of home dialysis only, what would you like?

Finally, what do you recommend? should we maintain or stop the journal?

What is the priority to improve?

Each of these questions was followed by several possible answers, of which only one had to be selected. The questionnaire was formatted in a completely anonymous Google form survey (the participants' names were not requested, nor were the IP addresses of the people who accessed the survey recorded); it was intended only for healthcare professionals who read medical and nursing literature in French. The Web address for responding to the survey was communicated to all nurses and nephrologists who participate to the French Language Peritoneal Dialysis and Home Hemodialysis Registry (RDPLF), as well as to a French-speaking nephrological mailing list (RENALISTE), a nurse mailing list (AlloDP), and the RDPLF Twitter account, and finally, a link to this questionnaire was put online both on the RDPLF site and on the journal site. The aim was to collect the opinions of nephrologists and nurses whatever their mode of practice and their specialty, and whether the journal was known to them or not.

Access to the questionnaire was possible for one month from August 15 to September 15, 2020.

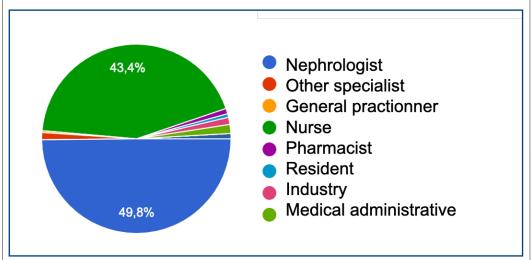
## 2. Statistical analysis

At the end of the collection period, the responses to the questionnaire were downloaded from Google's server to a text file. A purely descriptive analysis was performed on this file using R software. The graphics were designed using its ggplot2 routines.

#### **RESULTS**

## 1. Response rate and professions

We obtained 327 responses to the questionnaire, including 142 from nurses and 163 from nephrologists. Twenty-two other health professionals responded (1 general practitioner, 4 doctors from other specialties, 3 pharmacists, 2 residents, 4 sales representatives, 5 administrative staff in care establishments, 3 patients or patients' family members). The participants are summarized in Figure 1.

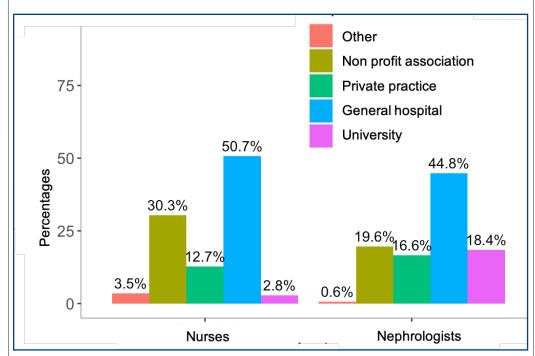


↑ Figure 1. Respondents' professions

We focused our analysis on nephrologists and nurses, as the other participants were not numerous enough to allow a representative assessment of their profession.

## 2. Institutional affiliation of respondents

The majority of respondents worked outside university hospital centers. In the university sector, nephrologists responded more often than nurses. Figure 2 summarizes the practice modalities of the nurses and nephrologists who responded.



**↑** Figure 2. Distribution of respondents by place of practice

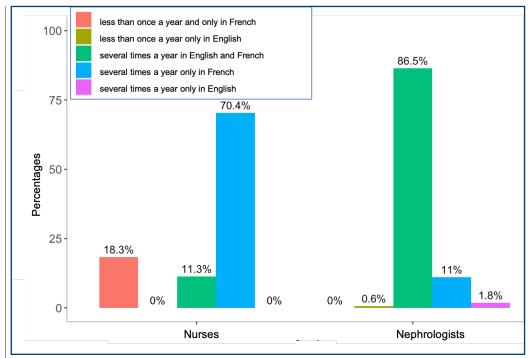
## 3. General profile of respondents

## A. Duration of professional practice

Eighty-three percent of nurses and 63% of nephrologists had more than 10 years of experience. Twelve percent of nurses and 23% of nephrologists had between 5 and 10 years of experience.

## B. Reading habits

The majority of nurses (70%) read professional articles several times a year, but only in French; this was also the case for 11% of nephrologists, but the majority (87%) of them read both French and English journals (Figure 3).



**↑** Figure 3. Reading habits of nurses and nephrologists who responded to the survey

## C. Publication habits (Table II)

Six percent of nurses had written articles in the past 2 years, all in French only. In any case, the number of nurses posting in English was very low. Among nephrologists, 52% had published at least one article in the past 2 years, of whom 18% had published only in English-language journals, 9% only in French, and 25% in both French and English-language journals, which is reflected in the fact that more respondents at university hospitals had written an article.

◆ Table II. Respondents' publications during last 2 years according to type of professional practice

Profession	Nurses		Nephrologists		
Place of practice	In university hospitals	Other institutions	In university hospitals	Other institutions	
No article published	75%	95%	13%	56%	
Published in English-language journals	0%	0%	23%	18%	
Published in French-language journals	25%	5%	20%	6%	
Published in both English and French-language journals	0%	0%	43%	20%	

## D. Respondents' opinions about the BDD

## 1) The need for a journal in French pecializing in home dialysis.

One of the survey questions was to assess whether the journal met a need for nurses and physicians. The answers are available in Table III; nurses as well as doctors confirmed their interest,

and 20% of nephrologists considered that the BDD was necessary to them, as articles available in English were often far from their clinical practice concerns.

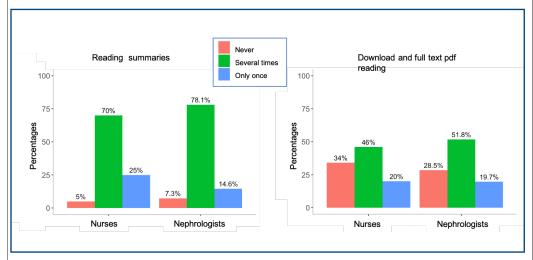
**♣** Table III. Estimate of the need for a journal in French specializing in home dialysis

Do you feel a need for a nursing or medical journal specializing in home dialysis?	Nurses	Nephrologists
Essential to me because I do not feel at ease with other languages than French.	66%	32%
Essential to me, as articles in English are often far from my quotidian clinical practice concerns.	6%	20%
I may need this type of journal.	26%	47%
I do not need this type of journal.	1%	2%

## 2) Previous knowledge of the journal among respondents

Seventy percent of nurses and 84% of nephrologists who responded were aware of the BDD. Of those who were aware of the journal before the survey, 95% of nurses and 93% of nephrologists had read at least one article summary in the journal; 66% of nurses and 71% of nephrologists had downloaded and completely read at least one article (Figure 4).

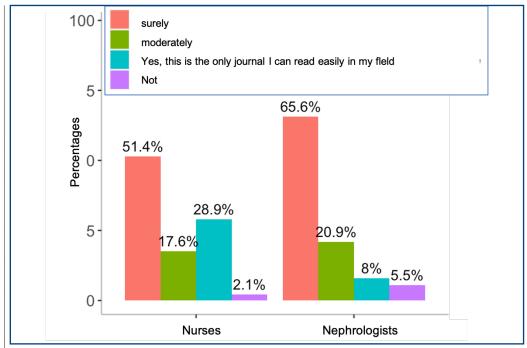
In response to the question "Do you think that, in the future, you will log on from time to time to the *BDD* site to see if any article interests you?" 80% of nurses and physicians confirmed they would.



↑ Figure 4. Percentage of nurses and nephrologists who had read article summaries or full BDD articles

## 3) Perception of the BDD

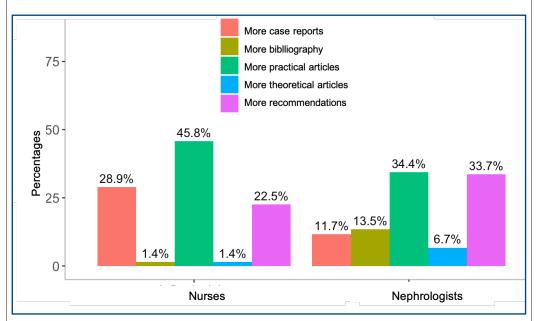
No nurses and only 1% of physicians thought the journal duplicated other existing journals. Even so, the nephrologists who thought that the BDD might be duplicating still pointed out that it has the advantage of being specialized in home dialysis. The majority of readers (98% of nurses and 94% of nephrologists) agreed that the journal provided them with a service that they could not find elsewhere, and a third of nurses considered that it was the only journal that they could easily read in their domain (Figure 5).



↑ Figure 5. Does the journal provide a service not available elsewhere?

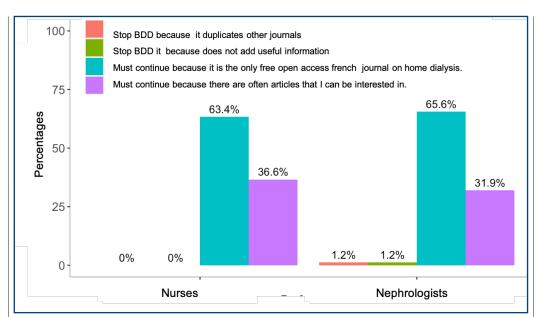
## 4) Wishes expressed

Among the possible changes in content, the publication of practical articles was the most requested (46% of nurses and 34% of doctors); in second place, physicians wished to have recommendations, while nurses were i favor of the publication of clinical cases (Figure 6).



↑ Figure 6. Evolution desired by nurses and nephrologists: What needs to be improved?

Finally, we took the risk of asking the question about the need to continue or stop the publication. One hundred per cent of nurses and 98% of nephrologists believe that the journal should absolutely be maintained. The details of the responses are summarized in Figure 7.



↑ Figure 7. Answers to the question, "Is it useful to maintain the journal?"

## 5) Willingness to publish articles in the journal

If the journal interests readers, the corollary is the need to obtain articles. In order to assess the potential of authors who could submit an article to the journal, one of the last questions was, "Would you be ready to submit an article to the BDD?" (Table IV).

A proportion of respondents said that they missed time: 7% of nurses and 17% of nephrologists. The need to be helped by a more experienced person in order to publish was cited by 12% of nurses and 15% of nephrologists. Finally, 11% of nephrologists would only consider writing in the journal if it were indexed in PubMed.

+	Table IV. Answers to	o the question	"Would you be	e ready to sul	bmit an article	to the BDD?"
---	----------------------	----------------	---------------	----------------	-----------------	--------------

Would you consider writing an article in the BDD?	Nurses' answers	Nephrologists
For sure.	3%	12%
For sure, if assisted.	12%	15%
I would like to but lack time.	7%	17%
Yes, if indexed in PubMed.	1%	11%
Maybe.	38%	35%
No.	26%	2%
No, I am not interested in writing.	13%	7%

## **DISCUSSION**

In its guide to best practices and quality criteria for reviews and journals in the French medical press, the Haute Autorité de Santé (High Health Authority) [1] recalled that the medical knowledge necessary for the practice of medicine doubles every 12 to 15 years; in practice, this means that a student at the end of his studies only has one-sixth of what he will have to know during the rest of his professional life. In France, as in most countries, all healthcare professionals

therefore have an obligation to participate in continuous professional development (CPD) on a regular basis to update their knowledge. So, continuing education organizations certify training courses for nurses as well as for doctors, in particular in the field of nephrology [2,3]. In addition to these official, chargeable training courses, health professionals have a large number of specialized journals which allow them to self-document spontaneously, in addition to formalized CPD procedures. However, the vast majority of these journals are in English, English having become the international language for scientific communication.

Professionals whose native language is English have easy access to documentation in their areas of interest. It is not the same for those who are weak in foreign languages; their libraries will select English journals with a high impact factor, whose articles are often far from the daily practice of the clinician and the nurse. This is particularly evident in the results presented in Table III, which shows that 20% of nephrologists consider that the BDD is essential because many articles in English-language journals are far from their clinical practice concerns. Thus, a journal that is close to daily clinical practice and easily accessible finds all its justification here and can help the development of home dialysis. It is remarkable that, in the responses to our survey, a significant proportion of respondents also demanded recommendations: this proves that those published in English, however numerous, are not always read. When they are in French, it is usually in journals for which they need to pay an amount that they do not always have the ability to spend. As we had already perceived this need, we decided in some of the previous issues, with the agreement of the International Society of Peritoneal Dialysis (ISPD), to translate the international recommendations [4, 5]. It is because of the difficulties of access to a number of professional journals that there has been, in recent years, a strong movement to make science accessible to all [6, 7].

Three constraints, however, reduce the possibilities of access to documentation that is useful to French-speaking clinical practitioners and nurses:

- the need to have sufficient command of English to read scientific articles
- the cost of printed journals or most online journals with paid access
- the financing needs of establishments

We develop these issues below.

## Linguistic handicap

The French are ranked 22nd out of 26 European countries for their skills in English [8]. While courses have been taught in English at universities for a few years now, and medical schools often require their students to write their theses in English, skills are often lost after graduation for those whose professional activities do not leave enough time for reading international journals. The problem remains the same in a number of other French-speaking countries. It is not surprising then that 70% of caregivers read professional journals only in their mother tongue (Figure 4) and that this is still the case for 11% of nephrologists in the field of dialysis. There is obviously, at least for those who answered the questionnaire, a place for professional journals in French. Probably other countries where English is not the native language have similar difficulties. Many French-speaking professionals, in this particular case of home dialysis, pointed out in our survey that they did not have a sufficient skills n English and were attached to the publication of the BDD for this reason. It is a limitation that the questionnaire was anonymous and did not allow us to know the nationality of the people who answered; however, it is likely that nurses and physicians in Quebec, if the questionnaire had been addressed to them specifically, would have answered

differently because of their greater familiarity with English. Nevertheless, French remains very popular: it is estimated that 102 million Internet users surf in French [9], and it seems that French, after a period of decline, is expanding again, including in the business world but also among scientists; some projections show that 750 million people could speak French by 2050 [10].

## The cost of print journals or online paid journals

The cost of journals, unless they are accessible through contribution to a scientific society, can also represent a handicap, especially since a single journal is not sufficient to cover documentation needs. In practice, only institutional libraries have the financial resources to subscribe to several specialized journals, but access is not available to all and depends on the modality of practice. Many publishers have moved in recent years to open-access publication via the Internet, according to two different economic models: either the reader is charged for access, often at high costs, in particular outside of a subscription, or the authors have to pay the editorial costs, once their article has been accepted, for amounts exceeding several hundred dollars and sometimes a thousand in the most highly rated journals. In both cases, the cost is a limit for either the reader or the author. One of the fundamental qualities of the Bulletin de la Dialyse à Domicile is that it is freely accessible for both authors and readers.

## The need of money of the health establishments

We explain the following for the youngest, who are not always informed about the economic implications. Many indices, often competitive, have been developed to assess scientific production and have an influence on the careers of young researchers. In addition, these indicators can provide additional financial resources. In France, the SIGAPS system (System of Interrogation, Management and Analysis of Scientific Publications) [11] was developed by Patrick Devos at the CHRU in Lille [12]. This system makes it possible to evaluate the scientific productivity of researchers, services and establishments. This indicator is used to determine the funding of research through that of MERRIs (Teaching, Research, Reference and Innovation Missions) and can constitute relatively large financial contributions. School management, both public and private, thus generally exert strong pressure on their staff to publish work in journals which report SIGAPS points. The number of SIGAPS points itself depends on the impact factor of the journals in which one publishes. One consequence is a race to publish as many articles as possible in the journals with the highest impact factor. Authors will rightly be inclined to publish articles of a high scientific level in the most prestigious journals only in English, the complexity of which is difficult for the non-specialist to understand. This approach is of course essential to scientific and medical progress, but results in a lack of documentation that is more oriented towards daily clinical practice for the clinician and caregivers and more easily understandable. This drawback is aggravated by the fact that only the journals indexed in the PubMed server [13] generate SIGAPS points. Practitioners and nurses are therefore poorly motivated to use a non-PubMed-indexed journal as a publication medium for their work.

The survey shows that publication activity is higher in academia, which is naturally more oriented towards research, whether in English or in French, but French retains a notable place, since 20% of nephrologists working in the university sector have published only in French during the last 2 years, to which must be added an uncalculated proportion who published in both languages.

No nurses responded that they had published in English in the past 2 years. However, a review of the literature shows some nursing publications in English-language journals during the same period; these are probably nurses who did not respond to the questionnaire.

A still young journal, like the Bulletin de la Dialyse à Domicile, is initially locked in a vicious circle: to be indexed in PubMed, one needs high-quality publications, but the authors are encouraged to publish only in journals already indexed in PubMed. To get out of this vicious circle, the journal can then rely only on altruism: finding authors who wish to devote part of their time to supporting a journal which they perceive as in the interest of their colleagues, without deriving from it immediate financial benefit or international reputation for their institution or service, or for their career, with the sole objective of sharing their knowledge with colleagues and caregivers who want easily understandable documentation.

Aims and future of the Bulletin de la Dialyse à Domicile journal (BDD)

Health authorities, social insurance companies, patient associations, and doctors emphasize the interest of developing home treatments for patients with renal insufficiency on dialysis; the reasons are at the same time economic, medical, and societal. The acquisition of medical and nursing knowledge specific to home dialysis in all its forms (peritoneal dialysis, intermittent home hemodialysis, daily home hemodialysis) is essential for the continuous improvement of the quality of care. The role of the BDD is not only to be the communication organ of the French Language Peritoneal Dialysis and Home Hemodialysis Registry (RDPLF), but also to facilitate the access of the French-speaking nephrological and caregiver community to information useful to their daily practice in the field of home dialysis: information collected and analyzed from data entered in the RDPLF, research work, clinical cases, literature reviews, and general reviews. In order to guarantee the quality of the information published, the BDD adheres to quality criteria and good publishing practices [14, 15]; this has enabled it to be indexed in the Directory of Open Access Journals [16], which guarantees the quality of open-access journals.

In addition, open access journals are constantly increasing in number: in 2019, a study showed that 31% of journal articles are open access and could reach 44% in 2025, the number of open access readings reaching 70%

Our survey shows a need for both theoretical and practical articles, as well as recommendations. The journal has become an essential source of information for many practitioners and nurses, as it is freely accessible and in French. It can provide assistance in training authors in the activity of publication, many of whom wish to be helped in formalizing their work. It bridges the gap between the French-speaking and English-speaking linguistic communities by translating articles into both languages. It is important that professionals keep in mind their duty to help clinicians and nurses in their daily practice by providing them with easily accessible documentation with high quality in terms of comprehension, economy, and language.

We could not finish this article better than with this extract from the Hippocratic oath: "... I will hold the children of my master for brothers, and, if they wish to learn medicine, I will teach it to them without pay or commitment."

#### **CONCLUSION**

This survey revealed the value of a specialized native-language peer-reviewed journal to help the development of home dialysis in all its forms in France, but maybe also in other francophone countries. The free access to the journal, for both readers and authors, makes it a working tool for clinicians and nursing staff. Its future rests on the goodwill of authors ready to devote a little of their time to provide practitioners and nurses invested in home dialysis treatments with an easily and freely accessible resource in their mother tongue while preserving a close link with the English-speaking community, which can thus also submit its work with the assurance of wide dissemination. The journal meets international ethical and best practice criteria and benefits from international indexing among so-called open-access journals. It remains necessary that it be indexed in PubMed to encourage more researchers to publish there: this will be possible in the coming months if everyone takes the initial step of publishing in the Bulletin de la Dialysis à Domicile works, clinical cases, and studies, with the main motive to help promote the journal and share their experience.

#### ACKNOWLEDGMENTS

Nous remercions les membres des comités de lecture médical et infirmier pour leur aide dans la sélection des articles et leurs avis.

#### Nurse advisory committee:

Isabelle Brayer, Hôpital Brugmann (Bruxelles, Belgique) Armelle Doutey, CHU(pédiatrie, Strasbourg) Sonia Guillouët, CHU(Caen) Sophie Mougel, CHU (Nice) Marie Christine Padernoz, RDPLF, (St Lo)

## **Medical advisory committee:**

Comité de lecture médical
Didier Aguilera, Centre Hospitalier Jacques Lacardin (Vichy)
Walid Arkouche, AURAR (Saint Gilles-La Réunion)
Julie Beaume, AVODD (Toulon)
Catherine Bresson-Vautrin, B CHU (Besançon)
Morgane Gosselin, CHU (Brest)
Céline Nodimar AURAD Aquitaine (Gradignan)
Antoine Lanot, CHU(Caen)
Guillaume Séret, ECHO (Le Mans)
Natalia Target, CHD (La Roche sur Yon)

Thanks to our secretary: Katia Guerin

## CONFLICT OF INTEREST

The authors declare no conflict of interest for this article.

### REFERENCES

- 1 https://www.has-sante.fr/upload/docs/application/pdf/2013-06/bonnes pratiques et criteres de qualite des revues et journaux de la presse medicale française.pdf
- 2 <a href="https://www.sfndt.org/professionnels/dpc">https://www.sfndt.org/professionnels/dpc</a> [consulté Octobre 2020]
- 3- https://www.afidtn.com/medias/File/Dossiers/Catalogues/CATALOGUE%202021.pdf

- 4 Dratwa M, Verger C. Créer et maintenir un accès péritonéal optimal chez les patients adultes : mise à jour 2019. Bull Dial Domic [Internet]. 16juin2019 [cité 13oct.2020];2(2):93-116. Disponible sur: <a href="https://doi.org/10.25796/bdd.v2i2.20503">https://doi.org/10.25796/bdd.v2i2.20503</a>
- 5 Dratwa M, Verger C. Recommandations de pratique de la Société internationale de dialyse péritonéale: prescrire une dialyse péritonéale de haute qualité dirigée par un objectif . Bull Dial Domic [Internet]. 9avr.2020 [cité 13oct.2020];3(1):5-18. Disponible sur: https://doi.org/10.25796/bdd.v3i1.54453
- 6 Le mouvement vers la science ouverte prend de l'ampleur. <a href="https://www.inserm.fr/actualites-et-evenements/actualites/mouvement-vers-science-ouverte-prend-ampleur">https://www.inserm.fr/actualites-et-evenements/actualites/mouvement-vers-science-ouverte-prend-ampleur</a> [consulté Octobre 2020]
- 7- Open Access: une nouvelle version du Plan S, plus réaliste et applicable. <a href="https://www.inserm.fr/actualites-et-evenements/actualites/open-access-nouvelle-version-plan-plus-realiste-et-applicable">https://www.inserm.fr/actualites-et-evenements/actualites/open-access-nouvelle-version-plan-plus-realiste-et-applicable</a> [consulté Octobre 2020]
- 8 https://www.bfmtv.com/societe/education/pourquoi-les-francais-sont-ils-si-mauvais-dans-les-langues-etrangeres AN-201709270064.html [consulté Octobre 2020]
- 9- Les 10 langues les plus demandées dans le monde des affaires. Ines Pimentel.

https://blog.amplexor.com/fr/les-10-langues-les-plus-demand%C3%A9es-dans-le-monde-des-affaires [consulté Octobre 2020]

10 - Want To Know The Language Of The Future? The Data Suggests It Could Be...French. Pascal-Emmanuel Gobry [consulté Octobre 2020]

https://www.forbes.com/sites/pascalemmanuelgobry/2014/03/21/want-to-know-the-language-of-the-future-the-data-suggests-it-could-be-french/#6d74d6703933

[consulté Octobre 2020]

- 11 http://www.sigaps.fr
- 12 Devos P. De la bibliométrie au financement : le logiciel SIGAPS. J Neuroradiol 2008;35:31-3.
- 13 https://pubmed.ncbi.nlm.nih.gov/
- 14 http://www.icmje.org/journals-following-the-icmje-recommendations/
- 15 COPE Best practice recommendations. https://publicationethics.org/
- 16 Directory of Open Acces Journals. <a href="https://doi.org">https://doi.org</a>
- 17 Heather Piwowar, Jason Priem, Richard Orr. The Future of OA: A large-scale analysis projecting Open Access publication and readership. BioRxiv. doi: https://doi.org/10.1101/795310
- $18 Gajović, S~(31~August~2017).~ \\ \text{``Diamond Open Access in the quest for interdisciplinarity and excellence''}. Croatian Medical Journal.~ \\ 58~(4):~261-262.~ \\ \text{doi:}10.3325/\text{cmj.}2017.58.261$
- 19 George Machovec. An Interview with Jeffrey Beall on Open Access Publishing Advisor Interviews/The Charleston Advisor/July 2013. doi:10.5260/chara.15.1.50

received 20020/10/12 accepted after revision 2020/10/25, published 2020/12/15

Open Access This article is licensed under a Creative Commons Attribution 4.0 International

License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <a href="http://creativecommons.org/licenses/by/4.0/">http://creativecommons.org/licenses/by/4.0/</a>.