SCIENTIFIC JOURNAL
CEREM-GO
DOI 10.37951/2675-5009.2024v5i14.151
ISSN 2675-5009
SCIENTIFIC ARTICLE -EXPERIENCE REPORT

HEMODIALYSIS AND ITS FINANCING IN BRAZIL: EXPERIENCE REPORT

CAROLINA ILA DE OLIVEIRA PERES[1]; CRISTINA ILA DE OLIVEIRA PERES[2]; AMANDA ILA DE OLIVEIRA PERES[3]; SÉRGIO MOTA DA SILVA JÚNIOR[4]

1. Doctor from the Faculty of Health Sciences of Barretos (FACISB), Resident in Clinical Medicine at UniEvangélica, Anápolis, Goiás, Brazil.
2. Nurse, Master in Health Sciences (UFU), professor at the University of Uberaba (UNIUBE) and professor at Faculdade Anhanguera, Uberlândia, Minas Gerais, Brazil.
3. Doctor from Instituto Master de Ensino Presidente Antônio Carlos (IMEPAC).
4. Preceptor at UniEvangélica, Anápolis, Goiás, Brazil.

ABSTRACT

Introduction: Chronic Kidney Disease is defined as the progressive and irreversible loss of kidney function. Data established by the Brazilian Society of Nephrology (SBN), published in 2023, showed that by 2022 there were more than 150 thousand patients undergoing dialysis treatment in Brazil. Despite its relevance, insufficient funding for Renal Replacement Therapy (RRT) has generated increasing challenges to ensure adequate care for chronic kidney patients, especially given the increased demand and complexity of treatment. **Objective:** This report seeks to highlight the impacts of underfunding on clinical practice and the experience at the James Fanstone Foundation, highlighting initiatives that can contribute to strengthening the system and showing state and municipal investments as potential solutions to improve renal health care. **Methodology:** Experience report based on experiences during the Nephrology rotation at the James Fanstone Foundation in Anápolis and in the specialty's outpatient clinics, carried out during the Internal Medicine residency. **Results:** The diagnosis of Chronic Kidney Disease can be made based on routine exams in patients with chronic diseases such as diabetes and hypertension. Soon after, together with the nephrologist, the type of treatment, type of vascular access and request for a place in the municipal dialysis clinics are defined. However, the investment from the SUS table does not cover all the expenses generated by RRT. Currently, some Brazilian states assist with funds to supplement the financing of hemodialysis, which has brought great benefits to patients. **Conclusion:** It is necessary to increase investments in hemodialysis sessions and clinics in the country, with the objective of improving care for chronic kidney patients and increasing their quality and life expectancy.

Keywords: Chronic Kidney Disease. Hemodialysis. Underfunding. Renal Replacement Therapy.

INTRODUCTION

Chronic Kidney Disease (CKD) is defined as the progressive and irreversible loss of kidney function.[1] According to data published in 2023 by the Brazilian Society of Nephrology (SBN), CKD is considered endemic in the country, affecting 1 in 10 Brazilian adults. Furthermore, the data revealed that by 2022, there were over 150,000 patients undergoing dialysis treatment in Brazil, with more than 120,000 of them receiving hemodialysis sessions through the Unified Health System (SUS). Additionally, it was estimated that over 2,000 people were on waiting lists to begin

treatment in public clinics.[2]

However, the growing number of patients in these institutions and the lack of adjustments to the SUS reimbursement table for financing hemodialysis in Brazil have led to negative consequences in the care of dialysis-dependent chronic kidney disease patients. These include a shortage of clinic vacancies, a limited number of sessions, a lack of high-flux dialyzers, insufficient facilities for hemodialysis in patients with chronic viral infections, and difficulties in accessing high-cost medications that complement the treatment.

As a result, the maintenance of this service faces significant challenges due to the financing provided by the SUS reimbursement table. Consequently, some Brazilian states have implemented financial incentives to support the sector, aiming to improve patient care and reduce losses for local governments.

This experience report aims to highlight the clinical practice at the James Fantone Foundation's hemodialysis clinic and the nephrology outpatient clinic, as well as to describe the challenges faced by chronic kidney disease patients. Additionally, it seeks to shed light on public investment in this health sector, emphasizing the initiatives of some Brazilian states in addressing the underfunding of Renal Replacement Therapy (RRT) services and the benefits generated for users.

EXPERIENCE REPORT

The proposal for integrating hemodialysis clinics and nephrology outpatient care into the Internal Medicine residency program aims to provide exposure to the routine of Renal Replacement Therapy (RRT) and deepen knowledge about Chronic Kidney Disease (CKD). The prevalence of CKD has been rising in recent years due to the declining quality of life among many Brazilians and the lack of adherence to treatments for other comorbidities, such as hypertension, cardiovascular diseases, and diabetes—these being the primary causes of CKD in Brazil.[3]

Patients within this risk group require regular medical follow-ups. The diagnosis of Chronic Kidney Disease (CKD) requires a Glomerular Filtration Rate (GFR) of less than 60 ml/min/1.73 m^2 for more than three months, or a GFR greater than 60 ml/min/1.73 m^2 accompanied by albuminuria, glomerular-origin hematuria, electrolyte imbalances, tubular diseases, abnormal renal biopsy findings, structural abnormalities on imaging studies, or a history of kidney transplantation.

Once the diagnosis is established, the disease staging is performed based on the GFR, ranging from stages 1 to 5. Additionally, in patients with stages 4 and 5, an investigation of mineral bone disorder and anemia is conducted, along with screening for viral diseases such as hepatitis B, hepatitis C, and HIV.

In collaboration with the attending nephrologist, treatment strategies and pathways for Renal Replacement Therapy (RRT) are defined, including the Shilley catheter, arteriovenous fistulas (AVF), Permcath, and peritoneal dialysis. Following this process, a request is made to the municipal Health Department for a vacancy to perform dialysis.

Most of the patients at the clinic reported receiving their diagnosis during hospital admissions caused by clinical decompensation of CKD, such as hyperkalemia, uremia, and hypervolemia. Many had not managed their comorbidities properly, or had excessively used anti-inflammatory drugs or other nephrotoxic medications, leading to irreversible kidney damage. This reality

reflects the difficulty in accessing early diagnosis and follow-up, which could have been addressed through outpatient care. It highlights the lack of access to preventive care and early diagnostic services.

After the initiation of Renal Replacement Therapy (RRT), changes occur in the patient's routine, such as work hours, dietary and fluid restrictions, care with the fistula or catheter, and continuous medication use. Many highlight the discomfort of the puncture during each hemodialysis session and the prolonged duration of the sessions. Additionally, family members describe the challenges they face, such as the need for dietary restructuring, the availability of a companion during dialysis, the high cost of medications, and the difficulty of intermunicipal transportation. Many of these services are provided by the municipality of origin, as many patients live in cities near Anápolis.

At the James Fantone Foundation clinic, patients undergo 3 hemodialysis sessions per week, each lasting 3 to 4 hours. In Brazil, the Unified Health System (SUS) provides 3 hemodialysis sessions per week, while pediatric patients receive 4 sessions during the same period.[4]

The dialysis schedule varies based on the patient's dry weight and KTV, which is a ratio that assesses the quality of hemodialysis based on the clearance volume and the dialyzer's ability/performance in removing substances from the blood (K), the dialysis time (T), and the patient's body volume (V). The nephrologist is able to prescribe an efficient hemodialysis treatment suitable for the weight the patient has gained during the interdialytic period.[5]

Another treatment modality is peritoneal dialysis, which, according to the Brazilian Society of Nephrology (2021), occurs within the patient's body, with the peritoneum acting as a substitute for renal function. It is divided into two types: Continuous Ambulatory Peritoneal Dialysis (CAPD), which, according to the Brazilian Society of Nephrology (2021), is a daily manual procedure performed by the patient or a family member, with four exchanges per day. The other type is Automated Peritoneal Dialysis (APD), also performed daily, at night, using a cycler machine that infuses and drains the fluid, performing the necessary exchanges according to the doctor's prescription.[6,7]

According to Constitutional Amendment Proposal 32/2022, the Federal Government increased the SUS table value by 10.3%, raising the cost per session to R$ 240.97. Additionally, there was an additional incentive for the maintenance of hemodialysis machines in clinics with more than 29 units. As a result, an increase in dialysis vacancies in institutions across the country and a reduction in the number of patients on waiting lists for treatment were estimated. However, this was not enough to cover the expenses.

The discrepancy between the actual costs of a hemodialysis session and the amounts reimbursed by SUS is evident. According to a survey conducted by the Brazilian Association of Dialysis and Transplant Centers (ABCDT), the cost per session in March 2020 was R$ 301.34, and in March 2021, it was R$ 314.27. At the time, the reimbursement according to the SUS table between 2020 and 2021 was R$ 194.208. With this difference in values, clinics faced high costs for supplies, limited vacancies, and difficulties maintaining equipment, charges, and taxes.

At the end of 2019, the state of Rio de Janeiro, with the support of ABCDT, implemented co-financing for dialysis. Currently, the states of Mato Grosso do Sul, Rio de Janeiro, Distrito Federal, Bahia, Mato Grosso, Santa Catarina, Sergipe, São Paulo, and Amazonas provide financial assistance to complement dialysis funding. As a result, there are reports of an

increase in the number of vacancies, improvement in the technical capacity of clinics, and better care for patients.

In Santa Catarina, the State Health Department will allocate a monthly amount of R$ 1,235.00 per patient undergoing peritoneal dialysis to cover the cost of materials and the maintenance of the multidisciplinary team providing care. Additionally, R$ 61.00 will be allocated for hemodialysis sessions, based on the reference of Ordinance MS 389 of March 13, 2014, which encouraged funding for the care of patients with Chronic Kidney Disease (CKD), though it was later revoked.[9]

In contrast, only in 2023 was Ordinance No. 813/2023 established, initiating co-financing for Renal Replacement Therapy in the state of São Paulo. As a result, the additional amount to be paid by the state is R$ 700.00 per month for each patient undergoing hemodialysis, R$1,300.00 per patient undergoing ambulatory peritoneal dialysis, and R$ 600.00 for the creation of arteriovenous fistulas.[10]

In Mato Grosso do Sul, Resolution No. 161/SES/MS of 2024 authorized financing for Renal Replacement Therapy services with an amount of R$ 45.00 per hemodialysis session, with a maximum of 14 dialysis sessions per patient per month.[11]

State co-financing has proven to be an effective strategy in some Brazilian states, enabling the expansion of available spots and improvement in service quality. However, these initiatives are still isolated and require broader national adoption to ensure the sustainability of the hemodialysis system.

CONCLUSIONS

During the two months at the hemodialysis clinic of Fundação James Fanstone in Anápolis and in the nephrology outpatient clinics, it was possible to experience the routine of dialysis patients and their families, listen to their experiences with the disease, and understand the impacts on their lives. This highlights the importance of comprehensive and humanized care, which should go beyond the technical approach and also consider the social and emotional implications of the disease.

Moreover, other points to highlight are the lack of available spots in clinics for all patients in the network and the long wait for the creation of arteriovenous fistulas through the Unified Health System (SUS).

Based on studies and research conducted by the SBN and ABCDT, it has been proven that the SUS reimbursement for hemodialysis sessions in Brazil is insufficient to cover the payment of staff, supplies, and expenses generated by each dialysis patient. With the existing state co-financing in the states of Mato Grosso do Sul, Rio de Janeiro, Federal District, Bahia, Mato Grosso, Santa Catarina, Sergipe, São Paulo, and Amazonas, improvements in patient care and quality of life for those with chronic kidney disease have been observed, along with a reduction in waiting lists for clinic vacancies.

Therefore, strengthening public financing and expanding state co-financing programs are essential measures to ensure universal and equitable access to dialysis treatment. Based on the clinical experience, the need for public policies that promote the financial sustainability of clinics and improve the quality of life of chronic kidney disease patients, in all their biopsychosocial dimensions, is emphasized.

REFERENCES

1. Romão Junior JE. Doença renal crônica: definição, epidemiologia e classificação. Braz J Nephrol. 2004 Aug;26(3 suppl 1):1-3.

2. Nerbass FB, Lima HN, Moura-Neto JA, Lugon JR, Sesso R. Censo brasileiro de diálise 2022. Braz J Nephrol. 2023 Dec 8;46(2):e20230062.

3. Brasil. Ministério da Saúde. Secretaria de Assistência à Saúde. Estudo epidemiológico brasileiro sobre terapia renal substitutiva. Brasília (DF); 2002.

4. Brasil. Ministério da Saúde. Portaria nº 1675/GM/MS de 7 de junho de 2018.

5. Breitsameter G. Cálculo de Kt/V em hemodiálise: comparação entre fórmulas. Braz J Nephrol. 2012 Mar;34(1):22-6.

6. Sociedade Brasileira de Nefrologia. Available from: https://sbn.org.br/.

7. Sociedade Brasileira de Nefrologia. No Brasil 80% de todos os tratamentos de diálise realizados no Brasil são financiados pelo Sistema Único de Saúde (SUS). 2023 Jan 23. Available from: https://sbn.org.br/medicos/sbn-acontece/noticias/no-brasil-80-de-todos-os-tratamentos-de-dialise-realizados-no-brasil-sao-financiados-pelo-sistema-unico-de-saude-sus/.

8. Datasus. SIGTAP - Sistema de Gerenciamento da Tabela de Procedimentos, Medicamentos e OPM do SUS. Available from: http://sigtap.datasus.gov.br/tabela-unificada/app/sec/inicio.jsp.

9. Secretaria de Estado da Saúde do Estado de Santa Catarina. Linha de cuidado da pessoa com doença renal crônica em santa catarina. 2021. Available from: https://www.saude.sc.gov.br/index.php/documentos/atencao-basica/cronicas/rede-de-atencao-as-condicoes-cronicas-nacc/19969-linha-de-cuidado-da-pessoa-com-doenca-renal-cronica/file.

10. Secretaria de Estado da Saúde do Estado de Mato Grosso do Sul. Governo lança incentivo a municípios que oferecem serviço de terapia renal substitutiva. 2024 Jan 23. Available from: https://www.saude.ms.gov.br/governo-lanca-incentivo-a-municipios-que-oferecem-servico-de-terapia-renal-substitutiva/.

11. Assembleia Legislativa do Estado de São Paulo. SP deve cofinanciar TRS a pacientes do SUS, afirma deputado. 2022 Nov 11. Available from: https://www.al.sp.gov.br/noticia/?id=443523.

Carolina Ila de Oliveira Peres
http://lattes.cnpq.br/3319976156493507 - https://orcid.org/0009-0003-2788-8257

Cristina Ila de Oliveira Peres
http://lattes.cnpq.br/4025594076842420 - https://orcid.org/0000-0003-0495-6766

Amanda Ila de Oliveira Peres
http://lattes.cnpq.br/1524504953402581 - https://orcid.org/0009-0000-4709-2254

Sérgio Mota da Silva Júnior
http://lattes.cnpq.br/1568462403206261 - https://orcid.org/0009-0009-1180-7946

MAILING ADDRESS

CAROLINA ILA DE OLIVEIRA PERES
Av. Universitária, s/n - Cidade Universitária, Anápolis – GO
E-mail: ilacarol18@gmail.com

Library Review - Romulo Arantes
Spell Check: Dario Alvares
Received: 11/12/24. Accepted: 12/12/24. Published in: 15/01/25.