



## Psychiatric hospitalizations and implementation of CAPS in Rio Grande do Sul

Karoline Kuczynski, Caroline Vicenzi, José Milton Alves dos Santos Júnior\*,  
Karen Jansen

Universidade Católica de Pelotas, Pelotas, RS, Brasil

### *Histórico do Artigo*

Recebido em:

18/08/2021

Aceito em:

18/11/2021

### *Keywords:*

Mental health;  
Community Mental  
Health Centers;  
hospitalization

### *Palavras-chave:*

Saúde mental; Centros  
comunitários de saúde  
mental; hospitalização.

### **ABSTRACT**

The CAPS (Psychosocial Care Centers) was created with the objective of offering care that prioritizes the rehabilitation and psychosocial reintegration of the mentally ill individual. However, psychiatric hospitalization remains a widely used resource. It are open and community health services made up of a multidisciplinary team that works from an interdisciplinary perspective and primarily provides care to people with severe and/or persistent mental distress or disorder. This study aims to evaluate the rates of psychiatric hospitalizations and the implementation of CAPS in the state of Rio Grande do Sul, from 2008 to 2018. The study has an ecological time series design. As a result, we found a 42% increase in psychiatric hospitalizations. The CAPS coefficient (parameter to assess CAPS coverage) was 0.64 per 100,000 inhabitants in 2008 and increased to 0.85 per 100,000 inhabitants (34% higher). The correlation between the CAPS coverage coefficient and the rate of psychiatric hospitalizations in RS exhibited a positive and statistically significant coefficient (R of 0.96,  $p < 0.001$ ). These data diverge from what is found in the literature, which indicates a reduction in psychiatric hospitalizations at Brazil in recent years. Thus, it is possible to conclude that there was an increase in hospitalizations and an increase in CAPS during the study period. This study can be used by managers as a warning sign and motivating better attention to the functioning of CAPS in the state of Rio Grande do Sul.

### **Internações psiquiátricas e implantação dos CAPS no Rio Grande do Sul**

### **RESUMO**

O CAPS (Centros de Atenção Psicossocial) surge com o objetivo de oferecer atendimento que prioriza a reabilitação e a reintegração psicossocial do indivíduo adoecido mentalmente. São serviços de saúde abertos e comunitários compostos por uma equipe multidisciplinar que atua em uma perspectiva interdisciplinar e atende prioritariamente pessoas com sofrimento ou transtorno mental grave e/ou persistente. No entanto, a internação psiquiátrica continua sendo um recurso muito utilizado. Este estudo tem por objetivo avaliar as taxas de internações psiquiátricas e a implantação dos CAPS no estado do Rio Grande do Sul, no período de 2008 a 2018. O estudo tem delineamento ecológico de séries temporais. Como resultado, encontramos aumento de 42% das internações psiquiátricas. O coeficiente de CAPS (parâmetro para avaliar a cobertura de CAPS) era de 0,64 por 100.000 habitantes em 2008 e cresceu para 0,85 por 100.000 habitantes (34% maior). A correlação entre o coeficiente de cobertura dos CAPS e a taxa de internações psiquiátricas no RS exibiu um coeficiente positivo e significativamente estatístico (R de 0,96,  $p < 0,001$ ). Esses dados divergem do encontrado na literatura, que aponta redução nas internações psiquiátricas nos últimos anos no Brasil. Assim, é possível concluir que houve aumento nas internações e aumento de CAPS no período estudado. Este estudo pode ser usado pelos gestores como sinal de alerta e motivando melhor atenção ao funcionamento dos CAPS no estado do Rio Grande do Sul.

## **1. Introduction**

The Brazilian Psychiatric Reform is a sociopolitical movement taking place in the public health sphere that, from the point of view of public policy management, is united in a

\* Autor correspondente: medicinamilton@gmail.com (Alves dos Santos Júnior J.M.A.)

mental health legislation that began in 1990, with the Declaration of Caracas, in which countries from Latin America undertook to promote the restructuring of psychiatric care, critically review the hegemonic and centralizing role of the psychiatric hospital, defend the civil rights, personal dignity, and human rights of users and promote their permanence in the community environment (1).

The CAPS (Psychosocial Care Centers) was created with the objective of offering care that prioritizes the rehabilitation and psychosocial reintegration of the mentally ill individual. It is born from a new perspective of care that encourages access to work and leisure, the exercise of civil rights and the strengthening of family and community ties, offering users with mental disorders multidisciplinary care (2,3).

Thus, the CAPS have emerged as the main strategy for transforming the asylum model of mental health care and for guaranteeing users' rights, since it has been constituted in the network as a "service that differs from traditional structures and is guided by the expansion of the space for social participation of the subject who suffers, by the democratization of actions, by the non-segregation of mental illness and by the valuing of subjectivity, based on multidisciplinary actions" (4). Thus, the CAPS are open and community health services made up of a multidisciplinary team that works from an interdisciplinary perspective and primarily provides care to people with severe and/or persistent mental distress or disorder (5), including those with needs arising from the use of alcohol and other drugs, in their territorial area, whether in crisis situations or in psychosocial rehabilitation processes, and are substitutes for the asylum model (6).

However, as it is an essential procedure in the configuration of care and the evolution of the main psychiatric illnesses (7), psychiatric hospitalization continues to be a widely used resource, especially for more severe disorders. However, there is still a lot of prejudice surrounding this device, and the image of hospitalization with bars is common in the popular imagination (8). In addition, little is known about them, with few studies evaluating hospitalizations and their characteristics, as well as the changes resulting from the psychiatric reform (9).

This study aims to evaluate the implementation of CAPS and the rates of psychiatric hospitalizations in the state of Rio Grande do Sul, from 2008 to 2018. The tested hypothesis was that there is an increase in the implementation of CAPS and a reduction in the rates of psychiatric hospitalizations.

## **2. Materials and methods**

This study has an ecological time series design, appropriate to observe the effects of the implementation of CAPS. The period from 2008 to 2018 was delimited by data availability. The study population was residents of the state of Rio Grande do Sul hospitalized through the SUS.

Data were obtained from the SUS Hospital Information System (SIH-SUS), the National Register of Health Establishments (CNES) and the Demographic Census. They are available on the DATASUS portal (<https://datasus.saude.gov.br/>) and the Brazilian Institute of Geography and Statistics (IBGE) (<https://www.ibge.gov.br/>). The number of CAPS, number of psychiatric hospitalizations broken down by ICD 10 as F20 to F39, number of psychiatric beds and population residing in the state of Rio Grande do Sul were collected.

Hospitalizations with main diagnosis were used, according to the International Statistical Classification of Diseases and Related Health Problems – 10th Edition (ICD-10), in groups F20 to F29 (Schizotypal Disorders and Delusional Disorders) and F30 to F39 (Disorders of Humor). For convenience and aiming to observe a specific group of illnesses, the group F10 to F19 (Mental and behavioral disorders due to the use of

psychoactive substances) was excluded.

The “CAPS coverage rate per 100 thousand inhabitants” (or CAPS Coefficient) was used, as directed by the Ministry of Health, as a parameter to assess CAPS coverage in RAPS (BRASIL, 2015). The rate of psychiatric hospitalizations was calculated as the ratio between their number and the resident population multiplied by 100,000 inhabitants.

As the data were obtained from a secondary source of official Brazilian data, such as the Ministry of Health and IBGE, this study was exempt from evaluation by the Research Ethics Committee, in accordance with the Resolution of the National Health Council of Brazil number 466 of December 2012, and the study was conducted within ethical standards.

The variables used were: population of the state of Rio Grande do Sul, psychiatric hospitalization rate, psychiatric beds, hospitalization rate for Psychotic Disorders (total, male and female), admission rate for Mood Disorders, and CAPS coverage coefficient

Microsoft Excel, version 16.0, and IBM SPSS, version 16.0 were used for data organization and statistical analysis. For the description of the variables, relative and absolute frequencies or means and standard deviation were used. To test the hypotheses, as the variables are numerical and the distribution is parametric, Pearson's Correlation was used and a significance level of 5% was adopted.

The correlation between CAPS coverage coefficient and psychiatric hospitalizations, psychiatric beds, psychiatric hospitalizations for Psychotic Disorders (total, male and female) and for Mood Disorders (total, male and female) was performed.

### 3. Results

In 10 years, the population of the state of Rio Grande do Sul (RS) grew approximately 3.8%, with 10,906,958 individuals in 2008 and totaling 11,326,540 in 2018. In this same period, the rate of psychiatric hospitalizations grew 42 %. Increasingly progressively from 2008 (where it was 106) to 2011 (133), showing a reduction in 2012 (130) and growing again in the following years, reaching the number of 151 in 2018. In 2012, the state had 2319 psychiatric beds, with little variation in this number, ending the year 2018 with 2242 beds (table 1).

The rate of admissions for psychotic disorders shows periods of increase and decrease. It grows between 2008 (44) and 2011 (48), has a reduction in 2012 (46), grows again between 2013 (50) and 2014 (53), decreases in 2015 (49), increasing in 2016 (50) and 2017 (51), ending 2018 with a rate of 49. Comparing the year 2008 with 2018, we observed an increase of approximately 11% in the rate of hospitalization for psychotic disorders.

This pattern is similar when analyzing hospitalization for psychotic disorders in males, which shows increases in the years 2008 to 2011, 2013 to 2014 and 2016 to 2017. When observing the difference in the rate between 2008 and 2018, we also found an increase of 11 %. In the female sex, we found different data. There is an increase from 2008 to 2014, a reduction in 2015, a further increase in 2016 and stabilization in the years 2017 and 2018. The growth percentage (between 2008 and 2018) was approximately 17%. We also add that throughout all the years, the rate of admissions in males was always higher than in females.

Hospitalizations for mood disorders show, in general, an increase in the range studied, 62 in 2008 and 102 in 2018 (64% increase in the rate of hospitalizations). In the years 2012 and 2018 we had a slight reduction when compared to the previous year.

We also observed a similar pattern when analyzing male hospitalizations for mood disorders, which was 21 in 2008 and reached the mark of 32 in 2017, when only the years 2012 and 2018 had lower numbers than the previous year. The increase found in the studied interval, in hospitalizations, was 47%. In the female sex, we have an increase from 2008 (40) to 2017 (71) with a slight reduction in 2018 (70). This gender showed a 75% increase in hospitalizations during the period studied. Finally, we emphasize that the

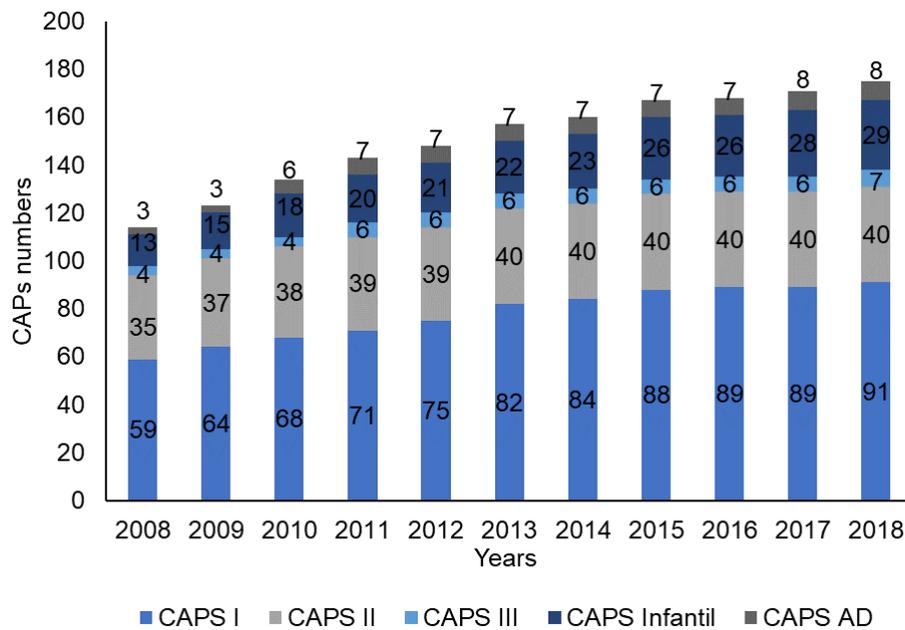
rate of hospitalizations in females was higher, in all years, than in males.

Comparing the rate of admissions between psychotic and mood disorders, we observed that admissions were 40% higher for mood disorders than for psychotic ones in 2008, being 108% higher ten years later (Table 1).

**Table 1** – Population, admission rates and CAPS coefficients in Rio Grande do Sul (2008 to 2018)

Year	Population	Psychiatric beds	Psychiatric	Psychotic Disorders			Mood Disorders			CAPS coefficients
				Total	Male	Female	Total	Male	Female	
Rio Grande do Sul										
2008	10.906.958	-	106	44	26	17	62	21	40	0,64
2009	10.965.071	-	119	46	28	18	73	24	49	0,69
2010	10.914.795	-	127	47	29	18	80	26	55	0,72
2011	10.963.317	-	133	48	29	18	85	27	58	0,74
2012	11.014.448	2319	130	46	27	18	84	26	59	0,76
2013	11.066.527	2300	137	50	30	21	87	26	61	0,81
2014	11.119.817	2318	144	53	31	22	91	28	64	0,82
2015	11.175.777	2191	141	49	29	20	92	28	64	0,84
2016	11.229.947	2184	145	50	29	21	95	30	64	0,84
2017	11.280.193	2215	154	51	31	20	103	32	71	0,84
2018	11.326.540	2242	151	49	29	20	102	31	70	0,85

The coverage coefficient of CAPS in the state of Rio Grande do Sul was calculated including all subtypes of this service (Figure 1). It was approximately 0.64 in 2008, showing progressive increases until the year 2018 (approximately 0.85), representing an increase of 34%.



**Figure 1** – Absolute number of CAPS in Rio Grande do Sul (2008 to 2018).

The correlation between the CAPS coverage coefficient and the rate of psychiatric

hospitalizations in RS exhibited a positive and statistically significant coefficient ( $R$  of 0.96,  $p < 0.001$ ). And the correlation between hospitalization rates for psychotic and mood disorders also had statistically significant coefficients ( $p < 0.001$ ) of, respectively, 0.83 and 0.95. There was no statistically significant correlation between the number of psychiatric beds and the CAPS coverage coefficient and between this rate and the rate of psychiatric hospitalizations.

Positive correlations were observed between the CAPS coverage coefficient and the rate of admission of men and women for psychotic disorders (0.72,  $p < 0.05$  and 0.85,  $p < 0.001$ ), while the correlation between the coefficient was observed. coverage of CAPS and the rate of admission for mood disorder in men and women exhibited a coefficient of 0.88 ( $p < 0.001$ ) and 0.96 ( $p < 0.001$ ), respectively (Table 2).

**Table 2** – Correlation between CAPS coefficient and psychiatric hospitalization rates in Rio Grande do Sul (2008 to 2018)

For disorders	Rio Grande do Sul	
	CAPS coefficient	p value
Male psychotics	0,71	<0,05
Female psychotics	0,85	<0,05
Total psychotics	0,83	<0,001
Male mood	0,88	<0,001
Female mood	0,96	<0,001
Total mood	0,95	<0,001
Psychiatric admissions	0,96	<0,001

#### 4. Discussion

In ten years, the rate of psychiatric hospitalizations in the state of Rio Grande do Sul grew 42%. During this same period, hospitalizations for psychotic disorders increased by 11% and for mood disorders by 64%.

In 10 years, psychiatric hospitalizations in the studied state showed a considerable increase, a different situation was observed in other states. In Minas Gerais, between 2001 and 2013, there was a considerable reduction in psychiatric hospitalizations (greater than 50%), highlighting the accelerated implementation of CAPS in this period (7). In São Paulo, between 2014 and 2019, there was also a reduction of 31.38% in the rate of admissions (10). We emphasize that in 2015 there is a change in the national policy on mental health, with cuts in investments for the CAPS, stimulating therapeutic communities. In 2017 there is a new ordinance (Ordinance 3.588/GM/MS) which reaffirmed this paradigm shift, compromising the deinstitutionalization provided for by the psychiatric reform. It is possible that this change in public policy has been reflected in an increase in psychiatric hospitalizations in the state of Rio Grande do Sul. This promoted changes in Brazilian public policy, enhancing the market logic and compromising constitutionally guaranteed rights (11).

Hospitalizations for psychotic disorders also showed an increase, especially among female patients, a situation also different from that found in the literature. In Rio de Janeiro, a study evaluating hospitalizations over a 10-year period found a higher prevalence of hospitalizations in males and a higher probability of hospitalization in this group, when compared to females (12). Another possibility is that women have less adherence to the CAPS in Rio Grande do Sul, thus increasing the possibility of

hospitalization. Researchers observed that of the patients with schizophrenia linked to the CAPS, 79.9% were male (13).

Keeping the pattern of other observations, hospitalizations for mood disorders increased by 64%. This situation was maintained when analyzing males (increase of 47%) and females (75% increase). Carteri et al. (2020) found similar data, studying psychiatric hospitalizations in Brazil, also over a 10-year period. The authors observed a higher prevalence of hospitalizations among women, but described a decrease in hospitalizations during the study period. Another study obtained similar conclusions to our results, evaluating hospitalizations in Porto Alegre-RS, in which there was an increase in hospitalizations for mood disorders, with a higher prevalence among women (15).

The Psychosocial Care Centers are characterized as community sites with the aim of providing comprehensive psychosocial care for patients with severe and persistent mental disorders who need intermediate care between primary and tertiary health care (16). It also aims to enable insertion into the social environment, in a process of deinstitutionalization and psychosocial rehabilitation of people who have been hospitalized for a long time in Psychiatric Hospitals. It is even expected that they can contribute to the reduction of psychiatric hospitalizations (17).

According to the Ministry of Health, we can define the care coverage rate, according to 100,000 inhabitants, as very good (above 0.70), good (0.50 to 0.69), regular (between 0.35 and 0.49), low (between 0.19 and 0.34) and insufficient/critical (below 0.20) (18). Rio Grande do Sul had a regular care coverage rate in 2008 (0.64), evolving to very good in 2018 (0.85). This increase in the number of CAPS is due to the incentive of the federal government, which stimulated a growth in the implementation of these services. In 2011, priority was established for the Psychosocial Care Network (RAPS), with an investment of 200 million reais, with the objective of expanding out-of-hospital coverage (6).

We found that the increase in CAPS coverage was associated with an increase in the rates of psychiatric hospitalizations. The increase in psychiatric hospitalizations in the state of Rio Grande do Sul was observed since 2001 by a study, which also points out the irregular implementation of CAPS between the regions of the state, with insufficient coverage in some locations (19). This result differs from most studies that evaluated this situation, which point to a reduction in hospitalizations after the implementation of those services (20,21). It is possible that this result is a consequence of failures in the articulation and integration between services, since the state has a significant territorial extension, with distant cities, which, in many cases, do not have any RAPS service (22). Another study points out that even today the number of CAPS and the financial resources invested are insufficient, there is not the necessary number of qualified professionals working in these services and there was a lack of education campaigns to prepare the population for living with the psychiatric patient (23). This is reaffirmed by another study, which points to the need for greater investment and articulation between services in the same state (24). Standing out, there was greater investment in the early years of psychiatric reform, with a progressive reduction over the years (25).

Stratifying the analysis, we maintain the observation of the association between the implementation of CAPS and psychiatric hospitalizations for psychotic and mood disorders. This can be explained by the recurrence of hospitalizations and the difficulty of adherence to treatment that these patients have. In this context, the low medication adherence that patients with psychotic disorders have in some studies is highlighted (26). On the other hand, another author observed good adherence to the CAPS of patients with mood disorders (27).

There were no differences in the correlation between CAPS coverage and admission rates by sex, maintaining the association between the implementation of CAPS and the

increase in admissions of men and women, both in psychotic disorders and in mood disorders.

Some studies show differences in adherence to CAPS between genders and between diagnoses. Monteiro et al. (2011) observed better adherence of male patients inserted in CAPS. Another study highlighted a higher prevalence of women linked to the CAPS, agreeing with better adherence among men (29). A study, however, pointed out a high prevalence of women inserted in the Psychosocial Care Center who have moderate or mild psychiatric conditions and who will rarely need hospitalization (30).

This study observed a slight variation in the number of psychiatric beds. The state of Rio Grande do Sul plays an important role in the Brazilian psychiatric reform, having a state law reaffirming determinations. A study that evaluated this state found a similar result (31). This scenario is the same from the rest of the country, where we find a reduction in beds (32).

It is possible that future studies, with other methodologies and data, can assess differences between hospitalizations in the capital and countryside, as well as between inland cities, pointing out new realities and contributing to a better understanding of public policy and its impact on society because this study has limitations, such as the general analysis of the entire state and the lack of analysis of the number of psychiatric beds available.

## 5. Conclusion

The results refute the hypothesis of a decrease in the rates of psychiatric hospitalizations and an increase in the implementation of CAPS. This reaffirms the need for further studies, including different designs, to deepen knowledge about this situation and better understand the impact of the Brazilian psychiatric reform. This study can be used by managers as a warning sign and motivating better attention to the functioning of CAPS in the state of Rio Grande do Sul.

## 6. References

1. Jorge MR, França JM. A Associação Brasileira de Psiquiatria e a Reforma da Assistência Psiquiátrica no Brasil. *Rev Bras Psiquiatr.* 2001; 23(1): 3–6.
2. Carneiro Tavares R, Sonia I, Gomes Sousa M. Os Centros de Atenção Psicossocial e as possibilidades de inovação das práticas em Saúde Mental. *Saúde em Debate.* 2009; 33(82): 252-263.
3. Tomasi E, Facchini LA, Piccini RX, Thumé E, Silva RA, Gonçalves H, Silva SM. Efetividade dos centros de atenção psicossocial no cuidado a portadores de sofrimento psíquico em cidade de porte médio do Sul do Brasil: uma análise estratificada. *Cad saude publica.* 2010; 26(4): 807–15.
4. Antoni C De. Os Centros de Atenção Psicossocial (CAPS): estruturação, interdisciplinaridade e intersetorialidade. *Aletheia.* 2013;(40): 87–101.
5. Borges TS, Todendi PF, Garcia EL, Krug SF. Indicadores Do Pacto Pela Saúde E a Cobertura Da Assistência Nos Centros De Atenção Psicossocial: Um Estudo Ecológico. *Arq Ciências da Saúde.* 2015; 22(4): 68-72.
6. César M de A, Coelho MP. As experiências de reforma psiquiátrica e a consolidação do movimento brasileiro: uma revisão de literatura. *Mental.* 2017; 11(20): 134–51.
7. Lara APM, Volpe FM. The evolution of the profile of psychiatric admissions via the unified health system in Minas Gerais, Brazil, 2001-2013. *Cienc e Saude Coletiva.* 2019; 24(2): 659–68.
8. Silva MG da, Daros GC, Bitencourt RM de, Iser BPM. Psychiatric hospitalizations in Brazil: exploratory and trend analysis from 2009 to 2019. *J Bras Psiquiatr.* 2021; 70(1): 39–44.
9. Zanardo GL de P, Silveira LH de C, Rocha CMF, Rocha KB. Internações e reinternações psiquiátricas em um hospital geral de Porto Alegre: Características sociodemográficas, clínicas e do uso da Rede de Atenção Psicossocial. *Rev Bras Epidemiol.* 2017; 20(3): 460–74.
10. Dias BM, Badagnan HF, Marchetti SP, Cristina A. Gastos com internações psiquiátricas no estado de São Paulo : estudo ecológico descritivo, 2014 e 2019. *Epidemiol. Serv. Saúde.* 2019; 30(2): e2020907.

11. Guimarães TAA, Rosa LCS. A remanicomialização do cuidado em saúde mental no Brasil no período de 2010-2019: análise de uma conjuntura antirreformista. *O Soc em Questão*. 2019; 21(44):111–38.
12. Pereira PK, Santos SA, Lima LA, Legay LF, Santos JF de C, Lovisi GM. Transtornos mentais e comportamentais no Sistema de Informações Hospitalares do SUS (SIH-SUS) no estado do Rio de Janeiro no período de 1999 a 2010. *Cad Saúde Coletiva*. 2012; 20(4): 482–91.
13. Silveira MS, Vargas MM, Reis FP, Silva P da. Caracterização dos usuários com esquizofrenia e outros transtornos psicóticos dos Centros de Atenção Psicossocial. *Cad saúde colet*. 2011; 19(1): 27–32.
14. Carteri RB, Oses JP, de Azevedo Cardoso T, Moreira FP, Jansen K, da Silva RA. A Closer look at the epidemiology oh schizophrenia and common mental disorders in Brazil. *Dement Neuropsychol*. 2020; 14(3): 300–7.
15. Salum GA, Leite LDS, Dos Santos SJE, Mazzini G, Baeza FLC, Spanemberg L, et al. Prevalence and trends of mental disorders requiring inpatient care in the city of Porto Alegre: A citywide study including all inpatient admissions due to mental disorders in the public system from 2013-2017. *Trends Psychiatry Psychother*. 2020; 42(1): 86–91.
16. Machado DB, Alves FJ, Rasella D, Rodrigues L, Araya R. Impact of the new mental health services on rates of suicide and hospitalisations by attempted suicide, psychiatric problems, and alcohol problems in Brazil. *Adm Policy Ment Heal Ment Heal Serv Res*. 2017; 45(3):381–91.
17. Brasil M da S. Saúde Mental No Sus: Os Centros de Atenção Psicossocial [Internet]. Brasília, DF; 2004. 1–86 p. Available from: [http://www.ccs.saude.gov.br/saude\\_mental/pdf/SM\\_Sus.pdf](http://www.ccs.saude.gov.br/saude_mental/pdf/SM_Sus.pdf)
18. BRASIL. Portaria Nº2.669, de 3 de Novembro de 2009. Estabelece as prioridades, objetivos, metas e indicadores de monitoramento e avaliação do Pacto pela Saúde [Internet]. 2009;11–4. Available from: [http://bvsms.saude.gov.br/bvs/saudelegis/gm/2009/prt2669\\_03\\_11\\_2009.html](http://bvsms.saude.gov.br/bvs/saudelegis/gm/2009/prt2669_03_11_2009.html)
19. Horta RL, da Costa JSD, Balbinot AD, Watte G, Teixeira VA, Poletto S. Hospitalizações psiquiátricas no Rio Grande do Sul de 2000 a 2011. *Rev Bras Epidemiol*. 2015; 18(4): 918–29.
20. Silva CC, Mello VRC, Ecker DD. Análise da taxa de cobertura dos Centros de Atenção Psicossocial (CAPS) no município de Porto Alegre de 2002 a 2015. *Revista Eletrônica Científica da UERGS*. 2019; 5(2): 113-127.
21. Miliuskas CR, Faus DP, Junkes L, Rodrigues RB, Junger W. Associação entre Internações psiquiátricas, cobertura de CAPS e atenção básica em regiões metropolitanas do RJ e SP, Brasil. *Cien Saude Colet*. 2019; 24(5): 1935–44.
22. Lemos de Pinho Zanardo G, Luzardo Cardozo Bianchessi D, Bones Rocha K. Dispositivos e conexões da Rede de Atenção Psicossocial (RAPS) de Porto Alegre - RS. *Estud Interdiscip em Psicol*. 2018; 9(3): 80-101.
23. Barroso SM, Silva MA. Reforma Psiquiátrica Brasileira: o caminho da desinstitucionalização pelo olhar da historiografia. *Rev da SPAGESP*. 2011; 12(1): 66–78.
24. Andreoli SB, Almeida-Filho N, Martin D, Mateus MDML, Mari JDJ. Is psychiatric reform a strategy for reducing the mental health budget? The case of Brazil. *Rev Bras Psiquiatr*. 2007; 29(1): 43–6.
25. da Rocha HA, Reis IA, da Cunha Santos MA, Melo APS, Cherchiglia ML. Psychiatric hospitalizations by the Unified Health System in Brazil between 2000 and 2014. *Rev Saude Publica*. 2021; 55: 14.
26. de Araújo LMC, Godoy EFM, Botti NCL. Situações presentes na crise de pacientes psicóticos. *Arq Bras Psicol*. 2017; 69(2): 138–52.
27. Cardoso Freire E, de Carvalho Feijó CF, de França Fonteles MM, de Sá Soares JE, de Jesus Ponte Carvalho TM. Adesão ao tratamento medicamentoso em usuários com transtorno do humor de centro de atenção psicossocial do nordeste do Brasil. *Rev Ciencias Farm Basica e Apl*. 2013; 34(4): 565–70.
28. Monteiro CF de S, Fé LCM, Moreira MAC, Albuquerque IE de M, Silva MG da, Passamani MC. Perfil sociodemográfico e adesão ao tratamento de dependentes de álcool em CAPS-ad do Piauí. *Esc Anna Nery*. 2011; 15(1): 90–5.
29. Borba LDO, Maftum MA, Vayego SA, Mantovani MDF, Vinícius J. Adesão do portador de transtorno mental à terapêutica medicamentosa no tratamento em saúde mental. *Rev Esc Enferm USP*. 2019; 52:e03365.
30. Zago AC, Tomasi E, Demori CC. Adesão ao tratamento medicamentoso dos usuários de centros de atenção psicossocial com transtornos de humor e esquizofrenia. *SMAD Rev Eletrônica Saúde Ment Álcool e Drogas*. 2015; 11(4): 224-233.
31. Gastal FL, Leite SO, Fernandes FN, Borba AT de, Kitamura CM, Binz MAR, et al. Reforma psiquiátrica no Rio Grande do Sul: uma análise histórica, econômica e do impacto da legislação de 1992. *Rev Psiquiatr do Rio Gd do Sul*. 2007; 29(1): 119–29.
32. De Almeida JMC. Mental health policy in Brazil: What's at stake in the changes currently under way. *Cad Saude Publica*. 2019; 35(11): e00129519.