

Temporomandibular Disorders and Orofacial Pain Specialty in the Chilean Public Health System: Changes 2018-2023

Especialidad de Trastornos Temporomandibulares y Dolor Orofacial en el Sistema de Salud Público Chileno: Cambios 2018-2023

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ABSTRACT: Temporomandibular disorders comprise a group of pathologies that affect the temporomandibular joints, as well as the masticatory muscles and related structures. These conditions generally cause pain and difficulty in jaw functions, increasing disability in people. Its prevalence is 6 to 9 % worldwide, in Chile it reaches 19.6 %. Providing timely and quality treatment is essential in this type of pathology, since it prevents chronification, facilitating diagnosis and treatment. For this, it is necessary to have an adequate response from the health systems to meet the demand for care from the population. To evaluate this aspect, it is necessary to know the status of the Waiting Lists, waiting times and offer of the specialty in the health system. There are few studies that investigate these aspects in the specialty of temporomandibular disorders and orofacial pain. Therefore, it is necessary to know and evaluate them, in order to plan improvements for the future. This study describes the changes that have occurred regarding the specialty of Orofacial Pain in the last 5 years in the Chilean public health system.

KEY WORDS: public health, temporomandibular disorders, orofacial pain, waiting list.

INTRODUCTION

Temporomandibular Disorders (TMD) encompass a group of painful conditions affecting the masticatory muscles, temporomandibular joint and associated structures (Yao *et al.*, 2023). TMD is the second most common chronic musculoskeletal disorder, affecting between 6 % and 9 % of adults worldwide (Macfarlane, 2001), with higher prevalence in lower socioeconomic groups (Minervini *et al.*, 2023). In Chile, the prevalence of TMD in the population of the public healthcare system (PHS), where individuals with lower economic incomes are often found, is around 19.6 % (Guerrero *et al.*, 2017). TMD is associated with several significant conditions, including headaches, anxiety, depression, lower back pain, and sleep disorders, among others (Thomas *et al.*, 2023), many of which are among the leading causes of disability-adjusted life years in Chile (Zitko & Aceituno, 2019)

and worldwide (GBD 2019 Diseases and Injuries Collaborators, 2020). Moreover, there is a direct relationship between TMD and reduced quality of life (Bitiniene *et al.*, 2018).

TMD is classified as non-GES (Explicit Health Guarantees) pathologies in the Chilean PHS, hence they are elective and not prioritized (Alarcón Rojas *et al.*, 2018). Waiting times (WT) arise as a result of the imbalance between supply and demand; if demand exceeds supply, a waiting list (WL) is formed (Viberg *et al.*, 2013). Several factors influence the existence of non-GES WLs in Chile: population aging, growth of chronic diseases, prioritization of GES pathologies, and human resources and infrastructure gap, highlighting a lack of access to these pathologies (Alarcón Rojas *et al.*, 2018). Prolonged WT hinder timely disease

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management (Alarcón Rojas *et al.*, 2018), resulting in increased pain, medication consumption, disability, and distress, decreasing individuals' quality of life (Renton, 2017). Moreover, it complicates both diagnosis and treatment of diseases, which is crucial to prevent pain chronification (Renton, 2017).

To address this and other challenges, the National Oral Health Plan 2021-2030 was developed (de Salud Pública, S, 2021). Among its many objectives, it aims to reduce the gap in dental specialists within the PHS and to design and implement a plan to close the human resources gap at the secondary level (de Salud Pública, S, 2021). To measure this deficit, a gap study was conducted in 2020 (Danke *et al.*, 2020), calculating the number of hours needed to improve specialist supply by 2025 and 2030, both nationally and by HS (HS).

Few studies analyze the aforementioned aspects over time, and those that do often do not focus on a specific specialty. The aim of this study is to analyze the changes experienced by the OFP specialty in the Chilean public healthcare system between 2018 and 2023.

MATERIAL AND METHOD

A descriptive observational study was conducted, which measured different parameters of the OFP specialty in the Chilean PHS in the years 2018, 2022, and 2023. All health services (29 HS) were included, to whom a request for information was made via the transparency law. These requests were sent to the HS on September 8th of each year. All HS provided the requested information, which was stored for further analysis and consultations. To determine the beneficiary population of the national health fund (FONASA), which is the population served in the PHS, a request was made each year through the same channel. Certified specialists in Chile were provided by the health superintendent using the same method. The list of professionals assigned to the care of OFP users in the HS was cross-referenced with the superintendent's database to verify their certification. Hours of non-certified professionals were excluded from the analysis. The obtained data were grouped and compared for analysis using Excel spreadsheets. The parameters studied were: FONASA beneficiary population, number of specialists, Waiting List (WL), Waiting Times (WT), specialist hours, Full-Time Equivalent (FTE), and FTE rate of the OFP specialty. The Full-Time Equivalent (FTE) is a unit of measurement representing the

equivalent of a specialist hired on a full-time basis or 44 hours per week (Danke *et al.*, 2020). The FTE rate represents the relationship between the supply of specialists and a population, being useful for evaluating the availability of care for a population. A higher FTE rate indicates greater availability, and vice versa (Danke *et al.*, 2020); in this study, the rate was calculated based on every 100,000 FONASA beneficiaries. Subsequently, the changes that these parameters underwent over a five-year period (2018-2023) and one year (2022-2023) were analyzed.

RESULTS

Fonasa Beneficiary Population. The FONASA beneficiary population in 2023 is 15,990,212, showing an annual growth of 3.02 % (FONASA population in 2022 was 15,521,033) and a five-year growth of 26.95 % (FONASA population in 2018 was 12,596,062). The most significant annual increases occurred in the Antofagasta (5.97 %), Iquique (4.95 %), M. Central (4.6 %), and M. Oriente (4.29 %) HSs. The most significant five-year increases occurred in the M. Central (210.21 %), Arauco (67.8 %), Antofagasta (48.26 %), and Aconcagua (48.04 %) HSs (Table I).

OFP Specialists in Chile. The number of registered OFP specialists in the health superintendent was 109, 205, and 227 for the study years (2018, 2022, and 2023). Of these, those affiliated with any HS were 20, 43, and 57 respectively, representing 18 %, 21 %, and 25 % of the total specialists for their respective years. 28 out of 29 HSs in Chile have OFP specialists. Seven HSs did not have this specialty in 2018; only Aysén HS maintains this situation in 2023.

Waiting Lists For OFP. The 2023 Waiting List (WL) for OFP nationally is 19,177, representing a 27.76 % increase over five years (2018 WL was 15,010) and a 4.33 % decrease compared to the previous year (2022 WL was 20,044). Currently, the HSs with the highest WL in OFP are Araucanía Sur (2,697), Viña del Mar (1,893), M. Suroriental (1,411), and M. Oriente (1,026). HSs with the lowest WL are Talcahuano (168), Iquique (114), Aysén (68), and Arica (31). In 2018, 7 HSs had no record of WL; currently, all have WL (Table I).

Changes 2018-2023 WL: The greatest increases were observed in the Araucanía Sur (+1,564), Viña del Mar (+1,050), M. Suroriental (+826), and Coquimbo (+824) HSs. The largest decreases were seen in the M. Norte (-1,685), M. Sur (-1,084), Concepción (-964), and Talcahuano (-549) HSs.

Table I. Variations 2018-2023 in Fonasa population, OFP hours List, and waiting times.

Health Services	FONASA beneficiary population*										OFP Hours			OFP Waiting List			OFP Waiting List Variation		Waiting Times (days)		Variation in Waiting Times 2022-2023
	2018	2022	2023	2018	2022	2023	2018	2022	2023	2018	2022	2023	2018	2022	2023	2018-2023	2022-2023	2022	2023	2022-2023	
Arica	186.409	220.985	229.049	0	0	22	-	-	31	-	-	-	-	-	-	-	-	-	198	-	
Iquique	275.952	318.82	334.591	22	44	44	2	441	114	5600.00%	-74.15%	-	565	445	-21.24%	-	565	445	-21.24%		
Antofagasta	348.643	487.749	516.888	22	22	22	-	634	724	-	14.20%	-	799	742	-7.13%	-	799	742	-7.13%		
Atacama	226.677	265.029	275.51	0	33	55	53	493	550	937.74%	11.56%	-	632	401	-36.55%	-	632	401	-36.55%		
Coquimbo	609.989	722.131	742.462	44	55	66	125	751	949	659.20%	26.36%	-	339	249	-26.55%	-	339	249	-26.55%		
Valparaíso-SA	366.48	464.024	479.558	44	44	44	298	434	264	-11.41%	-39.17%	-	320	365	14.06%	-	320	365	14.06%		
Víña del Mar- Q	771.027	904.569	935.731	55	55	66	843	2316	1893	124.56%	-18.26%	-	821	532	-35.24%	-	821	532	-35.24%		
Aconcagua	166.96	244.224	247.168	0	22	22	-	450	458	-	1.78%	-	293	347	18.43%	-	293	347	18.43%		
M. Norte	652.355	797.276	830.401	44	66	88	1729	2312	645	-62.70%	-72.10%	-	1067	509	-52.30%	-	1067	509	-52.30%		
M. Occidente	1.013.871	1.118.399	1.153.414	22	33	38	-	249	487	-	95.58%	-	302	322	6.62%	-	302	322	6.62%		
M. central	279.778	829.737	867.907	33	33	44	1102	898	886	-19.60%	-1.34%	-	529	387	-26.84%	-	529	387	-26.84%		
M. Oriente	613.447	679.927	709.086	33	66	66	580	613	1026	76.90%	67.37%	-	328	244	-25.61%	-	328	244	-25.61%		
M. Sur	1.020.677	1.061.927	1.096.111	44	88	88	2533	491	848	-66.52%	72.71%	-	-	168	-	-	-	168	-		
M. Suroriental	1.032.016	1.156.324	1.188.129	53	97	110	585	1333	1411	141.20%	5.85%	-	537	334	-37.79%	-	537	334	-37.79%		
O'Higgins	704.684	852.965	875.365	22	33	33	791	1025	1000	26.42%	-2.44%	-	589	761	29.20%	-	589	761	29.20%		
Maule	911.265	1.030.896	1.059.240	0	33	55	-	174	332	-	90.80%	-	96	192	100.00%	-	96	192	100.00%		
Ñuble	350.066	459.939	468.458	33	55	88	984	1059	630	-35.98%	-40.51%	-	599	233	-61.10%	-	599	233	-61.10%		
Concepción	433.587	553.498	567.685	22	22	22	1144	137	180	-84.27%	31.39%	-	224	139	-37.95%	-	224	139	-37.95%		
Talcahuano	298.886	316.63	322.926	22	22	22	710	151	161	-77.32%	6.62%	-	242	235	-2.89%	-	242	235	-2.89%		
Biobío	278.678	388.806	397.959	22	77	77	558	372	404	-27.60%	8.60%	-	332	190	-42.77%	-	332	190	-42.77%		
Arauco	93.963	155.877	157.674	0	22	22	-	174	305	-	75.29%	-	116	269	131.90%	-	116	269	131.90%		
Araucanía Norte	151.662	191.35	193.646	11	11	55	125	949	705	464.00%	-25.71%	-	912	348	-61.84%	-	912	348	-61.84%		
Araucanía Sur	600.696	735.033	754.549	33	66	66	1133	2451	2697	138.04%	10.04%	-	739	719	-2.71%	-	739	719	-2.71%		
Valdivia	317.516	368.247	377.138	11	22	22	830	630	746	-10.12%	18.41%	-	528	456	-13.64%	-	528	456	-13.64%		
Osorno	210.413	225.339	229.651	11	22	22	307	231	583	89.90%	152.38%	-	244	283	15.98%	-	244	283	15.98%		
Reloncaví	313.91	402.421	416.154	44	44	77	421	796	657	56.06%	-17.46%	-	652	393	-39.75%	-	652	393	-39.75%		
Chiloé	166.374	174.208	178.674	22	66	88	147	298	228	55.10%	-23.49%	-	473	444	-6.13%	-	473	444	-6.13%		
Aysén	85.091	82.227	83.089	0	0	0	10	12	68	580.00%	466.67%	-	610	134	-78.03%	-	610	134	-78.03%		
Magallanes	114.99	136.817	142.235	0	0	22	-	170	195	-	14.71%	-	852	453	-46.83%	-	852	453	-46.83%		
Total	12.596.062	15.521.033	15.990.212	669	1153	1446	15010	20044	19177	-	-	-	-	-	-	-	-	-	-	-	
National Average	-	-	-	23.07	39.76	49.86	-	-	-	-	27.76%	-	529**	347**	-12.84%	-	529**	347**	-12.84%		

*: 2018 is population registered in Primary Health Care. In the Total calculation, beneficiaries "without information" about registration in any Health Service are included. S/D: No data. This occurs due to lack of some parameters, usually in the Health Services that did not have OFP hours in any of the years studied. **: Median.

Changes 2022-2023 WL: The most significant increases were observed in the M. Oriente (+413), M. Sur (+357), Osorno (+352), and Araucanía Sur (+246) HSs. The largest decreases were seen in the Iquique (-327), Viña del Mar (-423), Ñuble (-429), and M. Norte (-1,667) HSs.

Waiting Times. There is evidence of a decrease in the national median Waiting Times (WT) from 2022 to 2023, dropping from 529 to 347 days (-34.4 %). Additionally, a decrease in WT was observed in 20 out of 29 HSs. The HSs with the lowest WT in 2023 are Biobío (190 days), M. Sur (168 days), Concepción (139 days), and Aysén (134 days). The highest WT in 2023 were observed in O'Higgins (761), Antofagasta (742), Araucanía Sur (719), and Viña del Mar (532) HSs. An analysis of changes over five years was not possible due to a lack of WT data for 2018. HSs with prolonged WT (over 2 years) in 2022 were 6: M. Norte, Araucanía Norte, Magallanes, Viña del Mar, Antofagasta, and Araucanía Sur. In 2023, there were 2: O'Higgins and Antofagasta HSs (Table I).

Changes 2022-2023 WT: The most significant increases in WT were observed in O'Higgins HS (+172), Arauco (+153), Maule (+96), and Aconcagua (+54). The largest decreases were observed in Araucanía Norte (-564 days), M. Norte (-558 days), Aysén (-476 days), and Magallanes (-399 days) HSs.

OFP Hours: The total number of OFP hours nationwide in 2023 was 1,446, showing an increase of 25.41 % compared to 2022 (1,153 hours) and 116.14 % compared to 2018 (669 hours). The average OFP hours per HS increased from 23.07 in 2018 to 39.76 in 2022 and finally to 49.86 in 2023. The 2018 hours include non-specialist OFP hours due to the unavailability of information to differentiate them. This was corrected in the 2022 (28 hours) and 2023 (54 hours) data (Table I).

Changes 2018-2023: The Concepción, Talcahuano, Valparaíso, Antofagasta, and Aysén HSs have not had an increase in their hours in the last 5 years. The HSs that increased the most were Chiloé (+66), M. Suroriental (+57), Maule (+55), and Ñuble (+55).

Changes 2022-2023: 14 HSs increased hours during this period. The HSs that increased the most were Araucanía Norte (+44), Reloncaví (+33), and Ñuble (+33).

Full-Time Equivalent (FTE): The FTE of OFP specialists nationwide was 15.2 in 2018, 26.2 in 2022, and 32.9 in 2023, reflecting a 116 % increase over 5 years. The average FTE per HS increased from 0.52 in 2018 to 0.93

in 2022 and 1.13 in 2023 (Table II). Hours of non-OFP professionals were excluded. This affects services with such hours: Maule (22), Aysén (13), Araucanía Sur (11), and Aconcagua (8).

The FTE rate of OFP per 100,000 FONASA users nationwide was 0.12 in 2018, 0.17 in 2022, and 0.21 in 2023, registering a 75 % increase over 5 years. The HSs with the lowest FTE rate in 2018 were M. Sur (0.10), Valdivia (0.08), O'Higgins (0.07), and M. Occidente (0.05). In 2023, they were Antofagasta (0.10), Concepción (0.09), O'Higgins (0.09), and M. Occidente (0.07). HSs without an OFP specialist in the respective years were excluded from this calculation. The highest FTE rate in 2018 was seen in Reloncaví (0.32), Chiloé (0.30), Valparaíso (0.27), and M. Central (0.27). In 2023, they were Chiloé (1.12), Araucanía Norte (0.65), Atacama (0.45), and Biobío (0.44) (Table II).

Changes 2018-2023: 24 out of 29 HSs saw an increase in the FTE rate from 2018 to 2023, with the largest increases seen in Araucanía Norte (+291.60 %), Chiloé (+272.46 %), and Biobío (+145.09 %). Six HSs saw a decrease in their rate, with the largest decreases in M. Central (-57.02 %), Antofagasta (-32.55 %), Concepción (-23.62 %), and Valparaíso (-23.58 %).

Changes 2022-2023: The largest increases were seen in Araucanía Norte (+369.07 %), Reloncaví (+69.23 %), Maule (62.21 %), and Atacama (60.33 %). Fourteen HSs saw a year-on-year decrease in the FTE rate from 2022 to 2023 (Table II).

DISCUSSION

The study reveals a growth in the FONASA beneficiary population from 2018 to 2023 of 26.95 %. This increase might be attributed to the data provided in 2018 corresponding to the population enrolled in primary health care (approximately 12,510,791 in August 2018) rather than the actual beneficiary population. This notion is supported by the FONASA Public Management Bulletin 2017 (FONASA, 2018), which states that the beneficiary population at the beginning of 2018 was 13,578,639. Despite being aware of this discrepancy and its potential impact on certain figures, the study relies on the data obtained through the described methodology (transparency request). This situation affects the calculated figures primarily in magnitude rather than trend. The remaining information is not affected. The observed increase in the beneficiary population in this study could be a consequence of the social and economic changes experienced by Chile and the world since 2018.

Table II. Variation 2018-2023 in Fonasa Population, OFF Hours, Full-Time Equivalent (FTE), and OFF FTE Rate.

Health Services	FONASA beneficiary population*						OFF Hours			Full-Time Equivalent (FTE)			FTE rate per 100,000 FONASA users		Variation in OFF FTE rate			
	2018	2022	2023	2018	2022	2023	2018	2022	2023	2018	2022	2023	2018	2022	2023	2018-2023	2018-2023	
Arica	186.409	220.985	229.049	0	0	22	0	0	0.5	0	0	0.22	0	0	0.22	S/D	S/D	
Iquique	275.952	318.82	334.591	22	44	44	0.5	1	1.0	0.18	0.31	0.30	0.18	0.31	0.30	64.95 %	64.95 %	
Antofagasta	348.643	487.749	516.888	22	22	22	0.5	0.5	0.5	0.14	0.1	0.10	0.14	0.1	0.10	-32.55 %	-32.55 %	
Atacama	226.677	265.029	275.51	0	33	55	0	0.75	1.3	0	0.28	0.45	0	0.28	0.45	S/D	S/D	
Coquimbo	609.989	722.131	742.462	44	55	66	1	1.25	1.5	0.16	0.17	0.20	0.16	0.17	0.20	23.24 %	23.24 %	
Valparaiso-SA	366.48	464.024	479.568	44	44	44	1	1	1.0	0.27	0.22	0.21	0.27	0.22	0.21	-23.58 %	-23.58 %	
Víña del Mar- Q	771.027	904.569	935.731	55	55	66	1.25	1.25	1.5	0.16	0.14	0.16	0.16	0.14	0.16	-1.12 %	-1.12 %	
Aconcagua	166.96	244.224	247.168	0	22	22	0	0.5	0.5	0	0.2	0.20	0	0.2	0.20	S/D	S/D	
M. Norte	652.355	797.276	830.401	44	66	88	1	1.5	2.0	0.15	0.19	0.24	0.15	0.19	0.24	57.12 %	57.12 %	
M. Occidente	1.013.871	1.118.399	1.153.414	22	33	38	0.5	0.75	0.9	0.05	0.07	0.07	0.05	0.07	0.07	51.83 %	51.83 %	
M. central	279.778	829.737	867.907	33	33	44	0.75	0.75	1.0	0.27	0.09	0.12	0.27	0.09	0.12	-57.02 %	-57.02 %	
M. Oriente	613.447	679.927	709.066	33	66	66	0.75	1.5	1.5	0.12	0.22	0.21	0.12	0.22	0.21	73.02 %	73.02 %	
M. Sur	1.020.677	1.061.927	1.096.111	44	88	88	1	2	2.0	0.1	0.19	0.18	0.1	0.19	0.18	86.24 %	86.24 %	
M. Suroriental	1.032.016	1.156.324	1.188.129	53	97	110	1.2	2.2	2.5	0.12	0.19	0.21	0.12	0.19	0.21	80.28 %	80.28 %	
O'Higgins	704.684	852.965	875.365	22	33	33	0.5	0.75	0.8	0.07	0.09	0.09	0.07	0.09	0.09	20.75 %	20.75 %	
Maule	911.265	1.030.896	1.059.240	0	33	55	0	0.75	1.3	0	0.07	0.12	0	0.07	0.12	S/D	S/D	
Ñuble	350.066	459.939	468.458	33	55	88	0.75	1.25	2.0	0.21	0.27	0.43	0.21	0.27	0.43	99.27 %	99.27 %	
Concepción	433.587	553.498	567.685	22	22	22	0.5	0.5	0.5	0.12	0.09	0.09	0.12	0.09	0.09	-23.62 %	-23.62 %	
Talcahuano	298.886	316.63	322.926	22	22	22	0.5	0.5	0.5	0.17	0.16	0.15	0.17	0.16	0.15	-7.44 %	-7.44 %	
Biobío	278.678	388.806	397.959	22	77	77	0.5	1.75	1.8	0.18	0.45	0.44	0.18	0.45	0.44	145.09 %	145.09 %	
Arauco	93.963	155.877	157.674	0	22	22	0	0.5	0.5	0	0.32	0.32	0	0.32	0.32	S/D	S/D	
Araucanía Norte	151.662	191.35	193.646	11	11	55	0.25	0.25	1.3	0.16	0.13	0.65	0.16	0.13	0.65	291.60 %	291.60 %	
Araucanía Sur	600.696	735.033	754.549	33	66	66	0.75	1.5	1.5	0.12	0.2	0.20	0.12	0.2	0.20	59.22 %	59.22 %	
Valdivia	317.516	368.247	377.138	11	22	22	0.25	0.5	0.5	0.08	0.14	0.13	0.08	0.14	0.13	68.38 %	68.38 %	
Osorno	210.413	225.339	229.661	11	22	22	0.25	0.5	0.5	0.12	0.22	0.22	0.12	0.22	0.22	83.25 %	83.25 %	
Reloncaví	313.91	402.421	416.154	44	44	77	1	1	1.8	0.32	0.25	0.42	0.32	0.25	0.42	32.00 %	32.00 %	
Chiloé	166.374	174.208	178.674	22	66	88	0.5	1.5	2.0	0.3	0.86	1.12	0.3	0.86	1.12	272.46 %	272.46 %	
Aysén	85.091	82.227	83.089	0	0	0	0	0	0	0	0	0	0	0	0	S/D	S/D	
Magallanes	114.99	136.817	142.235	0	0	22	0	0	0.5	0	0	0.35	0	0	0.35	S/D	S/D	
Total	12.596.062	15.521.033	15.990.212	669	1153	1446	15.2	26.2	32.9	-	-	-	-	-	-	-	70.26 %	70.26 %
National Average	-	-	-	23.07	39.76	49.86	0.52	0.93	1.13	0.12	0.17	0.21	0.12	0.17	0.21	-	-	-

*: 2018 represents the population enrolled in Primary Health Care. Total calculation includes beneficiaries "without information" regarding enrollment in any Health Service. S/D: No data. This occurs due to the lack of one of the parameters, usually in the Health Services that did not have OFF hours in any of the studied years.

The number of certified OFP specialists increased from 110 between 2003 and 2017 to 227 between 2018 and 2023. This increase could be attributed to the greater number of universities offering the specialty (or their enrollment capacity) (Fig. 1). The proportion of OFP specialists working in the SSP increased from 18 % to 25 %, implying that there is available and trained human resources to address the SSP gap. It is known that the dentist-to-population ratio in Chile is among the highest in the region and the world (Danke *et al.*, 2020), indicating a similar situation may occur in OFP in the future. To ascertain the current specialist-to-population ratio, it is necessary to consider: First, the population projection for 2023 according to the National Institute of Statistics is 19,960,889 people. Second, according to FONASA data (FONASA, 2023), it is estimated that 19 % of the population is outside the SSP. Lastly, assuming that specialists working in the SSP do not work in the private sector (likely underestimating the actual number of professionals in the sector). Taking all of this into account, the national proportion is calculated to be 1 TTM per 87,548 individuals; in the private sector, 1 TTM per 22,178 individuals; and in the public health system, 1 TTM per 283,654 individuals, which is nearly 13 times lower than the private sector.

The methodology of the SSP gap study (Danke *et al.*, 2020) was based on determining the national average FTE of each specialty, with the SS of Chiloé, Aysén, and Magallanes excluded from the calculation, resulting in an OFP FTE rate of 0.14. The 2025 gap was measured based on the hours needed to bring all SS to the national average, and the 2030 gap was measured based on the hours needed to equalize all SS to the best available JCE rate at the time of the study (0.29). Although the results show a significant gap, the authors

state that OFP is underrepresented. This is because, at the time of the study, TTM had a low number of hours and specialists in the SSP. Considering the undervaluation of the gap, efforts to strengthen the specialty are highlighted, as evidenced by the improvement in several parameters over the past 5 years. The number of specialist hours has more than doubled, increasing from 669 hours in 2018 to 1446 in 2023 (+116.14 %). The average hours per SS increased from 23.07 to 49.86. The average FTE increased from 0.52 to 1.13. The FTE rate grew by 75 %, with most SS experiencing an increase (24 out of 29), rising from 0.12 to 0.21 nationwide. However, this growth has not been equitable. This can be seen in the difference between the FTE rate of Chiloé and M. Occidente, the SS with the highest and lowest rates (1.12 and 0.07), the latter being 16 times lower. Additionally, care must be taken when analyzing the growth of the FTE rate, as a significant increase does not necessarily indicate that an adequate rate has been achieved. This is the case for SS Maule, which shows a 62.21 % increase in the FTE rate from 2022 to 2023, but its final rate is 0.12, one of the lowest rates currently and below the 2023 average (0.21) and equal to the 2018 average (0.12). Currently, there are 12 SS with an FTE rate below the national average, and even 7 SS are below the 0.14 target set for the 2025 gap (Antofagasta, M. Occidente, M. central, O'Higgins, Maule, Concepción, Valdivia, and Aysén). M. Occidente and O'Higgins have remained the worst FTE rates since 2018.

Despite the overall upward trend, there are 6 SS whose FTE rate is declining. This occurs in two situations. The first occurs in SS where, despite an increase in hours, it is proportionally lower than the population growth. This scenario is represented by M. Central, which increased its hours from 33 to 44 (+33 %) while simultaneously experiencing a user population growth of 210.2 %, resulting in the most significant decrease in FTE rate nationwide at -57.02 % (from 0.27 in 2018 to 0.12 in 2023). The other SS in this situation is Viña del Mar. In the second scenario, there are 4 SS that have maintained their hours despite the population increase, negatively affecting their FTE rate (Antofagasta -32.55 %; Valparaíso -23.58 %; Concepción -23.62 %; Talcahuano -7.44 %).

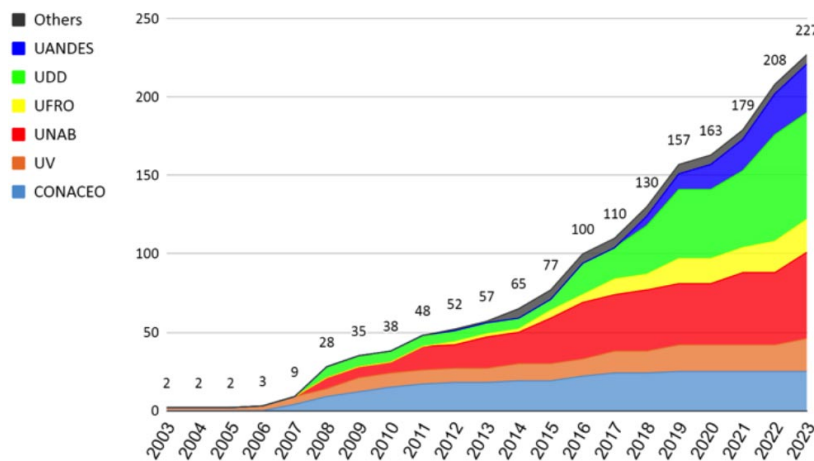


Fig. OFP Specialists by certifying entity 2003-2023.

Despite the noticeable increase in the specialty offering in the PHS (+116.14 % of hours), there is evidence of a 27.76

% increase in the national WL. This could be explained by factors such as the increase in the beneficiary population and thus the increase in demand. It could also be due to the implementation of the national OFP protocol in 2019 (de Salud Pública, S 2021), which led to all HS having local reference protocols and consequently expressing demand for the specialty, thus generating more representative WLs. It should be noted that in the 2022-2023 period, there is a decrease of 4.33 % in the National WL. This could be due to both the significant increase in OFP hours and WL management. Of the 4 HSs with the highest WL as of 2018, only HS Araucanía Sur remains in that condition until 2023. The other 3 HSs (Concepción, M. Norte, and M. Sur) noticed a significant decrease in their OFP WLs (-964, -1084, -1685), while their specialist hours remained the same or increased (+0, +44, +44). The 4 HSs with the highest WL by 2023 (Viña del Mar, M. Oriente, M. Surorientado, and Araucanía Sur) have increased their OFP hours in the last 5 years (+20 %, 100 %, 103 %, and 137 %). The largest percentage decreases in WL occurred in 4 services, of which in 2 HSs (M Norte. and M. Sur), their provision of OFP hours was doubled; However, in the other 2 services (Concepción and Talcahuano), these decreases (-84 % and -77 %) occurred without an increase in OFP hours. WTs had a significant improvement, with 20 of the 29 HSs reducing their waiting times compared to 2022, and the HSs with a prolonged WL (greater than 2 years) also dropped from 6 to only 2. The median WT dropped from 529 to 347 days in just one year. The largest decreases were seen in several of the HSs that had prolonged WL as of 2022, and these did not necessarily depend on an increase in supply.

It can be seen that a decrease in the FTE rate does not necessarily lead to an increase in the WL. This is reflected in the decrease in WL in 3 of the 6 HSs with a decreasing rate. The situation of Concepción and Talcahuano HSs is especially noteworthy, which despite experiencing a drop in the FTE rate, due to the increase in population without the increase in hours, have had a decrease in their WL of 964 and 549 respectively (-84 % and -77 %), being the HSs with the highest percentage decrease in WL at the national level. The other services that have a similar decrease are South M. and North M. HSs (-66.52 % and -62.70 %), in which cases both doubled the number of specialist hours. All these situations of improving indices without increasing supply make it clear that there are other strategies to face WL and WTs. Due to all of the above, the question arises regarding what strategies the HSs are taking to face this problem. Unfortunately, with the data collected by this study, it is not possible to answer this question precisely.

In Chile, WL and WTs begin to be measured from the generation of the reference from the establishment of origin, generally in primary care. Withdrawal from the WL is carried out for several reasons, the most important being the care provided by the specialist, but there are other causes of withdrawal such as non-relevance, change in diagnosis, care outside the system, repeated absences, among others. It is for these reasons that WLs can be addressed through their management. One of these strategies is to evaluate large numbers of patients in WL, thus allowing the reevaluation of several of these parameters. This is very useful regarding updating data and disease status, but at the same time, it carries the risk of leaving patients waiting for their treatment in the specialty. This type of strategy is logical since they manage to update the WL but at the same time generate WL for treatments. This last WL is not currently measured in Chile, which is done in other countries such as England or Canada (Viberg *et al.*, 2013). To respond to this, it is necessary to have the adequate capacity of professionals in health systems. Another strategy to use is strengthening the role of primary care. For this, staff training is necessary, with the objective of improving resolution, opportunity for treatment, and referral. Achieving this would improve the relevance of the WL, leading to them being composed of people who effectively need to be evaluated and/or treated by specialists. Another important strategy to take into account is the role that telemedicine can play since it can increase coverage, increase the efficiency of the use of HS resources, in many cases avoid transportation costs for patients, improving the quality of care and quality of life of patients (de Salud Pública, S 2021).

Traditionally, it is thought that the demand and needs of the population for a health problem are reflected in the WL. Without neglecting their importance, it must be taken into account that they are dynamic figures and do not have information related to the promptness of treatment, making it difficult to interpret waiting statistics in relation to the need for access to health care (Godden & Pollock, 2009). Therefore, it is important to take into account the WTs and the availability of specialists (FTE rate). We believe that the direction adopted in the 2021-2030 oral health plan is correct, seeking to equalize the specialist offer rather than operating through WL figures. That is, it is necessary to take into account the underestimation of the deficit expressed in the gap study (Danke *et al.*, 2020).

In the future, it will be necessary to remain attentive to the changes in WL, WTs, and FTE rates of the HSs, in addition to having specialists in all of them.

Know the experiences of HSs that have improved the efficiency of their resources (especially those with lower supply and good WT and WL figures) and evaluate their implementation to other HSs. It is necessary to analyze the incorporation of the measurement of WL or WT of treatment. Study integration strategies with other medical specialties, such as neurology or otorhinolaryngology. Evaluate the degrees of implementation of the OFP specialty in sleep or chronic non-oncological pain units, and even in emergency protocols (such as in dentoalveolar trauma with blows to the jaw). Evaluate the possible technologies to implement to improve the efficiency of diagnoses or treatment in the specialty, such as the incorporation of ultrasound or integration into the digital flow. Take into account training plans for primary care and even counseling, seeking to improve their resolution capacity and improve the relevance of the reference. In conclusion, the efforts being made at the national level to improve the health gap regarding the OFP specialty are evident. Great progress has been made in the last 5 years, reflected in the improvement of the measured figures. We can only wait to see if the strategies outlined for the future are reflected in better care and quality of life for people affected by these pathologies. It is the duty of all levels, particularly OFP specialists, to be vigilant of how these processes evolve.

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ABARZÚA, P.; VILLEGAS, M. & LÓPEZ, J. Especialidad de Trastornos Temporomandibulares y Dolor Orofacial en el Sistema de Salud Público Chileno: Cambios 2018-2023. *Int. J. Odontostomat.*, 18(3):343-350, 2024.

RESUMEN: Los trastornos temporomandibulares son un conjunto de patologías que afectan las articulaciones temporomandibulares, así como a los músculos masticatorios y estructuras anexas. Estas cursan generalmente con dolor, pueden producir dificultad en las funciones mandibulares y la calidad de vida. Su prevalencia es del 6 al 9 % a nivel mundial, mientras que en Chile llega al 19.6 %. Proporcionar un tratamiento oportuno y de calidad es esencial para prevenir la cronicación de estas patologías, facilitando tanto el diagnóstico como el tratamiento. Por ello, es necesario contar con una adecuada respuesta desde los sistemas de salud para hacer frente a la demanda de atención por parte de la población. Para evaluar esto, se requiere conocer el estado de las listas de espera, los tiempos de espera y la oferta de la especialidad en el sistema de salud. Actualmente, hay pocos estudios que investiguen estos aspectos en la especialidad de trastornos temporomandibulares y dolor orofacial. Este estudio describe los cambios que han ocurrido respecto a la especialidad de trastornos temporomandibulares y dolor orofacial en los últimos 5 años en el sistema de salud público chileno.

PALABRAS CLAVE: salud pública, trastornos temporomandibulares, dolor orofacial, lista de espera.

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