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Original Article

Speech-Language Therapy Staffing for Pediatric and Adult Patient Care in High-Complexity Hospitals in Chile

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ABSTRACT

The Chilean Ministry of Health has developed a proposal to estimate how many professionals are required according to the number and type of hospital beds, both for out-patient and in-patient care. This proposal differs from international recommendations, which suggest hiring one speech-language therapist for every 10 beds, with an even higher number depending on each institution. There is only one study in the country on speech-language therapy staffing for the adult population in high-complexity hospitals. The aim of this study is to determine the number of speech-language therapists and weekly hours required for adult and pediatric patients in high-complexity hospitals in Chile. A descriptive, observational, and cross-sectional study was carried out that included all hospital beds available in the country during 2022, for adult and pediatric patient care in high-complexity centers. This excluded psychiatric, obstetric, gynecology, socio-sanitary, and resident beds. Sixty-four hospitals were included in the estimation. It was found that the Metropolitan Region has the highest need for professionals (37.71%), followed by the Valparaíso Region (9.60%), and finally the Bío-Bío Region (9.22%). A total of 19,613.26 weekly hours are required in high-complexity centers in the country to cover the care of adult and pediatric patients. In conclusion, and considering each hospital separately, a total of 504 speech-language therapists are necessary at a national level. This means 445 professionals working 44-hour weeks, 17 working 33-hour weeks, 13 with 22-hour workweeks, and 29 with 11-hour workweeks. It is suggested that the gap in the number of professionals is determined at a national level.

Keywords:
Speech, Language and Hearing Sciences; Health Planning Guidelines; Health Facilities; Hospital Administration

Dotación fonoaudiológica para la atención de pacientes adultos y pediátricos en hospitales chilenos de alta complejidad

RESUMEN

El Ministerio de Salud en Chile ha realizado una propuesta para cálculo de profesionales según número y tipo de camas hospitalarias, tanto para la atención abierta y cerrada. Dicha propuesta difiere de las recomendaciones internacionales, donde se propone un fonoaudiólogo cada 10 camas, siendo aún mayor según cada Institución. En el país solo existe un estudio de dotación fonoaudiológica orientado a la población adulta en hospitales de alta complejidad. El objetivo fue estimar la cantidad de fonoaudiólogos y horas requeridas semanales para usuarios adultos y pediátricos en hospitales chilenos de alta complejidad. Se realizó un estudio descriptivo, observacional, de corte transversal, que incluyó todas las camas hospitalarias del año 2022 de centros de alta complejidad en el país, para la atención de pacientes adultos y pediátricos, excluyendo camas psiquiátricas, obstetricia, ginecología, socio-sanitarias y de pensionados. Se incluyeron 64 hospitales para el cálculo. La Región Metropolitana concentra el mayor requerimiento profesional (37,71%), seguida de la Región de Valparaíso (9,60%), y finalmente por la Región del Bío-Bío (9,22%). Se precisa un total de 19.613,26 horas semanales en los centros de alta complejidad del país, para conseguir dar cobertura a los usuarios adultos y pediátricos. Se concluye que, a nivel nacional y considerando cada hospital por separado, se requiere un total de 504 fonoaudiólogos. 445 profesionales en jornadas de 44 horas semanales, 17 en jornadas de 33 horas, 13 en jornadas de 22 horas y 29 en jornadas de 11 horas. Se sugiere realizar cálculo de la brecha profesional a nivel nacional.

Palabras clave:
Fonoaudiología; Directrices para la Planificación en Salud; Instituciones de Salud; Administración Hospitalaria

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INTRODUCTION

Various studies and publications highlight the importance of speech-language therapy within tertiary health care (McGrath & Wallace, 2014; Royal College of Speech and Language Therapists [RCSLT], 2022; Vega et al., 2017; Wilkinson et al., 2014). This is attributed to the role played by speech-language therapists in assessing and managing communication and swallowing difficulties, forming interdisciplinary teams, providing information to patients, their families, and caregivers, and educating healthcare teams (American Speech-Language-Hearing Association [ASHA], 2022; Cambridge University Hospital, 2019; Joubert, 2021; Mayo Clinic College of Medicine and Science, 2022).

Diverse international recommendations can be found regarding the number of professionals required for the care of hospitalized patients. For instance, the Royal College of Speech and Language Therapists [RCSLT] (2019) in the United Kingdom suggests that there should be one professional for every 10 critical care beds for adult and pediatric patients. Similarly, the Intensive Care Society (ICS) stated in 2022 that intensive care units should have speech-language therapists available five days a week on weekdays. As a minimum recommendation, they propose 0.1 full-time professionals per intensive care bed, equating to one speech-language therapist for every 10 beds. Additionally, the ICS mentions that this number could be even higher based on the services provided, the level of complexity defined by each healthcare center, and other factors such as the need to cover non-business days, ideally extending to the entire week.

In Chile, the Ministry of Health (MINSAL) published in 2019 the document *Modelo de Gestión Red de Rehabilitación* (Rehabilitation Network Management Model), which outlines the procedure to estimate the number of professionals needed for rehabilitation in hospitals. This encompasses both outpatient and inpatient care, based on the number of hospital beds categorized as basic bed (BB), intermediate bed (IB), Intensive Care Unit (CCU) bed for adults (ICUBa), and pediatric ICU bed (ICUBp). According to the details provided in Resolution No. 436 by MINSAL (2021), which "approves the technical administrative standards for the application of the health benefits tariff system," it can be inferred that the BB is used for low-risk patients with partial dependence or self-sufficiency, requiring minor interventions. On the other hand, the IB is designated for patients with medium risk and high dependency levels, in the acute phase of a pathology, under periodic surveillance and comprehensive care. Finally, the ICU bed (ICUB), whether for adults or pediatric patients, is intended for individuals with life-threatening conditions affecting one or more systems, who require continuous and advanced management by the healthcare team.

Regarding speech-language therapy, the Rehabilitation Network Management Model created by MINSAL (2019) indicates the need for one speech-language therapist per 13 intensive care beds for adult patients, one speech-language therapist per 26 pediatric intensive care beds, one per 43 intermediate beds, and one per 166 basic beds. Table 1 provides a detailed representation of the formula proposed by MINSAL.

Table 1. Proposed estimation for the number of speech-language therapists per type of hospital bed, according to the MINSAL document "Rehabilitation Network Management Model" from the year 2019.

Level of Complexity of the Bed	Estimation of the Number of Full-Time Speech-Language Therapists
Basic (BB)	(Number of BB / 10) * 0,06
Intermediate (IB)	(Number of IB / 10) * 0,23
ICU adult (ICUBa)	(Number of ICUBa / 6) * 0,46
ICU pediatric (ICUBp)	(Number of ICUBp / 6) * 0,23

A prior national study calculated the staffing levels required for the care of adult patients in high-complexity hospitals (Rosales et al., 2020). This study indicates that approximately 269 full-time speech-language therapists are needed, with 104 designated for the Metropolitan Region, 31 for the Bío-Bío Region, and approximately 24 for the Valparaíso Region.

To this date, there are no studies at the national level, similar to the aforementioned, that include the pediatric population in the estimation of the number of speech-language therapists needed. Therefore, this study aims to extend the estimation of speech-language therapy staffing to encompass both the adult and pediatric populations in high-complexity hospitals in Chile. The research question was established using the PECO strategy (Strategic Communication Plan), and entails: What is the required speech-language therapy staffing in high-complexity hospitals in Chile, for the care of adult and pediatric patients? The objective of this study is to estimate the number of speech-language therapists and the weekly hours required for adult and pediatric patients in high-complexity hospitals in Chile.

MATERIALS AND METHODS

Design

Descriptive, observational, cross-sectional study.

Population

This study includes public high-complexity hospitals within the Chilean healthcare network, catering to both adult and pediatric patients. The unit of analysis is each hospital bed available within the healthcare network.

Inclusion Criteria

High-complexity hospitals in the country that provide care for adult and pediatric patients, including newborns.

Exclusion Criteria

Medium and low-complexity hospitals in the country, hospitals that specialize in the treatment of psychiatric conditions. Beds in obstetrics, gynecology, socio-sanitary departments, and private wards.

Sources of Data

Microsoft Excel 2016, the MINSAL document *Modelo de Gestión Red de Rehabilitación*, and the MINSAL database on the number of beds for the year 2022, obtained through a request under the Transparency Law for access to information, under the code AO002T0006737, in September 2022 *(Subsecretaría de Redes Asistenciales*, 2022).

Procedures

Firstly, in September 2022, updated data was obtained through the Transparency Law on the number of beds in the healthcare network for the year 2022.

Secondly, the research team transferred the data to a blank Microsoft Excel 2016 spreadsheet, where all unnecessary information was removed, retaining only that corresponding to the number of beds per high-complexity institution in Chile.

Thirdly, a categorization was carried out based on region, hospital, total number of hospital beds, number of ICUBa, number IBa, number of BBa, number of ICUBp, number of IBp, and number of BBp. For data analysis and the proposed work schedule, full-time positions were considered as 44 hours per week for all integer values. Additionally, for 33 hours per week part-time positions, decimals between 0.75 and 0.99 were considered; for 22-hour positions, decimals between 0.50 and 0.74 were taken into account; and for 11-hour workweeks, decimals between 0.25 and 0.49 were considered.

Once all data were recorded, the estimations were carried out according to the information contained in Table 1.

Data Analysis

Descriptive statistics were employed using a simple mathematical calculation proposed by the MINSAL document "Modelo de Gestión Red de Rehabilitación."

Ethical Considerations

As this study involves publicly available information and includes data on research subjects, it did not require approval from a scientific ethics committee.

RESULTS

The database obtained through Transparency Law comprised a total of 198 public hospitals. After the exclusion criteria were applied, 64 high-complexity hospitals were included for analysis. Appendix 1 provides a detailed analysis at the national, regional, and hospital levels of the required number of speech-language therapists and speech therapy hours, based on the quantity and type of available beds in the healthcare network, for the care of adult and pediatric patients in high-complexity hospitals in Chile.

Number of Speech-Language Therapists

Following the MINSAL formula, the total number of speech-language therapists required at the national level, based on the number of beds, would be 478.72, who would be hired for the care of adult and pediatric patients in high-complexity hospitals. This translates into 478 44-hour positions and one 22-hour position. However, considering the number of beds at each healthcare center, this figure varies based on the specific professional hours required for each institution, needing a total of 504 speech-language therapists in different workweek modalities (11, 22, 33, or 44 hours). Figure 1 illustrates the number of speech-language therapists required nationwide, distributed by region.

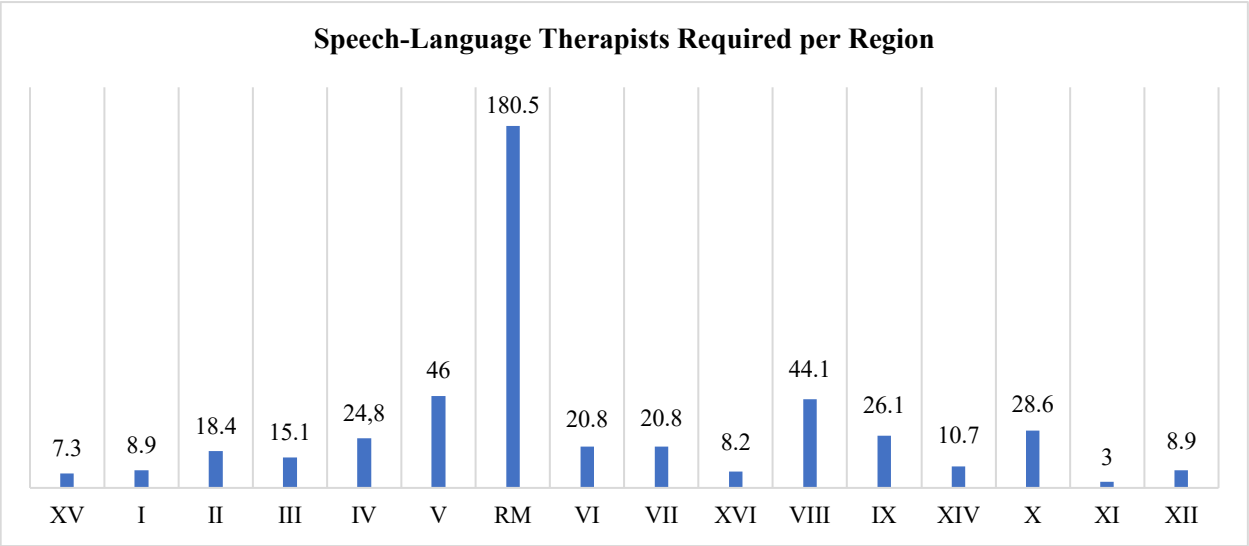


Figure 1. Number of speech-language therapists required at the national level for the care of adult and pediatric patients in high-complexity hospitals, distributed by region.

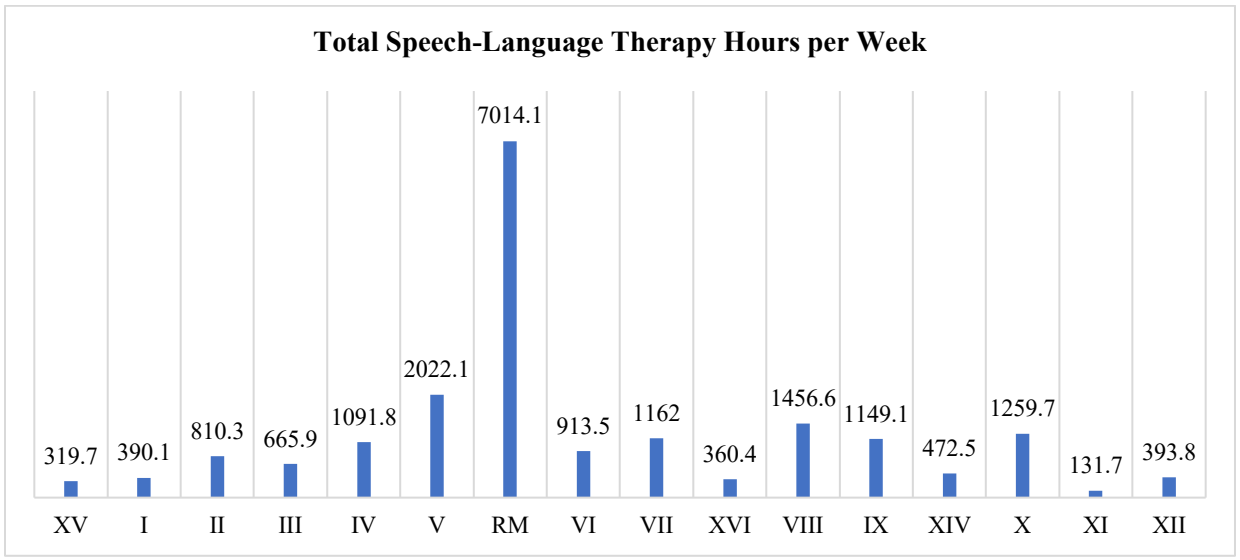


Figure 2. Speech-language therapy hours required per week at the national level, for the care of adult and pediatric patients in high-complexity hospitals, distributed by region.

It can be observed that the Metropolitan Region has the highest demand (37.71%), followed by the Valparaíso Region (9.60%), and lastly, the Bío-Bío Region (9.22%). On the other hand, the hospital centers with the greatest need for speech-language therapy positions are Dr. Hernán Henríquez Aravena Hospital in Temuco (n=19.25); Dr. Sótero del Río Hospital Complex (n=19.12); and *Hospital Regional de Rancagua* (n=16.32).

Total Speech-Language Therapy Hours

After carrying out the estimation it can be established that a total of 19,613.26 weekly hours are required in high-complexity centers throughout the country to cover the care for adult and pediatric patients. The Metropolitan Region requires a total of 7,014.13 hours, the Valparaíso Region 2,022.09 hours, and the Bío-Bío Region 1,456.65 hours. Regarding centers with the greatest need based on the number and type of beds, Dr. Hernán

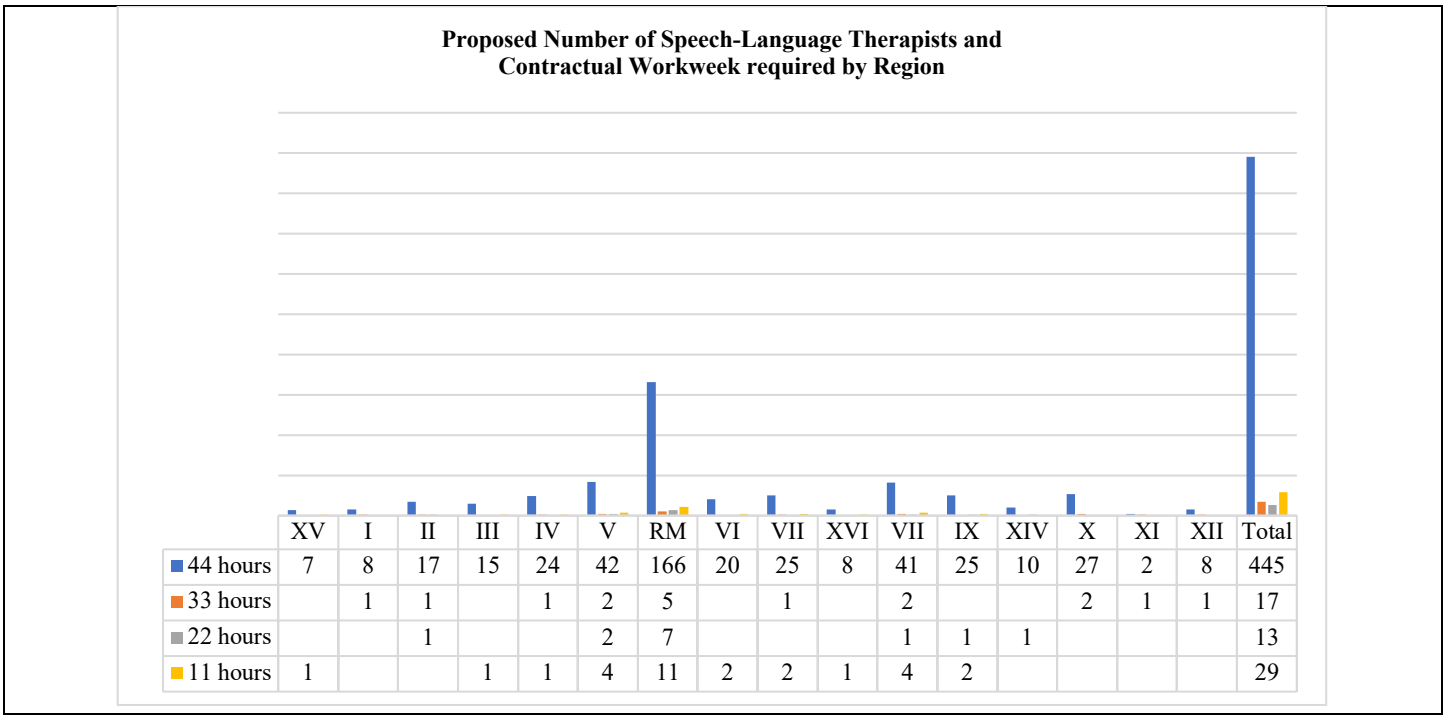
Henríquez Aravena Hospital in Temuco would require 846.94 hours; Dr. Sótero del Río Hospital Complex 841.19 hours; and Hospital Regional de Rancagua a total of 718.18 hours. Figure 2 illustrates the number of speech-language therapy hours required per week, and distributed by region.

Distribution of Work Hours

To meet the required number of professionals and hours, and considering that the estimate should be exclusively based on the number and type of beds per healthcare center, it is necessary to have 445 speech-language therapists working 44 hours per week (88.29%), 17 working 33 hours per week (3.37%), 13 working 22 hours per week (2.58%), and 29 working 11 hours per week (5.76%). Therefore, the total number of speech-language therapists at the national level, considering the number and type of beds per hospital, would be 504. Figure 3 provides a detailed representation of the proposed number of speech-language therapists and the contractual work schedule required for the care of adult and pediatric patients in high-complexity hospitals, distributed by region.

DISCUSSION

The aim of this study was to estimate the number of speech-language therapists and the weekly hours required for adult and pediatric patients in high-complexity hospitals in Chile. By using the proposal provided by MINSAL (2019) within the document "Modelo de Gestión Red de Rehabilitación" for the estimation of professionals required based on the number and type of hospital beds, the necessary number of speech-language therapists in the country was determined. This corresponds to 478 professionals working 44 hours per week and one working 22 hours per week.



	XV	I	II	III	IV	V	RM	VI	VII	XVI	VII	IX	XIV	X	XI	XII	Total
44 hours	7	8	17	15	24	42	166	20	25	8	41	25	10	27	2	8	445
33 hours		1	1		1	2	5		1		2			2	1	1	17
22 hours			1			2	7				1	1	1				13
11 hours	1			1	1	4	11	2	2	1	4	2					29

Figure 3. Proposed number of speech-language therapists and contractual workweek required for the care of adult and pediatric patients in high-complexity hospitals, distributed by region.

While the aforementioned result is global, as it references the total number and type of beds at the national level, it is important to conduct a detailed analysis considering the actual requirements based on the characteristics (number and type of beds) of each healthcare center. In this context, the required number of speech-language therapists would be 445 working 44 hours per week, 17 working 33 hours, 13 working 22 hours, and 29 working 11 hours. In total, 504 professionals would be required for the care of hospitalized adult and pediatric patients in high-complexity hospitals, encompassing both outpatient and inpatient care.

Critical Points

This proposed work schedule provides an approach to the required number of speech-language therapists per institution. However, five points should be discussed. Firstly, not every hospital may have complied with the strategies found in the guidelines provided by MINSAL, as they are only suggestions and not mandatory. This means that meeting the minimum requirement for professionals is not guaranteed, thereby impacting the care of patients who require speech-language therapy assessment and rehabilitation. Secondly, the estimated number of professionals according to the model proposed by MINSAL (2019) is based on references that do not necessarily follow what is reported in the model proposal. Therefore, the suggested staffing levels do not align with international recommendations. The number of speech-language therapists needed in Chile is much lower than what the ICS (2022) and RCSLT (2019) propose, which is 10 beds per professional. According to the proposal of MINSAL for the country, one speech-language therapist would be required for every 13 critical beds for adult patients, one for every 26 critical pediatric beds, one for every 43 intermediate beds, and one for every 166 basic beds. Moreover, this estimate is intended to be distributed between hospitalized and outpatient patients. Thirdly, the model proposed by MINSAL (2019) does not consider epidemiological aspects such as data on the prevalence and incidence of pathologies, socioeconomic status, and age, among others. The current estimate is solely based on the number and types of hospital beds. Fourthly, during the COVID-19 pandemic, intermediate beds were converted to critical beds. It is unknown whether these beds will return to their original state or be permanently converted. This could alter the way the professional staffing estimate is carried out. Fifthly, the estimate could be biased, considering that some regions and centers may require more professionals than others. Additionally, it does not consider the population size per district and region established by *Instituto Nacional de Estadística* [INE] (2017), focusing exclusively on the number and types of beds available per healthcare center, which does not reflect the real need of the population.

Limitations

We acknowledge that the estimation could have been carried out considering every healthcare center nationwide, regardless of their level of care complexity. However, this was not the objective of the present study. This could have been an opportunity to conduct a comprehensive study on speech-language therapist staffing at the national level.

Projections

It would be desirable for healthcare management professionals to consider these figures when hiring speech-language therapists. Additionally, a study that considers the entire staffing, including all hospitals nationwide, regardless of their complexity, would be beneficial. Furthermore, it is necessary to conduct studies that aim to determine the gap existing in speech-language therapy, i.e., the difference between the hours contracted by the healthcare center and the estimate according to the ministerial proposal. Finally, it is suggested that MINSAL considers the most up-to-date international recommendations in ministerial guidelines for estimating professional staffing, as the current guidelines are not in line with the latest evidence. Finally, the current estimation is intended to determine the need for professionals for both outpatient and inpatient care; therefore, the number of speech-language therapists who specifically care for hospitalized patients would be lower.

CONCLUSION

The analyzed data allows us to determine that, considering the total number and type of beds, the required number of speech-language therapists at the national level for the care of adult and pediatric patients in high-complexity hospitals, would be 478 working 44 hours per week, and one speech therapist working 22 hours per week. When considering the number and type of beds per hospital this figure changes, making it necessary to hire 504 speech-language therapists, distributed as follows: 445 speech-language therapists working 44 hours, 17 working 33 hours, 13 working 22 hours, and 29 working 11 hours.

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Appendix 1. Details of the analysis at the national level of the required number of speech-language therapists and speech-language therapy hours by region and hospital, based on the quantity and type of available beds in the healthcare network for the care of adult and pediatric patients in high-complexity hospitals in Chile, 2022.

Region	Hospital	N°BBa	N° BBp	N°IBa	N°IBp	N°CBa	N° CBp	Total N° of beds	Total N° of SLTs per Adult Bed	Total N° of SLTs per Pediatric Bed	Estimated N° of SLTs	Proposed Working Hours (SLT X h)	Total Weekly SLT Hours	Total SLT Hours by Region	% of SLTs required per hospital	% of SLTs required per Region
XV	Dr. Juan Noé Crevanni Hospital	30	3	136	18	36	20	243	6.07	1.20	7.27	7x44 1x11	319.73	319.73	1.52	1.52
I	Dr. Ernesto Torres Galdames Hospital	55	26	147	19	42	35	324	6.93	1.93	8.87	8x44 1x33	390.09	390.09	1.85	1.85
II	Dr. Carlos Cisternas Hospital	38	25	65	6	18	7	159	3.10	0.56	3.66	3x44 1x22	161.01	810.29	0.76	3.85
	Dr. Leonardo Guzmán Hospital	162	14	195	64	82	38	555	11.74	3.01	14.76	14x44 1x33	649.28		3.08	
III	San José del Carmen Hospital	74	23	97	9	151	14	373	14.25	0.88	15.13	15x44 1x11	665.87	665.87	3.16	3.16
IV	Dr. Antonio Tirado Lanas Hospital	0	13	102	22	24	6	167	4.19	0.81	5.00	5x44	220.00	1091.82	1.04	5.18
	San Juan de Dios Hospital	14	0	106	30	68	36	254	7.74	2.07	9.81	9x44 1x33	431.43		2.05	
	San Pablo Hospital	39	14	160	88	46	12	359	7.44	2.57	10.01	10x44 1x11	440.38		2.09	
V	Carlos Van Buren Hospital	117	41	267	14	36	29	504	9.60	1.68	11.28	11x44 1x11	496.44	2022.09	2.36	9.60
	Claudio Vicuña Hospital	73	10	43	0	6	0	132	1.89	0.06	1.95	1x44 1x33	85.67		0.41	
	Dr. Eduardo Pereira Ramírez Hospital	80	0	77	0	18	0	175	3.63	0.00	3.63	3x44 1x22	159.76		0.76	
	Hospital de Quilpué	47	21	28	6	17	0	119	2.23	0.26	2.49	2x44 1x11	109.71		0.52	
	Dr. Gustavo Fricke Hospital	81	6	224	80	78	53	522	11.62	3.91	15.53	15x44 1x22	683.13		3.24	
		28	11	102	16	14	0	171	3.59	0.4	4.02	4x44	176.94		0.84	

	San Martín Hospital										1x11			
	Hospital de San Camilo	71	29	24	0	30	17	171	3.28	0.83	4.10	4x44 1x11	180.56	0.86
	San Juan de Dios Hospital	85	85	24	0	18	0	212	2.44	0.51	2.95	2x44 1x33	129.89	0.62
	San José Hospital Complex	215	16	100	0	88	13	432	10.34	0.59	10.93	10x44 1x33	480.96	2.28
	Dr. Roberto del Río Children's Clinical Hospital	0	23	0	96	0	47	166	0.00	4.15	4.15	4x44 1x11	182.50	0.87
	Instituto Nacional del Cáncer Dr. Caupolicán Pardo Correa	65	0	0	0	8	0	73	1.00	0.00	1.00	1x44	44.15	0.21
	Dr. Félix Bulnes Cerda Hospital	30	5	90	56	36	52	269	5.01	3.31	8.32	8x44 1x11	366.14	1.74
	San José Hospital	68	17	21	0	9	0	115	1.58	0.10	1.68	1x44 1x22	74.05	0.35
	San Juan de Dios Hospital	95	28	188	12	90	45	458	11.79	2.17	13.96	13x44 1x33	614.37	2.92
RM	Instituto Traumatológico Dr. Teodoro Gebauer	50	0	40	0	4	0	94	1.53	0.00	1.53	1x44 1x22	67.17	7014.13	0.32	37.71
	Hospital el Carmen	15	10	279	15	65	22	406	11.49	1.25	12.74	12x44 1x22	560.50	2.66
	San Borja-Arriarán Clinical Hospital	139	82	53	21	66	53	414	7.11	3.01	10.12	10x44 1x11	445.27	2.11
	Hospital de Urgencia Asistencia Pública Dr. Alejandro del Río	0	0	198	0	96	0	294	11.91	0.00	11.91	11x44 1x33	524.22	2.49
	Dr. Luis Calvo Mackenna Children's Hospital	0	0	0	101	0	55	156	0.00	4.43	4.43	4x44 1x11	194.98	0.93
	Hospital Del Salvador	236	0	0	0	66	0	302	6.48	0.00	6.48	6x44 1x11	284.94	1.35

	Dr. Luis Tisné B. Hospital	12	6	125	0	55	31	229	7.16	1.22	8.39	8x44 1x11	369.07		1.75	
	Instituto de Neurocirugía Dr. Alfonso Asenjo	0	0	45	18	20	6	89	2.57	0.64	3.21	3x44 1x11	141.34		0.67	
	Instituto Nacional de Enfermedades Respiratorias y Cirugía Torácica	75	0	0	0	66	0	141	5.51	0.00	5.51	5x44 1x22	242.44		1.15	
	Instituto Nacional de Rehabilitación Infantil Presidente Pedro Aguirre Cerda	0	24	0	0	0	12	36	0.00	0.60	0.60	1x22	26.58		0.13	
	Instituto Nacional Geriátrico Presidente Eduardo Frei Montalva	0	0	47	0	0	0	47	1.08	0.00	1.08	1x44 1x11	47.56		0.23	
	Barros Luco Trudeau Hospital	352	10	102	0	96	35	595	11.82	1.40	13.22	13x44 1x11	581.67		2.76	
	Dr. Exequiel González Cortés Hospital	0	0	0	128	0	24	152	0.00	3.86	3.86	3x44 1x33	170.02		0.81	
	El Pino Hospital	0	5	123	22	58	19	227	7.28	1.26	8.54	8x44 1x22	375.76		1.78	
	Hospital Parroquial de San Bernardo	0	3	70	0	21	11	105	3.22	0.44	3.66	3x44 1x22	161.03		0.76	
	Dr. Sótero del Río Hospital Complex	158	46	172	51	134	65	626	15.18	3.94	19.12	19x44 1x11	841.19		3.99	
	Padre Alberto Hurtado Hospital	142	52	72	0	30	23	319	4.81	1.19	6.00	6x44	264.07		1.25	
	Hospital Metropolitano	0	0	48	0	132	0	180	11.22	0.00	11.22	11x44 1x11	493.86		2.34	
	Hospital Clínico de la Florida	149	4	65	27	60	32	337	6.99	1.87	8.86	8x44 1x33	389.87		1.85	
VI	Hospital Regional de Rancagua	0	0	234	49	96	64	443	12.74	3.58	16.32	16x44 1x11	718.18	913.51	3.41	4.34
		0	9	73	6	30	7	125	3.98	0.46	4.44	4x44	195.33		0.93	

	San Juan de Dios Hospital											1x11			
VII	Dr. César Garavagno Burotto Hospital	102	12	200	72	90	60	536	12.11	4.03	16.14	16x44 1x11	710.16	1161.95	3.37	5.52
	Presidente Carlos Ibáñez del Campo Hospital	40	32	64	0	36	6	178	4.47	0.42	4.89	4x44 1x33	215.34		1.02	
	Hospital San Juan de Dios de Curicó	112	17	70	0	36	6	241	5.04	0.33	5.37	5x44 1x11	236.46		1.12	
XVI	Herminda Martín Clinical Hospital	202	58	60	0	54	29	403	6.73	1.46	8.19	8x44 1x11	360.43	360.43	1.71	1.71
VIII	San Carlos Hospital	20	10	59	3	18	0	110	2.86	0.13	2.99	2x44 1x33	131.38	1456.65	0.62	9.22
	Hospital Clínico Regional Dr. Guillermo Grant Benavente	281	57	117	50	96	51	652	11.74	3.45	15.18	15x44 1x11	668.10		3.17	
	Hospital de Lota	37	16	44	7	0	0	104	1.23	0.26	1.49	1x44 1x11	65.60		0.31	
	San José Hospital	5	7	54	16	10	0	92	2.04	0.41	2.45	2x44 1x11	107.74		0.51	
	Hospital de Tomé	31	12	43	0	6	0	92	1.64	0.07	1.71	1x44 1x22	75.11		0.36	
	Las Higueras Hospital	88	38	166	0	52	19	363	8.33	0.96	9.29	9x44 1x11	408.72		1.94	
	Complejo Asistencial Dr. Víctor Ríos Ruiz	62	27	148	35	69	47	388	9.07	1.96	11.03	11x44 1x33	485.31		2.30	
IX	Dr. Mauricio Heyermann Hospital	10	7	97	20	18	13	165	3.67	1.00	4.67	4x44 1x22	205.54		0.98	
	San José Hospital	113	23	0	0	18	0	154	2.06	0.14	2.20	2x44 1x11	96.62	1149.10	0.46	5.46
	Dr. Hernán Henríquez Aravena Hospital	6	0	331	111	84	68	600	14.09	5.16	19.25	19x44 1x11	846.94		4.02	
XIV		105	53	179	20	54	28	439	8.89	1.85	10.74	10x44	472.49	472.49	2.24	2.24

	Hospital Clínico Regional											1x22				
X	Hospital Base de Osorno	115	37	71	12	46	90	371	5.85	3.95	9.80	9x44 1x33	431.10		2.05	
	Hospital de Puerto Montt	58	8	230	55	86	38	475	12.23	2.77	15.00	15x44	660.04	1259.66	3.13	5.98
	Hospital de Castro	0	2	38	8	30	12	90	3.17	0.66	3.83	3x44 1x33	168.52		0.80	
XI	Hospital Regional	24	2	42	18	14	10	110	2.18	0.81	2.99	2x44 1x33	131.68	131.68	0.63	0.63
XII	Dr. Lautaro Navarro Avaria Hospital	164	14	196	0	36	16	426	8.25	0.70	8.95	8x44 1x33	393.77	393.77	1.87	1.87
	Total	4370	1093	6151	1401	2863	1376	17259	387.19	91.53	478.72		21063.56	26627.39	100	100