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**Original articles** 

# Structure of treatment goals set by expert voice-specialized speech-language pathologists for patients with vocal needs

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#### ABSTRACT

**Purpose:** to determine the structure of treatment goals set by expert voice-specialized speech-language pathologists in treatment plans for patients with vocal needs.

**Methods:** a cross-sectional documentary research was conducted to analyze 129 treatment goals proposed in treatment plans by 30 expert voice-specialized speechlanguage pathologists. These goals were thematically analyzed and organized according to the therapeutic content addressed. The goals including the notion of patient in their wording, the statement of a specific purpose, the method for achieving it, and the presence of outcome criteria, were evaluated.

**Results:** most treatment goals analyzed correspond to those aimed at modifying vocal parameters (67.4%). The contents referring to muscle tone (13.8%), vocal hygiene and education (10%), breathing (7.75%), and posture (1.55%) are represented to a lesser extent. From the total number of treatment goals analyzed, 82.17% include the notion of patient, 88.37% indicate the method, 100% indicate the purpose, 52.71% state the outcome criteria used, and 17.05% include other components in their structure.

**Conclusions:** diversity in goal setting shows different visions by the professionals involved in the therapeutic process.

Keywords: Dysphonia; Planning; Clinical Decision-Making; Achievement; Voice Training



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# **INTRODUCTION**

In rehabilitation sciences, treatment goals are determined frameworks to address specific functions that can improve patients' performance. This process is carried out through specific clinical intervention procedures performed by health professionals<sup>1</sup>.

Generally, treatment goals must be measurable, and patients must actively participate in their creation process. However, there is no single way to write them<sup>2</sup> or sufficient clarity regarding their measurement methodologies.

Due to the above, the structure of treatment goals in speech-language interventions has been a common conflict among professionals with different backgrounds, treatment theories, varied workplaces, and patients with different characteristics. This situation could interfere with the communication of therapeutic organization processes between different professionals, even within interdisciplinary teams that care for patients<sup>2.3</sup>.

Additionally, in voice therapy, how the goals are written is likely to vary according to the rehabilitation philosophy selected by the therapist to address the patient's needs<sup>3</sup>. In this sense, previous research shows no agreement regarding the structure of treatment planning to treat patients with vocal needs<sup>4</sup>, which shows the lack of a standard structure in setting treatment goals for voice intervention.

## Importance of Treatment Planning

Treatment planning is a process that arises after identifying the patient's problems and needs through the speech-language assessment<sup>5</sup>. This process involves setting treatment goals, a central and essential aspect to ensure an effective rehabilitation process<sup>6,7</sup>.

Planning is a complex process<sup>6</sup> that requires a critical analysis of the information collected in the assessment to identify the clinical findings and the contents of the intervention. This information will then be used to select the treatment techniques and tools that allow the patient to progress in a determined time<sup>8</sup>. Goal setting and patient performance monitoring are primary aspects of rehabilitation. However, the evidence behind this practice is quite limited, and planning processes are variable since they depend on professional training, expertise in the area, therapeutic orientation, and the workplace, among other factors<sup>9</sup>.

Rehabilitation is more effective when the goalsetting and planning processes are patient-centered and consider both their perceptions and those of the treating health professionals<sup>7</sup>. However, the need to consider information from various sources in the process may lead to the use of erroneous treatment strategies, produce a clash of views on the patient's health situation, create communication problems in the patient-therapist relationship, or even trigger a lack of adherence to therapy<sup>5</sup>. With this in mind, maintaining good communication between all parties to maximize the socialization of the treatment plan can prevent these problems from occurring and improve the outcome of the treatment process.

According to the American Speech-Language-Hearing Association, treatment planning should consider that patients use their voice in the different environments where they operate daily<sup>10</sup>. From that consideration, the expert voice-specialized speechlanguage pathologist will determine the vocal needs to be addressed in the voice intervention and set goals accordingly. Depending on the patient's vocal condition and treatment expectations<sup>10</sup>, it is recommended to adopt at least one direct approach and one or more indirect approaches.

# **Treatment Planning Models**

Currently, some proposals allow for organizing treatment planning in general terms. In this sense, planning is organized into two or three hierarchical levels according to the specificity of the proposed goal. At a higher level, the general goal represents the global aim of voice therapy and, due to its nature, does not need to be set with measurable outcome criteria<sup>11</sup>. Thus, its role is to direct therapeutic efforts convergently, but it does not represent the level of specification necessary to establish operational monitoring mechanisms at the intra-therapeutic level. According to the Rehabilitation Treatment Specification System (RTSS), this goal is called 'aim'12,13. Setting this goal will depend on the patient's health condition and rehabilitation possibilities, considering the otorhinolaryngological diagnosis, the information obtained in the clinical assessment, and the contextual factors analysis<sup>14</sup>. Under particular conditions, it may also be crucial to set a goal regarding the psychosocial adjustment required by the patient's new communicative condition, both by the patient himself and by the relevant individuals in his environment<sup>15</sup>.

Operationalizing the general or long-term goal transforms the abstraction of the global treatment aim into concrete actions so that they can be observed, monitored, and assessed. Therefore, the abstract

nature of therapeutic contents can be verified using treatment or short-term goals<sup>16</sup>. This goal is referred to as a "target" by the RTSS<sup>12,13</sup>.

Some planning proposals also include a specific goal, which uses an intermediate degree of achievement and works as a step level by allowing an adequate thematic organization of the therapeutic contents<sup>17</sup>.

Several proposals have been provided to adapt the therapeutic intervention process to different conceptual frameworks. However, these proposals have not given much relevance to setting treatment goals. Currently, in general terms, one of the most widely used philosophies is the SMART strategy. This strategy holds that higher-level goals should be specific, measurable, achievable, relevant, and time-bound<sup>9,18-21</sup>. However, while this is considered a standard goal-setting strategy in rehabilitation sciences, it has received considerable criticism due to its excessive rigidity, limited scope, and failure to incorporate patient opinion into the model<sup>22</sup>. The latter has been discussed and considered in some interpretations of the model<sup>23,24</sup>. Due to this situation. new paradigms have been proposed. For example, the SMARTER model allows speech-language pathologists to work collaboratively with patients, creating an environment of mutual respect, accessibility, receptivity, and flexibility that improves the therapeutic process<sup>25,26</sup>. On the other hand, the MEANING model is proposed as an approach to setting goals based on self-regulation theory<sup>27</sup>. Finally, the Goal Attainment Scale proposes a series of levels regarding goal achievement<sup>28,29</sup>.

#### **Voice Treatment Planning**

Concerning voice therapy, the proposal by Ma et al.<sup>30</sup> organizes the voice intervention based on the categories provided by the International Classification of Functioning, Disability, and Health (ICF) of the World Health Organization<sup>31</sup>. However, it does not provide a model for structuring treatment goals or treatment planning per se.

Van Stan et al.<sup>32</sup> proposal provides a specific taxonomy for voice therapy that fits the logic underlying the techniques and methods used in the speechlanguage intervention. This taxonomy classifies the intervention procedures that the therapist can use as tools but does not include recommendations on treatment planning concerning goal setting.

Crisosto's model proposes a general organization for voice treatment planning and establishes the steps necessary for goal setting<sup>14</sup>. Given the breadth of the proposal, this model does not specify a particular strategy for setting treatment goals and recommends using the SMART model. The Castillo-Allendes & Fouillioux model makes similar recommendations, specifying as formal elements of the goal the task to be performed related to its functional impact, the outcome criterion, and the degree of assistance<sup>33</sup>.

The recent RTSS-Vocal model provides a series of specific target-type goals for voice therapy and the therapeutic actions needed to achieve them, called ingredients, as well as their verification mechanism or outcome criteria<sup>34</sup>. This model represents a significant qualitative advance over previous proposals, as it allows for the proper organization of interventions and is considered a relevant input to treatment planning. However, this model shows some limitations derived from the RTSS structure and does not consider particular aspects of the contextual and temporal conditions in which the voice intervention occurs. In addition to the elements already discussed, Crisosto & Flores consider that the goal of voice treatment planning should incorporate the notion of patient to demonstrate the active role that patients would play in the therapy and their involvement in treatment planning4.

This research aims to determine the structure of treatment goals set by expert voice-specialized speechlanguage pathologists to treat patients with voice complaints. This process allows knowing the reasoning behind the clinical procedures used in voice therapy and facilitates communication between the expert voice-specialized speech-language pathologist, the rest of the health team, and the patients themselves.

The research question that guides the research process is "How are the treatment goals set by expert voice-specialized speech-language pathologists structured when treating patients with vocal needs?".

# METHODS

# Design

A qualitative cross-sectional purposive documentary research. A postpositivist approach is used since the focus of analysis does not consider the subjects or the particular contexts but is focused only on the content of treatment planning in isolation<sup>35</sup>. The study was approved by the Scientific Ethics Committee of the San Juan de Dios Hospital, Santiago, Chile (n. 134/2022). All participants signed the informed consent.

# **Participants and Analysis Documents**

A judgment sampling was used. An open call was made through social networks to expert voicespecialized speech-language pathologists who wished to participate in the study by submitting anonymous treatment plans of therapy sessions for patients with vocal needs. In addition, various professionals in the area were contacted directly and invited to participate. A snowball sampling technique was also used to contact new participants so that each participant referred at least one additional expert voice-specialized speechlanguage pathologist to participate, when possible. This stage was carried out between September 2022 and January 2023.

Although the research subjects were expert voicespecialized speech-language pathologists, the sample comprised the goals of treatment planning proposed by these professionals to treat patients with vocal needs. Both the expert voice-specialized speech-language pathologist and the patient were anonymized in the analysis. The participants were asked to anonymize the patients before submitting the documents so that they did not contain any information that could contribute to eventually individualizing the patient. Thus, each participant, besides submitting the treatment plan, completed a participation form with the following information: years of clinical or academic work experience, postgraduate studies in the voice area, the reported patient's otorhinolaryngological diagnosis, and the reported session number. In addition, the participants were asked to declare whether they had used the treatment plan in a university activity with speech-language pathology internship students.

The following inclusion criteria were used to include a treatment plan in the analysis: (1) it had to be proposed by an expert voice-specialized speechlanguage pathologist, (2) it had to consider performing a voice intervention in patients with voice discomfort or pathology, for which a treatment goal(s) had been set and (3) it had to contain treatment goals. The following exclusion criteria were used: (1) group treatment plans, (2) treatment plans using any method of vocal compensation without glottal source, (3) treatment plans exclusively employing indirect vocal intervention strategies, or (4) treatment plans that followed a planning format pre-established by the clinical establishment in which the voice treatment services were performed.

Under these circumstances, 30 expert voicespecialized speech-language pathologists with an average of 9.1 years of work experience participated in this study. They all declared having experience in voice-related professional specialization studies and university teaching. Regarding the reported patients' characteristics, 21 had an instrumental otorhinolaryngological diagnosis, while nine did not. Twelve individuals with documented diagnoses had organic dysphonia, three had organic-functional dysphonia, and six had functional dysphonia. The mode was that expert voice-specialized speech-language pathologists reported the third session, although they reported from the first to the fourteenth session. 23 of the 30 treatment plans were used in the context of clinical teaching activities, including working with final-year speech-language pathology students for patient care. The remaining seven treatment plans were used in the context of each expert voice-specialized speech-language pathologist's personal, professional practice.

## **Analysis Procedure**

The treatment goals were analyzed using a thematic content analysis model<sup>36</sup> to identify a possible structure in their writing. A working hypothesis is not presented<sup>37</sup> because the research design is exploratory. The content analysis used focused on the formal characteristics of the goals. This method allows researchers to indirectly access the therapeutic conception that expert voice-specialized speech-language pathologists have when treating a patient's voice and reveals the directionality and methods used to monitor the voice intervention.

For qualitative analysis, the data was organized in a table using the following three a priori classification categories: (a) the purpose (b) the method, (c) the notion of patient and (d) the outcome criteria. Category (e) other components was included in the process due to the use of an open analysis format and the possibility of including emerging categories. This category included any component in the analyzed goal that could not be qualified in the indicated dimensions. However, we did not include any additional emerging analysis categories because the goals did not provide information other than that already indicated. The treatment goals were grouped concerning the subsystem that was explicitly reported.

Regarding the categories of analysis, the 'notion of patient' refers to the fact that the paragraph explaining the treatment goal incorporates the patient as the subject on which the treatment procedures are applied. 'Method' explicitly indicates a procedure to achieve the proposed purpose: a specific strategy or treatment technique for treating a patient. 'Purpose' explicitly indicates a specific rehabilitation aim around which treatment efforts converge to achieve it. The 'outcome criteria' category included the mechanisms declared for verifying the achievement of the goal. Subsequently, these mechanisms were classified according to their nature: 'quantitative' when said criterion referred to a percentage or non-percentage measurement for monitoring; 'qualitative' when the criterion refers to any non-measurable verification strategy, regardless of its nature; and 'mixed' when both quantitative and gualitative means of verification have been proposed to monitor the achievement of the goal. The 'other components' category included: (a) the 'aids' subcategory for those goals that explicitly declared the presence of 'aids' for the patient to achieve the proposed purpose; (b) the 'context' subcategory for goals that explicitly determined a particular context in which the treatment goal should be evidenced; and (c) the 'support' subcategory for goals that explicitly indicated the need to incorporate a 'support' to achieve the goal.

The treatment goals were organized according to the therapeutic content covered, grouping them into the categories 'vocal hygiene and education', 'posture', 'breathing', 'muscle tone', and 'vocal parameters'. This last category included two subcategories: 'voice quality parameters' and 'laryngeal parameters'. The first subcategory grouped the goals that set purposes regarding the patients' voice and not their laryngeal features, that is, aspects such as emission quality, volume, pitch and tonal extension, vocal attack, pitch breaks, prosody, vocal placement, resonance, timbre, articulation, mouth opening, and tremor<sup>38</sup>. The second subcategory included those goals that set purposes for the individuals' larynx, for example, modification of glottic closure, lesion resorption, elimination of supraglottic interference, and medial approximation of vocal folds.

# RESULTS

Two of the 30 treatment plans received during data collection were discarded because they had no treatment goals and only reported activities developed during the treatment session. Therefore, 131 treatment goals were obtained from the remaining 28 documents. However, two goals referred to swallowing intervention, so they were excluded from the current analysis.

Consequently, the results emerge from the structural analysis of the 129 treatment goals selected based on the presence of (a) notion of patient, (b) method, (c) purpose, (d) outcome criteria, and (e) other components. Table 1 shows the distribution of the goals analyzed in the research. Said table shows that 67.44% correspond to treatment goals referring to the intervention of vocal parameters, 13.8% to muscle tone, 10.08% to vocal hygiene and education, 7.75% to breathing, and 1.55% to posture. No goals were observed that declared purposes for more than one subsystem, so the correspondence of each goal to each subsystem is unambiguous.

#### **Table 1.** Structural analysis of treatment goals

| Subsystems addressed  | Notion of<br>patient | Method          | Purpose       | Outcome<br>criteria | Other<br>components |
|---|----------------------|-----------------|---------------|---------------------|---------------------|
| Vocal Hygiene and Education<br>N=13, 10.08% of the total<br>(n.%) | 10<br>(76.92%)       | 9<br>(69.23%)   | 13<br>(100%)  | 1<br>(7.69%)        | -                   |
| Posture<br>N=2, 1.55% of the total<br>(n.%)                       | 2<br>(100%)          | 2<br>(100%)     | 2<br>(100%)   | -                   | -                   |
| Breathing $N=10, 7.75\%$ of the total $(n.\%)$                    | 8<br>(80%)           | 8<br>(80%)      | 10<br>(100%)  | 4<br>(40%)          | 1<br>(10%)          |
| Muscle tone $N=17, 13.8\%$ of the total $(n.\%)$                  | 14<br>(82.35%)       | 13<br>(76.47%)  | 17<br>(100%)  | 7<br>(41.18%)       | 5<br>(29.41%)       |
| Vocal parameters<br>N=87, 67.44% of the total<br>(n.%)            | 72<br>(82.76%)       | 82<br>(94.25%)  | 87<br>(100%)  | 56<br>(64.37%)      | 16<br>(18.39%)      |
| Total<br>N=129, 100%<br>(n.%)                                     | 106<br>(82.17%)      | 114<br>(88.37%) | 129<br>(100%) | 68<br>(52.71%)      | 22<br>(17.05%)      |

Captions: N = number of treatment goals set for each subsystem in the total sample; n = number of goals of the subsystem addressed that meet the analysis criterion used; % = percentage of goals that meet the analysis criterion in relation to N.

All 129 treatment goals (100%) provide a stated purpose. However, only 106 goals (82.17%) contain the notion of patient, and 114 goals include the method (88.37%). On the other hand, outcome criteria and other components are found to a lesser extent in the structure of the analyzed goals.

Table 2 details the nature of the outcome criteria and what was found under the category 'other

components'. Regarding outcome criteria, 31 treatment goals (24.03%) had a qualitative outcome criterion, 29 treatment goals (22.48%) had a quantitative criterion, and eight treatment goals (6.20%) had a mixed criterion. Regarding the presence of other components, nine goals (6.97%) contain an explicit reference to 'support', six goals (4.65%) detail the 'context', and seven goals (5.42%) explicitly state 'aids'. Table 2. Analysis of the outcome criteria and other components of treatment goals

|   | (                        | Outcome criteria          | 1                  | Other components |               |               |
|---|--------------------------|---------------------------|--------------------|------------------|---------------|---------------|
| Subsystems addressed  | Qualitative<br>Criterion | Quantitative<br>Criterion | Mixed<br>criterion | Support          | Context       | Aids          |
| Vocal Hygiene and Education<br>N=13, 10.08% of the total<br>(n.%) | 1<br>(7.69%)             | -                         | -                  | -                | -             | -             |
| Posture $N=2$ , 1.55% of the total $(n.\%)$                       | -                        | -                         | -                  | -                | -             | -             |
| Breathing $N=10, 7.75\%$ of the total $(n.\%)$                    | 1<br>(10%)               | 1<br>(10%)                | 2<br>(20%)         | -                | 1<br>(10%)    | -             |
| Muscle tone<br>N=17, 13.8% of the total<br>(n.%)                  | 6<br>(35.29%)            | 1<br>(5.88%)              | -                  | -                | 2<br>(11.76%) | 3<br>(17.65%) |
| Vocal parameters<br>N=87, 67.44% of the total<br>(n.%)            | 23<br>(26.44%)           | 27<br>(31.03%)            | 6<br>(6.90%)       | 9<br>(10.34%)    | 3<br>(3.45%)  | 4<br>(4.60%)  |
| Total<br>N=129, 100%<br>(n.%)                                     | 31<br>(24.03%)           | 29<br>(22.48%)            | 8<br>(6.20%)       | 9<br>(6.97%)     | 6<br>(4.65%)  | 7<br>(5.42%)  |

Captions: N = number of treatment goals set for each subsystem in the total sample; n = number of goals of the subsystem addressed that meet the analysis criterion used; % = percentage of goals that meet the analysis criterion in relation to N.

Table 3 presents the disaggregated analysis of the treatment goals referring to the specific intervention of vocal parameters. Thus, 48.83% of the goals analyzed

are related to the intervention of vocal quality parameters, while 19.37% deal with laryngeal parameters.

#### Table 3. Goals of vocal parameters referring to voice quality parameters and laryngeal parameters

| Parameters addressed   | Notion of<br>Patient | Method         | Purpose      | Outcome<br>criteria | Other<br>Components |
|--|----------------------|----------------|--------------|---------------------|---------------------|
| Voice quality parameters<br>N=63, 48.83% del total<br>(n, %) | 59<br>(93.65%)       | 61<br>(96.83%) | 63<br>(100%) | 49<br>(77.78%)      | 13<br>(20.63%)      |
| Laryngeal parameters<br>N=25, 19.37% del total<br>(n, %)     | 13<br>(52%)          | 22<br>(88%)    | 25<br>(100%) | 7<br>(28%)          | 3<br>(12%)          |

Captions: N = number of treatment goals set for each subsystem in the total sample; n = number of goals of the subsystem addressed that meet the analysis criterion used; % = percentage of goals that meet the analysis criterion in relation to N.

Regarding the outcome criteria (Table 4), there is a similar distribution when using qualitative and quantitative outcome criteria in treatment goals of voice quality parameters (both with 34.92%). In comparison, quantitative outcome criteria predominate in the goals that address laryngeal parameters (20%). Concerning other components (Table 4) in the structure of the goals, 14.29% use supports, and 6.35% use aids in the case of goals referring to voice quality parameters. In the case of laryngeal parameters, 12% detail the context.

**Table 4.** Analysis of the outcome criteria and other components in treatment goals referring to voice quality parameters and laryngeal parameters

|                          | Outcome criteria         |                           |                 | Other Components |         |         |  |
|--------------------------|--------------------------|---------------------------|-----------------|------------------|---------|---------|--|
| Parameters addressed     | Qualitative<br>Criterion | Quantitative<br>Criterion | Mixed Criterion | Support          | Context | Aids    |  |
| Voice quality parameters | 22                       | 22                        | 5               | 9                |         | 4       |  |
| (N=63)                   | (34.92%)                 | (34.92%)                  | (7.94%)         | (14.29%)         | -       | (6.35%) |  |
| Laryngeal Parameters     | 1                        | 5                         | 1               |                  | 3       |         |  |
| (N=25)                   | (4%)                     | (20%)                     | (4%)            | -                | (12%)   | -       |  |

Captions: N = number of treatment goals set for each subsystem in the total sample; n = number of goals of the subsystem addressed that meet the analysis criterion used; % = percentage of goals that meet the analysis criterion in relation to N.

# DISCUSSION

Treatment planning is essential for organizing voice therapy to be consistent with the individual's biopsychosocial characteristics and needs. Thus, the treatment plan indicates the goals and activities to be performed during the voice therapy session and clarifies the mechanisms for verifying therapeutic progress. In recent times, there has been increasing attention from the scientific community regarding the use and characteristics of treatment planning and, in particular, goal setting in the vocal area<sup>4,13,14,33</sup>. However, to date, no researchers have empirically considered the goals that expert voice-specialized speech-language pathologists set to address patients with voice complaints, at least in the researchers' understanding. Because of this, this research aims to cover this lack of knowledge and unveil the strategies professionals employ to treat voice disorders through the structural analysis of the proposed goals.

Two of the 30 treatment plans had to be discarded because they did not have treatment goals in their structure. This fact demonstrates that using treatment goals is not mandatory for all professionals, even when it represents a mechanism to ensure an effective intervention<sup>6,7</sup>. This reveals high variability in understanding the instrument and, likewise, the lack of transversal guidelines during the preparation of professionals.

Most participating expert voice-specialized speechlanguage pathologists indicate that the treatment plans provided were developed in the context of clinical teaching activities. This fact should not come as a surprise. Speech-language treatment planning and goal setting are mechanisms for clarifying professional knowledge and are particularly useful when working with students to develop critical thinking<sup>39</sup>. However, despite the study's results and methodological design, there is no guarantee that treatment plans are generally used more in the academic context than in therapists' clinical practice.

Another important aspect is that the notion of patient is not reflected in all treatment goals. This issue is relevant if we consider that this process must be patient-centered and that the goals must reflect this<sup>9,40</sup>. Omitting the notion of patient can lead to errors, such as posing the treatment activities as the session's goals, which confuses the method with the purpose. In addition, it can indicate what the therapist should do instead of focusing on what the patient should do within the context of the voice intervention.

The method, which refers to the programs, strategies, or treatment techniques used to treat patients in the context of this research, although it is present in a large proportion, is not mentioned in all the proposed goals. This omission may lead to poor decision-making since not specifying the techniques could force the expert voice-specialized speech-language pathologist to select them during the session, resulting in a wrong choice due to the urgency involved in making decisions during therapy. Instead, the professional may pre-select the techniques to be used, but if he/she does not document them properly, there is a risk of not remembering them correctly and confusing them. Additionally, failure to specify intervention methods in the treatment plan makes it difficult to accurately assess the patient's performance with a specific treatment technique during the planning stage of an upcoming session. This situation negatively affects therapeutic progression due to this bias in access to information.

Outcome criteria are essential to adequately organize the treatment goals since they demonstrate the mechanism to measure them<sup>1,18,19,22,25</sup>. With 52% of the total, this component is present in the lowest proportion of all deemed essential to set a goal. In a paradox, one of the fundamental purposes of goal setting in treatment planning is to quantify the degree of progress made by the patient<sup>28</sup>. This absence of means of verification to recognize the achievement of a goal represents one of the greatest threats to therapeutic success. Without these, it is impossible to determine the adequacy of treatment and the relevance of the therapist's decisions to ensure good treatment outcomes. Moreover, this absence of outcome criteria also hinders the patient's awareness of the levels of therapeutic progress achieved.

Another element evident in the goals' structural review is the aids, support, and therapeutic context. This element was present in 17.05% of the goals analyzed (n=22). However, this dimension is not necessarily contemplated in the voice goal-setting process<sup>14,32</sup>. By including this dimension, it is possible to analyze the therapy's progress, learn more about the patient's degree of participation and independence in specific treatment tasks, and make the therapeutic actions with the patient more concrete and precise. Thus, patients who progress favorably will need fewer aids as therapy progresses. In addition, the level of detail offered by these components in the goal structure allows other therapists to replicate the tasks, if necessary, to understand how the patient performs in the therapeutic activities.

The goals of vocal parameters are organized into voice quality parameters and laryngeal parameters. In this sense, the goals aimed at modifying voice quality parameters require specific clinical outcome criteria given their nature and, therefore, are easily verifiable by the therapist during the session. In other words, the expert voice-specialized speech-language pathologist can perceptually evidence the vocal changes produced by the intervention. On the other hand, the goals aimed at modifying laryngeal parameters have a physiological purpose, so they require an outcome criterion according to this perspective<sup>4</sup>. For example, for those goals that state 'decrease glottic contact' or 'decrease laryngeal swelling', the outcome criteria must be consistent and measured through instrumental criteria that effectively measure what is stated. Unfortunately, instrumental methods of laryngeal assessment are not always available to the therapist during the session, and without an adequate verification mechanism, monitoring these goals is impossible, undermining their therapeutic function.

The novelty of this study is one of its main strengths. No research has studied the structure of treatment goals used in authentic contexts and patients in the voice area, which encourages theoretical discussions on the subject. Regarding the methodological design, one of the study's strengths is that all of the participating expert voice-specialized speech-language pathologists declared having postgraduate studies in voice and having several years of experience. This situation allows access to highly specialized treatment planning, ensuring its relevance.

However, given the non-probability sampling used, it is impossible to determine whether these findings apply similarly to the rest of the population of speechlanguage pathologists. This situation implies limitations on the generalizability of the results. Nevertheless, most of the expert voice-specialized speech-language pathologists participating in the study provided treatment plans developed in the context of university clinical teaching, allowing us to speculate about their use in different work contexts.

Another limitation is the type of material analyzed. In order to create the ideal conditions for accessing treatment plans, we asked expert voice-specialized speech-language pathologists to provide any treatment plans they had used. This freedom of choice resulted in some therapeutic content being overrepresented compared to others. In addition, the participating expert voice-specialized speech-language pathologists selected the treatment plans for analysis, which does not guarantee that these were the most representative of their daily work.

Future research should address the categories of 'aids' and 'support' included in some goals analyzed.

Likewise, it is necessary to understand better how incorporating the notion of 'context' could be helpful when planning specific treatment strategies. Research is also needed on the impact of treatment planning on the efficacy of voice intervention and its impact on patient performance.

# **CONCLUSIONS**

Although the basic information on treatment goals is relatively uniform, this research reveals a great diversity in the goals set by expert voice-specialized speechlanguage pathologists for voice treatment. The different ways of writing goals reflect professionals' diverse perspectives in understanding the therapeutic process. The notion of patient, the method used, the declared purpose, and the outcome criteria were considered essential structural elements of the treatment goals. In addition, a broad category was included to incorporate other components that emerged during the analysis process, such as the level of assistance required by the patient and the context for performing the tasks. All the goals analyzed explicitly presented a specific purpose, while the other elements were presented in different degrees of detail. Regarding the intervention of voice quality, there is a relevant conceptual variation when setting goals that aim to modify voice quality parameters and others that seek to modify laryngeal function or structure.

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