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Seeking the recognition of voice disorder as work-related disease: historical-political movement

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Abstract *The high prevalence of voice disorders among professionals who use their voice as a working tool, signals the existence of a collective illness caused by voice wear through poor working conditions and lack of social protection. This article describes the construction of a political movement seeking recognition of voice disorder as a work-related disease in Brazil. This is a narrative review on the historical processes, including social subjects, production of knowledge and the proposals for a strategic agenda, in view of the urgency of including voice disorder in the Brazilian Ministry of Health's list of work-related diseases. The analysis comprises three strands: a) technical and scientific, on advances in characterization of voice disorder and establishment of its connection with work; b) juridical and institutional, on legal recognition of this linkage; c) political and professional, on mobilization of social actors to advocate recognition of work-related voice disorders (WRVDs). The key role of the Pontifical Catholic University of São Paulo in fomenting discussions about WRVDs over the course of this movement lasting nearly two decades is highlighted, along with the main difficulties in achieving formal recognition of WRVDs.*

Key words *Occupational health, Voice disorders, Legislation as topic, Public health policy, Public health*

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Introduction

This article is a narrative review in which we discuss the historical-political movement seeking formal recognition of voice disorder as a work-related disease (WRD), with analysis on the strengths and limitations of this movement. We review the paths that have been trodden and indicate the challenges that have yet to be overcome.

In this initiative, we placed the movement towards production of knowledge and practices within the perspective of the field of occupational health, anchored in the health surveillance model. This movement envisages a commitment towards changing the processes associated with work-related disease, based on actions in the political, juridical, technical and ethical fields[1]. Thus, we sought to identify indicators of certain models of thought and actions that structure, sustain and reproduce health-related practices. In this specific case, we included analyses on movements seeking to legitimize and give visibility to a problem linking health and work: professional use of the voice and voice disorder. We attempted to systematize the evidence, movements, advances and setbacks that have accumulated through this process. In so doing, we laid out a path towards expansion of the field of occupational health, to enable analysis and interventions relating to a health problem that is still not very visible and for which work-related preventive actions and health promotion actions are still implemented only timidly or are non-existent.

Our review was built on a basic observation, of which different social groups have become aware over recent decades: workers who use their voices intensely to carry out their activities are victims of illness that affects vocal production. It describes the debate about the terms that best define this illness, its nature and causes, the ways in which official recognition of the phenomenon can be achieved and the care that needs to be provided for workers affected by it.

The analysis comprises three strands: a) technical-scientific, in which the connection between voice disorders and work is discussed; b) juridical-institutional, on the institutional forms of recognition of voice disorders; and c) both of the preceding strands contextualize and support political-professional analysis, in which mobilization of social actors towards advocating recognition of work-related voice disorders (WRVDs) is discussed.

Beginning in the late 1990s, these debates gained momentum through a pioneering initiative of the Pontifical Catholic University of São Paulo (PUC-SP) in which this topic was included in an annual scientific event, known as the Voice Seminars[2,3]. Various actors joined the campaign (medical and speech-language-hearing associations and councils, unions, universities, reference centers for workers' health (CEREST), charities and jurists, among others) in broader debates or in more isolated business-related initiatives. Consequently, documents were produced with the purposes of standardizing behaviors and defining technical norms for management of WRVDs and work-related laryngeal disease (WRLD), such as the 3rd voice consensus[4], from a document prepared by CEREST-SP[5] that was subsequently published as an article[6], and the Brazilian Ministry of Health's protocol of differentiated complexity, known as the WRVD protocol[7]. In addition to these initiatives, other actions have contributed towards greater visibility for WRVDs, such as voice campaigns[8] and local law initiatives with the aim of creating vocal health programs for teachers[9].

Method

This study comprised a narrative review, i.e. a broader format of article that is appropriate for discussing the state of the art on a given subject. It is presented as a critical and personal analysis by its authors, without any claim regarding its capacity for generalization[10]. Since the authors of this review have participated in seeking recognition for WRVDs, they are both objects and subjects of this history. The primary sources used were technical documents, articles in scientific journals and annals of events, which formed the basis for the historical narrative about WRVDs, tailored in accordance with the current legislation.

Technical-scientific analysis

Empirical evidence on the relationship between work and voice disorders

Although voice disorders are not yet on official WRD lists, many studies have empirically supported this linkage. Teachers are the group making professional use of the voice that has been studied most, in terms of the numbers of workers or working conditions, or because of the ease of investigation.

Epidemiological research has revealed that the prevalence of voice disorders among teachers is high, and that this is associated with environ-

mental factors and work organization. The criticism that can be made regarding these studies is that they are of variable quality, had different operational definitions, used irregular methods, were not always well designed, did not use control groups and used self-reference as the means for scoring voice disorders, thus compromising the quality of the evidence[11,12].

However, in more recent studies, the designs have been better, with greater sophistication of methods, thus resulting in evidence of greater robustness[13,14]. In the WRVD protocol[7], there is a compilation of epidemiological studies in which the high prevalence of vocal alteration was demonstrated, especially among teachers, and the symptoms, predisposing personal factors and environmental and organizational risks were listed. A recent systematic review showed that occurrences of voice disorder among teachers were increasing in comparison with other occupations, and were more commonly associated with presence of classroom noise, habitual use of a loud voice and being a physical education teacher[13]. In another review study[14], prevalence of vocal alterations of 6 to 15% was observed in the general population, while among teachers it ranged from 20 to 50%. The associated factors identified were inadequate classrooms, excessive noise, health problems and lifestyle habits.

It can be emphasized that, even if there are personal factors that can trigger a voice disorder, environmental factors and work organization are the determinants of illness. Schilling[15] classified WRDs into three categories: I - work was the single and necessary cause; II – work was a contributory factor; III – work provoked a latent disorder or worsened an established disease. Because of the multicausal nature of WRVDs, they are in categories II and III[16] with a higher likelihood of occurrence of the disease when work-related risk factors are present. Thus, the nexus between disease and work is epidemiological, given the excess frequency in certain occupational groups and the work-related risk factors[17].

Legal-institutional analysis

Skills for defining WRDs

There is a peculiar difficulty regarding official recognition of the nexus between voice disorders and work: the multiplicity of regulatory instruments and institutional competencies for dealing with work-related diseases and injuries (Figure 1).

According to International Labor Organization (ILO) convention no. 155[18] and decree no. 7,602/11[19], which enacted it in Brazil, the competence for establishing the relationship regarding WRDs belongs to the Brazilian Ministry of Health. The latter regulatory instrument would then form support for defining social security regulations and regulations for compulsory notification of diseases within the Brazilian Notifiable Diseases Information System (SINAN), which is also within the competence of the Ministry of Health.

The main list of work-related diseases was established under the terms of Ministry of Health ordinance No. 1,339/99[20]. It is based on law no. 8,080/90[21], which delegates "regular reviewing of the official list of diseases that originate through work processes" to the Brazilian National Health System (SUS) (article 6, § 3, VII); and on National Health Council resolution no. 220[22], which "recommends that the Ministry of Health should publish a list of work-related diseases".

Ordinance no. 1,339/99[20] which here is considered to provide the main list, correlates etiological agents and occupational risk factors with diseases, through double entry, both according to the causative agents and according to the disease itself. It is composed of around 200 nosological entities that have been defined in the International Classification of Diseases (ICD-10). It provides a guideline for SUS, with the aim of "implementation of care and monitoring actions regarding workers' health"[20].

The social security list is stipulated in article 20 of law no. 8,213/91[23] and has been established in annex II B, of decree no. 3,048/99[24] with wording modified by subsequent decrees (the last one is decree nº 6,957/09. of September 9, 2009)[25].

The compulsory notification list is still based on law no. 8,080/90[21] which also includes occupational health as a field of action within SUS, through epidemiological and health surveillance actions, promotion and protection of health, and recovery and rehabilitation of workers who have been subjected to risks and harm arising from working conditions. Its latest edition was issued recently, through Ministry of Health ordinance no. 205/16[26], which did not include WRVDs as a disease with compulsory notification.

Political-professional analysis

Movement towards recognition of WRVDs in Brazil

The initial course of action

In seeking recognition of voice disorders as a WRD, the Speech-Language Pathology and Hearing School of PUC-SP played a pioneer-

1* SINAN: Brazilian Notifiable Diseases Information System. 2* SUB: National Benefits System (Brazil). * INSS: National Institute for Social Security (Brazil).

Figure 1. Legal-institutional attributions regarding formal recognition of work-related diseases and corresponding sample databases.

ing role in fostering discussions and calling on different social actors to enter the debate, thereby enabling advancement of themes present in their agendas. In 1997, starting from a letter to the Federal Speech-Language and Hearing Council (CFFa) that gave information on numerous cases of teachers with voice disorders who had been seen at the Public Servants' Hospital of the state of Pernambuco, Brazil, PUC-SP promoted a discussion about dysphonia as an occupational disease at the seventh voice seminar[27], thus broadening the debate to include a greater number of social actors.

The beginnings of the movement were difficult. Its foundations were fragile and uncertainties persisted in this field, which historically had focused only on rehabilitation of individuals. However, persistent and tireless activity during the subsequent eight years of debate in seminars at PUC-SP provided effective interdisciplinary and intersectoral dialogue with professionals within the fields of occupational medicine, law and medicine, and with representatives of the workers' unions, thus marking an auspicious approach towards the field of public health.

A milestone in understanding voice disorders was reached when professionals ceased to blame individuals who became unable to use their voice (who were said to have "abused" it or "ill-used" it) and began to see voice prophylaxis as a necessary imposition for surmounting the subjects' precarious working conditions. Thus, speech-language pathologists (SPLs) became able to reshape their practice to respond to the reality of sickness among a large number of workers. Araújo et al.[28] warned that voice problems among teachers, along with mental disorders and repetitive strain injury/work-related musculoskeletal disorders (RSI/WMSD) are aggravating factors that, because of their importance in certain professional categories, merit interventions through public policies.

At the eighth voice seminar[29], an instrument was drawn up for multicenter application with the aim of achieving better understanding regarding the health-disease process within teaching. This questionnaire, which was designed to investigate the prevalence of voice disorders, signs and symptoms and factors associated with the environment and work organization, constituted a fundamental initiative for producing evidence about voice disorders and their relationship with work.

The questionnaire was initially applied to teachers within the municipal teaching network in the city of São Paulo, Brazil. The results showed that voice disorders were highly prevalent, thus emphasizing the relevance of this initiative[30]. Its updated version, known as the protocol for conditions of teachers' voice production (CPV-P)[31], was applied to more than 10,000 teachers in different contexts, whose realities thus differed. One part of the questionnaire was validated and now comprises the screening index for voice disorder (SIVD)[32].

Drawing up the questionnaire was also difficult given that epidemiological studies had historically not been customary in this field. On the other hand, this yielded valuable approaches, such as a partnership with the School of Public Health of the University of São Paulo, through which it contributed towards the research.

The first evidence from research conducted in Brazil and abroad among teachers, regarding sick leave and functional retraining, legislation in Brazil and other countries and practices of other professionals who used the voice as a work tool (e.g. broadcasters, telemarketers, actors and singers), was shared at the ninth voice seminar[33], which was held in 1999.

First political and legal gains

Each law is the result of a political victory. Social movements succeed when they achieve legislative change that formalizes decisions welcoming their demands. Presentation of a bill establishing a state teacher health program, for example, would be of immense value. The problem is that until a few years ago, a project like this would be the exclusive responsibility of the state governor. The legislature could not, on its own initiative or through an amendment to a bill from the executive, increase the administration's expenditure, according to the current interpretation of article 61, § 2, and article 63, item I, of the Brazilian Constitution[34]. To avoid unconstitutionality, legislators would have to present a bill allowing the executive to implement an increase in expenditure. However, this would not give rise to an entitlement, since no such program was actually created: rather, only legal permission was granted for it to be created.

Between 1998 and 2006, 22 initiatives were registered and most of these were proposed by the legislative branch[9]. From 1998 to 2010, 66 initiatives were added, thus showing that significant growth occurred over the last four years of that period. Among the 61 initiatives that were most directly related to teachers' voices, 88.5% related to voice health programs[35].

However, the Federal Supreme Court has now accepted a more literal interpretation of the constitution such that this now makes it possible for teacher health programs (state or municipal) to be implemented on the basis of laws enacted through parliamentary initiative[36].

Also in 1999, the first national voice week was launched[8] as an initiative from the Brazilian Society of Laryngology and Voice (SBLV), with support from the Brazilian Speech-Language-Hearing Association (SBFa) and the Brazilian Society of Otorhinolaryngology (SBORL), which today is known as the Brazilian Association of Otolaryngology and Cervical-Facial Surgery (ABORL-CCF). The campaign highlighted voice problems through publicizing the high prevalence of laryngeal cancer in the Brazilian population. SBLV is an interdisciplinary society for ear, nose and throat (ENT) physicians and SPLs that was founded to better respond to the demands of workers who use their voices professionally. Although these voice campaigns were not directly related to the struggle for recognition of WRVDs, they played an important role in giving greater visibility to voice problems. The initiative was successful and was embraced internationally, thereby creating the World Voice Day[8,37].

Difficulties in establishing the causal link

In 2000, at the tenth voice seminar[38] there was a setback in the struggle for recognition of the linkage between voice illness and work, in that voice disorder was considered conceptually to be a multifactorial disease. The consequence of this understanding was that it increased the difficulty in establishing the causal nexus between voice disease and work. The discussion focused on the field of epidemiology and, based on the lack of strong evidence to support the causal nexus (decree no. 2,172/97[39], which regulated social security benefits), it was impossible to delimit the role of work in this etiology.

The reference to the text may have been mistaken, because at that time decree no. 3,048/99[24], which replaced the abovementioned decree, was already in force. In this decree (1997)[39], in comparing nosological entities (based on ICD-10), pathogens that cause occupational or occupational diseases, occupational agents/factors and the National Classification of Economic Activities (CNAE) in Brazil, there is some interesting reasoning. However, it does not include dysphonia or laryngeal disease as nosological entities, which could be associated with potential occupational etiological agents, particularly in professional activities in which the voice is the main instrument of work, such as education, teaching and telemarketing. On the other hand, it gives rise to the possibility of providing accident aid in situations of "word disturbance"[24,39], if this is proven through objective clinical methods. The challenge for professionals was how to put this nexus into operation, since there was no technical guidance on how to proceed in cases of voice disorder, which was not yet covered in the technical manual of work-related diseases of the Brazilian Ministry of Health[17].

From then on, there was a focus on construction of documents that would bring evidence about WRVD and would define occupational risk factors, clinical pictures and diagnoses, as well as treatment, prevention and other courses of action, as established for diseases that had already been recognized as work-related.

Medical Act and the polarization of the movemen

In parallel with the movement promoted by the Speech-Language Pathology and Hearing School of PUC-SP, the medical profession also built initiatives in the form of consensuses. In 2001, the first pro-consensus national meeting on professionally used voice[40] was promoted

by the current ABORL-CCF, with participation by the Regional Medical Council of the State of Rio de Janeiro (CREMERJ) and the SBLV. It established the preliminary basis for a protocol, including the multifactorial and co-causal nature of voice disorders, multiprofessional evaluation, periodicity of occupational examinations and professional qualification. It was agreed that the professional councils involved should be consulted regarding attributions, competencies, limitations and restrictions of each field. The points discussed were: evaluation, treatment, care, training, qualification and improvement of individuals who use the voice professionally.

In 2002, in the second consensus[41], discussions focused on aspects of medical procedures such as anamnesis and limitations to otorhinolaryngologists' actions, particularly regarding the issue of fitness or incapacity for work (attribution of occupational physicians) and situations that could weaken the medical profession. However, such actions performed by experienced or trained technicians would be allowed, for example execution of voice therapy, singing techniques and giving opinions about the future of a patient's career in the light to voice disorders. Finally, competencies, limitations and restrictions were established in relation to SPLs. In this context, the agenda was clearly evident: SPLs would be subservient to ENT physicians, which would restrict their activities such as the ability to make diagnoses, request complementary examinations and coordinate teams. In that same year, the Senate put forward bill no. 268/02, on medical procedures, which was subsequently approved as law no. 12,842/13[42], known as the Medical Act.

From then on, the polarization between ENT physicians and SPLs was established. SBLV was renamed the Brazilian Association of Laryngology and Voice (ABLV), thereby restricting the participation of non-medical professionals only to secondary positions. The board was restricted to physicians and thus an entity that could have had a promising future from an interdisciplinary perspective was dissolved. Voice campaigns started to take place in parallel, with separate initiatives from these two professional groups[8]. If, on the one hand, there was a loss of activity through fragmentation, on the other hand, this expanded the space within the media. The campaigns gained emphasis and began to count on sponsorship from artists, thus giving greater visibility to voice problems.

Macropolitical initiatives were also evident. In 2003, at the 12th national health conference[43], implementation of actions to prevent and rehabilitate the voice for workers subjected to chemical or physical risks was recommended. Although this was only an initial recommendation, it had a macrospatial impact given that it extrapolated from the previously delimited borders between the specific fields of speech-language pathology and otorhinolaryngology. It thus surmounted the walls relating to specific professional actions in the field of voice care and repositioned voice disorders as a public health problem.

In 2004, two important documents resulting from the discussions that had been held up to that time were released almost simultaneously. The first of these was an "open letter to Rio", presented by the medical profession at the third voice consensus[4], which defined technical procedures and competencies for establishing the causal nexus of work-related diseases, along with monitoring and care for WRLD. Three months later, at the 14th seminar at PUC-SP[5], CEREST-SP presented the WRVD protocol with similar definitions. The polarization between the medical and speech-language pathology professions became even more evident, symbolized by the terminology used to define the disease. For SLPs, considering speech disorder as a nosological entity implied broader nomenclature, which could also take into consideration voice disorders without structural lesions in the larynx. For ENT physicians, the term laryngeal disease was the most appropriate, and the condition without structural lesions was called functional laryngeal disease. At that time, the only consensus was in relation to the term "dysphonia", which was abolished by both professions, given that it was classified in ICD-10 as a symptom. In the same year, a new list of complaints for which notification was compulsory was published by the Ministry of Health, which included neither voice disorders nor laryngeal disease in its annexes (Ministry of Health ordinance no. 777/04)[44].

Focus on WRVD notification

Over the following years, the movement became dampened, thus frustrating the expectations of seeing voice complaints included in the WRD list. In 2007, there was another setback: decree no. 6,042/07[45] was published, which amended the social security regulations without considering voice disorders. At the same time, the Senate promulgated a vote of applause[46] for SPLs on the occasion of World Voice Day. Although well received, this initiative did not solve the major problem of WRVD recognition.

Also in 2007, in the newssheet of the 13th national health conference[47], there was a new call for voice disorders to be recognized as an occupational disease and for their evaluation to be integrated into healthcare protocols, thereby establishing a "voice healthcare policy" for workers.

In 2008, the National Voice Day was established[48]. Its implementation had the aim of "raising awareness among the Brazilian population regarding the importance of taking care of the voice". In political terms, voice complaints gained greater visibility through these initiatives, but still without formal recognition as an occupational disease.

At the same time, in a pioneering initiative, CEREST-RJ asked the Department of Health of the state of Rio de Janeiro to include "occupational dysphonia" in the list of diseases for which notification was compulsory, as a matter of interest for the state[49]. A few years later, in 2013, a resolution[50] redefining the list of notifiable diseases in the state of Rio de Janeiro, including dysphonia, was published. This was preceded by an initiative in the state of Alagoas[51], with publication of a law one year earlier (2012) and was followed by one in the municipality of Niterói, state of Rio de Janeiro[52], in 2014, which included the code "R49.0" for dysphonia, in its local lists. In Alagoas, the complaint was referred to as a "work-related voice disorder," while maintaining the same code (R49.0) for the notification.

This was an insightful initiative, which took advantage of article 10 of Ministry of Health ordinance no. 104/11[53], through which state or municipal lists can be drawn up, in accordance with the local epidemiological profile. In this case, choosing the symptom of dysphonia would not make a difference, since compulsory notification is provided for in cases of suspected or confirmed diagnosis. Although voice disorder is not only a local problem, its inclusion in the list of notifiable diseases was a way of demonstrating its high occurrence and putting pressure on the Brazilian Ministry of Health for its inclusion in the national list of WRDs. However, one major difficulty hindering success in this strategy comprises underreporting, which also occurs in cases of other health complaints.

With the repeal of Ministry of Health ordinance no. 104/11[53] and its replacement by ordinance no. 1,271/14[54], preparation of local lists is no longer envisaged. Nonetheless, this does not mean that existing lists have become invalid, nor does it mean that new municipal or state lists cannot be created. The purpose of the ordinances

Creation of local lists is based not only on an ordinance, but also on the autonomy of the states and municipalities, which is laid down in the constitution. They can create their own information systems, to run services using local skills. In was to establish which injuries would be notifiable, so that it would become possible to place these cases in the database administered by the Brazilian Ministry of Health and thus in their statistics. constitutional law, this power is called "implicit competency"[55]: if a charter attributes a duty to federal states, to provide a service, all the attributions that will enable this to be fulfilled are implied. "Taking care of health" is a "competency that is common to the union, states, federal district and municipalities", according to article 23, item II, of the Brazilian Constitution.[34] Therefore, services and actions need to be organized to achieve this purpose. Thus, local lists will always be valid, since they represent municipal or state efforts towards ascertaining the specific demands of their areas of coverage.

The Ministry of Health's alternative

In 2009, the second national voice seminar (CEREST-SP) and the 19th voice seminar of PUC-SP[56] took place. The initial strategy of investment in the Ministry of Social Security was modified and the target became the Ministry of Health, and particularly the general coordination office for workers' health (COSAT; now known under the initials CGSAT), which was responsible at that time for issuing protocols of differentiated complexity. The initiative from CEREST-RJ influenced the referral to the Ministry of Health itself, through including WRVDs in the list of notifiable diseases. This was because of the Ministry of Health's ability to create WRD lists.

These lists indicated the diseases that would receive attention from the organs involved in the national workers' and workers' health policy (PNSTT), which was linked to the national network of comprehensive care for workers' health (RENAST). Citizens who were affected by diseases that could objectively be related to work, but which were still absent from the list, would receive public treatment, but not treatment through the specific organs of the PNSTT. There were two other lists, the social security list, for access to benefits, and the Ministry of Health's list, for diseases for which notification is compulsory in Brazil. WRVDs did not appear in any of these lists.

Also in 2009, during the World Voice Congress, the Brazilian multidisciplinary committee for occupational voice use (COMVOZ)[57] was cre-

ated by ABORL-CCF, the National Occupational Medicine Association (ANAMT), ABLV and SBFa, in an attempt to achieve rapprochement between SLPs and ENT physicians. The purpose of the initiative was to define criteria to support future legislation regarding recognition of voice disorder as a WRD. The negotiations were difficult and tense, but produced two bulletins. The first one[58] dealt with the definition of the etiology of dysphonia (functional, organo-functional and organic); its characterization as a symptom and not as a disease; and use of the term "adapted voice" as a socially acceptable voice and, in occupational terms, maintaining the relationship with the demands on the voice used and the required voice quality. The second bulletin[59] suggested that voice evaluation should be conducted upon admission to a clinic or in the presence of voice complaints, which would be composed at least of an otorhinolaryngological evaluation with laryngeal examination, speech-language evaluation with functional voice and hearing examinations. In addition, voice management was to have been recommended in a third bulletin that has not been published so far.

In 2010, in partnership with the Sergio Arouca National Public Health School of the Oswaldo Cruz Foundation (ENSP/FIOCRUZ), CEREST-RJ launched a series of quarterly bulletins on speech-language pathology and hearing within occupational health. Two of them highlighted WRVDs[60,61]. In order to guide professionals, the bulletins also reported on the movement towards recognition of WRVDs and dealt with topics such as notification, surveillance and the teachers' voice health program, and addressed other matters of a more conceptual nature such as occupational health and ergonomics.

The WRVD protocol under public consultation

In 2011, there was another frustration. A new edition of the list of notifiable diseases was published through Ministry of Health ordinance no. 104/11[53], without taking voice disorders into consideration. This negative contribution comprised a summary of the WRVD document that had been released in 2004[5]. The then COSAT-MS, together with CEREST-RJ and representatives of SBFa, CFFa, and COMVOZ reviewed the WRVD protocol. This was then presented at the 21st seminar at PUC-SP[62] and was released for public consultation by the Ministry of Health. The discussion mobilized several social actors and raised impressive expectations regarding referrals. However, to date, there has not been any presentation of the results from the public consultation or regarding the final wording of the document, as had been established in the Ministry of Health's work methodology. SBFa requested information from COSAT in May 2013, but there has not been any formal positioning regarding the progress of the work[63].

Also in 2011, the macropolitical dimensions of WRVD expanded further. At the 14th national health conference,[64] a motion was put forward calling on the Ministry of Health to approve the WRVD protocol, in order to ensure that these disorders would be notified to SINAN and that full care would be provided. There was no reference here to recognition of voice disorders as WRDs, which would be the first step towards its formalization.

The engagement of CEREST-RJ provided reflections on speech-language practice within occupational health and, in 2012, in partnership with the regional speech-language and hearing council of the first region of the state of São Paulo, a document was accepted as the basis for ordinance no. 26/11[65], which deals with SLP and audiology within workers' health. Subsequently, the argument produced was appropriated by CFFa through resolution no. 428/13[66], thereby expanding the discussion to a national level. These resolutions provided audiologists with clearer guidelines on occupational health in terms of skills and actions. They also constituted an important landmark through their demarcation of positions in the light of the threat posed by medical action.

The 4th national conference on workers' health[67] was held in 2014 and included creation of a national voice health program, with implementation of a single register of notifications of injuries and accidents at work, which included "dysphonia" in the list. The idea of a single register was in line with unification of the lists, thus bureaucratizing the system, which has been a recurrent theme within the agenda for workers' health.

Even with all the initiatives that have been implemented, including seminars, consensuses, documents, protocols, bulletins, notifications, campaigns and voice health programs, voice disorders have still not been recognized as WRDs (Figure 2). The latest two initiatives from the Ministry of Health, which updated the list of notifiable diseases, i.e. ordinance no. 1,984/14[68] and the recently published ordinance no, 205, of February 17, 2016[26], also did not take WRVDs into consideration.

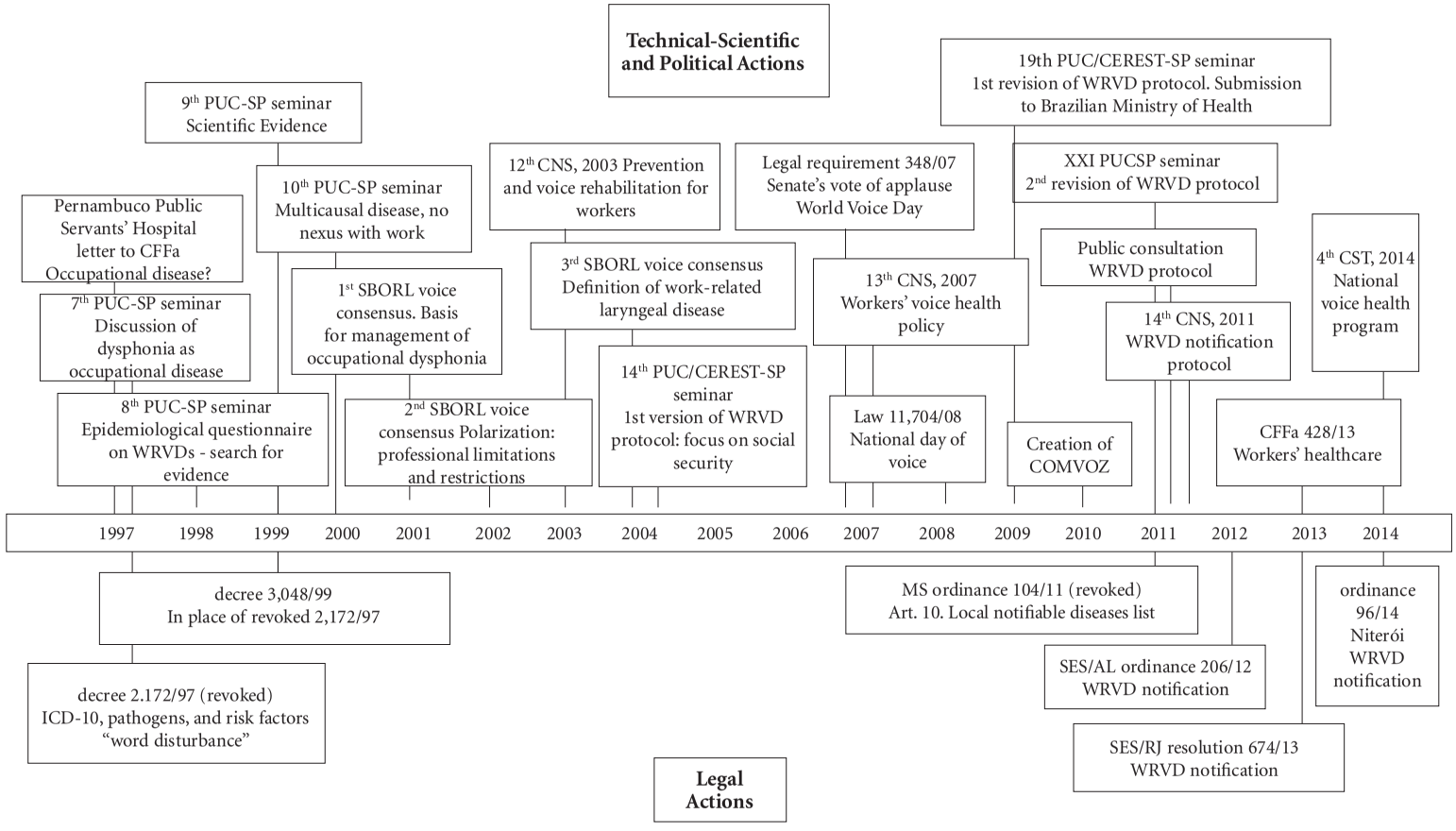

Figure 2. Technical-scientific actions, policies and legal frameworks in the history of seeking recognition of WRVDs in Brazil.

Final remarks

This article presented the movement among social actors seeking recognition of voice disorders as a WRD over the last 20 years. Although the evidence demonstrates that there is high prevalence of voice impairment among workers who use their voice professionally, which is associated with organizational and working environment factors, especially among teachers, there is no legislation regarding WRVDs or any public healthcare policy.

This movement was shown to have been a non-linear process, marked by accomplishments and setbacks, moments of great optimism and times of conflict and frustration, and peripheral initiatives that, although they gave visibility to the question, did not achieve formal recognition of WRVDs. Although the efforts of the actors involved were initially made in concert, they became strained through conflicts such as the attempt to impose the primacy of medical action, from which it was difficult to return to dialogue. Overcoming the tensions that have become established between social actors, so that they might again join forces for recognition of WRVDs would greatly contribute towards this recognition.

It is essential to have recognition for WRVDs from the Brazilian Ministry of Health, with due publication of a protocol of differentiated complexity, thus addressing guidelines regarding management, monitoring, promotion of preventive and protective action and rehabilitation. Inclusion of WRVDs in the social security list would bring positive results in terms of compensatory benefits. In the absence of their inclusion, the nexus has been proven on a case-by-case basis or in courts dealing labor-law matters, in a more costly and time-consuming manner. Inclusion of WRVDs in the list of notifiable diseases would provide a clearer understanding of the epidemiological reality, provided that the challenge of underreporting has been overcome.

Finally, it has been noted that the quest for recognition of WRVDs should be based on the link between work and voice health among individuals who use their voices professionally, with the mission that the conditions and characteristics of the work itself are objects for interventions to promote and protect voice health among these workers. This concept will strengthen the need to build healthier environments and working conditions that will enable job satisfaction and full professional practice without compromising health, while also promoting better quality of life.

Collaborations

MLV Masson worked on designing, analyzing and interpreting the data; essay writing and critical review of intellectual content; final approval of the version to be published; responsibility for all aspects of the work as to the accuracy and completeness of any part of the work. S Ferrite, LMA Pereira, LP Ferreira and TM Araújo collaborated in the design, analysis and interpretation of the data; relevant critical review of intellectual content; final approval of the version to be published; responsibility for all aspects of the work as to the accuracy and completeness of any part of the work.

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