

# Teleconsultancy compulsion: a management tool for health regulation

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## Abstract

*Introduction: One of the great difficulties in consolidating Basic Health Care (ABS) in Brazil is related to the resolving capacity of the teams, in a scenario of excessive referrals and long waiting lines for several specialties. One of the strategies proposed for clinical qualification at ABS is teleconsulting, which through digital technology offers support to professionals. However, its spontaneous use has historically always been incipient. In 2015, the Santa Catarina Telehealth Center began a process of articulation with the Regulation Centers, which made compulsory the use of teleconsulting prior to referral to some specialties. Method: The article describes and details the teleconsulting and compulsory project, developed by the Telehealth Center in Santa Catarina since 2015 and its current results. Results and conclusion: The results showed a large number of cases with the possibility of management in ABS and qualification of access to specialties, reinforcing the importance of establishing the compulsory flow of teleconsultancy as a tool of regulation to ensure access in a timely place and time.*

*Keywords: Teleconsultancy; Telehealth; Health Management; Basic Health Care; Unique Health System.*

## Resumen

*Obligatoriedad de la teleconsulta: una herramienta de gestión para la regulación en salud.*

*Introducción: Una de las grandes dificultades para consolidar la Atención Básica de Salud (ABS) en el Brasil está relacionada con la capacidad resolutoria de los equipos, en un escenario de excesivas derivaciones y largas filas de espera para varias especialidades. Una de las estrategias propuestas para la cualificación clínica en el ABS es la teleconsulta, que a través de la tecnología digital ofrece apoyo a los profesionales. Sin embargo, su uso espontáneo siempre ha sido históricamente incipiente. En 2015, el Centro de Telesalud de Santa Catarina inició un proceso de articulación con los Centros de Regulación, que hizo obligatorio el uso de la teleconsulta antes de la remisión a algunas especialidades. Método: El artículo describe y detalla el proyecto de teleconsulta y obligatoriedad, desarrollado por el Centro de Telesalud de Santa Catarina desde 2015 y sus resultados actuales. Resultados y conclusión: Los resultados mostraron un gran número de casos con la posibilidad de gestión en el ABS y la calificación del acceso a las especialidades, lo que refuerza la importancia de establecer el flujo obligatorio de teleconsulta como una herramienta de regulación para asegurar el acceso en un lugar y tiempo oportunos.*

*Palabras clave: Teleconsulta; Telesalud; Gestión de la Salud; Atención Sanitaria Básica; Sistema Único de Salud*

## Resumo

*Compulsoriedade de teleconsultoria: uma ferramenta de gestão para regulação em saúde*

*Introdução: Uma das grandes dificuldades para consolidação da Atenção Básica à Saúde (ABS) no Brasil está relacionada à capacidade resolutoria das equipes, num cenário de excesso de encaminhamentos e grandes filas de espera para diversas especialidades. Uma das estratégias propostas para qualificação clínica na ABS é a teleconsultoria, que por meio de tecnologia digital oferta apoio para os profissionais. Todavia, seu uso espontâneo historicamente sempre fora incipiente. Em 2015, o Núcleo Telessaúde de Santa Catarina iniciou um processo de articulação com as Centrais de Regulação, que tornaram compulsório o uso da teleconsultoria previamente ao encaminhamento para algumas especialidades. Método: O artigo descreve e detalha o projeto de teleconsultoria e obrigatoriedade desenvolvido pelo Centro de Telessaúde de Santa Catarina desde 2015 e seus resultados atuais. Resultados e conclusão: Os resultados demonstraram grande número de casos com possibilidade de manejo na Atenção Básica e qualificação do acesso às especialidades, reforçando a importância do estabelecimento do fluxo compulsório de teleconsultoria como ferramenta da regulação para garantia do acesso em local e tempo oportunos.*

*Palavras-chave: Teleconsultoria; Telessaúde; Gestão em Saúde; Atenção Básica à Saúde. Sistema Único de Saúde.*

## Introduction

Since the creation of the Unified Health System (SUS) in 1988, the model of care proposed by the Ministry of Health (MS) to organize its health system was that of Primary Health Care (PHC) in Brazil, called Basic Health Care (ABS).

Despite its recognized importance in improving health indicators over the years<sup>1</sup>, one of the problems faced for its qualification is its resolutive capacity, which is around 70%, well below the resolutive capacity in countries with consolidated system, which is between 85% and 90%<sup>2,3</sup>.

Does telehealth contribute to the training of the primary care professionals? To answer this question, we traced as objective: To analyze the impacts of telehealth in the training of primary care professionals in Brazil.

A broad survey conducted in more than 70 health units in several states of Brazil demonstrates this picture of low solvability, presenting an excessive number of referrals, causing an overload for Specialized Attention<sup>3</sup>.

This lack of criteria and lack of risk stratification in Basic Care causes the Specialized Outpatient Care services to receive both cases of simpler, low and medium risk problems, as well as cases of more complex and higher risk problems<sup>2</sup>.

A survey conducted in Belo Horizonte on the relationship between Basic Care and Specialized Care in Cardiology revealed that most cardiologists considered that a large part of referrals could have resolution and follow-up in Basic Care<sup>4</sup>.

These inadequate references can generate additional problems of inequality of access, with the creation of long waiting lines, and consequent delay in the care of cases that actually need specialized attention<sup>5</sup>.

Studies show that long waiting periods for specialized attention may lead to worsening of the health problem, prolonging suffering and, in extreme cases, leading to death by withdrawal, besides the social costs inherent to the process of illness or death<sup>4</sup>.

Some researches show that the lack of establishment of criteria for access to specialized care can lead to queues with great waiting time, as in the study conducted in a small municipality in the State of Minas Gerais, which pointed out an average of 244 days of waiting for specialized consultation<sup>6</sup>.

In the survey conducted by Barros, Pereira and Pereira (2013) in a large municipality in southern Brazil, in a pre-regulation period without clinical evaluation of the cases, the waiting time in some specialties exceeded five years<sup>7</sup>.

The long waiting times also lead to a high percentage of absenteeism of patients scheduled for specialized consultation, which in some cases, reaches close to 40%<sup>4</sup>, because it may occur that at the time of authorization of the procedure, the patient is no longer found or has already performed the consultation or examination by other means, or even has died<sup>7</sup>.

The difficulty of access to Specialized Attention is still corroborated by the insufficient offer of consultations in some specialties and by the regulatory process still incipient in many regions of the country<sup>8</sup>.

The most used instruments to avoid unnecessary refer-

als to specialized attention are clinical protocols and regulatory protocols.

Clinical protocols support care practice, with evidence-based information to support therapeutic decisions<sup>9</sup>, and must go through a process of validation of the various actors involved in care, on diagnostic criteria, recommended treatments, clinical follow-up mechanisms and verification of therapeutic outcomes<sup>8</sup>.

On the other hand, access regulation protocols are sets of guidelines for the organization of the regulation process, promoting the adequate and rational use of health actions and services, in the different areas of care, and are composed of criteria for referrals (establishing who may or may not access a certain service), risk and vulnerability classification (prioritizing the cases of greatest need), access flow (guiding the most appropriate place of care) and other instruments, according to local need<sup>10</sup>.

Although these instruments are necessary and useful, the simple establishment of clinical protocols and access regulation may not guarantee the necessary attention to the user. Even with this information, the attending physician may have doubts or insecurity about the patient's management.

The available evidence indicates that the passive adoption of clinical guidelines probably does not improve the process of qualification of referrals<sup>11</sup>.

What seems to facilitate the use of management protocols is the approximation between specialist and physicians of Basic Care, through the establishment of clinical dialogue, improving the quality of referrals to specialist care<sup>4</sup>.

The identification of difficulties in solving problems sensitive to Basic Care and of theoretically unnecessary referrals to specialized care requires, therefore, permanent education activities, which can be of matrix support, both in person and through the use of virtual technologies<sup>12</sup>.

One of the initiatives of the federal government to develop permanent education actions for the qualification of Basic Care teams was the creation of the Telehealth Brasil Program, later redefined as the National Telehealth Brasil Redes Program, through Ordinance No. 2.546/GM/MS/2011, which among other services, defines as one of its priority actions, the offer of clinical teleconsultancy to improve the solvability in Basic Care<sup>11</sup>.

The teleconsulting clinic consists of consultation registered and requested by health professionals in order to clarify doubts about clinical procedures and health actions, performed through two-way telecommunication (teleconsultor / requesting professional)<sup>11</sup>. The guidelines suggested by teleconsultants are based on the greatest scientific evidence available, respecting the limits of competence and responsibility of the Basic Care professional.

Offered since 2009 by the Santa Catarina Telehealth Center, the use of clinical teleconsulting has always been incipient in view of its potential to support professionals, even in a regional context of low solvability and excessive referrals to medical specialties<sup>13</sup>. The same difficulty of adherence to the use had been reported by other Centers of Telehealth, when the mode of spontaneous use of the teleconsultancy service in various forums and meetings of the Centers linked to the Ministry of Health.

## Method

From 2015 on, the Santa Catarina Telehealth Center, in partnership with the city of Joinville, carried out a pilot project for the compulsory use of teleconsultancy carried out by specialists prior to referral to Specialized Attention (Endocrinology and Orthopedics), with very expressive results regarding the possibility of handling cases in Basic Attention, which reached 40% of total requests from teleconsultancy<sup>14</sup>.

It is important to highlight that with the compulsory modality of teleconsultancy, your request almost always represents a desire of referral of the requesting doctor, which implies that potentially the teleconsultancy could reduce by 40% the requests of referral, which can be solved in the Basic Attention.

Other initiatives of compulsory flows have been implemented in other regulation centers such as in the city of Jaraguá do Sul (Endocrinology and Nutrition), and have been extended on a larger scale to the Outpatient Regulation Center of the State, including with the deliberation of the Bipartite Interagency Commission (CIB), including specialties such as Nephrology, Neurology, Gastroenterology, Rheumatology and Endocrinology itself, with successful results regarding the possibility of management in Basic Care<sup>15</sup>.

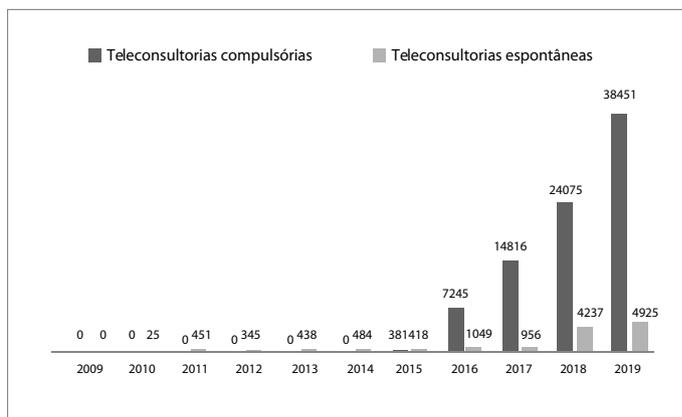
## Results and Discussion

The definition of compulsory flow, at first seems arbitrary. On the other hand, the refusal of the wrong referral, together with the possibility of discussing the clinical case in question, is a great opportunity for qualification of the professional. In this sense, teleconsulting shows itself to be quite adequate, since it is directed to specific and individualized learning needs, increasing its solvability potential for similar future cases<sup>8</sup>.

Moreover, the offer of permanent education actions is the responsibility and attribution of the municipal management, and in return, to carry out educational activities that aim at the qualification of its practice, is the responsibility of the health professional<sup>13</sup>.

However, in practice, health professionals adhere little to permanent education initiatives. In relation to teleconsultancy, available to all professionals in the State of Santa Catarina since 2009, the historical series demonstrates how its use in the spontaneous modality has always been very incipient, and with the beginning of compulsory flow in 2015, it starts to have an exponential increase, according to graphic 1.

**Graph 1.** Evolution of the offer of clinical teleconsultancy performed by the Telehealth Center of Santa Catarina to registered professionals, between 2009 and 2019.



Dark grey: Compulsive teleconsultations  
 Light grey: Spontaneous teleconsultations  
 Source: Federal University of Santa Catarina, Telehealth Center of Santa Catarina, 2019.

Obviously, it is not possible to analyze only from the quantitative point of view of the use of teleconsultancy, but what most calls attention is that of this total of requests, a good part was related to the suggestion of management in Basic Care, with a significant reduction in unnecessary referrals, which justifies the proposition of compulsory flow by the management in front of the previously presented picture of low solvability in Basic Care, excessive number of referrals to specialties, the still incipient use of educational resources.

One of the most important results presented from the definition of compulsory flows of teleconsultancy could be observed in the Central of regulation of the State of Santa Catarina. A comparison regarding the number of people waiting in line and the waiting time in days, showed an expressive reduction in all specialties, according to chart 1.

**Chart 1 .** Total number of people in the queue of the regulation system for specialized services in Santa Catarina, 2018.

Specialty	Total in the month of implementation of the flow	Total in December 2018	Percentage of drop in queue
Endocrinology	1172	431	Almost 200%
Rheumatology	890	410	More than 100%
Gastrology	1264	99	More than 1100%
Neurology	480	230	More than 100%
Nephrology	2019	413	More than 50%

Source: Central State of Ambulatory Regulation of the Secretary of State of Health, 2019.

Besides the results of the State Regulation Center, the implementation experiences in the regulation centers of Joinville and Jaraguá do Sul cities, also presented very expressive results, with the reduction of waiting time for the first consultation, being practically zeroed, after a period of six months of implementation of the compulsory flows of teleconsulting, in queues that previously exceeded two years in some specialties<sup>14,15</sup>.

The compulsion can be seen and justified still from the perspective of health regulation. The term regulation, applied to the health sector in the country, has several understandings, conceptions and practices.

Assistance regulation can be understood as a set of relations, knowledge, technologies and actions that intermediate users' demand for health services and access to them, requiring the establishment of strategies with scientific basis, as well as the contribution of human, material and financial resources for the adequacy of offer, instituting, expanding or changing, according to the population health needs. Therefore, it concerns the management of the access regulation process<sup>16</sup>.

Access regulation, on the other hand, is understood as the establishment of means and actions to guarantee the constitutional right of universal, full and equal access<sup>16</sup>. Therefore, it refers to the technical mechanisms used to guarantee the access to health actions and services, such as clinical protocols and regulation protocols, as well as the definition of care lines and assistance flows, guiding the best user access, based on his/her needs<sup>16</sup>.

In this logic, regulatory complexes are considered one of the strategies of access regulation, implemented under the guidance of clinical management tools, enabling the coordination of access flows to health actions and services within the lines of care, according to the user's needs, considering the reference and counter-reference in the Health Care Networks<sup>17</sup>.

Thus understood, the assistance regulation and the access regulation should build, respectively, processes of attention management and clinic management that avoid unnecessary referrals to specialized attention, when these do not present proven clinical indication. This implies an increase in the solvability of Basic Care, which besides providing the necessary care, avoids the exposure of patients to unnecessary procedures and displacements, and also optimizes the use of resources in health<sup>17</sup>.

That said, the establishment of compulsory flow of teleconsulting can be considered a strategy for the regulation of care, and the teleconsulting itself, a support tool for the regulation of access, having permanent education as its guiding axis, which in fact corroborates the broad understanding of regulation in health.

In addition, Ordinance No. 2.546/GM/MS/2011 itself points out the responsibility of the State Health Secretariats to promote the articulation of Telehealth Brasil Networks with the Central Regulatory Centers, in partnership with municipal and federal management, in a manner that is shared and articulated with the network's points of attention<sup>11</sup>, therefore, to a certain extent justifies the establishment of a flow of teleconsultancy articulated to regulation

and reinforces the fulfillment of responsibilities of the SUS management spheres.

The argument that compulsion can bureaucratize the access of cases in which specialized attention is indeed needed is also not true. The first question is that as of the teleconsultancy's request, the answers are posted within 72 hours, which does not significantly harm the possible scheduling of the specialized consultation, since we are lining up with ambulatory regulation (elective cases).

In addition, the description of the case in a detailed manner posted by means of a teleconsulting request, when the need for referral allows the assessment and classification of risk carried out by a specialist, which can potentially assist the decision of the regulator (in general generalist), with more technical criteria and more equanimous access to specialized attention.

This logic meets the primary function of regulation, which should provide access to health actions and services in a timely manner, especially medical appointments and diagnostic and therapeutic procedures for patients with higher risk, need, vulnerability and/or clinical indication<sup>8</sup>.

Another advantage of compulsion, even when there is a need for referral, is that the teleconsultant, because he is a specialist in the area of the request and also because he carries out his own assistance in the Specialized Attention, can already suggest through the teleconsultant, previous requests for exams (which can imply in a decrease of a first return appointment, since sometimes the diagnosis and therapy can be carried out in that first appointment), and also provisional management until the date of the specialized consultation. In both situations, it allows the qualification of access to specialized attention, including the possibility of accelerating the patient's recovery.

A final argument to bet on the maximum resolution of cases in ABS can be justified by a report of the National Health Service of the United Kingdom, which showed that the cost of health procedures performed in APS is 10 times lower than in the specialty outpatient clinic and 1,330 times lower than in the tertiary hospital<sup>2</sup>.

In the operational field, most studies that compared PHC services with other specialized care services, besides the issue of costs and user satisfaction in favor of PHC, did not demonstrate any adverse effect on the quality of care or the sanitary outcome<sup>2</sup>.

In spite of the definition by the establishment of a compulsory flow of teleconsulting prior to the referral to the Specialized Attention, this process must have previous discussion with the Regulation Centers, Technical Chamber of Regulation, Regional Inter-managerial Commission, Bipartite Interagency Commission, Basic Attention Coordination.

The experience of the Santa Catarina Telehealth Center, especially with the State Outpatient Regulation Center, started with a discussion process in the Technical Chamber of Regulation, regarding the long waiting lines in several specialties, and the verification by the regulatory doctors that many cases presented incomplete description of the cases or showed potential of resolution in the Basic Attention, without the need of referral to the specialties.

After discussions among the members of the Technical Chamber, it was proposed the compulsory use of teleconsulting in the form of a deliberation for the Bipartite Inter-agency Commission.

With this there was technical validation (Technical Chamber of Regulation) and political validation (Bipartite Inter-agency Commission) for the process. These movements give amplitude and legitimacy to any change process, especially when they interfere in the work process in the health area.

In addition, the whole process of implementation precedes a training of the Basic Care network to know the tool and the flows proposed for integration with the regulatory process. They are carried out via web lecture or for larger municipalities that implement their own flows, in a face-to-face manner.

Finally, it is important to emphasize that the compulsion consists in the request of teleconsulting prior to the decision of referral, and regardless of the suggestion of the teleconsulting (either management and/or referral), the decision of what to do is up to the attending physician, ensuring their autonomy, as provided by the medical code of ethics. Therefore, teleconsulting does not consist of a barrier as to the access to Specialized Attention, only part of the flow to guarantee its qualification.

## Conclusions

The importance and scope of teleconsultancy is already well established. The discussion of this article sought to discuss the need for the institution of compulsory flows of teleconsulting articulated to the central regulation centers, since the offer of teleconsulting in the modality of spontaneous use, although it may have importance in the individual qualification of some professionals and consequent benefits in the attention, has not been able to modify in a collective way the excessive picture of unnecessary referrals to the Specialized Attention, with losses in the attention to the population in general.

In this logic, the articulation of Telehealth with assistance regulation represents a major step towards effective management technology, which has its applications in the scope of (micro regulation), services (access regulation) and health system (assistance regulation)<sup>8</sup>.

Moreover, the tool of teleconsultancy as information and communication technology, allows the approach between Basic Care, Regulation and Specialized Care, thus promoting a functioning that propitiates the cooperative work in care network, and most importantly, from the needs of the users, which now has the guarantee of access with quality, performed in a timely place and time.

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