The healthcare network to the amputee

Rede de atenção à saúde à pessoa amputada

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Abstract

Objective: Analyzing the network of care for the amputee from the perspective of healthcare professionals inserted in high complexity services.
Methods: A qualitative research with data collection through semi-structured interviews with professionals from different areas involved in care of the amputee.
Results: It was observed that a part of the interviewed professionals knows and acts in a perspective of referral to rehabilitation, while others are unaware of the flow of referrals, as well as of the care network that supports these users.
Conclusion: The data showed the multidisciplinary and inter-institutional work occurring in some areas as the great fortress in the context of rehabilitation. The main weaknesses found were the lack of knowledge of high complexity professionals about the networks of health care, and the way rehabilitation is seen, not inserted in a context of care unless there is the possibility or occurrence of amputation.

Resumo

Objetivo: Analisar a rede de atenção à pessoa amputada na perspectiva dos profissionais de saúde inseridos nos serviços de alta complexidade.
Métodos: Pesquisa qualitativa com coleta de dados mediante entrevista semi-estruturada com profissionais de diferentes áreas de atuação envolvidos no cuidado à pessoa amputada.
Resultados: Observou-se que uma parte dos profissionais entrevistados conhece e atua em uma perspectiva de encaminhamento para reabilitação, enquanto outros desconhecem o fluxo de encaminhamento bem como a rede de atenção que ampara estes usuários.
Conclusão: Os dados evidenciaram como grande fortaleza no contexto da reabilitação o trabalho multiprofissional e inter-instituicional ocorrido em alguns espaços. Como principal fragilidade aponta a falta de conhecimento dos profissionais sobre a alta complexidade das redes de atenção à saúde, assim como a maneira como a reabilitação é vista, não sendo inserida em um contexto de cuidado desde que exista a possibilidade ou ocorrência da amputação.

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Introduction

Chronic non-transmissible diseases, especially those affecting the cardiovascular system and those associated with external causes such as traffic accidents and work accidents are responsible for a growing number of people with physical sequelae. These consequences result in physical disability and require services and actions aimed at the rehabilitation and social re-integration with guaranteed quality and access.[1,2]

Among the people affected by the aforementioned diseases, a significant number progresses to amputation. Amputation may result from inadequate prevention of underlying diseases, therapeutic action in the treatment of advanced diseases or an acute event.[3,4] It is considered a reconstructive surgery in which a limb or a body part is partially or completely separated from the organism.[5]

Therefore, there is the need for assistance in the sense of rehabilitation of amputated people, regardless of the origin causes, assuring them the right to comprehensive health care for health maintenance.

Among the organizational models of health actions and services are the Health Care Networks, with different levels of care integrated to guarantee the excellence of care to users of the system. It aims to enhance the performance of the health system in terms of access, equity, health and clinical effectiveness and economic efficiency.[5] Health Care Networks seek to maintain horizontal relationships between health care services and the Primary Health Care. Meanwhile, the users of the health system pass through these networks to care for their health, depending on the effectiveness of the agreement between them to have their needs met.[5] In this sense, studies[6,7] indicate the difficulties faced by people with disabilities as they seek to implement their rehabilitation, confronted with professional disinterest, distrust of the existing public policies, the unprepared educational system and difficulties of access.

Therefore, this study is justified since the amputation has a great social impact and involves services and professionals of all levels of health care. Concomitant to this, care and treatment in health to amputees requires that health professionals develop specific skills on the issue of amputations.[8,9] Skills for interventions in the care process of amputation and rehabilitation should be contextualized and developed with guidance of public policies and its availability of physical infrastructure, management of people, processes and services of a network of care coordinated and based on the principles of the Brazilian SUS – Sistema Único de Saúde (Unified Health System).

Given the above, the objective of this study was to analyze the network of care for the amputee from the perspective of health professionals who work with people who underwent amputation.

Methods

This is a qualitative study carried out at the level of high complexity care. It included public hospitals of the municipalities that make up the great Florianópolis, southern Brazil, with specialized services in traumatology and orthopedics, physiatry, general surgery, vascular surgery and Rehabilitation Center.

The study participants were health professionals involved in caring for people with amputation during hospitalization and rehabilitation. Professionals who refused to participate in the study and those away on vacations or sick leave during the period of data collection were excluded. The speeches of participants were coded to carry out the analysis.

Semi structured interviews were carried out with 19 professionals from the following fields of knowledge: doctors, nurses, social workers, nutritionists, psychologists and physiotherapists. The interviews took place in the workplace of each professional from December 2012 to March 2013, then were audio recorded and later transcribed and imported into Atlas Ti software, to assist in the process of categorizing the data. Data analysis was by analysis of content. It is inserted in a set of techniques for analyzing the communication processes in order to learn the content delivered and is organized in three phases: (1) pre-analysis, in which the material is organized by reading and

systematization of initial ideas; (2) exploration of the material, aimed at defining categories, categorization and classification of data; (3) treatment of the results, inference and interpretation, which corresponds to the moment of critical and reflective analysis of the results found, confronting them with the objectives outlined at the beginning of the research.

The development of the study met national and international standards of ethics in research involving human beings.

Results

In order to present the results obtained in the research, it was chosen to develop a scheme in the form of a flowchart, representing how the network of care for the amputee is mentioned by the interviewed professionals.

In figure 1 the roles of Primary Health Care and the Family Health Strategy are emphasized, which, at times, do not participate of the process of care network in the care of people with amputation. Some professionals expressed that referral to rehabilitation occurs in a direct flow of high complexity, demonstrated here by the link established between the hospitals that perform the amputation surgery and the outpatient visit after the procedure, and the reference service in rehabilitation. Figure 2 represents there commendation of the Ministry of Health, in which the primary care is the coordinator element of the reference and counter-reference for various health services. Thus, it is found that the results presented in figure 1 are not consistent with the recommendations of the Ministry of Health.

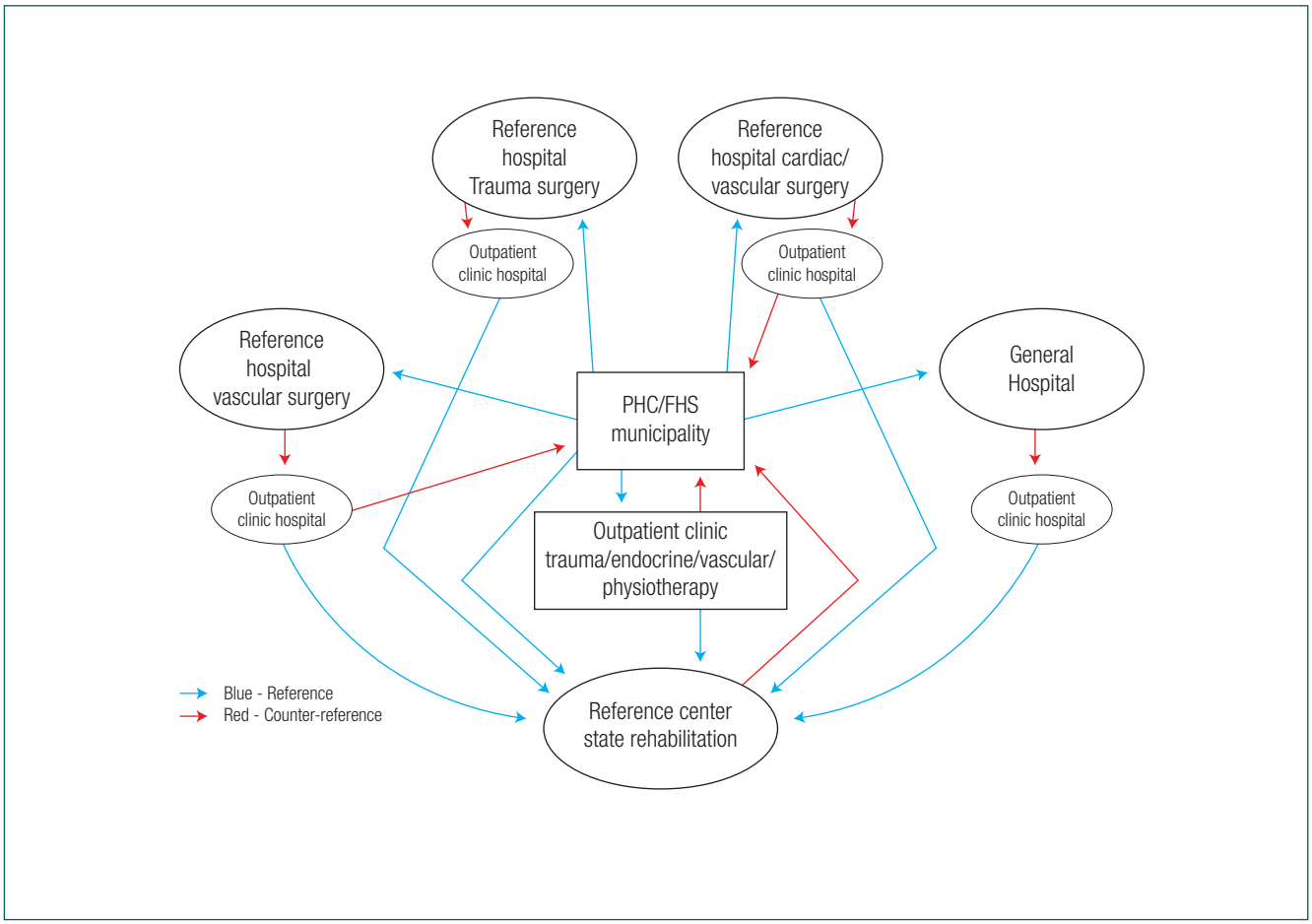
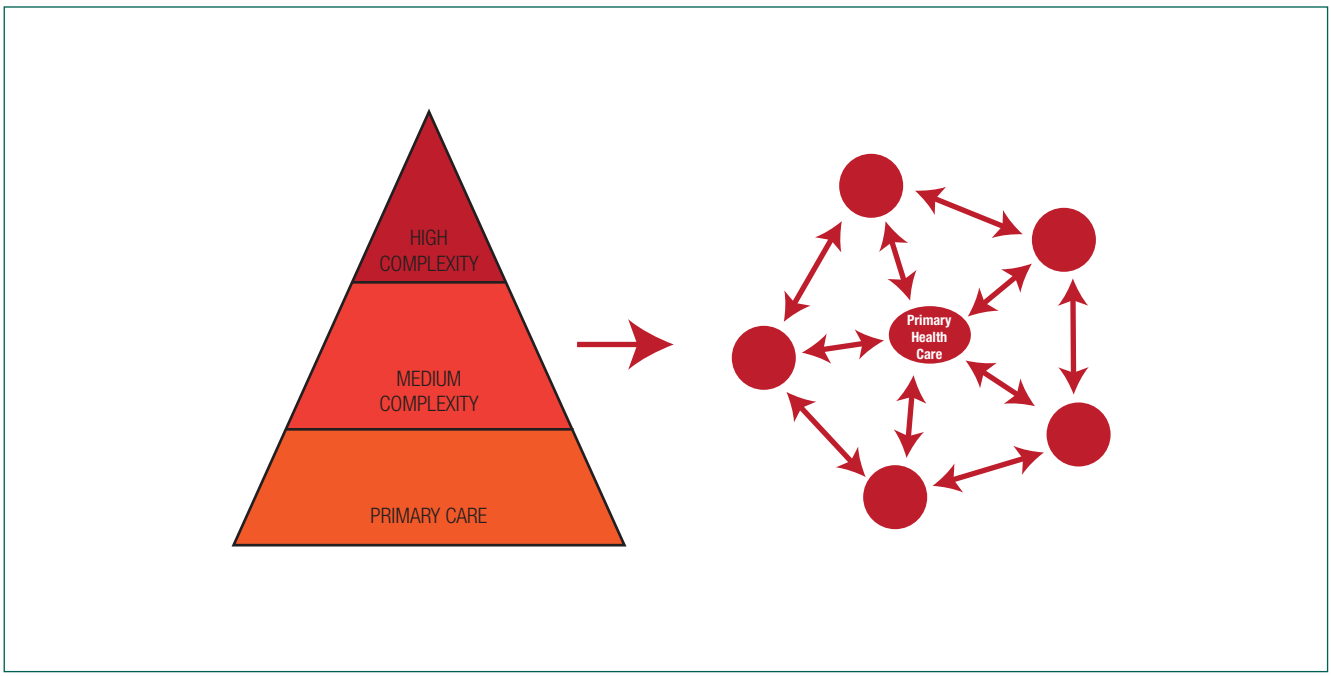


Figure 1. Flowchart of the network from the perspective of professionals in high complexity; PHC - Primary Health Care; FHS - Family Health Strategy



Source: http://www.conass.org.br/pdf/Redes_de_Atencao.pdf

Figure 2. Network model proposed by the Ministry of Health in Brazil

From the speeches of the study participants emerged two topics to be discussed, namely: Fortresses of the care network and Weaknesses of the care network.

In the category entitled 'Fortresses of the care network', it is noteworthy the allusion to the word fortress, where the positive points of the care network are discussed. In this direction, it appears that the Brazilian health system, from its principles of universality, fairness and integrity in health care, recognizes and seeks to ensure the necessary conditions for rehabilitation to amputated people.

The partnerships between various professions, or jobs done jointly in the same institution and focused on referrals for rehabilitation emerged as the fortresses of the care network to the amputee. It is worth noting the effort of professionals to referring amputated people to other rehabilitation services, even to distant counties, interacting with primary care.

In the category called 'Weaknesses of the care network to the person with amputation', the word weakness is understood as barriers established throughout the rehabilitation process of people with amputation, whether by failure of the public system or unawareness of the process flow by the professionals involved in it. One obstacle mentioned by the professionals working with amputated people is about which professionals should be responsible for referrals of such patients to the reference in rehabilitation. However, no consensus was found among participants.

Discussion

The limitation of the present study was the difficulty in finding at least one professional from each area to carry out the interview. The results represent the previously fixed view from the level of care of the hospital. On the other hand, the existence of health care networks demands the understanding of a continuous process in which various levels interact with each other to establish the right of access to health services, one focus of this article.

In face of the study results, a significant fortress found was the fact that Health Care Networks are consolidated as a public health policy. Therefore, they have shared responsibility at all levels of management, and greater financial incentive.[10]

A positive point indicated by the speeches of professionals regards the understanding of the flow of the care network services. Many clearly understand the need to begin the process of acceptance with amputated people in order to rehabilitate them for social interaction and work activities. They also demonstrate knowledge of the network of assistance offered to people who depend on these services. In this sense, studies discuss[11,12] the importance of highly specialized training professionals, who are focused on educating the people with amputation throughout their rehabilitation process that is aimed at rehabilitating in an adequate time and optimizing the treatment costs. By the logic of the authors, professionals trained on how and when to rehabilitate help the service that pays the treatment for preparing a limb for prosthetic placement. It is noteworthy that in the context of acquired disability it should be taken into account the singularities of each person, the variables as degree of capability and functionality, in the sense to offering support to people, respecting their choices, compensations and potentialities.[13-15]

Another emphasis in the speeches of professionals concerns the work of the multidisciplinary team. Internally in institutions, social service works with psychology, nursing, medicine and physiotherapy. Externally, the social service acts in contact with primary care, showing a significant work in this care network.

The commitment demonstrated by professionals in the preparation of post-amputation referrals as soon as the diagnosis is established is noteworthy. Some showed specific knowledge on the financial support to rehabilitation provided by the public system, with distinction on the areas of physiotherapy and social work. Furthermore, they demonstrated understanding the bureaucracy that permeates the referral of people with amputation to rehabilitation services.

Finally, there is the fact that the public system for rehabilitation of people with disabilities offers the Assistive Technology, which is the whole arsenal of resources and services that contribute to provide or enhance functional abilities of people with disabilities by promoting independent living and social inclusion.[16]

With regard to weaknesses in the care network for people with amputation, many of the professionals interviewed in this study demonstrated not knowing the referrals to rehabilitation, passing the activities of referrals and patient orientation to social workers and physiotherapy professionals, which highlights the fragmentation of care. In this way, each professional of the health team covers part of the service. While nursing and medicine are occupied with the care of the operative wound and associated comorbidities, physiotherapy acts in the orientation of exercises to prepare the stump for possible prosthetics, and social service interacts with patients, their families and the care network to ensure continuity of treatment.

The fragmentation between the practice of professionals intra and inter institutionally is due to the universal crisis of health care systems, which were designed and developed with the idea of continuity of a practice aimed at solving acute events, but disregarding the contemporary epidemic of chronic conditions. Hence, there is the demand of a health situation in the twenty-first century which is treated by a health care system established in the twentieth century, when acute conditions were predominant.[16]

In this study, the majority of amputations occurring in local services are a result of chronic diseases. Thus, the healthcare team must know the care network to these people. In this perspective, it is observed that the international literature of different countries shows good evidence that networks of health care can improve clinical quality, including sanitary outcomes, user's satisfaction and cost reduction of health care systems.[14]

A highlight for the speeches of professionals is the lack of referrals to the primary care network, which should be the service that most assists users, because with the proximity of primary care units and with the service of the family health strategy, the real needs and difficulties of people with amputation would be better addressed. And yet, part of the complications originating from chronic diseases that progress to amputation can be avoided

with early diagnosis and establishment of an effective treatment and follow-up in primary care. The PHC (*APS – Atenção Primária à Saúde*) in theory, is the central axis of the health care network (*RAS – Rede de Atenção à Saúde*) for being the first level of care, with emphasis on its role of solving the most common health problems and from which it conducts and coordinates care across all points of attention.[17]

When inferring such importance to primary health care, it is necessary to criticize the norms that organize basic, medium and high complexity health services. In this sense, by considering primary health care as less complex than the secondary and tertiary levels, there is a distortion of the concept of complexity, regarding the trivialization of primary health care.[16] Furthermore, a person with amputation or with potential risk to evolve into an amputation, demands a complex process of health care, which will permeate all levels of complexity. Following this logic, one can consider the existence of a paradox, as the figure 2 indicates that primary care is the foundation of the pyramid of the health system, which should be focused on injury prevention, reducing the suffering of users and the operating costs of the health system in the secondary and tertiary levels. And yet, in a network system that covers all levels of care, primary care is the central point of coordination between the existing services and assistance to the population.

When questioned about the existence of a care protocol for amputated people, the medical professionals and nursing are assaid there is nothing systematic to follow. The reason is that, in most cases, amputation is performed by complications of vascular diseases, a fact that particularizes the care even further. The existence of protocol is mentioned by social service professionals in the sense of referrals to a rehabilitation service. Another information emphasized by respondents is the difficulty of vascular medical professionals in referring patients to the rehabilitation reference after carrying out the procedure. But this information is refuted by the professionals heard at the rehab center, claiming that they accept referrals from any doctor and that the major difficulty is the appropriate referral of the amputated person to the reference center.

Another relevant aspect in this study shows how professionals understand the rehabilitation. Many attribute it to a specific service, with qualified professionals that are able to reestablish the social condition of the person with amputation, with procedures, such as the fitting of prosthetics. But it is clear that actions should permeate rehabilitation care, from the conduction of treatment to chronic diseases until the restoration of mental, physical and social conditions of people with amputation.[18]

Conclusion

The main objective of the study, understanding the care network to the amputee, was achieved. On one hand, the effort of professionals in providing health care to this part of the population was evident. On the other hand, the obstacles that make it difficult to provide services focused on rehabilitation, where patients can have their rights granted by law and avoid much inconvenience and long waiting periods. The major existing fortress in the context of rehabilitation is a consolidated legislation, and established through the Networks of Health Care, in addition to multidisciplinary and inter institutional work present in some spaces. The main weakness found were the lack of knowledge of high complexity professionals about the networks of health care, and the way rehabilitation is seen, not inserted in a context of care unless there is the possibility or occurrence of amputation.

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Collaborations

Vargas MAO and Ramos FRS contributed to project design, development of analysis and data interpretation. Ferrazzo S; Drago LC and Schoeller SD collaborated with the construction of the critical and relevant revision of intellectual content. The authors

Vargas MAO and Schoeller SD cooperated with the final approval of the version to be published.

References

1. Secretaria de Estado de Santa Catarina. Plano Operativo para a Organização da Rede de Assistência à Pessoa com Deficiência Física em Santa Catarina. Nov, 2008. Disponível em: http://www.saude.sc.gov.br/geral/planos/Plano_reabilitacao_deficiencia_fisica/Plano_de_Reabilitacao_Fisica.pdf.
2. Barmparas G, Inaba K, Teixeira PGR, Dubose JJ, Criscuoli M, Talving P, Plurad D, Green D, Demetriades D. Epidemiology of Post-Traumatic Limb Amputation: A National Trauma Databank Analysis. Am Surg. 2010; 76 (11):1214-22.
3. Lazzarini PA, O'Rourke SR, Russell AW, Clark D, Kuys SS. What are the key conditions associated with lower limb amputations in a major Australian teaching hospital? J Foot Ankle Res. 2012;5:12.
4. Santana P, Costa C, Loureiro A, Raposo J, Boavida JM. Geografias da diabetes *mellitus* em Portugal: como as condições do contexto influenciam o risco de morrer. Acta Med Port. 2014;27(3):309-17.
5. Luccia N. Amputação e reconstrução nas doenças vasculares e no pé diabético. São Paulo: Revinter; 2005.
6. Resende MC, Cunha CP, Silva AP, Sousa SJ. Rede de relações e satisfação com a vida em pessoas com amputação de membros. Ciências & Cognição. 2007; 10:164-77.
7. Silva SF. Organização de redes regionalizadas e integradas de atenção à saúde: desafios do Sistema Único de Saúde (Brasil). Ciênc & Saúde Coletiva. 2011; 16(6):2753-62.
8. Pasquina, PF. Twenty years forward. J Rehab Res Develop. 2013; 50(10):17-20.
9. Hordacre B, Birks V, Quinn S, Barr C, Patritti BL, Crotty M. Physiotherapy rehabilitation for individuals with lower limb amputation: a 15-year clinical series. Physiother Res Int. 2013 ;18(2):70-80.
10. Resnik L, Meucci M, Lieberman-Klinger S, Fantini C, Kelty DL, Disla R, et al. Advanced Upper Limb Prosthetic Devices: Implications for Upper Limb Prosthetic Rehabilitation. Arch Phys Med Rehab. 2012; 93(4):710-7.
11. Huang CJ, Wang YW, Huang TH, Lin CF, Lib CY, Chen HM, et al. Applications of machine learning techniques to a sensor-network-based prosthesis training system. Applied Soft Comput. 2011;11 (3):3229-37.
12. Brasil. Ministério da Saúde. Saúde sem Limite - Manual de Ambiência dos Centros Especializados em Reabilitação (CER) e das Oficinas Ortopédicas. Brasília (DF): Ministério da Saúde; 2013.
13. Bersch R. Introdução à tecnologia assistida. Porto Alegre: CEDI; 2008.
14. Liu F, Williams RM, Liu HE, Chien NH. The lived experience of persons with lower extremity amputation. J Clin Nurs. 2010 ;19(15-16):2152-61.
15. Archer KR, Castillo RC, MacKenzie EJ, Bosse MJ; LEAP. Perceived need and unmet need for vocational, mental health, and other support services after severe lower-extremity trauma. Arch Phys Med Rehabil. 2010; 91(5):774-80.
16. Mendes EV. As redes de atenção à saúde. 2a ed. Brasília (DF): Organização Pan-Americana da Saúde; 2011.
17. Mendes EV. As redes de atenção à saúde. Ciênc Saúde Coletiva. 2010;15(5):2297-305.
18. Maguire MT, Boult J. Building a foundation of strength. Addressing the incidence of limb loss. Rehab Manag. 2010; 23(6):20-3.