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Mapping Of Actors And Objectives In The Surgical Management Of Diabetic Foot: Application Of The Mactor Method

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ABSTRACT

Background: Diabetic foot represents one of the most serious complications of diabetes mellitus and is the leading cause of non-traumatic amputations worldwide. Its surgical management requires a multidimensional approach, integrating clinical, institutional, and social actors with varying degrees of influence and power. However, the literature shows that the lack of interprofessional coordination and clear policies limits clinical outcomes and increases costs for the healthcare system.

Objective: To analyze the dynamics of power, influence, and convergence of objectives in the surgical management of diabetic foot by using the MACTOR method to discover strategic actors, priorities, and gaps in the governance of the system.

Methods: A qualitative exploratory study was conducted using the MACTOR (Matrix of Actors and Objectives) method. Key actors and strategic objectives were identified and assessed through a literature review and expert consultation. Matrices of direct influence, actor positions relative to objectives, and net convergences and distances were constructed, allowing for the mapping of patterns of power, cooperation, and conflict.

Results: Hospital managers and policy-makers/insurers were classified as dominant actors, while surgeons were classified as link actors. Patients/caregivers and specialized nursing staff showed the highest levels of convergence, reflecting their central role in comprehensive care. The highest priority objectives were standardization of clinical protocols, reduction of morbidity and mortality, and improvement of quality of life, while perioperative metabolic control and efficient resource utilization showed the lowest capacity for action.

Conclusions: The MACTOR method proved to be a very useful tool for clearly mapping out governance in the surgical management of diabetic foot. The results highlight the importance of strengthening interdisciplinary integration, promoting a patient-centered approach, and guiding policies toward more equitable, efficient, and sustainable care.

Keywords: diabetes, amputations, infections, interprofessional coordination, patients.

INTRODUCTION

Diabetic foot is one of the most frequent and serious chronic complications of diabetes mellitus, characterized by the presence of neurological, vascular, and infectious disorders affecting the feet (Ahmad, 2016). These lesions usually develop from peripheral neuropathy and peripheral arterial disease, conditions that decrease sensitivity and reduce blood flow, facilitating the development of ulcers, infections, and, in severe cases, gangrene (Bandyk, 2018). It constitutes one of the most serious and costly complications, with an estimated prevalence between 6% and 10% in patients with diabetes throughout their lifetime, and with amputation rates ranging from 15% to 27% in complicated cases (Armstrong et al., 2017; Zhang, et al., 2020).

This condition not only impacts patients' quality of life but also represents a significant challenge for healthcare systems due to increased morbidity and mortality and costs associated with hospitalization and rehabilitation (Edmonds et al., 2021; Cavanagh, et al., 2012). Surgical management of the diabetic foot is essential in scenarios of infection, critical ischemia, or necrosis, where early intervention can be decisive in preserving the limb and reducing systemic complications (Game, et al., 2016; Lipsky, et al., 2020).

However, the clinical and social complexity of these patients requires the integration of multiple disciplines: vascular surgery, orthopedics, endocrinology, infectious disease, rehabilitation, nursing, and social work to ensure correct therapeutic decision-making, from the approach to the patient to the treatments to be followed with the patient's commitment (Everett & Mathioudakis, 2018; Hingorani, et al., 2016). Several studies indicate that the fragmentation of care, as well as the lack of coordination between clinical and institutional actors, increases the risk of implementing inefficient treatments and suboptimal outcomes (Barshes, et al., 2013; Monteiro-Soares, et al., 2020).

In view of this challenge, there are methodological proposals for strategic analysis that allow for the creation of maps of interests and objectives, as well as power relations or pressures between the different actors involved in providing care. In this regard, the MACTOR method (Matrix of Alliances and Conflicts: Tactics, Objectives, and Recommendations), developed within the field of strategic foresight, allows for the creation of a robust framework for identifying points of convergence and divergence between interest groups and support for consensual decision-making (Godet & Durance, 2011).

Although its use in the health field is quite limited, some of the most recent evidence concludes that this methodology is useful for observing the dynamics of cooperation and conflict in public health planning, hospital planning, and resource management (Jaziri & Alnahdi, 2019; Heydari et al., 2018). This technique can help understand the complex interactions that take place between health professionals, healthcare organizations, and patients in the difficult context of surgical management of the diabetic foot, thus guiding more integrated and patient-centered strategies.

By applying the MACTOR method, this study seeks to present a map of actors and objectives in the context of surgical management of the diabetic foot, with the goal of identifying synergies and tensions that determine clinical and organizational outcomes. In this regard, it aims to provide evidence that will advance strategic design, integrate services, and, ultimately, mitigate the impact this complication has on healthcare systems.

METHODOLOGY

This study responds to a qualitative exploratory design (Adedoyin, 2020), since it aims to identify and analyze the strategic interactions that occur between the various actors involved in the surgical management of the diabetic foot through the application of the MACTOR technique (Arcade et al., 2014). This technique is used to map the network of influence relations, as well as the convergences and divergences in the objectives of the actors involved in complex healthcare processes.

The study design follows a descriptive and analytical approach, aiming to characterize the dynamics of cooperation and competition among clinical, administrative, and institutional actors involved in diabetic foot surgical care. This approach is pertinent considering that the care of this complication involves a high degree of interdisciplinarity, with the participation of vascular surgeons, orthopedists, infectious disease specialists, endocrinologists, specialized nurses, hospital administrators, and patients, among others (Hingorani et al., 2016; Lipsky et al., 2020).

The selection of informants was carried out through purposive sampling, forming a panel of 12 experts with experience in key areas for the analysis of this study. The distribution was as follows: two (2) vascular or orthopedic surgeons with experience in limb salvage procedures; two (2) specialists in clinical infectious diseases and management of complicated diabetic foot infections; two (2) endocrinologists with experience in perioperative metabolic control; two (2) nursing professionals specialized in diabetic foot and postsurgical care; two (2) hospital managers or administrators with knowledge in coordinating multidisciplinary teams; two (2) representatives of patient associations or community leaders, to incorporate the user perspective.

The methodological procedure was developed in the following phases:

1. Identification of actors and objectives: Relevant actors and their strategic objectives related to diabetic foot surgical care were defined. These objectives were validated by consensus of the expert panel.

2. Development of the Matrix of direct influence (MDI): through workshops and work sessions, the influence that each actor has on the rest was assessed, thus developing the corresponding matrix in which the power and dependency relations were identified (Godet, 2001).

3. Assessment of the levels of objective convergence: based on the Matrix of Actors and Objectives (MAO), the levels of convergence/divergence that may exist between the actors and the objectives were assessed, which allows identifying potential areas of cooperation, as well as sources generating conflict between the actors.

4. Data processing with the elaboration of the different matrices, the results were treated with the specific software MACTOR that allows for organizing and analyzing the matrices of influence and objectives from which a set of indicators is built that allows for inferring the levels of power, dependency, and strategic alliances.

The application of the MACTOR method to the surgical management of diabetic foot constitutes a novel contribution to the literature, due to the introduction of a type of strategic actor analysis on a very complex clinical problem with a high impact on public health. The identification of interactions between professionals, managers, and patients allows for the identification of critical coordination points, as well as areas where cooperation can be optimized. These findings are relevant not only for improving clinical and administrative decision-making processes but also for guiding hospital policies toward comprehensive and more efficient surgical management of diabetic foot, reducing costs and improving health outcomes (Everett & Mathioudakis, 2018).

RESULTS

This section presents the findings obtained from the application of the MACTOR method in the analysis of the dynamics of power and influence among the actors involved in the surgical management of diabetic foot. The relations of dependency, the levels of convergence and divergence of strategic objectives, as well as the patterns of cooperation and conflict that influence clinical and administrative decision-making are presented. The analysis identified that some actors play a predominant role in the definition of strategies, which directly impacts the quality of surgical care and limb preservation.

For this study, key actors were selected through purposive sampling and a review of specialized scientific literature, as described in the methodology. These actors have different roles and responsibilities within the surgical process and comprehensive care of diabetic foot, which generates interactions of power and dependence that impact the operational management of hospital services. Table 1 summarizes the identified actors, with a code assigned to each one, their name, and their role within the system.

Table 1. Actors identified in the surgical management of the diabetic foot

Code	Actor	Role
A1	Vascular and orthopedic surgeons	They perform revascularization procedures, debridement, and limb-preserving amputations.
A2	Infectious disease specialists	Diagnosis and treatment of complex infections, selection of antimicrobials.
A3	Endocrinologists/diabetologists	Optimization of perioperative glycemic and metabolic control.
A4	Nurses specializing in diabetic foot disease	Wound care, postoperative follow-up, and patient education.
A5	Rehabilitation specialists and physical therapists	Disability prevention, functional recovery, and social reintegration.
A6	Podiatrists	Biomechanical assessment, recurrence prevention, and management of uncomplicated ulcers.
A7	Hospital managers	Coordination of multidisciplinary teams, allocation of resources and protocols.
A8	Patients and caregivers	Treatment adherence, self-care, and shared decision-making.
A9	Health policy-makers/insurers	Regulation, financing, and coverage of surgical procedures.

Source: Prepared by the authors based on scientific literature.

Similarly, strategic objectives were identified through a review of international guidelines and recent studies, complemented by consultation with clinical experts. These objectives reflect priorities related to patient safety, the effectiveness of interventions, and the sustainability of services. Table 2 presents the list of objectives that guide the actions of the actors included in this study.

Table 2. Strategic objectives in the surgical management of the diabetic foot

Code	Objective
O1	To reduce the rate of major amputations and preserve the limb.

O2	To reduce morbidity and mortality associated with surgical treatment.
O3	To prevent and control postoperative infections.
O4	To optimize perioperative metabolic control.
O5	To improve patients' quality of life and functionality.
O6	To standardize evidence-based clinical protocols.
O7	To ensure efficient use of hospital resources.
O8	To promote patient education and self-care.
O9	To ensure equitable access to specialized surgical services.
O10	To prevent recurrences and long-term complications.

Source: Prepared by the authors based on guidelines and scientific literature.

The information contained in Tables 1 and 2 was processed using MACTOR software, developed by LIPSOR (Laboratory of Research in Prospective, Strategy and Organization), which allowed for the completion of influence and position assessment matrices. These matrices served as a basis for identifying the actors with the greatest decision-making power, the most convergent objectives, and the areas of potential conflict that determine coordination in diabetic foot surgical care.

In constructing the MDI, the influence relations between actors were assessed using a scale of 0 to 3 (where 0 = no influence, 1 = weak influence, 2 = medium influence, and 3 = strong influence). From this matrix, the levels of influence and dependence of each actor were calculated, enabling their graphic representation on the plane of influence and dependence (Figure 1).

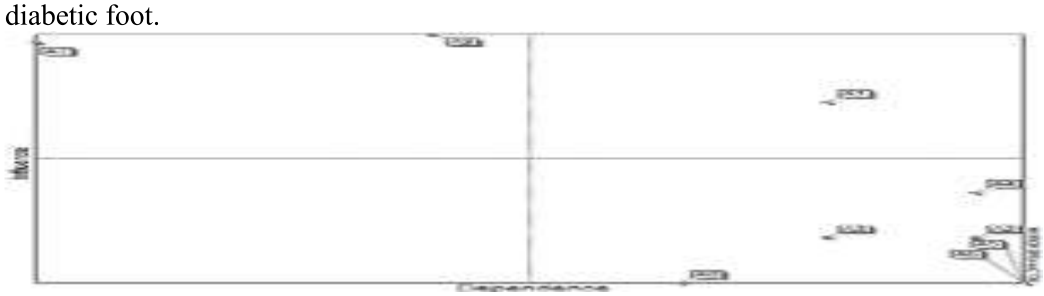
The analysis revealed the existence of two dominant actors (A7 Hospital Managers and A9 Policies/Insurance), located in the upper left quadrant. These actors have a high capacity to influence the system, while showing low dependence on others, reflecting their central role in defining policies, protocols, and resource allocation in the surgical management of diabetic foot.

In contrast, actor A1 Surgeons was positioned in the upper right quadrant, classifying itself as a link actor. This result indicates that, although surgeons have a high capacity to influence other actors, their level of dependence is also significant, given that they require resources, regulations, and institutional support to carry out surgical interventions.

Most of the actors (A2 Infectology, A3 Endocrinology, A4 Nursing, A5 Rehabilitation, and A6 Podiatry), along with A8 (Patients), were concentrated in the lower right quadrant, being categorized as dominated actors. This group is characterized by a high dependence on the dominant and link actors, and a limited capacity to influence the system's strategic decisions.

Finally, no autonomous actors, i.e., those with low influence and low dependence, were identified. This absence reflects the fact that all relevant actors in the surgical management of diabetic foot are linked through relations of power and coordination, albeit with varying degrees of participation in decision-making.

Figure 1. Plane of influences and dependencies between actors in the surgical management of the diabetic foot.



Source: Authors

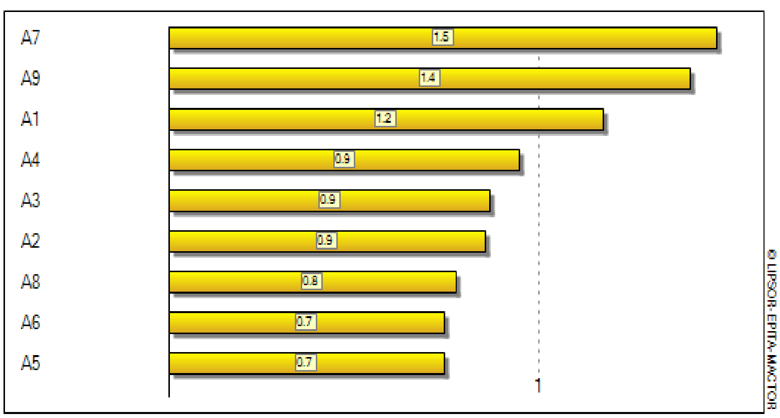
These results show that the governance of diabetic foot surgical management is articulated around dominant institutional and financial actors, while clinical actors and patients are largely dominated, with limited capacity for strategic influence. The role of surgeons as link actors underscores the need to strengthen interinstitutional coordination and the efficient allocation of resources to ensure that surgical decisions, although highly influential in clinical outcomes, are not restricted by structural dependencies. This analysis provides insight into the patterns of power and dependence within the system and provides input for designing cooperation strategies and policies that promote more equitable, effective, and sustainable care.

Second, the analysis of the power relations of each of the actors is presented in the MIDI histogram (Figure 2). This analysis allows for understanding the magnitude of relative influence within the system and, consequently, to identify the strategic actors in the surgical management of diabetic foot.

As can be seen in the figure, A7 (hospital managers) has the greatest strength with a value of 1.5, followed by A9 (health policy-makers and insurers) with 1.4, and A1 (vascular and orthopedic surgeons) with 1.2. These actors have the greatest capacity to influence strategic dynamics, whether through resource allocation, regulatory definition, or clinical decision-making.

At an intermediate level,A4 (diabetic foot specialist nurses) and A3 (endocrinologists/diabetologists) are located with values of 0.9, reflecting that, although they play an essential technical role, their power of influence is conditioned by the dominant institutional and clinical actors. Finally, with values below 1, A2 (infectious disease specialists), A8 (patients and caregivers), A6 (podiatrists), and A5 (rehabilitation and physical therapists) appear, confirming their more dependent role within the network of actors and their limited capacity to modify strategic dynamics autonomously.

Figure 2. Histogram of the strength relations of the actors in the surgical management of the diabetic foot.



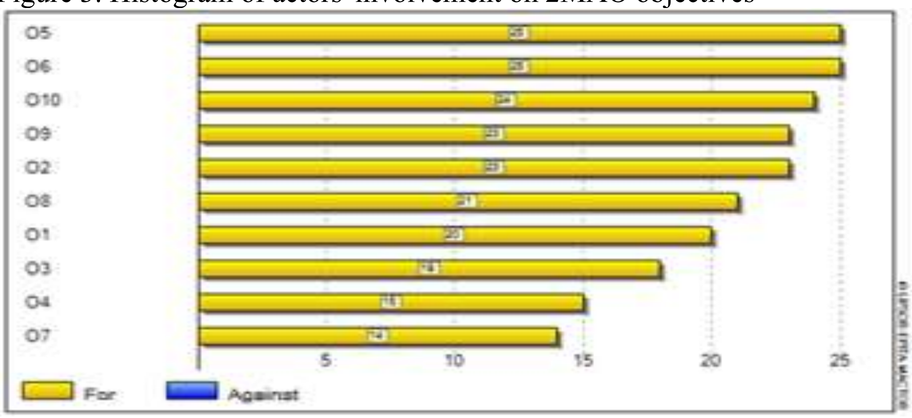
Source: Authors

Third, Figure 3 presents the histogram of strategic objective involvement (2MAO), which shows the level of support they receive within the system based on the cross-assessments of the actors. This analysis allows for identifying which goals command the greatest consensus and which have the least support, offering a comprehensive view of the collective priorities in the surgical management of the diabetic foot.

As can be seen, objectives O5 (to improve patients' quality of life and functionality) and O6 (to standardize evidence-based clinical protocols) achieve the highest score (25 points each), reflecting a strong consensus around the need to focus efforts on functional preservation and the homogenization of clinical practice. This is followed by O10 (to prevent recurrences and long-term complications) with 24 points, along with O9 (to guarantee equity in access to specialized surgical services) and O2 (to reduce morbidity and mortality associated with surgical treatment), both with 23 points. These results show a clear prioritization of patient safety, long-term sustainability, and equity as central axes of the system.

At an intermediate level are O8 (to promote patient education and self-care) with 21 points and O1 (to reduce the rate of major amputations and preserve the limb) with 20 points, confirming the relevance of patient empowerment and the reduction of mutilating procedures, although with a lower relative weight compared to the previously mentioned objectives. Finally, objectives O3 (to prevent and control postoperative infections, 18 points), O4 (to optimize perioperative metabolic control, 15 points) and O7 (to ensure efficient use of hospital resources, 14 points) are positioned with a lower level of involvement, indicating that, although they are recognized as important, their alignment with the overall priorities of the system is less prominent.

Figure 3. Histogram of actors' involvement on 2MAO objectives



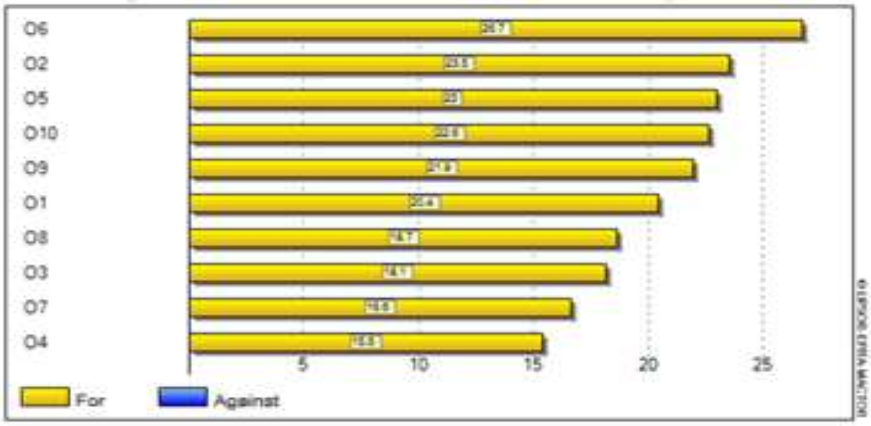
Source: Authors

The histogram in Figure 4 shows the mobilization capacity of actors in relation to the strategic objectives of surgical management of diabetic foot. It can be observed that the objectives that showed the greatest commitment in the previous analyses, such as O6 (to standardize evidence-based clinical protocols, 25.7 points), O2 (to reduce morbidity and mortality associated with surgical treatment, 23.5 points), and O5 (to improve patients' quality of life and functionality, 23 points), also stand out for their high mobilization capacity. This alignment indicates that, in addition to being perceived as priorities, they have strategic conditions and resources that facilitate their practical implementation.

At an intermediate level are O10 (to prevent recurrences and long-term complications, 22.6 points) and O9 (to ensure equity in access to specialized surgical services, 21.9 points), followed by O1 (to reduce the rate of major amputations and preserve the limb, 20.4 points). These objectives show significant support, although their achievement could be conditioned by the need for greater inter-institutional coordination or adjustments in resource allocation.

Finally, the objectives with the lowest capacity for mobilization are O8 (to promote patient education and self-care, 18.7 points), O3 (to prevent and control postoperative infections, 18.1 points), O7 (to ensure efficient use of hospital resources, 16.8 points), and O4 (to optimize perioperative metabolic control, 15.5 points). Although they are part of the strategic framework, these results show limitations for their implementation, suggesting the need to strengthen collaboration between actors, allocate additional resources, and design specific interventions to enhance their fulfillment.

Figure 4. Histogram of actors' involvement on 3MAO objectives



Source: Authors

Figure 5 presents the second-order convergence matrix (2CAA), which allows for identifying the degree of alignment of the different actors with respect to the strategic objectives in the surgical management of the diabetic foot.

According to the results, the actor with the highest level of overall convergence is A8 (patients and caregivers), with a score of 216.5, followed by A4 (diabetic foot specialist nursing) with 193. These values reflect that both actors share a high level of common interests with the rest, making them pivotal elements of the system. Their role is characterized by alignment with clinical and social priorities, giving them a key role in fostering cooperation and ensuring the implementation of objectives focused on quality of life and comprehensive care.

In contrast, the actors with the lowest level of convergence are A2 (infectious disease specialists) and A6 (podiatrists), with 169 and 170 points, respectively. These results suggest that, although they actively participate in the system, their specific interests are less aligned with those of the majority of actors, which may indicate a more sectoral or specialized position. This lower convergence could lead to greater autonomy of action or potential points of divergence in strategic decision-making.

Overall, the findings show that the system is organized around highly convergent actors, particularly patients, caregivers, and nurses, who tend to reinforce cooperation dynamics, while others, with a lower level of alignment, may require specific integration strategies to reduce tensions and enhance cohesion in the network.

Figure 5. Matrix of convergence between actors of order 2 (2CAA)

	A1	A2	A3	A4	A5	A6	A7	A8	A9
A1	0.0	21.0	21.5	24.5	21.5	20.0	21.5	28.0	24.0
A2	21.0	0.0	19.5	22.5	20.0	18.5	19.5	26.0	22.0
A3	21.5	19.5	0.0	23.0	20.5	17.5	20.0	26.5	22.5
A4	24.5	22.5	23.0	0.0	23.5	21.5	23.0	29.5	25.5
A5	21.5	20.0	20.5	23.5	0.0	20.5	19.5	26.5	21.5
A6	20.0	18.5	17.5	21.5	20.5	0.0	17.5	24.5	19.5
A7	21.5	19.5	20.0	23.0	19.5	17.5	0.0	26.5	22.5
A8	28.0	26.0	26.5	29.5	26.5	24.5	26.5	0.0	29.0
A9	24.0	22.0	22.5	25.5	21.5	19.5	22.5	29.0	0.0
Number of convergences	182.0	169.0	171.0	193.0	173.5	159.5	170.0	216.5	186.5
Degree of convergence (%)	100.0	-	-	-	-	-	-	-	-

Source: Authors

Figure 6 presents the third-order convergence graph, which allows a relational visualization of potential alliances between actors based on their strategic objectives. The intensity of the lines reflects the relative strength of the convergences: from the weakest (dotted lines) to the most significant (dark blue and red lines).

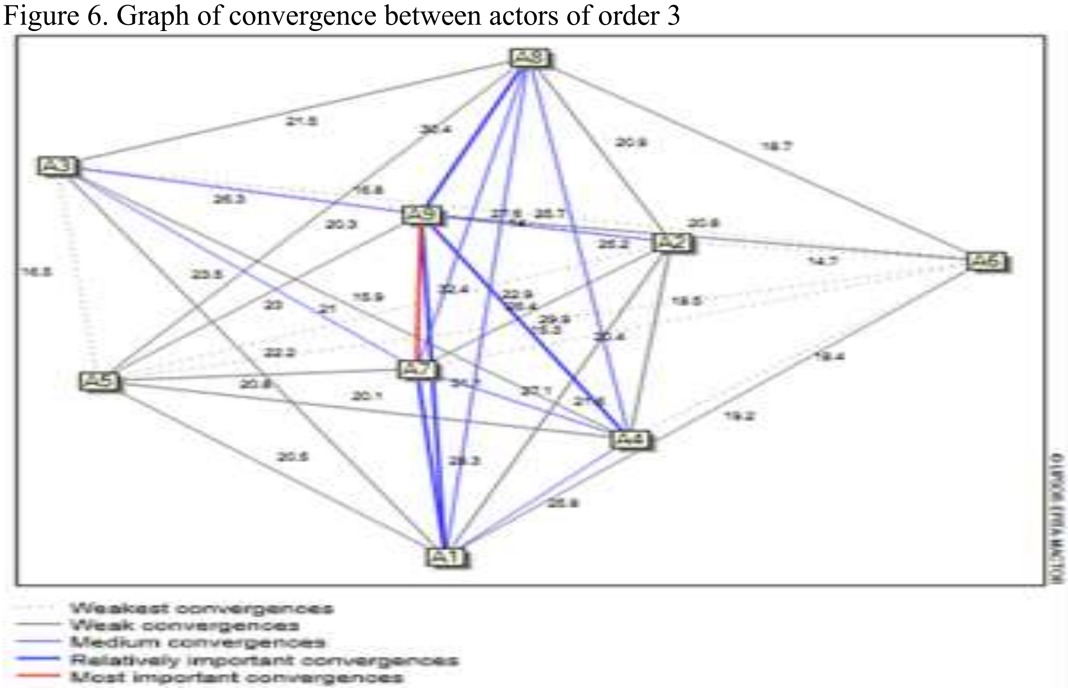
The results indicate that the strongest convergences are established between A9 (health policy-makers/insurers), A7 (hospital managers), and A1 (vascular and orthopedic surgeons), which form a strategic axis around clinical decision-making, resource management, and policy definition. These strong connections reflect an alignment on key objectives such as protocol standardization (O6) and reducing surgical morbidity and mortality (O2).

Similarly, the relevant convergences between A8 (patients and caregivers) and A4 (diabetic foot specialist nursing) are highlighted, reinforcing an axis oriented toward comprehensive care and improving quality of life (O5). These alliances suggest a clinical-care unit that, although with less institutional decision-making power, can significantly influence the practical implementation of the objectives.

In contrast, actors such as A6 (podiatrists) and A5 (rehabilitation and physical therapists) appear to have weaker convergences, evidenced by the lower density and strength of their connections. This indicates a partial integration into the alliance network, probably conditioned by their more specialized and peripheral role in the surgical process.

Overall, the graphical representation confirms that the system tends to be structured around two converging cores: one, institutional and management-related (A9, A7, A1) and the other, clinical-care-related (A8, A4), while peripheral actors maintain less decisive connections. This finding is key to identifying both priority cooperation blocks and areas where greater integration efforts are required.

Figure 6. Graph of convergence between actors of order 3



Source: Authors

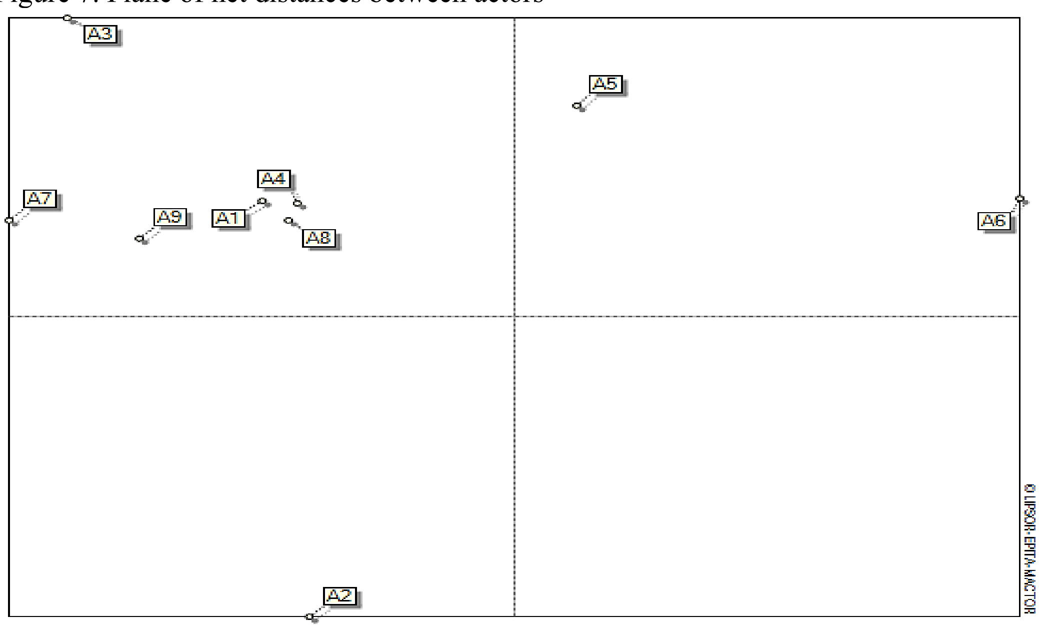
No significant divergences were identified between the actors, which allowed progress in the analysis of possible alliances using the plane of net distances, represented in Figure 7. This plane allows for observing the net influence of each actor (capacity to influence minus dependence) and its positioning within the governance system in the surgical management of the diabetic foot.

The graph shows a central block of actors comprised of A1 (vascular and orthopedic surgeons), A4 (diabetic foot specialist nurses), A8 (patients and caregivers), and A9 (health policy-makers/insurers). Their closeness reflects a strong interdependence and alignment of interests, suggesting that they constitute a key axis for the functioning of the system.

On the other hand, A3 (endocrinologists/diabetologists) and A7 (hospital managers) appear in relatively more isolated positions, but still within a range of interaction with the central core, which places them as strategic actors that, although influential, require coordination with the actors of the central block to enhance their impact.

In contrast, A5 (rehabilitation specialists and physical therapists) and especially A6 (podiatrists) are more distant, indicating less integration into the main decision-making dynamics, which could limit their ability to influence strategic objectives. Finally, A2 (infectious disease specialists) appears most distant from the rest, reflecting a more peripheral position within the system. Although their clinical role is fundamental in infection prevention and control, their low degree of convergence may reduce their direct influence on the definition of global strategies.

Figure 7. Plane of net distances between actors



Source: Authors

Taken together, these results suggest that the system is structured around a core of strongly aligned actors (A1, A4, A8, A9), accompanied by strategic actors that require greater coordination (A3, A7), while the specialized actors (A2, A5, A6) maintain a more peripheral participation and are dependent on the decisions of the central block. This mapping not only clarifies the dynamics of power and cooperation in the surgical management of the diabetic foot but also offers concrete inputs to guide future interventions, policies, and collaborative strategies aimed at improving clinical and organizational outcomes in this field.

DISCUSSIONS

The findings of this study, obtained through the application of the MACTOR method, offer a comprehensive view of the dynamics of power, influence, and goal convergence in the surgical management of diabetic foot. The identification of dominant actors, particularly hospital managers and policy-makers/insurers, and surgeons as link actors reflects a highly institutionalized governance, where clinical decisions depend largely on regulations, resources, and organizational structures. This situation is consistent with what is indicated in international guidelines, which emphasize that the effectiveness of surgical interventions is conditioned by access to hospital resources and the capacity for interinstitutional coordination (Hingorani et al., 2016; Lipsky et al., 2020).

The finding that patients and caregivers, along with specialized nursing, present the highest levels of convergence with other actors is particularly relevant. Recent studies highlight that patient empowerment and continuity of care are determinants of clinical outcomes, especially in the prevention of complications and recurrences (Everett & Mathioudakis, 2018; Monteiro-Soares et al., 2020). The centrality of these actors in the network of convergences suggests that, beyond institutional power, there is a key space for strengthening the patient-centered approach.

On the other hand, the strategic objectives that obtained the greatest consensus and mobilization capacity, such as the standardization of clinical protocols (O6), the reduction of surgical morbidity and mortality (O2), and the improvement of quality of life (O5), coincide with the priorities described by the International Working Group on the Diabetic Foot (IWGDF) and with recent cohort studies showing that the implementation of evidence-based protocols significantly reduces amputation rates and associated costs (Game et al., 2016; Bus et al., 2020). These findings suggest that the observed alignment between commitment and capacity reinforces the feasibility of achieving these objectives in hospital settings.

However, the lower mobilization capacity identified for objectives such as perioperative metabolic control (O4) or efficiency in the use of hospital resources (O7) reflects persistent gaps in clinical and administrative coordination. Several studies have indicated that inadequate integration between endocrinologists, infectious disease specialists, and hospital managers limits metabolic optimization and infection control, which negatively impacts postoperative recovery (Armstrong et al., 2017; Barshes et al., 2013). This finding emphasizes the need to strengthen interdisciplinary cooperation and the design of more efficient resource allocation strategies.

Finally, the net distance analysis confirms the existence of an articulating core composed of surgeons, nurses, patients, and policy-makers, while specialized actors such as infectious disease specialists, podiatrists, and rehabilitation specialists maintain a peripheral role. This structure reflects what has been pointed out in the international literature: surgical care for diabetic foot depends on a robust decision-making core, but requires the active integration of peripheral specialties to ensure a truly comprehensive approach (Edmonds et al., 2021; Raspovic & Wukich, 2014). Incorporating these actors more actively would not only contribute to improving clinical quality but also to reducing costs and recurrences, as suggested by economic evaluation studies in the context of diabetic foot (Cavanagh et al., 2012; Zhang et al., 2020).

The findings of this study validate the application of the MACTOR method to map strategic interactions in a highly complex clinical problem, providing evidence applicable to the design of hospital policies and protocols. Its main contribution is the identification of both priority cooperation blocks and points for strengthening in terms of integration, which represents an ideal input for moving toward more effective, equitable, and patient-centered surgical management of the diabetic foot.

This study has certain limitations. On the one hand, the qualitative and exploratory approach used by the MACTOR technique assumes that the results depend on the selected actors and the expert assessment, which can lead to perception biases. On the other hand, the analysis is based on secondary information from the scientific literature, as well as expert validation, but without primary patient data or medical records. Finally, the results reflect a context that should be interpreted with caution when extrapolating to other healthcare systems. Future research could include quantitative analyses, multicenter surveys, or validations in different hospital settings to strengthen the results.

CONCLUSIONS

This study applied the MACTOR method to map actors and objectives in the surgical management of diabetic foot, providing a comprehensive view of the dynamics of power, dependence, and strategic convergence. The results allow for several key conclusions:

System governance: The management of surgical diabetic foot is strongly conditioned by institutional actors, particularly hospital managers and policy-makers/insurers, who exert a dominant influence on resource allocation, definition of protocols, and access to specialized services.

Role of surgeons: Vascular and orthopedic surgeons are configured as link actors, with high clinical influence but also with high dependence on regulatory and institutional frameworks, which reflects the importance of strengthening their integration with the administrative and political level.

Patient and nursing centrality: Patients/caregivers and specialized nursing are actors with high convergence regarding strategic objectives, which demonstrates the relevance of person-centered approaches and continuous care to achieve better clinical and functional results.

Consensual and mobilizing objectives: The objectives that generated the greatest consensus and had the greatest capacity to mobilize were the standardization of evidence-based protocols, the reduction of morbidity and mortality, and the improvement of quality of life. These results were also consistent with international priorities and further emphasize the need for policies that facilitate their implementation.

Persistent gaps: Objectives such as perioperative metabolic control, resource efficiency, and comprehensive infection management show less capacity for action, highlighting critical areas that require greater interdisciplinary coordination, greater investment in resources, as well as innovative management strategies.

The analysis concludes that the use of prospective methodologies such as MACTOR is useful for understanding the complexity of the surgical approach to diabetic foot and for strategic decision-making. It also allows for the identification of priority cooperation blocks and critical areas, contributing to a more efficient, equitable, and sustainable approach for the benefit of patients.

This study did not involve the direct participation of patients or the collection of sensitive data, and therefore did not require approval from a research ethics committee. All information analyzed came from secondary sources and indexed scientific literature, following principles of academic integrity and compliance with current regulations on health research.

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