AVALIA-ULS: family doctors' perceptions on resources and training

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Abstract

Background: the Health Management Studies Group (GEST) of the Portuguese Association of General and Family Medicine (APMGF) created the "AVALIA-ULS: Analysis of the Advantages and Limitations of Local Health Units (ULS) – Perspectives from General and Family Medicine" questionnaire to assess the perceptions of General and Family Medicine (MGF) professionals regarding the universalization of this model. This article constitutes the second part of the AVALIA-ULS study, focusing on the perspectives on resources and training organization in ULS.
Objectives: to understand the perception of Family Doctors about the resources and organization of training in ULS.
Methodology: an online questionnaire was administered in 2023. Responses were analyzed using Microsoft Excel® and SPSS® v. 27. The chi-square test was used for analysis between

subgroups of professionals with and without previous ULS experience (statistical significance for p<0.05).

Results: a total of 342 responses were obtained. The impact on education regarding system organization and resource accessibility was considered more negative, while the transition to ULS was seen as more positive for training organizations.

Conclusion: the results revealed a generally negative perception of the transition to the ULS model.

Keywords: health services; family practice; health resources; continuing medical education

Introdution

The Health Regulatory Entity (ERS) defines Local Health Unit (ULS) as an application of vertical integration, combining primary and secondary healthcare in a specific geographic area. Vertical integration involves the creation of a single managing entity for multiple institutions offering services at different levels of care, with the aim of generating health gains for the population. The first ULS in Portugal was established in 1999, in Matosinhos, followed by seven more between 2007 and 2012 (Entidade Reguladora da Saúde, 2015).

A systematic review published in 2022 highlighted the fundamental objectives of creating ULSs: improving access, maximising efficiency, promoting quality, and optimising economic and financial performance. However, the review identified difficulties in concluding the superiority of these results due to challenges such as the financing model, human resource management, and the lack of specific studies for each locality (Cruz et al, 2022a; Cruz et al, 2022b). Decree-Law number 102/2023 extends the ULS model to all hospitals and primary care units in the country, except for the Portuguese Institutes of Oncology (Decreto-Lei n.º 102/2023).

Despite the theoretical advantages, there is skepticism within the medical community regarding the practical effectiveness of this model. Thus, the Health Management Study Group (GEST) of the Portuguese Association of General and Family Medicine (APMGF) developed the study "AVALIA-ULS: Analysis of the Advantages and Limitations of Local Health Units (ULS) – Perspectives from General and Family Medicine" to assess the perceptions of family medicine physicians regarding the universalisation of this model.

This article represents the second part of the analysis of the AVALIA-ULS study, focusing on a detailed examination of Family Physicians' perspectives on the resources and the organisation of training within Local Health Units.

Background

The aim of this study was to explore the perception of General and Family Medicine (GFM) physicians regarding the evaluation of their practice under the ULS model, through a questionnaire addressing population education for system organisation, resource accessibility, and training organisation.

Methodology

The study "AVALIA-ULS: Analysis of the Advantages and Limitations of Local Health Units (ULS) – Perspectives of General and Family Medicine" was conducted by the Health Management Study Group (GEST) of the Portuguese Association of General and Family Medicine (APMGF). This study collected data directly from family physicians and primary care professionals, whose experience is essential for analysing the ULSs. Their perspectives are crucial for evaluating the current landscape and for building a more robust future for General and Family Medicine, as well as for the continuous improvement of the ULSs.

The research was conducted as a cross-sectional study, involving primary care professionals in Portugal between August 7 and November 5, 2023. The sample included specialist and resident family doctors. The study aimed to assess the perceptions of these professionals regarding ULSs, focusing on perceived advantages and anticipated limitations, using a structured questionnaire with both closed- and open-ended questions.

The questionnaire was distributed digitally and through social networks (snowball sampling), using the Google Forms® platform for anonymous responses. The questionnaire included information about the study, and participation was voluntary, ensuring informed consent.

The questionnaire was divided into four sections: a) sociodemographic characterisation; b) resource management; c) resource organisation and training; d) care delivery model. This article presents the results of sections b) and c) analysis. The variables that were examined included the impact of ULSs on: (1) population education for system organisation, (2) resource accessibility, and (3) training organisation. The detailed analysis focused on the resource management section, which included three closed-ended questions (multiple-choice, using a 5-point Likert scale ranging from negative to positive) and one open-ended question. The evaluation took into account variables such as gender, career position, type of workplace, prior experience, and age.

The responses were exported to an Excel® 2013 file and subsequently converted to IBM® SPSS® Statistics, v. 27 (2020), where statistical analysis was performed.

The questionnaire was assessed in terms of reliability and psychometric validity, as well as the nature of the sample distribution. Below, we detail the main analyses performed and their results.

The reliability of the questionnaire was evaluated using Cronbach's alpha, which yielded a value of 0.971, indicating high internal consistency. As for the corrected item-total correlation, the average of the correlations was 0.67, with values ranging from 0.512 to 0.798, indicating good consistency of all items with the construct being evaluated. As for the nature of the sample distribution, the Kolmogorov-Smirnov and Shapiro-Wilk tests rejected the hypothesis of normality ($p < 0.05$), showing that the sample distribution was not normal. These results justified the use of the chi-square test for the analyses.

The results of the chi-square test are presented in table 1, which shows the test values for each variable:

Table 1 Values of the chi-square test results for each variable

Variable	Pearson's Chi-square test	Asymptonic significance (p-value)	Liberty's grading scale (df)
Access to open consultations at hospital	0.025	0.874	1
Access to open consultations at health centers	1.482	0.223	1
Access to emergency services	0.655	0.418	1
Knowledge about access circuits and system functioning	5.699	0.017	1
Creation of a unified clinical process	0.922	0.337	1
Training initiatives (joint courses/training activities between primary and secondary care)	0.639	0.424	1
Medical residency (training capacity for hospital internships)	2.756	0.097	1
Consulting process (contact between primary care professionals and secondary care services)	0.936	0.333	1
Implementation of protocols and free access and circulation	0.186	0.666	1
Referrals for scheduled hospital consultations (meeting maximum response times)	0.330	0.566	1
Time for complementary diagnostic tests	1.771	0.183	1
Standardization of access to subsidized prescriptions for complementary diagnostic methods (MRI, pro-BNP, etc.)	3.273	0.070	1

The chi-square test was used to compare subgroups of professionals with and without previous experience in ULS, considering statistical significance at p<0.05.

Results

The study included 342 valid responses from professionals in the field of GFM, from 52 distinct health center groupings across Portugal. Of the respondents, 63.9% (n=218) were female, and 40.9% (n=140) were aged 35-44. The majority (83.6%; n=286) worked as GFM specialists, 10.5% were GFM residents, and 5.8% (n=20) categorised themselves as "others." The majority were working in a model B (47.7%) or model A (27.2%) family health unit, and 41.8% (n=143) held a position with organisational responsibility (Executive Director, President of the Clinical and Health Council, Coordinator or member of the Technical Council). Approximately 25.4% (n=87) had previously worked in a ULS.

In response to the question "How do you think that transitioning to a ULS would impact the population's education regarding the organisation of the system?" the majority considered it would have a more negative than positive impact on knowledge about access circuits and how they work (35.6% vs 21.4%), access to open consultations at health centres (34.8% vs 16.4%), and access to the emergency department (29.5% vs 19.6%). In subgroup analysis, professionals without prior ULS experience reported a more negative impact (36.9% vs 17.7%) on knowledge about access circuits and system functioning, while professionals with prior experience reported

a neutral impact (32.1% vs 32.1%). This difference was statistically significant only for knowledge about access circuits and system functioning (chi-square value 5.699; p=0.017).

Regarding the impact on "Resource Accessibility", positive impacts were considered in the following areas: standardisation of access to subsidised prescriptions for complementary diagnostic methods (MRI, pro-BNP, etc.) (50.9% vs 16%); creation of a unified clinical process (61.1% vs 10.3%); consulting process (contact between primary care professionals and secondary care services) (52% vs 19%); and implementation of protocols and free access and circulation (43.5% vs 20.8%). On the other hand, other aspects in this area were considered more negative than positive, including time for complementary diagnostic methods (37.2% vs 30.1%) and access to hospital open consultations (30.4% vs 25.4%). The impact on referrals for scheduled hospital consultations (meeting maximum response times) was considered neither positive nor negative.

In subgroup analysis, professionals with prior ULS experience more positively highlighted the creation of a consulting process (58.6% vs 16%). Professionals with ULS experience considered the time for complementary diagnostic methods as positive (35.6% vs 34.4%), although no statistically significant difference was observed.

Regarding the area of "Training Organisation", the impact was considered positive, particularly concerning training initiatives (joint courses/training activities between primary and secondary care) (48.9% vs 12%). Also considered positive, though less so, was the impact on medical residency (training capacity for hospital internships) (28.4% vs 16.4%).

In subgroup analysis, professionals with prior ULS experience highlighted more positively the impact on joint training initiatives (58.6%) and on medical residency (42.5%), though without statistical significance (chi-square value 0.639; p=0.424).

Finally, regarding the question "In your opinion, what is the greatest challenge faced by ULSs in terms of clinical governance and care integration?", 142 free-text responses were collected. Most responses focused on balancing communication and coordination between primary and secondary care, the erosion of the organisational culture of primary care services due to the introduction of hierarchical leadership that lacks knowledge of the functioning and specifics of primary care, the risk of devaluation (with a hospital-centered management approach), and differing objectives between these levels of care (n=106). Another frequently mentioned challenge was resource scarcity (n=34), with some responses also pinpointing the lack of motivation among professionals (n=7) and quintennial prevention (n=2). Other challenges included longer response times for access to diagnostic methods and consultations (n=15), external policy pressures, bureaucracy, and management distant or ineffective from the grassroots (n=19), a focus on acute disease care (n=8), performance-based payment (n=4), flexibility in hiring (n=3), and the size of patient files (n=2).

Discussion

The results obtained in the present study revealed a generally negative perception regarding the transition to the ULS model.

In this section, we compare the results of this study with those of similar studies to provide a more comprehensive and integrated analysis of the findings.

Regarding the subgroup analysis of professionals with and without prior experience in ULS, the only result showing statistical significance was related to knowledge about access pathways and operational procedures. A more negative perception was observed among professionals without prior experience in ULS, compared to those with experience, whose perception was neutral in this regard.

As for resource accessibility, the present study found a positive perception in some specific areas, namely the standardisation of access to subsidised diagnostic tests, the creation of a unified clinical process, and the consultancy process. In this regard, a clear sense of improvement in care integration within ULSs can be observed among the professionals. On the other hand, there was a negative perception in other topics, such as the time required for diagnostic tests and access to open hospital consultations, which may reflect some skepticism about the actual implementation of this integration.

A study conducted in 2022 aimed to analyse the organisational model of ULS and the economic and health benefits resulting from care integration. This study observed an increase in the number of complaints submitted to the ERS in four of the ULSs studied, with the second most frequent subject of complaints being the difficulty in accessing healthcare (Cruz et al., 2022a).

Similarly, a study conducted in ACeS Cova da Beira and ULS Castelo Branco, comparing the impact of ULS and ACeS on the coordination and consultancy process between primary and hospital care, demonstrated that, regarding contact between family doctors and hospital staff and the percentage of information returned to primary care, the ULS seemed to show no significant advantage. This study also demonstrated that, concerning the waiting time between the request for hospital consultations and their realisation, the ULS did not show a significant disadvantage, nor did it show superiority (Matos, 2013). Another study conducted at ULS Castelo Branco aimed to evaluate the perception of service directors and administrators of the effects of hospital integration into the ULS and the coordination between the hospital and primary care. According to 57% of the respondents, integration into the ULS Castelo Branco presented disadvantages, with the lack of coordination between care levels being the main disadvantage cited (Farias & Nunes, 2020). Consistent with these findings, in the present study, one of the main challenges identified in care integration was the imbalance in both communication and coordination between primary and secondary healthcare, with the risk of adopting a hospital-centric management model.

Further, regarding resource accessibility, vertical integration of healthcare implies prioritising preventive care and, consequently, a reduced use of emergency services. A previous study aimed at analysing the use of emergency services by ULS s concluded that, in 2015, the average number of emergency episodes per user enrolled in a ULS context was not lower when compared to those not enrolled in a ULS (Rego, 2018).

These data show that the theoretical concepts and perceptions regarding ULS, and more specifically regarding access to healthcare, differ significantly from what is observed in clinical practice.

Regarding the area of training organisation, the present study showed a generally positive perception, both in terms of training initiatives (joint primary and secondary care courses/training actions) and the impact on medical internships. Professionals with prior experience in ULS highlighted the positive impact of the ULSs in this area. Although there are no studies to date with objective data regarding the impact of the ULSs on training and medical

internships, in a press release dated April 2024, the Portuguese Medical Association (Ordem dos Médicos, 2024) warned of the urgent need for clarification regarding the current state of uncertainty in medical internships, particularly in General and Family Medicine and Public Health, resulting from the generalisation of the ULSs.

When compared to other international models, ULSs in Portugal generally share the central goal of integrating primary, hospital, and community care to ensure continuity and efficiency in healthcare (Nolte & Pitchforth, 2014; Shortell, 2000). However, comparisons with systems such as the National Health Service (NHS) in the United Kingdom highlight that implementing this integration faces universal challenges, such as administrative barriers and regional inequalities. The NHS is a universal public system that provides free healthcare, where Clinical Commissioning Groups (CCGs) manage and integrate primary and secondary care, although they operate as separate entities. Despite efforts toward care integration, the administrative and financial separation of care remains a barrier, unlike ULS (Ham & Dixon, 2016).

Experiences from decentralised systems, such as the Danish system (Olejaz, 2012), illustrate the potential of digital tools and local autonomy to improve care coordination, although financial sustainability and equity remain central concerns. Additionally, Nordic and Catalan systems (Saltman & Boerma, 2006) emphasize the importance of strengthening primary care and prevention, areas that ULSs can further explore.

The main limitations of the present study concern the sample selection method (convenience sampling) and its implications for interpreting the results. On the other hand, most participants, at the time of their responses, had never worked in a ULS model, which may contribute to a lack of confidence in the model and, consequently, the generally negative results.

The significant proportion of respondents in management positions reflects the evolved organisational culture of primary care services, with the involvement of these professionals, and also translates into greater apprehension about the change process. Furthermore, the lack of superior performance of the ULS model, according to available evidence, may be one of the main reasons for the overall negative perception of this change.

Conclusion

This study presents the perceptions of family medicine physicians regarding the integration process into the ULS model, offering an opportunity to promote debate on the transition of organisational models. The results revealed a generally negative perception of the transition to the ULS model. In this view, we can conclude that this transition process requires greater awareness among professionals in order to ensure the integration of care as envisioned in the ULS model.

In this regard, the GEST group considers it relevant to replicate similar surveys in the future to reassess the process, promote continuous improvement, and foster greater engagement of professionals with management bodies. A reassessment of the perspectives of family medicine doctors is also planned, with the aim of understanding the implications of their current and more consolidated experience in the ULS on their responses and perceptions of the model.

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