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Five years of reorganization in the family practice residency program in the Lisbon and Tagus Valley Region in Portugal

Cecília Shinn (https://orcid.org/0000-0001-8554-9761) [1]
Inês Maio (https://orcid.org/0009-0004-5257-8418) [1]
Marta Marquês (https://orcid.org/0000-0001-7713-382X) [1]
Matilde Padrão Dias (https://orcid.org/0009-0000-9166-8193) [1]
Nelson Mota Gaspar (https://orcid.org/0009-0001-3111-6642) [1]

Abstract *The General and Family Medicine practice residency program was transformed between 1981 and 2010 from a hospital-based 3-year training to a primary health care-based four-year training. In 2015 and 2019, the curriculum changed, and new evaluation methods were introduced. The Lisbon and Tagus Valley Family Practice Residency Coordination manages 850 residents in training, and due to the increase in the number of residents and changes in the curriculum, focused their team on 4 intervention areas: 1) Regional Teams; 2) Communication and Decision; 3) Collaboration; 4) Organizing the Central team around 5 pillars – training capacity, training residents, continuing assessment, training the supervisors, and final assessment. Between 2019 and 2023, they managed to empower the regional teams, improve decision-making, standardized residency programs, and, at the central level, increased the quality and number of the training slots, increased training opportunities for residents and teachers, created continuous evalutaion teams, and contributed significantly to the national final assessment process.*
Key words *Family practice, Training, Management, Portugal*

[1] Administração Regional de Saúde de Lisboa e Vale do Tejo. Av. Estados Unidos de América n.º 77. 1749-096 Lisboa Portugal.
cecilia.shinn@gmail.com

Introduction

Medical education in Portugal is divided into undergraduate and postgraduate education (general training and specific training). Undergraduate education lasts six years and is administered by the Ministry of Education. Postgraduate education, which we call Medical Internship, is the equivalent of medical residency in Brazil. It is divided into general training (one year) and specialized training (four to six years) and is administered by the Ministry of Health.

To enter a medical internship, candidates must take the National Entrance Examination, an annual test equivalent to the Brazilian Selection Process. This test creates an ordered selection list of candidates for admission to medical internship. The Ministry of Health opens general and specialized training slots based on suitability and training capacity criteria (equivalent to the Brazilian accreditation) with the approval of the Ministry of Finance.

General training[1] for medical internships is conducted as a professional internship, starting in January and ending in December, with a curriculum that includes rotations in Internal Medicine, Primary Health Care, General Surgery, and Pediatrics. The internship consists of a working paid employment contract with the state effective work with a paid employment contract with the state. After completing their internship, the intern doctor is considered apt to join speciality training or can choose to work independently.

In the speciality training[2] of the medical internship, the specialized training intern (MIFE) is tutored by a training supervisor (OF), a specialist doctor who works at the training location. The MIFE has an employment contract with the state for an indefinite period and follows the training program determined by the Portuguese Medical Association for the specialty they have chosen. The program involves Rotations within and outside their primary training location, with annual continuous evaluation. At the end, the MIFE undergoes a national final assessment to qualify for the specialist degree.

The Central Administration of Health Services (ACSS) jointly manages medical internships in all specialties with other central, regional, and local entities. The Family and Community Medicine specialty in Portugal is General and Family Medicine (MGF). It started in 1980 with the creation of the General Practice career and became MGF in 1990 (Chart 1).

The Coordination of the General and Family Medicine Internship in Lisbon and the Tagus Valley (CIMMGFLVT) manages the training of specialist doctors in MGF in the Lisbon and Tagus Valley Region (LVT), implements the training program, and ensures the institutional representation of the internship. It aims to train family doctors who can also manage patient lists, thus contributing to the provision of quality Primary Health Care (PHC). The CIMMGFLVT coordinator is a family doctor and is supported by directors of the MGF Medical Internships (DIM-MGF); all DIM-MGFs are family doctors, and some manage the internship in their geographical area, while others take on advisory roles to the Coordinator.

The training of specialists in MGF has evolved in content and volume since 1980 (Chart 2). In 2023, 850 MIFEs were undergoing training at ARSLVT under the supervision of 650 OFs; from 2020 and 2023, 580 new family doctors were trained in the LVT region, making it one of the largest speciality training programs in Portugal.

This article mainly aims to present the development of management and application of the Internship Training Program in General and Family Medicine in the Lisbon and Tagus Valley Region in Portugal, its challenges, and the strategies used to respond to them.

Methods

This article combines two approaches: a quantitative one, based on the CIMMGFLVT database of the Portuguese Ministry of Health, and a descriptive one, using documentary analysis.

The 2019[9] specialized training program in MGF introduced significant changes that allowed training process standardisation with national curricular objectives, And national continuous evaluation and final evaluation exams. This program is based on the growing training capacity in primary health care, draws the IMMGF closer to the reality of the care work of family doctors, and consequently requires greater capacity to coordinate resources. To respond to the increased number of MIFEs in training and the new program, four areas of focus and strategies for each field were defined in the CIMMGFLVT: 1) Training of Regional Teams; 2) Communication and Decision; 3) Collaboration; 4) Reorganization of the Central Team.

Chart 1. Timeline of the General Practice Internship/MGF in Portugal.

1980 - Creation of the General Practitioner career
1981 - First course of the Complementary Internship for General Practitioners with supervision by OF in other specialties
1982-1985 - Placement of 5,000 general practitioners throughout the country without training, with the possibility of accessing Specific Training during Practice without completing an internship
1986 - Creation of three General Practitioner Institutes (ICG)3 - North, Center, and South
1987 - Medical internship becomes the only way to enter Family Medicine career
1990 - Recognition of the MGF specialty
1982-1997 - Training of 800 specialists out of a pool of approximately 6,000 GPs (General Practice) in practice
1999 - Extinction of ICG and creation of IQS4 with 3 MGF Coordination Offices
2006 - Extinction of IQS5 and creation of ACSS6, creation of 5 Coordination Offices in the Regional Health Administrations (ARS) and Autonomous Regions (RA) - North, Center, South, Madeira, and Azores
2013-2014 - Southern Coordination splits into Lisbon and Tagus Valley, Alentejo, and Algarve

Source: Authors.

Chart 2. Changes in MGF training and CIMMGFLVT: 1981-2019.

1980 - 3-year General Medicine Internship, with six months in general medicine in out-of-hospital practice
1992 - General Medicine Internship (IMMGF) increases to 14 months in out-of-hospital practice
2000-2010 - Gradual increase in training capacities (slots) at the CIMMGFLVT with a training process focused on clinical practice of MGF and creation of Integrated Teams of Supervisors (EIO*)
20107 - 4-year IMMGF, 28 months out-of-hospital, with a 40-hour weekly schedule.
2014 - Significant increase in slots at CIMMGFLVT (Figure 2)
20158 - Change in the MGF training program with a new form of continuous evaluation and final evaluation. New significant increase in slots at the CIMMGFLVT (Figure 2)
20199 - Change in the MGF training program with the structuring of the 4 curricular years in 3 MGF rotations, with mandatory and optional complementary training in the 2nd and 3rd curricular years, creation of national continuous evaluation, changes in the final evaluation, promotion of tutoring and relational learning with protected non-clinical hours, and flexibility of learning in out-of-hospital contexts

*Communities of training tutors with the same workplace or with geographically close workplaces that promote reciprocal learning in the pedagogical area.

Source: Authors.

Training of Regional Teams

The Health Centre Groups (ACES) regional teams, composed of fifteen DIM-MGF and their Secretaries/administrative staff, are part of an organizational proximity strategy. This intermediate structure has been essential to ensure the implementation of the training program and CIMMGFLVT guidelines (Figure 1). The MGF College of the Portuguese Medical Board issued criteria for the training suitability of the IMMGF Directorates[10].

The DIM-MGF in LVT Have between 6 and 20 hours a week allocated to managed the regional internship, depending on the number of MIFEs, which varies between 33 and 83 (Figure 1). The Internship Directors are supported by secretaries (technical assistants), usually one person per region. However, some Internship Directorates have no secretary, so the Coordination secretary provides this support.

Changes in the program and size of the IMMGF in LVT have led to a considerable increase in the time required for the DIM-MGF and Secretariat to perform their duties. The structure of the new training program and changes in the tools used by regional teams have led to the need for training of Internship Directors in several areas.

In this item, the following problems were identified: (1) relevant asymmetries in the MIFE ratio per regional team (between 33 and 83 MIFEs in each DIM-MGF) and less hours allocated to DIM-MGF functions that necessary (ranging from 6 to 20 hours); (2) some DIM-MGFs without secretarial support; (3) asymme-

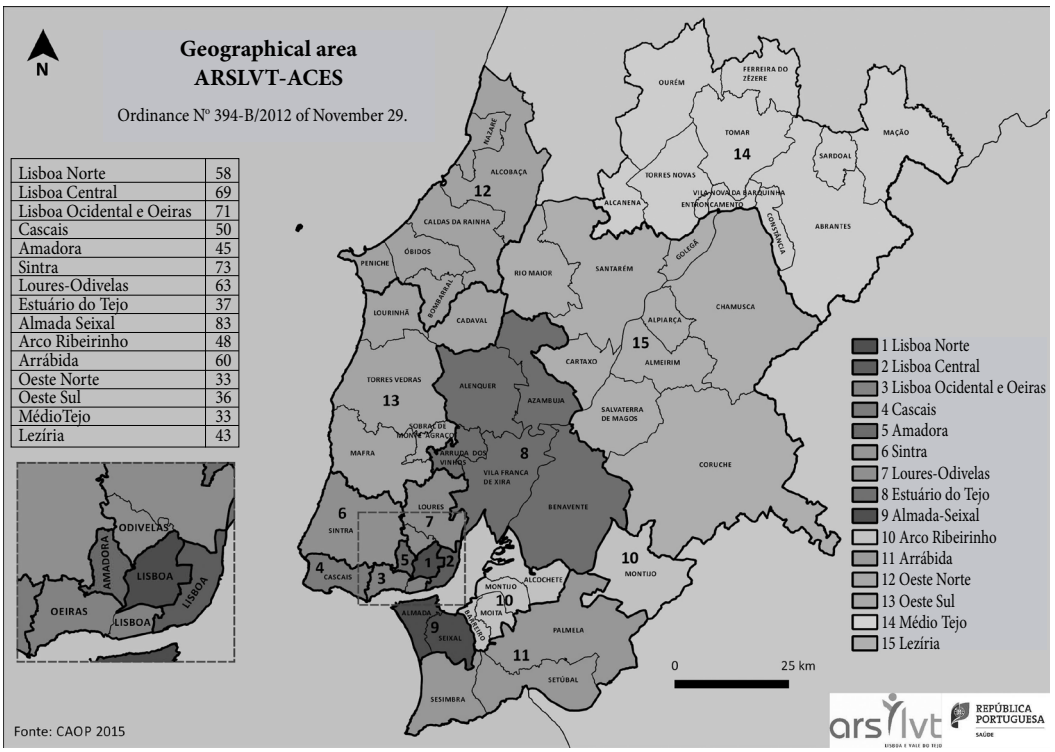

Figure 1. The 15 MGF Internship Directorates of ARSLVT and the number of intern doctors as of 31/12/2023.

Source: Regional Health Administration of Lisbon and Tagus Valley and Databases of the Coordination of the Medical Internship in General and Family Medicine of Lisbon and Tagus Valley, Ministry of Health.

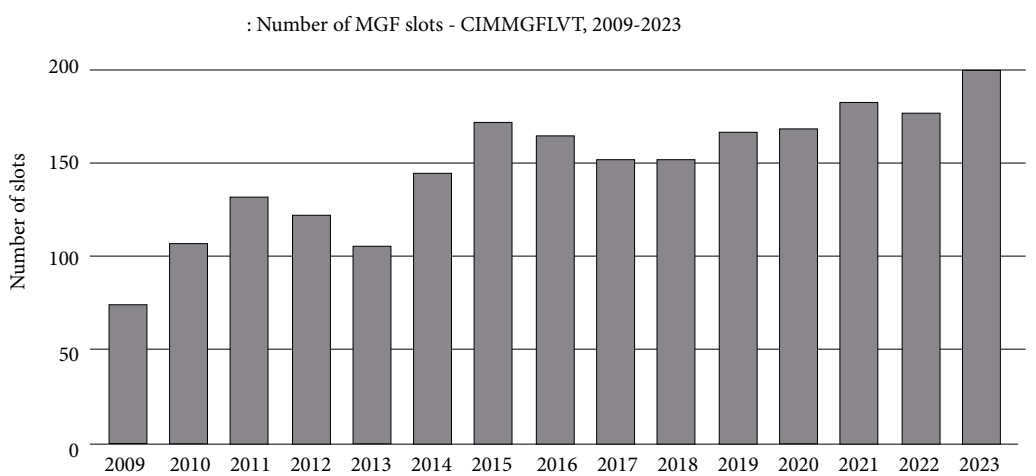

Figure 2. Number of new slots/year in MGF in the LVT region, 2009-2023.

Source: Database of the Coordination of the Medical Internship in General and Family Medicine of Lisbon and Tagus Valley (CIMMGFLVT), Ministry of Health of Portugal, 2024.

tries in the evaluation due to a high component of subjectivity; (4) asymmetries in the knowledge and management of procedures by the Secretarial staff.

The strategies implemented were: (1) Adjustment of the ratio of DIM-MGFs to the number of MIFEs, Using the criteria established by the MGF College of the Portuguese Medical Board; (2) Regional reinforcement of the secretariats; (3) Organization of training in the area of assessment for DIM-MGF and (4) Organization of training in Procedure Management for the Secretariat.

Communication and Decision

Rapid decision-making and effective communication speed up the implementation of corrective measures in structures. In this sense, problem areas were identified: (1) Use of personal e-mails that hindered information transmission when there was a change of professionals in their roles; (2) All meetings were in person and only the DIM-MGF were present, consuming more time in travel and in transmitting information to the Secretariat; (3) Use of paper archives; (4) Difficulty in Uniform sharing of information and training opportunities with MIFEs and OFs; (5) scarce secretarial resources with the need to adapt existing resources to support the neediest regional teams.

The strategies implemented were: (1) Shared institutional e-mails; (2) Participation of secretaries in all monthly meetings and holding of online meetings; (3) Digital administrative circuits with reduction of paper archives; (4) Investment in the training, dissemination, and information platform and (5) Request for reinforcement of Human Resources for the Central Secretariat.

Collaboration

Collaboration with other institutions Involved in speciality training programs allows for developing joint plans and regulations defining uniform procedures. CIMMGFLVT participates in the Regional Medical Internship Commission (CRIM) and the National Medical Internship Council (CNIM) with fortnightly and monthly meetings, respectively. These committees are responsible for reviewing and amending the medical internship regulations, reviewing training programs proposed by the Specialty Colleges of the Medical Association, defining criteria for granting training suitability and the framework for the activity of medical training advisors and coordinating with ministerial institutions and the ACSS.

The CIMMGF collaborated from 2017 to 2018 with the MGF College in reviewing the MGF training program. However, regular meetings with other Coordination Offices, MGF College, and the Intern Commission were poorly implemented.

The strategies implemented were: (1) participating in biweekly/monthly meetings with the CRIM/CNIM; (2) monthly meetings between MGF Coordinators; (3) regular meetings with the MGF College; (4) monthly meetings with the MGFLVT interns' committee and (5) sharing CIMMGFLVT's work.

Reorganizing the Central Team

Changes in the internship program and size led to a considerable increase in the time required for the DIM-MGFs to perform their duties as Advisors to the Coordinator. It therefore became urgent to increase the central DIM-MGF team and reorganize its work.

The strategies implemented were establishing five central pillars with individual strategies in each pillar, namely: (1) Training capacity; (2) Training of Specialized Intern Doctors (MIFE); (3) Continuing evaluation; (4) Training of Training Advisors (OF) and (5) Final evaluation.

Training capacity

Increasing training capacity is a priority, given the need to train more family doctors in Portugal. The 2019 training program[9] provides for three rotations over the four year internship. Within each rotation, it provides for periods of mandatory and optional complementary training and short training and also allows for training in MGF outside the CSP placement unit. Traditionally, compulsory and optional complementary training courses are conducted in hospitals, providing intensive training in different clinical situations, although they are not helpful or appropriate for the family doctor practice. Additionally, there are limitations In the number of MIFEs that can be present in each hospital service, And some hospitals do not have competence to teach in all specialities.

Thus, MIFES and OFs have taken the initiative, and created spontaneous projects (training hubs) in various regions, which offer enriching training opportunities in CSP outside their placement unit, offering suitable, challenging,

and complex training fields to MIFEs. The strategies implemented were making the most of hospital slots at a regional level (a centralized process of allocating mandatory and optional complementary training by the Coordination Office) and formalizing training hubs outside of hospital training centres.

Training of Specialized Intern Doctors (MIFE)

The theoretical and practical training of MIFEs is provided by the OFs during their rotations and through individual study, guided by the curricular objectives. CIMMGFLVT is responsible for producing formal learning content through training manuals, curricular courses, study resources for interns. The 2019[9] program has now reorganized the curricular objectives. It stipulated eight weekly non-care hours for tutoring and relational learning and up to 160 hours of curricular courses during the four-year training.

The following areas were identified as needing improvement: (1) Optimal use of time dedicated to non clinical activity provided for in the new program; (2) Asymmetries in the organization of reflective and relational learning; (3) Reduced training opportunities from 2016 to 2019 due to the central team's downsizing; (4) Ensuring that training hubs provide the necessary conditions for training interns.

The strategies implemented were the creation of (1) the Training Guide, (2) the Reflective Learning Guide and the Relational Learning Sessions Guide, and (3) the MGF Academy to support the training of MIFE and advisors, with the creation of new optional curricular courses and (4) the Training Hub Guide.

Continuous evaluation

Continuous evaluation is conducted at the end of each academic year. It consists of performance-based evaluation (carried out by the OF after analysing data submitted by the MIFE, following MGF[11] College guidance) and knowledge evaluation (through multiple-choice exams after Year one and three, and oral clinical case discussion after year two and four).

In the analysis of this item, we identified that (1) The OFs evaluated their interns using different criteria; (2) The data submitted by the interns was not a workable analysis tool for interns; (3) Some interns were in the middle of their training at the time of the implementation of the new program; (4) There was a need to expand the team that prepares the multiple choice questions and clinical cases for continuous evaluation.

The adopted strategies were: (1) Training OFs in Performance Based Assessment and Evaluation; (2) Creating a database analysis tool with feedback for interns; (3) Making the transition from the 2015 to the 2019 Program (keeping the regional written tests of the 2015 Program); (4) Training DIM-MGFs in the preparation of Multiple-Choice Questions, which require national collaboration in the first-and-third years' national tests, and regional and national collaboration in the second-and-fourth years' tests.

Training of Supervisors/Tutors (OF)

MGF is a pioneer in studying and analyzing consultation techniques, patient-centered consultation models, evidence-based medicine, rationalizing resources, and ongoing questioning of accumulated knowledge. The training of MGF specialists should be based on continuous training strategies and autonomous learning methods[12].

The following difficulties were identified: (1) The communities of practice for OFs created in 2004 under the name of Integrated Teams of Supervisors (EIO) stopped focusing on continuous training in adult teaching-learning, teaching-evaluation methodologies in clinical practice, and management of complex situations in the MIFE-OF relationship and ended up becoming spaces for sharing clinical knowledge between OFs and MIFEs; (2) The new OFs did not feel prepared to receive their first intern with the current Introductory Course to Supervision; (3) The OFs with helpful knowledge and training acquired only applied it locally; (4) The OFs felt the need for more training; (5) The training available was not always suited to the OFs' needs/expectations; (6) Difficulty in perceiving the OFs' ideal profile.

The strategies implemented were: (1) Creation of an EIO Guide; (2) Reformulation of the Introductory Course to Supervision (CBO), mandatory for first-time OFs; (3) Restarting the OF Open Day with workshops relevant to OF training; (4) Survey of the training needs of OFs, creation of the Continuous Training Program for OF (FOCO) in MGF; (5) Implementation of a satisfaction questionnaire for OFs of the Curricular Courses; (6) Creation of the OF Profile.

Final assessment

There are two Annual Final Evaluation, which consist of three separate examinations: theoretical, curricular, and practical. The juries are composed of three doctors specializing in MGF, one of whom is the MIFE's OF. Each jury evaluates up to six candidates.

From 2019 onwards the theoretical examination is national, and is currently prepared by a national jury, with 100 multiple-choice or short-answer questions. The curricular test is based on a curriculum document submitted by the candidates, subject to prior evaluation and followed by an oral discussion. The practical examination entails discussion of three mini-clinical cases (MCC) prepared by a national technical group. All candidates who take the practical examination take all three MCCs simultaneously.

The difficulties in this evaluation were related to (1) finding members with experience in preparing multiple choice questions to be a part of the jury, (2) having members of the national technical group of the practical examination with experience in preparing mini-clinical cases, (3) the individual subjective application of evaluation criteria by members of each jury n the practical examination.

The following strategies were implemented: (1) Participation of CIMMGFLVT members with experience in preparing multiple choice questions in the national jury for the theoretical examination; (2) Coordination of the national technical group for the practical test; (3) Organization of annual training for the CIMMGFLVT final evaluation juries.

Results

The annual Slots available for a Medical Internship at CIMMGFLVT almost tripled between 2009 and 2023 (Figure 2). Focusing on four areas allowed us to obtain specific results in each area, with gains in the quality of the medical internship in MGF at the CIMMGFLVT.

Area 1: Training of Regional Teams

Based on regional needs, the number of DIM-MGFs increased from 15 to 19, distributed across 15 regional teams with regional secretarial staff in each region, freeing up two secretaries from the Coordination Office for other tasks. The secretarial staff members participated in the Outlook and E-mail Management Training, and the DIM-MGFs participated in the EURACT Course on Assessment in Medicine[13] for DIM-MGFs. DIM-MGFs also participated in the Curricular Courses as supervisors and trainees.

Area 2: Communication and decision

By joining a single national system of Ministry of Health email domains, the e-mails of the Coordination Offices, Directors, and the Internship Secretarial staff were transferred to institutional e-mails of the assigned positions, allowing the secure and unequivocal identification of employees and guaranteeing confidentiality, security, and trustworthiness of communications. This organization also provides for temporary substitution and work continuity during prolonged absences, essential from 2020 to 2023 due to multiple absences of professionals.

Monthly meetings between the Coordination and Internship Directors are held with secretarial staff present and alternate between online format to respect the geographical dispersion of the DIM-MGFs and in-person formats to encourage team spirit. The DIM-MGFs access a direct chat shared via mobile phone for urgent communication situations.

The management of decisions and processes within the CIMMGFLVT is digital (digital documents with digital signature, e-mail, and shared storage folders), allowing for the auditing of processes, automatic assessment of workload which allows for redistribution of tasks when necessary, and the development and evaluation of strategies to improve effectiveness.

Communication between CIMMGFLVT and MIFE and OF is conducted through a digital e-learning platform (PEL) that allows sharing of information and carrying out training online training sessions. We have increased the use of the digital e-learning platform (PEL) with several training courses (curricular courses, webinars, and seminars), evaluation tools, manuals, and documents applicable to MIFEs and OFs, and the scheduling of CIMMGFLVT activities.

The central Secretarial team was reinforced with members allocated to the Internship directors, with teams dedicated to the central intervention priority areas, besides support for dispatch and interagency collaboration.

Area 3: Collaboration

CIMMGFLVT participated in 90% of CRIM meetings and 96% of CNIM meetings. These committees were instrumental in adapting medical internships during the COVID-19 pandemic and are now working on adapting medical internships to the new reorganization of the National Health Service with the creation of Local Health Units[14]. The CIMMGFLVT is one of the CNIM members responsible, since 2023, for coordinating the working group that promotes preventing and managing violence and harassment in medical internships.

Monthly online and in-person meetings were implemented between the seven CIMMGFs to aim to reach a single and uniform MGF medical internship in Portugal. These meetings established the National Training Guide[15], the national MGF OF skills profile[16], and reflections on implementing relational learning sessions[17]. Clarifications were also developed on the standard curriculum for the final evaluation[18], national procedures were developed for final evaluation juries were defined, work was organized to prepare the national multiple-choice examination, and regional strategies for the oral evaluation were shared.

Besides these meetings, a national mailing list of MGF Medical Internship Coordinators was created and a mobile phone chat tool was used to allow immediate Coordination.

CIMMGFLVT has encouraged annual meetings with the MGF College of the Portuguese Medical Association to discuss health units' suitability and training capacity, besides matters related to final evaluation. It also participated in the National Meetings of the Portuguese Medical Association with internship bodies to discuss the final evaluation model and strategies to maintain quality and increase training capacity.

CIMMGFLVT organizes monthly meetings with the MGFLVT Intern Committee that leverage the involvement of MIFEs in decision-making. It allows them to share their vision Regarding problems that are identified as well as possible solutions, determining more effective and efficient action and proximity to the MIFEs. The Internship Committee conducts satisfaction surveys on complementary training in the 15 regions of the CIMMGFLVT, which allows feedback to the DIM-MGFs on strategies for allocating training and slots. The meetings also aim to collaborate in organizing curricular courses promoted by the Internship Committee and the MGF Medical Internship Conferences of LVT, which occur every two years.

CIMMGFLVT sent a delegation to the Third EURACT Medical Conference[19] held in Bled, Slovenia, in October 2023, where it presented three posters and four oral communications, sharing the strategies implemented at the CIMMGFLVT.

Area 4: Reorganizing the Central Team

To ensure work on the five pillars of the team, the CIMMGFLVT increased from three to six family doctors with Coordination Advisory functions and gradually managed to strengthen the secretarial team over the four years, increasing from 35 hours to 118 hours of weekly support in the Secretarial staff.

Training capacity

Training capacity has increased, and the CIMMGFLVT has implemented strategies to maximize hospital training capacities. However, despite these efforts, hospitals have not always met our needs. Managing slots in hospitals is now centralized to ensure equity in access to all internships by all LVT MIFEs in all hospitals in the LVT geographical area. Although availability appears to exceed needs, the difficulties lie in the availability of slots close to the MIFEs' usual place of work. MIFEs often have to travel to hospitals outside their reference area to undertake training; for example, some of the region's training capacity exists in hospitals more than 100 km from the MIFEs' internship location. The most vulnerable areas continue to be Women's Health, the Gynecology/Obstetrics Emergency Service, and the Pediatrics Emergency Service (Table 1), where there are fewer slots.

The CIMMGFLVT organizes optional complementary training, but MIFEs can also propose other areas depending on their training objectives as family doctors (Table 2). Some specialties, such as Dermatology and Endocrinology, are in high demand by MIFEs but have fewer hospital training slots available.

MIFEs use short training periods to train specific skills in areas they identify as being of most significant interest in their future clinical activity that are not covered by the previously mentioned training courses.

CIMMGFLVT prepared the Training Hubs Guide[20] with rules for their creation in family doctor activity areas, respecting MIFEs' training needs, the possibility of continuous training pe-

Table 1. Capacity and training needs for mandatory complementary training of CIMMGFLVT at the end of 2023.

Mandatory Complementary Training	Capacity (months)*	Needs (months)*
Women's Health	382	346
Child and Youth Health	449	339
Mental Health	408	302
Urgent Care Service - Surgery	317	201
Urgent Care Service - Gynecology/Obstetrics	190	178,5
Urgent Care Service - Internal Medicine	358	173
Urgent Care Service - Orthopedics	292	195
Urgent Care Service - Pediatrics	245	187
Urgent Care Service - Psychiatry	206	163

*Training capacity is quantified in available months, with mandatory complementary training lasting between 1 and 3 months. Needs are quantified based on the number of MIFE and the duration of their training.

Source: Database of the Coordination of the Medical Internship in General and Family Medicine of Lisbon and Tagus Valley (CIMMGFLVT). Ministry of Health, 2024.

riods of training periods stretched out over time, guaranteeing supervision, and the conditions of the training unit regarding supervision and suitability. The projects have different operating modes – fixed units, short training courses, intern units, appointments for complex patients, family health centres experimenting with novel approaches to primary health care, and screening projects – and allow targeted training in specific areas (the time-opportunity factor, i.e., the concentration of situations relevant to training in time and space). Several partially qualified units in the CSP constitute Training Hubs for MIFE in Women's Health and Child and Youth Health. The creation of training hubs was proven a valuable strategy for training MIFEs who can train their clinical competencies, with health gains for the population and increased satisfaction of MIFEs and OFs while contributing to the care of the population.

Training of Specialized Training Medical Interns

The 2019 CIMMGFLVT Reflective Learning Guide was adopted nationally under the name of Training Guide[15]. It details all training objectives comprehensively, divided by the curricular year in which each educational aim is expected to be met. This document is useful to organize the aims of formative and summative evaluations.

The 2019 Relational Learning Sessions Guide[18] structures weekly 4-hour sessions (Relational Learning Sessions (RLS) in LVT) in which all MGF MIFEs of the same curricular year in that region meet. These sessions aim to create a community of practice among the MIFEs and are a satisfactory and effective tool to improve their training. This guide was evaluated and revised in 2023 and is in final review for publication.

CIMMGFLVT is responsible for producing formal learning content through training manuals, curricular courses, and support material for MIFEs. Thus, it created the "CIMMGFLVT MGF Training Academy", which organizes training for MIFEs and OFs. The Academy collaborates with the Internship Commission and other entities in developing and providing training content. It currently offers two mandatory curricular courses: "The Consultation" (3 days) and "The Family" (2 days), and the following optional curricular courses: Palliative Care, Ethics, Empathy and the Other's Shoes (3 to 5 days); Child Health, Mental Health, Wounds for Doctors (2 days); Evidence-Based Clinical Practice, Rational Prescription of Antibiotics (1 day); and MGF-Maxillofacial Surgery Interface and Breaking Bad News (half a day).

The training opportunities provided and MIFEs' demand have been increasing in recent years (Table 3).

All curricular courses are subject to a participant satisfaction questionnaire, with generally satisfactory results. Suggestions for improvement were systematically analyzed to continuingly improve the quality of training opportunities on offer.

Table 2. Capacity and training needs for mandatory complementary training of CIMMGFLVT at the end of 2023, Lisbon and Tagus Valley Region, Portugal, 2023.

Optional Complementary Training	Capacity (months)*	Needs (months) *	Optional Complementary Training	Capacity (months)*	Needs (months) *
Cardiology	165	81	Occupational Medicine	12	0
General Surgery	116	11	Physical Medicine and Rehabilitation	101	39
Plastic Surgery	12	0	Hyperbaric Medicine	2	0
Pain Consultation	73	29	Internal Medicine	232	10
Palliative Care (Outpatient Clinic)	9	5	Legal Medicine	12	0
Palliative Care (Hospitalization)	36	3	Nephrology	105	15
Dermatology	**158**	**183**	Neurosurgery	24	1
Diabetes	26	7	Neurology	128	36
Autoimmune Diseases	9	1	Ophthalmology/ Otorhinolaryngology	71	52
Pre-hospital Emergency	12	2	Ophthalmology	111	15
Endocrinology	**60**	**111**	Oncology	61	1
Stomatology	12	0	Orthopedics	180	4
Epidemiology and preventive intervention	3	0	Otorhinolaryngology	164	57
Gastroenterology	120	33	Clinical Pathology	12	0
Medical Genetics	12	0	Small Surgery	12	4
Geriatrics	12	3	Pneumology	158	40
Hematology	28	7	CV Prevention and Risk	12	0
Anticoagulation	12	0	Child and Adolescent Psychiatry	29	14
Home Hospitalization	72	1	Rheumatology	109	96
Imaging	56	0	Public Health	12	0
Immunoallergology	43	9	Stroke Unit	4	0
Immunohemotherapy	15	0	Urgent care - Ophthalmology	24	1
Infectiology	90	5	Urgent care - Otorhinolaryngology	48	19
Aeronautical Medicine	2	0	Urology	125	19
Sports Medicine	6	5			

*Training capacity is quantified in available months, with optional complementary training lasting at least 15 days and a variable maximum. Needs are quantified based on the number of MIFE and the duration of their training.

Source: Database of the Coordination of the Medical Internship in General and Family Medicine of Lisbon and Tagus Valley (CIMMGFLVT). Ministry of Health, 2024.

Continuous evaluation

The need for performance based assessment with more specific and detailed evaluation parameters was identified. Thus, curricular courses and support documents were created so that the OFs feel more confident in their capacity to evaluate. Besides the courses, the CIMMGFLVT created Evaluation resource documents by hospital tutors and OFs.

Performance based assessment also requires analysing data on clinical activity numbers and reports, submitted by interns at the end of each rotation. The collection and analysis of all national data is conducted by the CIMMGFLVT, allowing each MIFE and OF to compare their quantitative performance with the national average in each parameter evaluated. It is a powerful tool for reflection and adaptation at the level of the MIFE-OF dyad and at the level of each

Table 3. Training opportunities of Curricular Courses for MIFE between 2021 and 2024. Lisbon and Tagus Valley Region, Portugal, 2024.

Year	Training capacity (slots)	Registered MIFEs	Attending MIFEs
2021	740	716	692
2022	1,007	991	883
2023	1,096	1,094	963
2024	934	ND	nº

Source: Database of the Coordination of the Medical Internship in General and Family Medicine of Lisbon and Tagus Valley (CIMMGFLVT). Ministry of Health, 2024.

DIM-MGF to evaluate the use and distribution of training resources.

In the knowledge evaluation, some MIFEs still had to complete the IMMGF in the 2015 Program[8] (16 regional written tests per year), besides the MIFES that had already started the 2019 Program[9]. Five hundred and twelve questions were still being prepared in the Regional Tests of the 2015 Program[21] of 2023.

The CIMMGFLVT organizes training for DIM-MGF and OF on preparing multiple-choice questions. This training was offered to the other internship coordinators to qualify the technical groups for preparing the questions for the written examinations.

Each year has two moments[22] in which continuous evaluation is carried out, which requires the construction of 100 questions to assess the first year and 200 questions to assess the third year. The CIMMGFLVT is responsible for the Global Coordination of the national exam at the end of the third year held in January (preparation and review of questions and review of requests that challenge the correct answer), and 10 DIM-MGFs from the CIMMGFLVT participate in the preparation of the questions for the various exams.

For the discussion of clinical cases at the end of the second and fourth year, the CIMMGFLVT prepares three practical scenarios (Mini Clinical Cases similar to those used in the final evaluation) and organizes the logistics to ensure that all intern doctors assessed at the same time perform the same cases on the same day and time, thus increasing evaluation fairness and uniformity.

Final assessment

The IMMGF in LVT has many candidates for the final assessment test (PAF), fielding on average 145 candidates per year, which requires a high level of organization in logistics and human resources. The CIMMGFLVT organizes, on average, 26 final evaluation juries per year, which involves an average of 342 people per year, including candidates. Between 2020 and 2023, the CIMMGFLVT trained 583 new family doctors, representing a successful training rate of 94%.

Two CIMMGFLVT members were appointed to the national jury for the examination, which is made up of 20 people, and a DIM-MGF with advisory functions in the LVT Coordination Office coordinates the technical group for the practical examination.

Every year, the CIMMGFLVT organizes a training day – "Jury Summit" – to clarify and standardize the procedures inherent to the final examinations. Feedback has been very positive, and this course was proposed by the MGF College of the Portuguese Medical Board for implementation at a national level.

Training of Supervisors/Tutors (OF)

The expanded CIMMGFLVT training team has achieved some of the Coordination Office's objectives, and it has been possible to review the training opportunities for OF and make it more structured, creating a logical and cohesive program. This Continuous Training Program for Training Advisors (*FOCO em MGF* program) is based on the premise that those involved MGF Training Supervisors maintain their collaboration over time, and it is therefore essential to invest in training their pedagogical skills.

In this sense, the CBO was reformulated and is currently available on PEL in B-learning format – one day of online which entails videos, reading articles, and assessment, and one day in-person training with presentations, small-group work, plenary debate, and practical work on managing challenging situations in the medical internship.

The *Open Day* restarted in 2022. Topics such as the OF Profile, the EIO Guide, Ethics, Mini Clinical Case Training, OF Balance Management-Clinical Practice, and the Supervisor's Personal Plan have been addressed. In 2023, 123 OFs registered in the two editions held.

The CIMMGFLVT Training Academy currently organizes the following curricular courses for OFs: Analysing filmed consultations, Leadership for OFs, Performance-based Instruments, and Structured Feedback. In response to OFs' training requests, it also organizes the courses "Practicing Roleplays of Clinical cases for OF"

and "Application of the curricular framework". In total, 10% of the slots on the MIFE Curricular Courses are also offered to OFs, with an increase in registrations from 29 OFs in 2021 to 507 OFs in 2023. A survey of OF training needs was prepared, which has been used to adapt and improve the CIMMGFLVT training opportunities and outline a document that defines the profile of the skills and aptitudes of an OF in MGF, was prepared. The CIMMGFLVT also created a semi-structured guide for EIOs help organize their activity, making meetings more productive.

Discussion

The reorganization of teams and ways of working did not happen overnight, and many stakeholders made the changes possible over several years. The work is based on the continuity of the work developed by other Medical MGF Internship Coordinators in LVT, in close collaboration with the MGF College of the Portuguese Medical Association to improve and implement a specialized training program in MGF increasingly better adapted to the needs of the MIFEs, OFs, and the specialty.

Strengthening the human and technical resources of teams allows for adapting the MGF medical internship to LVT resources, the MGF needs of MIFEs who choose to do their training in this field and the skills and profiles of the MGF OFs who work in the health units of this geographical area.

Transparency in decision-making processes allows for quantification and auditing of work, and institutional collaboration provides for the standardization of the MGF medical internship at the national level, which is essential given that specialist employment placement schemes are national.

Organizing the central team into pillars allows each person responsible for their pillar to focus on developing responses to their needs, maintaining teamwork, and allowing the entire central team to contribute to managing challenges and finding solutions to improve quality. The CIMMGFLVT managed to keep the number of slots above 200 despite the 2020 pandemic and recent instability in the National Health Service, significantly increase training opportunities for MIFEs and OFs, create practical manuals for MIFEs and OFs in several fields of medical internship, create national working groups to share responsibilities in national examinations and contribute significantly to the content of the final evaluation and work carried out in the CNIM at a national level.

Not all MGF specialists want, can, or should be OFs, which is why tools were created to design and assess the OFs' profile and skills and abilities in MGF. Also, peer learning was promoted for MIFEs and OFs, so there has been an emphasis supporting and capacitating EIO.

Final considerations

The challenges are diverse, from limited human resources and institutional IT equipment to SNS instability with the creation of the 33 Local Health Units[14] in 2024. Local health units have an unknown impact on internships, which may have contributed to not filling all MGF slots this year.

The strategies implemented by the CIMMGFLVT focused on essential areas for managing medical internships in MGF, namely the training of the central coordination team, with the division of work into five pillars and recognizing the need to strengthen internship management. This reorganization maintained the progressive increase in quantitative and qualitative terms in training MIFEs in MGF. It offered the MGF OFs strategies for continuous improvement as supervisors of future family doctors.

In the coming years, CIMMGFLVT proposes to embrace the challenge of implementing the evaluation of OFs, offering training to MIFEs during their medical internship regarding being a future supervisor and teacher of MGF, participating in the review of the MGF Programme (2024) – with possible changes in evaluation slated to include practical evaluation based on clinical practice and filmed consultations – and reviewing the Medical Internship National Regulations to allow protected time for DIM-MGFs and supervisor time for OFs in all specialities, as well as improving training capacity in areas with limited training slots and capacitating the MGF Training Academy.

We have presented the strategies for organizing postgraduate medical training during external and internal changes in the Portuguese National Health Service. The implemented options were designed in the context of PHC and the MGF Medical Internship in Portugal but can be adapted and reformulated for other contexts. Medical training faces unique technological challenges in the coming years, which require debate,

reflection, and experimentation to preserve the quality, scope, and humanization of healthcare provided to the population.

Collaborations

All authors contributed equally to the preparation of the article.

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