

**UEMS 2025/29** 

# Training Requirements for the Specialty of Geriatric Medicine

**European Standards of Postgraduate Medical Specialist Training** 

#### **Preamble**

The UEMS (Union Européenne des Médecins Spécialistes, or European Union of Medical Specialists) is a non-governmental organisation representing national associations of medical specialists at the European level. With its current membership of 41 national associations and operating through 43 Specialist Sections and their European Boards, 19 Multidisciplinary Joint Committees and 7 Thematic Federations<sup>1</sup>, the UEMS is committed to promote the free movement of medical specialists across Europe while ensuring the professional consensus on the framework for the highest possible level of their training, which will pave the way to the improvement of quality of care for the benefit of all European citizens and beyond<sup>2,3,4</sup>.

**UEMS** and its Postgraduate Medical Specialists' Training programmes. In 1994, the UEMS adopted its Charter on Postgraduate Training, aiming at providing the recommendations at the European level for high quality training<sup>5</sup>. This Charter set the basis for the European approach in the field of harmonisation of Postgraduate Specialist Medical Training, most importantly with the ongoing dissemination of its periodically updated Chapter 6s, specific to each specialty. Through subsequent versions of the EU Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications<sup>6</sup>, the UEMS Specialist Sections and other UEMS Bodies have continued to work on developing the documents on European Training Requirement(s) (ETRs). They reflect modern medical practice and current scientific findings in each of the specialty fields, and particular competencies covered and being represented within the UEMS. In 2012 the UEMS Council adopted the document Template Structure for ETR.

<sup>&</sup>lt;sup>1</sup> https://www.uems.eu/our-structure

<sup>&</sup>lt;sup>2</sup> Fras Z. The current role, continuing challenges, and future strategy of the UEMS. In: Fras Z, Destrebecq F, eds. Building on solid foundations to improve specialist healthcare for European citizens. UEMS 50<sup>th</sup> Anniversary Conference, Brussels, 18<sup>th</sup> April 2008. Book of papers. Brussels: European Union of Medical Specialists, 2008: 37-40 <sup>3</sup> Harvey L. History of the UEMS. In: Fras Z, Destrebecq F, eds. Building on solid foundations to improve specialist healthcare for European citizens. UEMS 50th Anniversary Conference, Brussels, 18th April 2008. Book of papers. Brussels: European Union of Medical Specialists, 2008: 29-32

<sup>&</sup>lt;sup>4</sup> Twomey C. Postgraduate Training for Medical Specialists – what more can be done for greater harmonisation in Europe? In: Fras Z, Destrebecq F, eds. Building on solid foundations to improve specialist healthcare for European citizens. UEMS 50th Anniversary Conference, Brussels, 18<sup>th</sup> April 2008. Book of papers. Brussels: European Union of Medical Specialists, 2008: 19-22

<sup>&</sup>lt;sup>5</sup> Charter on Training of Medical Specialists in the European Community, Charter adopted by the Management Council of the UEMS, October 1993:

https://www.uems-ebdv.org/web/images/downloads/charter on training uems 2007.03.27-09.09.27.pdf

<sup>&</sup>lt;sup>6</sup> Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications: <a href="http://data.europa.eu/eli/dir/2005/36/oj">http://data.europa.eu/eli/dir/2005/36/oj</a>

The linkage between the quality of medical care and quality of training of medical professionals. It is the UEMS' conviction that the quality of medical care and expertise are directly linked to the quality of training, achieved competencies, and their continuous update and development provided to the medical professionals. No matter where doctors are trained, they should have the same core competencies. The UEMS ETRs embody extensive experience—spanning years or even decades—of collaborative work by UEMS Sections, Multidisciplinary Joint Committees (MJCs), and Boards. These requirements have been developed in close collaboration with relevant European Scientific Societies, integrating training standards with European Medical Assessments. It is one among the clear aims of the UEMS ETRs to raise standards of training to make sure that European patients find high quality standards of safe specialist care. While professional activity is regulated by national laws in EU Member States, the UEMS understands that it must fundamentally comply with international treaties, UN declarations on Human Rights, and the WMA (World Medical Association) International Code of Medical Ethics<sup>7</sup>.

**UEMS** and European legislation facilitating the mobility of medical professionals. The UEMS Council and its Specialist Sections, first created in 1962, have regularly provided advice and expert opinion to the European Commission. This helped create the framework that informed the drawing up of the Doctors' Directive in 1975, which provided for the mutual recognition of medical diplomas and the free movement of doctors throughout the EU. The revised EU Directive on the recognition of Professional Qualifications (2013/55/EU)<sup>8</sup> allows member states to decide on a common set of minimum knowledge, skills and competencies that are needed to pursue a given profession through a Common Training Framework (CTF), which represents the third mechanism that could be used to ensure mobility within the EU. This directive states that "professional qualifications obtained under common training frameworks should automatically be recognised by Member States. Professional organisations which are representative at Union level and, under certain circumstances, national professional organisations or competent authorities should be able to submit suggestions for common training principles to the Commission, in order to allow for an assessment with the national coordinators of the possible consequences of such principles for the national education and training systems, as well as for the national rules governing access to regulated professions". The UEMS supported CTFs since they encompass the key elements developed in modern educational and training models, i.e. knowledge, skills, and professionalism.

In addition, the Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border healthcare9 introduced a strong incentive for harmonisation of medical training and achieved competencies among EU/EEA Countries through the requirements to assure good and comparable quality of care to increasingly mobile European citizens.

<sup>&</sup>lt;sup>7</sup> https://www.wma.net/policies-post/wma-international-code-of-medical-ethics/

<sup>&</sup>lt;sup>8</sup> Directive 2013/55/EU, of the European Parliament and of the Council of 20 November 2013 amending Directive 2005/36/EC on the recognition of professional qualifications and Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System: http://data.europa.eu/eli/dir/2013/55/oj

<sup>9</sup> Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border healthcare: <a href="http://data.europa.eu/eli/dir/2011/24/oi">http://data.europa.eu/eli/dir/2011/24/oi</a>

The UEMS ETR documents aim to provide for each specialty the basic training requirements as well as optional elements, and should be regularly updated by UEMS Specialist Sections and European Boards to reflect scientific and medical progress. The three-part structure of these documents reflects the UEMS approach to have a coherent pragmatic document for each individual specialty, not only for medical specialists but also for decision-makers at the national and European levels interested in knowing more about medical specialist training. To promote the harmonisation of the ETR through more specific guidelines, the CanMEDS competency framework, which defines the complete set of professional roles common to both medicine and surgery (Professional, Communicator, Collaborator, Leader, Health Advocate, Scholar, and Medical Expert as the integrating role)<sup>10</sup>, is recommended. UEMS has an agreement to use an abbreviated version of the competencies within those roles.

Importance of making a distinction between Knowledge and Competency in ETR documents. Competency-based education is not oriented towards the period of clinical rotations, but towards the trainee, and their progress in the acquisition of competencies. Having a clear distinction within an ETR's contents between competencies and knowledge helps define both how that training should be delivered and how it should be assessed. The UEMS considers that the appropriate use of different methods of assessment of knowledge and acquired skills, emphasising the workplace-based assessment, is an essential component of quality postgraduate training, focused on high standards of specialist medical practice. To improve the methods of assessment it is also recommended to use the so-called Entrustable Professional Activities (EPAs) in all specialties' ETRs. In order to recognise common and harmonised standards on the quality assurance in specialist training and specialist practice at a European level, some UEMS Specialist Sections and Boards also have, for a long time, organised European examinations (supported and appraised by the UEMS CESMA - Council of European Specialist Medical Assessment<sup>11</sup>).

Overlapping of learning outcomes and competencies. Each of the UEMS ETRs defines a syllabus or knowledge base and describes learning outcomes defined for given competencies. Some of these curricula encompass a whole specialty, while others focus on areas within or across specialties and define content of the training requirements for specific areas of expertise. Recognising potential overlaps provides an opportunity for those drafting ETRs to develop shared or overlapping learning outcomes. However, similar methods of measurement do not necessarily imply identical targets. Instead, the ultimate goals may vary across specialties, with clearly defined individual objectives tailored to trainees and their distinct expectations.

<sup>&</sup>lt;sup>10</sup> Frank JR, Snell L, Sherbino J, editors. CanMEDS 2015 physician competency framework. Ottawa: Royal College of Physicians and Surgeons of Canada:

https://canmeds.royalcollege.ca/uploads/en/framework/CanMEDS%202015%20Framework\_EN\_Reduced.pdf

<sup>&</sup>lt;sup>11</sup> https://www.uems.eu/cesma-appraisals



**UEMS ETRs and national curricula**. The UEMS strongly encourages the National Medical Competent Authorities (NMCAs) to adopt such requirements, and believes that this is the most efficient way of implementation of good standards in postgraduate training. We clearly respect and support the vital role of the NMCAs in setting high standards of training and care in their respective Countries and checking through robust quality control mechanisms the qualifications of medical specialists moving across Europe. The UEMS ETRs are developed by professionals for professionals and this adds unique value to them. UEMS' aim is to indicate the knowledge and competencies that should be achieved by trainees in EU/EEA countries and also competencies and organisation of the training centres. The training environment and results described in UEMS ETRs may be achieved in adapted ways, depending on local traditions, organisation of healthcare system and of medical specialist training. Adaptation of UEMS ETRs to local conditions assures the highest quality of specialist training and each state may include additional requirements, depending on local needs.

Importance of collaboration with other representative European medical bodies. The UEMS always wishes to work with all Colleagues, NMCAs, and professional and scientific organisations across Europe. In the process of ETRs development, the UEMS recognises the importance of meaningful collaboration with the other European medical representative bodies, the European Junior Doctors (EJD representing doctors in training), the European Union of General Practitioners (UEMO – Union Européenne des Médecins Omnipraticiens), the Standing Committee of European Doctors (CPME - Comité Permanent des Médecins Européens), the Federation of European Salaried Doctors (FEMS) and the European Association of Senior Hospital Doctors (AEMH - Association Européenne des Médecins Hospitaliers). In addition, UEMS continues to develop closer links with the many European specialist societies. UEMS, in collaboration with its fellow European representative bodies, has constantly been highlighting the importance of coordinated postgraduate specialist medical training programmes, always accepting the differing needs of different specialties. In this way, quality medical care is delivered by highly qualified medical specialists - essential to ensuring consumer confidence and protection all over Europe.

Conclusions. UEMS is very proud of all the hard work that has been done until now in developing the UEMS ETRs, as well as that they are increasingly implemented as national curricula. However, we also recognise the need for constant improvement, and we are always open to further suggestions. The UEMS insists that the medical profession remains the driver in defining its own specialist training and continuous professional development needs. On this basis, we sincerely look forward to working with the key European Union responsible bodies, as well as the national stakeholders in implementing the basic common strategies and requirements outlined with this initiative. We are confident that the priorities detailed in UEMS ETR documents developed for individual specialties (and/or competencies) will become evident in national strategies and programmes, as well as action plans for postgraduate medical education and training.



# **Specialty of Geriatric Medicine**

The global population is rapidly ageing, and as a consequence, an increasing number of people are living with age-related medical conditions. The 2015 World Health Organization (WHO) World Report on Ageing and Health highlighted the urgent need for changes in health policies to address the challenges of ageing populations. In this context, the WHO also provided clear recommendations for the development of the health workforce<sup>12</sup>. In addition, the United Nations (UN) Decade of Healthy Ageing (2021–2030) has called for "a transformative collaboration of diverse sectors and stakeholders that focuses on changing how we think, feel, and act towards ageing; cultivating age-friendly environments; creating integrated and responsive health care systems and services; and ensuring access to long-term care for older people who need it"<sup>13</sup>.

Geriatric Medicine is "a specialty of medicine concerned with physical, mental, functional and social conditions in acute, chronic, rehabilitative, preventive and end of life care in older patients. This group of patients is considered to have a high degree of frailty and active multiple pathology [multimorbidity], requiring a holistic approach. Diseases may present differently in old age [atypical presentation], are often very difficult to diagnose, the response to treatment is often delayed and there is frequently a need for social support. Geriatric Medicine therefore exceeds organ orientated medicine offering additional therapy in a multidisciplinary team setting, the main aim of which is to optimise the functional status of the older person and improve the quality of life and autonomy. Geriatric Medicine is not specifically age defined but will deal with the typical morbidity found in older patients. Most patients will be over 65 years of age but the problems best dealt with by the specialty of Geriatric Medicine become much more common in the 80+ age group"<sup>14</sup>.

A geriatrician is "a medical doctor who specialises in caring for older people and who formally possesses skills to assess and manage older people with medical and psychological issues, including social consequences"<sup>15</sup>. Their primary expertise lies in the delivery and implementation of Comprehensive Geriatric Assessment (CGA), which is a "multi-dimensional, multi-disciplinary diagnostic and therapeutic process conducted to determine the medical, mental, and functional problems of older people [...] so that a co-ordinated and integrated plan for treatment and follow-up can be developed"; in hospitals, CGA has been shown to improve the likelihood of older patients being alive and residing in their own homes following an emergency admission<sup>16</sup>; furthermore, it has demonstrated effectiveness in other care settings<sup>17</sup>.

\_

World Health Organization. (2015). World report on ageing and health. World Health Organization. <a href="https://iris.who.int/handle/10665/186463">https://iris.who.int/handle/10665/186463</a>

<sup>&</sup>lt;sup>13</sup> https://www.decadeofhealthyageing.org/about/about-us/what-is-the-decade

<sup>&</sup>lt;sup>14</sup> Stuck AE, Masud T. Health care for older adults in Europe: how has it evolved and what are the challenges? Age Ageing. 2022 Dec 5;51(12):afac287

<sup>&</sup>lt;sup>15</sup> Cesari M, Amuthavalli Thiyagarajan J, Cherubini A, Acanfora MA, Assantachai P, Barbagallo M, Coume M, Diaz T, Fuggle N, Ouali Hammami S, Madden K, Matijevic R, Michel JP, Petrovic M, Sieber C, Veronese N, Martin FC, Banerjee A, Rowe JW. Defining the role and reach of a geriatrician. Lancet Healthy Longev. 2024 Oct 4:100644

<sup>&</sup>lt;sup>16</sup> Ellis G, Gardner M, Tsiachristas A, Langhorne P, Burke O, Harwood RH, Conroy SP, Kircher T, Somme D, Saltvedt I, Wald H, O'Neill D, Robinson D, Shepperd S. Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database Syst Rev. 2017 Sep 12;9(9):CD006211

<sup>&</sup>lt;sup>17</sup> Veronese N, Custodero C, Demurtas J, Smith L, Barbagallo M, Maggi S, Cella A, Vanacore N, Aprile PL, Ferrucci L, Pilotto A (EuGMS). Comprehensive geriatric assessment in older people: an umbrella review of health outcomes. Age Ageing. 2022 May 1;51(5):afac104

Historically, Geriatric Medicine has developed differently across European countries<sup>18</sup>. In most European countries, Geriatric Medicine is recognised as an independent specialty. However, some nations have yet to establish it, and in others, it remains a subspecialty of another discipline, primarily Internal Medicine<sup>19</sup>. In many hospitals, specialists in Geriatric Medicine are primarily involved in the acute care of older people, as physicians in emergency departments and/or acute medical wards. This may include the delivery of acute and hyperacute stroke care. Geriatricians also serve as consultants to other specialties, particularly in managing geriatric syndromes or providing advice on the most appropriate care pathway for an older patient. Geriatricians' outpatient services may be hospital or non-hospital-based, and focus on geriatric syndromes such as cognition, falls, continence care, bone health, neurological disorders, and preoperative assessment, to name but a few.

Furthermore, the practice of Geriatric Medicine has diversified and become increasingly sub-specialised, overlapping with other specialties in areas such as *psychogeriatrics* (Psychiatry), *geriatric rehabilitation* (Physical and Rehabilitation Medicine), *orthogeriatrics* (Orthopaedics and Traumatology), *perioperative medicine for older people undergoing surgery* (POPS<sup>20</sup>, in collaboration with other surgical specialties, Anaesthesiology and Pain Medicine), *oncogeriatrics* (Medical Oncology), *geriatric emergency medicine* (GEM, Emergency Medicine), *cardiogeriatrics* (Cardiology), *neurogeriatrics* (Neurology), *nephrogeriatrics* (Nephrology), and others that are still emerging. In some countries, geriatricians primarily or exclusively work in *community geriatrics*, which may include domiciliary visits, medical input for residential and nursing homes (*care home medicine*), and provision of *geriatric palliative care*.

The wide diversity in Geriatric Medicine training and practice across European countries underscores the need for robust pan-European education and training standards<sup>21</sup>. In this vein, the present ETR revision has sought to incorporate current international best practices in educational methods and the latest evidence base. The underlying philosophy is that by integrating the clinical, educational, and evidence-based aspects of geriatric medicine, we can enhance understanding of the wide diversity within the "older people" demographic. This approach ultimately aims to empower professionals, services, and societies to become more inclusive and responsive to the needs of all older adults<sup>22</sup>.

\_

<sup>&</sup>lt;sup>18</sup> Soulis G, Kotovskaya Y, Bahat G, Duque S, Gouiaa R, Ekdahl AW, Sieber C, Petrovic M, Benetos A. Geriatric care in European countries where geriatric medicine is still emerging. European Geriatric Medicine. 2021 Feb;12(1):205-211

<sup>&</sup>lt;sup>19</sup> Stuck AE, Masud T. Health care for older adults in Europe: how has it evolved and what are the challenges? Age and Ageing. 2022 Dec 5;51(12):afac287

<sup>&</sup>lt;sup>20</sup> Harari D, Hopper A, Dhesi J, Babic-Illman G, Lockwood L, Martin F. Proactive care of older people undergoing surgery ('POPS'): designing, embedding, evaluating and funding a comprehensive geriatric assessment service for older elective surgical patients. Age Ageing. 2007 Mar;36(2):190-6

<sup>&</sup>lt;sup>21</sup> Fisher, J. M.; Masud, T.; Holm, E. A.; Roller-Wirnsberger, R. E.; Stuck, A. E.; Gordon, A.; Blain, H.; Knight, P.; Frühwald, T.; Petermans, J.; Nuotio, M. S.; Ihle-Hansen, H. B.; Blundell, A.; Bakó, G.; Burns, E.; Davidovic, M. M.; Jónsdóttir, A. B.; Kolk, H.; Krulder, J. W. M.; Lambert, M.; Maggi, S.; Martinez-Velilla, N.; Pinter, G. F.; Singler, K.; Thompson, S.; Van Den Noortgate, N. J.; Vassallo, M. A.; Veninšek, G., New horizons in geriatric medicine education and training: The need for pan-European education and training standards. European Geriatric Medicine 2017, 8, (5), 467-473

<sup>&</sup>lt;sup>22</sup> Romero-Ortuno R, Stuck AE, Masud T. The giants of education in geriatric medicine and gerontology. Age and Ageing. 2022 Feb 2;51(2):afac004



#### **Procedure of ETR Revision**

The previous ETR for Geriatric Medicine was approved at the UEMS Council Meeting on 17 October 2020. The 2025 revision of the ETR for Geriatric Medicine was initiated following the UEMS Geriatric Medicine Section (UEMS-GMS) meeting, held both in-person and online in Valencia, Spain, on 21 September 2024. The ETR Review Committee was composed of the following members of the UEMS-GMS<sup>23</sup>:

Román Romero Ortuño, ETR Review Committee Chair	IRELAND
Jūratė Macijauskienė, President of the Section	LITHUANIA
Marianne van Iersel, President Elect of the Section	THE NETHERLANDS
Maria Nuotio	FINLAND
Helgi Kolk	ESTONIA
Eva Topinková	CZECH REPUBLIC
Didier Schoevaerdts	BELGIUM
Maria Victoria Farré Mercadé	SPAIN
Christophe Graf	SWITZERLAND
Santiago Cotobal Rodeles	European Junior Doctors, SPAIN
Mark Anthony Vassallo	MALTA
Michael Vassallo	UNITED KINGDOM
Dieter Lütje	GERMANY

The ETR Review Committee held its first meeting on 23 October 2024 under the standard Terms of Reference<sup>24</sup> and met multiple times online over the following months, completing the internal drafting phase on 14 February 2025. The draft was then shared with all members of the UEMS-GMS for further comments and input, leading to its approval at the UEMS-GMS online Spring Meeting on 9 April 2025.

Following this, external endorsements of the document were secured from the European Academy for Medicine of Ageing (EAMA<sup>25</sup>, 8 May 2025), the European Geriatric Medicine Society (EuGMS<sup>26</sup>, 9 May 2025), the International Association of Gerontology and Geriatrics (IAGG<sup>27</sup>, 30 May 2025), and the European Interdisciplinary Council on Ageing (EICA<sup>28</sup>, 15 September 2025). These letters of endorsement are appended to this document. The document and its endorsements were then submitted to coordination@uems.eu on 1 June 2025 (and on 19 September 2025 with the EICA endorsement). At the conclusion of the formal review period on 19 July 2025, minor revisions were incorporated in response to reviewer feedback and subsequently approved by the UEMS-GMS by the 19 August deadline. The finalised ETR was approved by the UEMS-GMS at its meeting in Reykjavík, Iceland, on 27 September, and was subsequently presented at the UEMS Autumn Council 2025, held in Tbilisi, Georgia, on 17–18 October, where it was unanimously approved by both the Advisory Board and the Council.

None of the ETR Review Committee members declared any conflict of interest in relation to this ETR revision and all acknowledge the support of their respective NMCAs. Prof. Romero Ortuño, Chair of the ETR Review Committee, also acknowledges the support of Trinity College Dublin, Ireland.

<sup>&</sup>lt;sup>23</sup> https://www.uemsgeriatricmedicine.org/

<sup>&</sup>lt;sup>24</sup> https://www.uems.eu/documents#ETRs-Procedure-rules

<sup>&</sup>lt;sup>25</sup> https://www.eama.eu/en

https://www.eugms.org/

<sup>&</sup>lt;sup>27</sup> https://iagg.site/

<sup>28</sup> https://eica.univiu.org/

# Contents

Pre	ar	mble	1
Spe	ci	ialty of Geriatric Medicine	5
Pro	ce	edure of ETR Revision	7
I.	•	TRAINING REQUIREMENTS FOR TRAINEES	10
1	. •	Content of training and learning outcomes	10
		Introduction	10
	•	Theoretical knowledge	11
		Practical and clinical skills	18
		Professionalism	19
	(	Competency levels	20
2		Organisation of training	21
		Schedule of training	21
		Logbook / Training Portfolio	21
		Assessment, evaluation and Entrusted Professional Activities	22
		Assessment tools	28
		Assessment process	29
		Remedial actions	29
		End of training assessment	29
	(	Governance	30
II.	•	TRAINING REQUIREMENTS FOR TRAINERS	31
1	. •	Process for recognition as trainer	31
		Requested qualification and experience	31
	(	Core competencies for trainers	31
2		Quality management for trainers	32
III.	•	TRAINING REQUIREMENTS FOR TRAINING INSTITUTIONS	33
1		Process for recognition as training centre	33
		Requirement on staff and clinical activities	33
		Supports to trainees	34
		Requirement on equipment, accommodation	34
2		Quality management within training institutions	35
		Accreditation	35

	Clinical governance	35
	Workforce planning	35
	Regular report	35
	External auditing	36
	Transparency of training programmes	36
	Structure for coordination of training	36
	Framework of approval – how are they approved	36
Арре	endices	37
Glos	sary of Terms	38
lict c	of Ahhreviations	30



# I. TRAINING REQUIREMENTS FOR TRAINEES

# 1. Content of training and learning outcomes

#### Introduction

A specialty medical trainee refers to a doctor who has completed primary medical education and is enrolled in an accredited programme to become a recognised medical specialist. In some countries, university graduates who pass competitive exams may transition directly into specialty training without a distinct period of general professional training. In others, trainees must first complete a period of general professional training (such as an internship or foundation programme, which may vary in length and may or may not involve examinations) before entering formal specialty training. Titles for these trainees vary across Europe and may include interns, residents, specialty/specialist registrars, or fellows.

Learning outcomes are clear statements outlining what a learner knows, understands, and is capable of doing upon successfully completing a learning process. Competency represents the desired combination of knowledge, skills, and professionalism that enables a learner to perform effectively in real-world scenarios, with learning outcomes serving as measurable steps toward achieving this broader goal.

Trainees must demonstrate strong interpersonal and communication skills to effectively interact with patients and colleagues and to navigate the social and cultural context of their country of training. Proficiency in the local language(s) (as required by national regulations), along with information technology and communication skills, is vital for accessing medical literature and collaborating with colleagues locally and internationally. These foundational communication skills should be developed prior to entering specialty training and remain a central focus of continuous professional development. Furthermore, trainees should be knowledgeable about the regulatory, legal, and policy frameworks influencing the practice of their specialty in the country where they are training, and they should understand how to apply this knowledge safely and effectively in their clinical practice. Trainees should know the requirements and processes for training programme accreditation in their country of training.

The minimum theoretical knowledge, practical and clinical skills, and professionalism aspects that a European trainee in Geriatric Medicine is expected to achieve are outlined below. They incorporate all the items previously included in the consensus article published in 2019 by Roller-Wirnsberger R. et al., titled European postgraduate curriculum in geriatric medicine developed using an international modified Delphi technique<sup>29</sup>. Under the auspices of the UEMS-GMS, the EuGMS, and the EAMA, a Europe-wide survey was conducted using three Delphi rounds to establish recommendations for the training requirements to become a specialist in Geriatric Medicine. These recommendations allow flexibility for individual nations to develop their own curricula tailored to local requirements and healthcare systems.

\_

<sup>&</sup>lt;sup>29</sup> Roller-Wirnsberger R, Masud T, Vassallo M, Zöbl M, Reiter R, Van Den Noortgate N, Petermans J, Petrov I, Topinkova E, Andersen-Ranberg K, Saks K, Nuotio M, Bonin-Guillaume S, Lüttje D, Mestheneos E, Szekacs B, Jonsdottir AB, O'Neill D, Cherubini A, Macijauskiene J, Leners JC, Fiorini A, van Iersel M, Ranhoff AH, Kostka T, Duque S, Prada GI, Davidovic M, Krajcik S, Kolsek M, Del Nozal JM, Ekdahl AW, Münzer T, Savas S, Knight P, Gordon A, Singler K. European postgraduate curriculum in geriatric medicine developed using an international modified Delphi technique. Age Ageing. 2019 Mar 1;48(2):291-299



# Theoretical knowledge

#### 1. Biology of ageing and basic science

Trainees should be able to explain:

- The process of normal ageing in humans at the molecular and cellular levels
- The physiological effects of ageing on organ systems and homeostasis
- The effects of ageing on functional abilities
- The hallmarks of accelerated biological ageing<sup>30</sup>
- The pathophysiology of age-related diseases
- The difference between chronological and biological age

## 2. Comprehensive geriatric assessment (CGA)

Trainees should have knowledge of the CGA<sup>31</sup> process across diverse settings. They must demonstrate understanding of validated identification and assessment tools across all dimensions of geriatric assessment, including, but not limited to, multimorbidity, mobility, cognition, frailty, nutrition, continence, skin integrity, sensory function, mood, and dependency in personal or basic Activities of Daily Living (ADL), extended or Instrumental Activities of Daily Living (IADL), as well as activity limitations and participation restrictions. Trainees must also be aware of the strengths and limitations of these tools to ensure their effective application and be able to develop a treatment plan based on the interpretation of the results of the assessments. Furthermore, they should exhibit knowledge of the structure and functioning of the multidisciplinary team, recognise the expertise of its members, and understand their roles, tools, and contributions in delivering holistic, patient-centred care.

#### 3. Multimorbidity and Geriatric Syndromes

Trainees should be able to manage older adults with multiple co-existing medical conditions (multimorbidity), with particular attention to atypical disease presentations and common geriatric syndromes. They should be proficient in assessing and managing these conditions and demonstrate the knowledge required to effectively use and interpret the results of the CGA. Competency in managing geriatric syndromes (and preventing them where appropriate) should encompass, but not be limited to:

- Falls and syncope<sup>32</sup>
- Dizziness and vertigo

-

<sup>&</sup>lt;sup>30</sup> López-Otín C, Blasco MA, Partridge L, Serrano M, Kroemer G. Hallmarks of aging: An expanding universe. Cell. 2023 Jan 19;186(2):243-278

<sup>&</sup>lt;sup>31</sup> Gladman JR, Conroy SP, Ranhoff AH, Gordon AL. New horizons in the implementation and research of comprehensive geriatric assessment: knowing, doing and the 'know-do' gap. Age Ageing. 2016 Mar;45(2):194-200 <sup>32</sup> Montero-Odasso MM, Kamkar N, Pieruccini-Faria F, Osman A, Sarquis-Adamson Y, Close J, Hogan DB, Hunter SW, Kenny RA, Lipsitz LA, Lord SR, Madden KM, Petrovic M, Ryg J, Speechley M, Sultana M, Tan MP, van der Velde N, Verghese J, Masud T; Task Force on Global Guidelines for Falls in Older Adults. Evaluation of Clinical Practice Guidelines on Fall Prevention and Management for Older Adults: A Systematic Review. JAMA Netw Open. 2021 Dec 1;4(12):e2138911



- Gait disorders
- Reduced mobility, physical inactivity, dependency
- Hospital-associated deconditioning<sup>33</sup> and functional decline
- Osteoporosis and bone health disorders
- Sarcopenia, sarcopenic obesity, osteosarcopenia
- Frailty, conceptually defined as increased vulnerability to stressors due to dysregulation of multiple biological and physiological systems<sup>34</sup>. Trainees should understand the advantages and limitations of different frailty identification tools<sup>35</sup>
- Constipation and faecal incontinence
- Urinary incontinence<sup>36</sup> (underactive, overactive bladder) and urinary retention
- Loss of skin integrity and tissue viability (e.g., pressure ulcers)
- Mild cognitive impairment (MCI) and dementia (all types including Alzheimer's disease, vascular, Lewy Body, frontotemporal). Trainees should understand the appropriate indications and limitations of neuroimaging in the assessment of cognitive disorders, particularly for differentiating between dementia subtypes, identifying reversible causes, and detecting comorbid pathologies. This includes knowledge of when to use Computed Tomography (CT) versus Magnetic Resonance Imaging (MRI), as well as familiarity with standard MRI protocols (e.g., T1, T2, FLAIR, DWI). Awareness of more advanced modalities, e.g., Positron Emission Tomography (PET), is encouraged
- Delirium
- Sensory problems (vision: cataracts, glaucoma, age-related macular degeneration, etc.; hearing: presbycusis, sensorineural deafness, etc.; smell: hyposmia/anosmia)
- Dysphagia
- Oral health issues
- Malnutrition and fluid/electrolyte imbalance
- Speech and language disorders
- Pain, both acute and chronic, including neuropathic
- Mood disorders (e.g., anxiety, depression, other psychiatric disorders in older age)
- Sleep disorders (e.g., insomnia, restless legs syndrome)
- Loneliness, social isolation and social vulnerability
- Elder abuse

#### 4. Presentations of Acute and Chronic Diseases

Trainees should be knowledgeable about common acute and chronic diseases in older age, their clinical presentation, including atypical presentation, and their risk factors, causes, pathophysiology, clinical features, diagnostics, treatments, prognosis, and prevention. The following is a non-exhaustive list:

• Cardiovascular (e.g., ischaemic heart disease, valvular disease, heart failure, arrhythmias, hypertension, orthostatic hypotension, peripheral vascular disease, venous thromboembolism)

<sup>&</sup>lt;sup>33</sup> Welch C, Chen Y, Hartley P, Naughton C, Martinez-Velilla N, Stein D, Romero-Ortuno R. New horizons in hospital-associated deconditioning: a global condition of body and mind. Age and Ageing. 2024 Nov 1;53(11):afae241

<sup>&</sup>lt;sup>34</sup> Campbell AJ, Buchner DM. Unstable disability and the fluctuations of frailty. Age Ageing. 1997 Jul;26(4):315-8

<sup>&</sup>lt;sup>35</sup> Bamps J, Capouillez B, Rinaldi R, Patris S. Frailty detection by healthcare professionals: a systematic review of the available English and French tools and their validation. Eur Geriatr Med. 2023 Aug;14(4):773-787

<sup>&</sup>lt;sup>36</sup> Aharony L, De Cock J, Nuotio M. Consensus document on the management of urinary incontinence in older people. European Geriatric Medicine. 2017, 8(3), 210–215



- Cerebrovascular (e.g., stroke, transient ischaemic attack [TIA])
- Respiratory (e.g., community-acquired and aspiration pneumonia, chronic lung disease, obstructive sleep apnoea, viral infections including influenza, COVID-19)
- Gastrointestinal and hepatological (e.g., gastroesophageal reflux disease, acute and chronic pancreatic and liver disease)
- Endocrine (e.g., diabetes, hyperlipidaemia and metabolic syndrome, thyroid and parathyroid diseases, adrenal gland disorders, hypocalcaemia/hypercalcaemia)
- Renal (e.g., acute and chronic renal failure)
- Urological (e.g., infection, lower urinary tract symptoms, benign prostatic hyperplasia in men), and gynaecological (e.g., pelvic organ prolapse or vaginal bleeding in postmenopausal women)
- Neurological (e.g., Parkinson's disease and syndromes, movement disorders, autonomic disorders, epilepsy, neuropathies)
- Hematological conditions (anaemia, myelodysplastic syndromes, coagulopathies)
- Cancer (all types affecting older adults)
- Infectious diseases and sepsis, including atypical presentations with hypothermia and delirium
- Nosocomial infections (e.g., MRSA, clostridium difficile, COVID-19<sup>37</sup>) and iatrogenic disorders
- Dermatological (e.g. pruritus, rashes, leg ulcers, skin infections, xerosis)
- Rheumatological and autoimmune (e.g. osteoarthritis, inflammatory arthritis, vasculitis)
- Substance misuse (e.g., alcohol, prescription drugs)
- Non-specific (e.g. fatigue, fever or inflammatory syndrome)

#### 5. Drug Therapy

Trainees should be able to explain pharmacological issues in ageing and geriatric care, including indications, contraindications, mechanisms of action, effectiveness, adverse effects, drug interactions, and alternatives for commonly used medications in older patients. They should also be able to recognise symptoms that could be attributed to adverse drug reactions and identify risk factors for an increased likelihood of adverse drug effects. Knowledge of drug-drug and drug-food interactions, as well as the impact of disease states on pharmacokinetics and pharmacodynamics in older adults, is essential. Trainees should also acquire knowledge in areas such as polypharmacy, potentially inappropriate medications (PIMs), anticholinergic burden, underuse of medications and appropriate prescribing, as well as overuse of medications and strategies for de-prescribing.

Trainees should be familiar with validated tools to enhance appropriate prescribing in older adults, e.g.:

- STOPP/START<sup>38</sup>
- STOPPFrail (Screening Tool of Older Persons Prescriptions in Frail adults with limited life expectancy)<sup>39,40</sup>

<sup>37</sup> Giri S, Chenn LM, Romero-Ortuno R. Nursing homes during the COVID-19 pandemic: a scoping review of challenges and responses. Eur Geriatr Med. 2021 Dec;12(6):1127-1136

<sup>&</sup>lt;sup>38</sup> O'Mahony D, Cherubini A, Guiteras AR, Denkinger M, Beuscart JB, Onder G, Gudmundsson A, Cruz-Jentoft AJ, Knol W, Bahat G, van der Velde N, Petrovic M, Curtin D. STOPP/START criteria for potentially inappropriate prescribing in older people: version 3. Eur Geriatr Med. 2023 Aug;14(4):625-632

<sup>&</sup>lt;sup>39</sup> Lavan AH, Gallagher P, Parsons C, O'Mahony D. STOPPFrail (Screening Tool of Older Persons Prescriptions in Frail adults with limited life expectancy): consensus validation. Age Ageing. 2017 Jul 1;46(4):600-607

<sup>&</sup>lt;sup>40</sup> Curtin D, Gallagher P, O'Mahony D. Deprescribing in older people approaching end-of-life: development and validation of STOPPFrail version 2. Age Ageing. 2021 Feb 26;50(2):465-471



• STOPPFall (Screening Tool of Older Persons Prescriptions in older adults with high Fall risk)<sup>41</sup>

Trainees should also demonstrate the ability to stay up to date with new medications and emerging indications for existing medications. Trainees should demonstrate knowledge of the indications and contraindications of preventive pharmacological strategies (e.g., vaccinations) and be able to personalise drug therapies (e.g., blood pressure, lipid-lowering therapy, osteoporosis), tailored to the needs, tolerability, and overall health status of older people living with frailty or limited life expectancy.

#### 6. Rehabilitation

Trainees should be able to explain the content and principles of geriatric rehabilitation and its multi-professional aspects, including the following:

- Principles of rehabilitation in older people including the assessment of rehabilitation potential in an older person
- Knowledge of a range of interventions, including physical therapy, occupational therapy, aids, appliances, and adaptations, as well as awareness of specialist rehabilitation services available in different settings
- Specific requirements for providing specialist geriatric input to older patients undergoing rehabilitation in any clinical setting
- Specific requirements for rehabilitation in special areas e.g., stroke, cardiovascular, orthopaedic rehabilitation
- Understanding and application of biopsychosocial models relevant to rehabilitation, including the WHO's International Classification of Functioning, Disability and Health (ICF) 42. This involves considering body structures and functions, activities and participation, and environmental and personal factors, within a holistic approach to care. Trainees should also appreciate key psychological dimensions such as motivation, self-efficacy, and locus of control, which are essential for effective rehabilitation planning and goal-setting in older adults
- Knowledge of methods for the prevention and management of complications of acute illness, such
  as pressure ulcers, venous thromboembolism, contractures, constipation, functional impairment,
  sarcopenia, and aspiration pneumonia
- Knowledge of the indications for consultation with Physical and Rehabilitation Medicine (PRM) and other relevant specialists when required

#### 7. Integrated Care and Specific Clinical Pathways

Trainees should be able to:

Huntee

- Identify levels and types of care available in their training country, including community/home care, day hospital care, outpatient care, and residential/nursing home care, including short- and longterm options
- Assess individual suitability for different care levels by prioritising the person's needs and preferences, incorporating multidisciplinary team assessments, liaising with primary care and social services, and considering caregiver inputs

<sup>&</sup>lt;sup>41</sup> Seppala LJ, Petrovic M, Ryg J, Bahat G, Topinkova E, Szczerbińska K, van der Cammen TJM, Hartikainen S, Ilhan B, Landi F, Morrissey Y, Mair A, Gutiérrez-Valencia M, Emmelot-Vonk MH, Mora MÁC, Denkinger M, Crome P, Jackson SHD, Correa-Pérez A, Knol W, Soulis G, Gudmundsson A, Ziere G, Wehling M, O'Mahony D, Cherubini A, van der Velde N. STOPPFall (Screening Tool of Older Persons Prescriptions in older adults with high fall risk): a Delphi study by the EuGMS Task and Finish Group on Fall-Risk-Increasing Drugs. Age Ageing. 2021 Jun 28;50(4):1189-1199

<sup>&</sup>lt;sup>42</sup> <a href="https://www.who.int/standards/classifications/international-classification-of-functioning-disability-and-health">https://www.who.int/standards/classifications/international-classification-of-functioning-disability-and-health</a>



- Evaluate and implement care transitions, ensuring alignment between the individual's overall condition, preferences, and available care options to optimise outcomes
- Describe systems of integrated care, including health and social care provision in their training country, any record-sharing digital platforms, and relevant legislative and regulatory frameworks
- Implement coordinated approaches across emergency, intensive, and prehospital care settings, with attention to breakdowns in community-based supports
- Promote care environments and processes that reduce risks and support individuals living with geriatric syndromes across all care settings
- Apply a multidisciplinary and interdisciplinary approach to managing geriatric patients, being able
  to participate in liaison services such as orthogeriatrics, fracture liaison services, oncogeriatrics,
  perioperative care, cardiogeriatrics, geriatric emergency, and other specialties involved in geriatric
  care
- Assess eligibility for long-term residential care, such as nursing homes, and evaluate the care required for residents. When necessary, manage patients in long-term care settings, including residential and nursing care homes
- Provide palliative and end-of-life care, ensuring compassionate, patient-centred approaches tailored to the unique needs of older adults

#### 8. Ethical and Legal Issues

Trainees should be able to articulate the relevant country-specific ethical and legal frameworks for working with older people, encompassing the following areas:

- Core ethical principles: autonomy, beneficence, non-maleficence, and justice
- Legislation: knowledge of laws related to confidentiality and patient rights
- Informed consent: the process for obtaining valid consent for treatments, procedures, and participation in scientific research
- Legal provisions for supporting adults who lack mental capacity, including the assessment of capacity and the application of the "best interests" principle when capacity is lacking
- Procedures for assessment and treatment under the Mental Health Act or equivalent legislation in the country of training
- Role of family and caregivers: understanding the legal and ethical position of family members and caregivers in decision-making processes
- Safeguarding: recognition, reporting, and management of suspected elder abuse, including physical, emotional, financial, and neglect-related abuse
- Legal representatives: appointment and role of Power of Attorney, guardianship, and other substitute decision-makers according to legislation in the country of training
- Advance care planning: knowledge of development and implementation of advance decisions, living
  wills, and other aspects of advance care planning according to legislation in the country of training
- End-of-life decisions: country-specific knowledge of the legal processes for making decisions about end-of-life care, life-prolonging treatments, cardiopulmonary resuscitation, implementation of Do Not Resuscitate (DNR) or Do Not Hospitalise orders, and, if applicable, assisted dying
- Counteracting ageism: recognition of ageism in healthcare and strategies to promote equitable and inclusive care for older adults



#### 9. Policy and Management

Trainees should be able to explain the following:

- The organisation, financing, and delivery of healthcare and social care systems in the country of training
- Framework and dynamics of interagency collaboration and partnership between health and social care services in their country, including integrated care programmes and initiatives
- Key administrative responsibilities, including involvement in education, committee work, service development, and human resource management
- Principles of clinical governance and their application in Geriatric Medicine to maintain and improve standards of care, including methods for clinical audit, service evaluation, quality improvement, and service development
- Strategies for delivering cost-effective care and ensuring equitable allocation of finite healthcare resources
- Competencies related to identifying, managing, and reducing risks to patient safety
- Methods for addressing patient and family concerns, managing complaints, and navigating medico-legal cases

#### 10. Health Promotion

Trainees should be able to demonstrate understanding of the following:

- Prevention of geriatric syndromes: evidence-based strategies to prevent and reduce the prevalence
  of geriatric syndromes, including health education and lifestyle changes (e.g., physical activity,
  nutrition optimisation, social engagement). Trainees should be knowledgeable about evidencebased prevention strategies for specific geriatric syndromes, including but not limited to falls<sup>43</sup>,
  cognitive impairment and dementia<sup>44,45</sup>, frailty<sup>46</sup>, sarcopenia<sup>47</sup> and malnutrition<sup>48</sup>
- Demographic changes: current and projected demographic trends in the country of training, including ageing population statistics, and global perspectives on ageing
- Roles of care-promoting institutions: contributions of national and international organisations in setting care standards, driving quality improvement, and supporting age-friendly initiatives

\_

<sup>43</sup> https://worldfallsguidelines.com/

<sup>&</sup>lt;sup>44</sup> Rosenberg A, Mangialasche F, Ngandu T, Solomon A, Kivipelto M. Multidomain Interventions to Prevent Cognitive Impairment, Alzheimer's Disease, and Dementia: From FINGER to World-Wide FINGERS. J Prev Alzheimers Dis. 2020:7(1):29-36

<sup>&</sup>lt;sup>45</sup> Livingston G, Huntley J, Liu KY, Costafreda SG, Selbæk G, Alladi S, Ames D, Banerjee S, Burns A, Brayne C, Fox NC, Ferri CP, Gitlin LN, Howard R, Kales HC, Kivimäki M, Larson EB, Nakasujja N, Rockwood K, Samus Q, Shirai K, Singh-Manoux A, Schneider LS, Walsh S, Yao Y, Sommerlad A, Mukadam N. Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission. Lancet. 2024 Aug 10;404(10452):572-628

<sup>&</sup>lt;sup>46</sup> Dent E, Martin FC, Bergman H, Woo J, Romero-Ortuno R, Walston JD. Management of frailty: opportunities, challenges, and future directions. Lancet. 2019 Oct 12;394(10206):1376-1386

<sup>&</sup>lt;sup>47</sup> Cruz-Jentoft AJ, Bahat G, Bauer J, Boirie Y, Bruyère O, Cederholm T, Cooper C, Landi F, Rolland Y, Sayer AA, Schneider SM, Sieber CC, Topinkova E, Vandewoude M, Visser M, Zamboni M; Writing Group for the European Working Group on Sarcopenia in Older People 2 (EWGSOP2), and the Extended Group for EWGSOP2. Sarcopenia: revised European consensus on definition and diagnosis. Age Ageing. 2019 Jan 1;48(1):16-31

<sup>&</sup>lt;sup>48</sup> Volkert D, Beck AM, Cederholm T, Cruz-Jentoft A, Hooper L, Kiesswetter E, Maggio M, Raynaud-Simon A, Sieber C, Sobotka L, van Asselt D, Wirth R, Bischoff SC. ESPEN practical guideline: Clinical nutrition and hydration in geriatrics. Clin Nutr. 2022 Apr;41(4):958-989



- Social theories of ageing: core principles of social theories of ageing, focusing on the social determinants of health and the impact of social and health inequalities on older adults
- Psychology of ageing: key psychological principles, including behavioural change theories and their application to promote healthy ageing
- Sexuality in older adults: the importance of addressing sexual health, intimacy, and relationships in later life
- Public health interventions: evidence-based public health strategies for promoting health and supporting healthy ageing across the population. WHO Guidelines to support healthy ageing include Guidelines on community-level interventions to manage declines in intrinsic capacity. Integrated care for older people approach (ICOPE) is WHO's approach to provide a continuum of integrated care that helps to reorient health and social services towards more person-centred and coordinated care. ICOPE supports optimising intrinsic capacity and functional ability in older age<sup>49</sup>.
- Gerotechnology and eHealth: the role of technology in supporting older adults, including assisted living devices, eHealth solutions, and interventions designed to enable ageing in place

#### 11. Evidence-Based Geriatric Medicine

Trainees should be able to:

- Address underrepresentation in research: recognise the importance of including older adults in research studies, understanding how their frequent underrepresentation in clinical trials limits the generalisability of findings to this population<sup>50</sup>
- Advocate for geriatric-focused research designs: promote research approaches that prioritise outcomes relevant to older adults, such as improving functionality, quality of life, and independence
- Translate research into practice: apply the latest research findings to develop and implement evidence-based strategies for the prevention, assessment, and management of diseases in older populations
- Pursue academic opportunities: engage in academic geriatric medicine through participation in research projects, publications, and presentations, and consider pursuing postgraduate research degrees that can be integrated into postgraduate medical training (e.g., via out-of-programme experiences)

<sup>&</sup>lt;sup>49</sup> https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing/ageing-and-health/integrated-care-for-older-people-icope

<sup>&</sup>lt;sup>50</sup> Pitkala KH, Strandberg TE. Clinical trials in older people. Age Ageing. 2022 May 1;51(5):afab282.



#### Practical and clinical skills

Trainees should be able to:

- Establish a diagnosis and differential diagnosis for older patients presenting with both typically and atypically through the appropriate use of history-taking and clinical examination, including the performance of a complete functional assessment including physical, cognitive, psychological and social domains
- Be able to indicate and interpret additional diagnostic tests, including laboratory tests, diagnostic imaging techniques, and more invasive diagnostics, with a focus on evaluating and communicating their benefits and risks using a patient-centered approach
- Collaborate in joint or shared clinical workflows and actively participate in interdisciplinary
  discussions where assessments or diagnostic input from other specialties inform clinical decisionmaking in Geriatric Medicine. While many clinical assessment competencies in Geriatric Medicine
  can be performed independently, others—particularly those involving specialty-specific domains—
  require timely consultation or collaboration with other specialists
- Whilst not expected to interpret specialist diagnostics independently, trainees should be able to
  identify appropriate indications for testing, understand the basic principles and applications of
  diagnostic modalities, and interpret findings in collaboration with relevant specialists
- In the context of laboratory diagnostics, trainees should know the appropriate use and
  interpretation of tests relevant to the specialty, including awareness of clinically significant
  methodological limitations. For point-of-care testing, trainees should understand the limitations of
  certain tests. When applicable, they should also be familiar with micro-techniques for laboratory
  testing, atraumatic sampling methods, and appropriate transport conditions for specific specimens,
  such as arterial blood and cerebrospinal fluid
- In the context of radiology diagnostics, trainees should be capable of critically appraising reports
  and integrate imaging findings into the broader clinical picture. The development of these skills
  should include structured learning opportunities such as supervised case reviews, multidisciplinary
  team meetings, and feedback from diagnostic specialists. For example, in the area of brain health,
  trainees should acknowledge and appreciate the role of neuroradiologists and be able to recognise
  common imaging patterns, such as medial temporal atrophy, white matter changes, and major
  radiological signs of stroke
- Perform a CGA of older patients presenting with geriatric syndromes, acute and/or chronic illnesses, and/or disabilities, across diverse settings, and work with other professionals to develop a comprehensive person-centered management plan, which may include treatment, rehabilitation, health promotion, disease prevention, patient and caregiver education, chronic disease management, or palliation, as appropriate
- Assess rehabilitation potential and provide multidisciplinary rehabilitation to older patients
- Conduct evidence-based medication reviews and advise patients about the risks and benefits of these treatments, in order to maximise benefit and minimise medication-related adverse events
- Plan and implement person-centered transitions of care, collaborating with professionals across settings to ensure optimal management of older patients, promoting safety and continuity of care
- Understand that geriatric patients with certain conditions may require care from non-geriatric specialists, and as such consultation with other specialists (e.g., internists, neurologists, cardiologists, psychiatrists) may be necessary to achieve optimal diagnostic/treatment outcomes
- Effectively facilitate care planning meetings and family meetings, whilst retaining the patientcentered approach



# **Professionalism**

#### Trainees should:

- Exhibit the appropriate attitude, communication skills, and patient-centered approach to effectively
  manage both the multidisciplinary team and interactions with patients, their relatives, and
  caregivers. Specifically, exhibit competency in tailored communication strategies for patients with
  cognitive impairment and/or sensory disabilities, such as hearing or vision impairments
- Be able to be an effective member and a leader of a multidisciplinary team including other
  physicians, nurses (general and specialist), allied health professionals (e.g., physiotherapists,
  occupational therapists, nutritionists, speech and language therapists, social workers), clinical
  pharmacists, and physician assistants, among others. Trainees should possess effective
  interprofessional team management skills
- Integrate holistic skills and attitudes for individualised, person-centered care, including non-technical skills such as situation awareness, clinical reasoning, and effective decision-making
- Provide patient centered care that optimises function and/or well-being
- Advocate for patients' requirements and wishes
- Prioritise and manage the care of older patients by integrating the patient's goals and values, comorbidities and prognosis into the practice of evidence-based medicine
- Assist patients in clarifying goals of care and making care decisions
- Be competent in basic research methodology, ethical principles of research, and the critical appraisal of medical literature. Have the ability to analyze and apply research findings in geriatric medicine, ensuring that clinical practice is, as far as possible, evidence-based
- Possess educational and teaching skills, enabling them to teach the principles of geriatric care and ageing-related health issues to professionals, patients, families, healthcare providers, and the wider community, as well as supervise and support trainees
- Be able to demonstrate maintenance of both general medical knowledge and expertise in Geriatric
  Medicine at a sufficient level to ensure a high standard of clinical practice. Engage in career-long
  learning and continuous professional development and demonstrate a commitment to reflective
  learning
- Develop leadership competencies, be prepared for roles as future clinical leader and be committed
  to the health and well-being of individuals and society through profession-led regulation, and by
  upholding high standards of personal behaviour and clinical practice



#### Competency levels

Expertise in certain areas will develop progressively throughout the training programme, while others may require specific full-time or sessional attachments to achieve the necessary depth of knowledge and skills. Assessment will focus on the trainee's ability to demonstrate competency across all areas.

Upon completion of the training programme, and through the consolidation of experiences gained during the training years, the trainee should have acquired all the competencies outlined in this curriculum to function as a European specialist in Geriatric Medicine. Exceptional trainees may also have the opportunity to develop a subspecialised profile by gaining additional competencies and expertise in one or two preferred areas, whether clinical (e.g., cardiogeriatrics, oncogeriatrics) or non-clinical (e.g., education, research, or healthcare management).

The curriculum is outcome-focused, providing a clear framework for the required competencies while remaining sufficiently flexible to accommodate personal development tailored to the individual trainee, the resources of the training centre, and the context of the country in which the training takes place.

The levels of competencies provide a structured framework for trainee development, ranging from foundational understanding through observation (Level 1) to independent execution of tasks in routine and complex scenarios (Level 4), and culminating in expert-level performance with the ability to supervise and guide others (Level 5). Trainees progress from requiring assistance (Level 2) to occasional support (Level 3) before achieving full independence, with clear standards and procedures in place to ensure readiness at each stage. A full description of the competency levels is as follows:

- 1. Has observed: The trainee is gaining familiarity with the activity by observing others perform it, acquiring a foundational understanding without active involvement. At this stage, they possess beginner-level knowledge about the specialty and its working environments.
- 2. Can do with assistance: The trainee is capable of performing the task but needs direct supervision and guidance to ensure it is executed correctly. They are becoming proficient in managing routine tasks of the specialty and are progressively developing their competency in line with the specialty's training requirements under supervision.
- 3. Can do but may need assistance: The trainee is able to perform the task independently in most situations but may require occasional guidance or support for more complex or unfamiliar cases. They are proficient in managing more challenging tasks of the specialty and are continuing to expand and deepen their competency in alignment with the specialty's training requirements under supervision.
- 4. Can do without assistance (independence): The trainee is capable of performing the task independently and confidently in both routine and more complex situations, without requiring supervision. This level represents the minimum standard expected for the completion of specialty training. A clear, objective, and nationally agreed procedure should be in place to determine the promotion of a trainee from Level 3 to Level 4.
- 5. Can expertly do without assistance: the trainee has attained a high level of expertise, allowing them to perform the task independently with precision even in the most complex situations, and effectively guide and supervise others in its execution. This level represents the ideal standard for specialty completion and aligns with the competency expected of a recently qualified specialist.



#### 2. Organisation of training

#### Schedule of training

In 2022, a publication by Stuck and Masud reported that Geriatric Medicine was recognised as an established specialty in 23 European countries, and as a subspecialty in several additional countries. The duration of postgraduate training required to obtain the specialty title in geriatrics varied across these 23 countries where Geriatric Medicine is a recognised primary specialty, with a median training length of 5 years (minimum: 4 years; maximum: 9 years)<sup>51</sup>. One factor is that in some European countries, trainees undertake dual specialty training with General (Internal) Medicine, while in other countries, the period of postgraduate training leads to a single specialty certificate, specifically in Geriatric Medicine.

Directive 2005/36/EC of the European Parliament and of the Council, dated 7 September 2005, governs the recognition of professional qualifications across the European Union. For geriatrics, the directive establishes a minimum training period of 4 years<sup>52</sup>. However, a duration 5 years is recommended. In all countries, the training should ensure that trainees achieve competency in the full range of learning objectives, knowledge areas, skills, attitudes, and behaviours by the completion of specialty training. Specific arrangements for the overall training of individual trainees will be decided locally and influenced by relevant national requirements.

#### Logbook / Training Portfolio

The trainee will maintain a formal Logbook, which will serve as a tool to track progress and determine whether they meet the criteria to become a Geriatric Medicine specialist. The Logbook must meet the UEMS standards for documenting professional experience and achievement of training requirements.

The Logbook should include an individual training plan with strengths and weaknesses analysis, details of previous training posts, including dates, duration, and trainers, details of EPAs achieved, examinations passed, and assessments completed. Additionally, the Logbook should include reports from the trainer/s detailing the trainee's proficiency in both clinical and non-clinical areas, including in assessing research evidence, active participation in unit activities, publications, and scientific and research work, including relevant theses. Logbook entries must be regularly monitored through inspections (e.g., annual trainee assessments) and signed off by the appropriate trainers. Assessment forms for each training period should also be completed and signed by trainers for that period and included in the Logbook.

Additionally, the trainee should be encouraged to maintain a Training Portfolio, which should include an up-to-date curriculum vitae (in EUROPASS style) incorporating, among others:

- List of publications, with copies of the published first page or abstract
- List of research presentations at local, national, and international meetings
- List of courses and training events attended
- Other relevant achievements

\_

<sup>&</sup>lt;sup>51</sup> Stuck AE, Masud T. Health care for older adults in Europe: how has it evolved and what are the challenges? Age Ageing. 2022 Dec 5;51(12):afac287.

<sup>&</sup>lt;sup>52</sup> https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02005L0036-20140117&from=EN

The Logbook should be readily available for presentation to a receiving country or employer as proof of the knowledge and skills acquired during postgraduate education. When applying for a position in another EU country, trainees should be able to provide detailed information about the curriculum they followed, including the nature and extent of their clinical experiences, methods of support for their development, and assessments of their progress in knowledge, clinical performance, and professional growth. Geriatricians seeking employment in a different country should have a portfolio demonstrating their achievement of these goals.

#### Assessment, evaluation and Entrusted Professional Activities

Assessment is the process of gathering information to determine whether specific objectives or goals are being met, using methods such as testing, observation, and performance reviews to measure knowledge, skills, attitudes, or behaviours against predefined criteria. Formative assessment, conducted during the learning or training period, focuses on monitoring progress and providing feedback to guide the learner in identifying strengths, weaknesses, and areas for improvement, with examples including supervisor feedback, reflective practice reviews, and progress discussions. In contrast, summative assessment occurs at the end of a learning period to evaluate whether required competencies or objectives have been achieved, often serving high-stakes purposes such as certification, progression, or completion of training, with examples including formal annual reviews, competency-based assessments, and certification tests. Evaluation goes a step further by incorporating value judgments. It involves interpreting assessment data to make informed decisions about a given situation, such as determining the effectiveness of a training programme or the competency of a trainee.

It is recommended that trainees' progress is monitored using a range of approaches and methods, including **Entrustable Professional Activities** (EPAs), which are a framework used in competency-based medical education (CBME)<sup>53,54,55</sup>. EPAs are tasks or responsibilities that a medical trainee must be able to perform independently once they have demonstrated sufficient competency. They are designed to bridge the gap between competency frameworks and real-world clinical practice. EPAs serve as a unit of professional practice that can be observed, supervised, and assessed.

EPAs incorporate multiple competency domains, including medical knowledge, patient care, interpersonal skills and communication, professionalism, practice-based learning and improvement, and systems-based practice. In addition, EPAs also encompass key elements for effective implementation. These include the knowledge, skills, and attitudes required for trainees to perform tasks effectively; the tools and methods needed to assess progress, such as observation and structured feedback; clear milestones indicating when a trainee is ready to practice independently; and defined criteria for making formal entrustment decisions to ensure readiness for unsupervised practice<sup>56</sup>.

<sup>&</sup>lt;sup>53</sup> Ten Cate O. Entrustability of professional activities and competency-based training. Med Educ. 2005 Dec;39(12):1176-7

<sup>&</sup>lt;sup>54</sup> Leipzig RM, Sauvigné K, Granville LJ, Harper GM, Kirk LM, Levine SA, Mosqueda L, Parks SM, Fernandez HM, Busby-Whitehead J. What is a geriatrician? American Geriatrics Society and Association of Directors of Geriatric Academic Programs end-of-training entrustable professional activities for geriatric medicine. J Am Geriatr Soc. 2014 May;62(5):924-9

<sup>&</sup>lt;sup>55</sup> Ten Cate O, Taylor DR. The recommended description of an entrustable professional activity: AMEE Guide No. 140. Med Teach. 2021 Oct;43(10):1106-1114

<sup>&</sup>lt;sup>56</sup> Ten Cate O. Nuts and bolts of entrustable professional activities. J Grad Med Educ. 2013 Mar;5(1):157-8

At the time of reviewing this ETR, we acknowledge the significant variation in how EPAs are integrated into national Geriatric Medicine curricula across Europe, ranging from comprehensive inclusion to partial adoption and, in other cases, no explicit implementation. While each national training authority will define its own EPAs for Geriatric Medicine specialist training, it is recognised that the CGA method will form the foundation of most clinical EPAs. In fact, CGA can be considered the core or "stem" upon which EPAs are built, with its application refined to suit diverse clinical situations and settings<sup>57</sup>.

Below are suggested EPAs that can be adopted or adapted to suit specific national requirements. EPAs can be formulated at varying levels of detail throughout the training process, and should represent specific, clearly identifiable tasks within clinical or non-clinical aspects of Geriatric Medicine, and focus on outcomes, i.e., what the trainee is expected to do in practice.

#### Non-exhaustive list of EPAs in Geriatric Medicine:

#### Clinical

- Comprehensive Geriatric Assessment (overarching EPA)
- Comprehensive medication review and optimisation
- Assessment, management and prevention of delirium
- Assessment and management of dementia (cognitive/non-cognitive symptoms)
- Assessment, management and prevention of bone health, falls and fractures
- Assessment, diagnosis, management and prevention of sarcopenia
- Assessment, management and prevention of malnutrition
- Coordinate and deliver perioperative care for older patients
- Design and implement a multidisciplinary rehabilitation plan
- Make escalation decisions in acute care (e.g., ICU admission)
- Conduct care planning meetings with patients and caregivers
- Facilitate transfers and continuity of care across settings
- Perform necessary and effective specialty consultations
- Conduct effective liaison work (e.g. orthogeriatrics)
- Provide palliative care to older patients

#### Non-clinical

Provide education and supervision to more junior trainees

Measuring and improving quality of care and patient safety

Below are examples of full descriptions for selected EPAs:

<sup>&</sup>lt;sup>57</sup> Nederlandse Vereniging voor Klinische Geriatrie. (2023). *Herziene eindtermen en individualisering klinische geriatrie*. Retrieved from

https://www.nvkg.nl/sites/nvkg.nl/files/20240104%20Herziene%20EIK%20LOP%20klinische%20geriatrie%201.2 0 .pdf (accessed: 14 December 2024)



# **EPA Example 1: Comprehensive Geriatric Assessment (CGA)**

Description	Conducting a comprehensive assessment of older adults across medical, psychological, functional, and social domains to develop a tailored, integrated care plan that addresses individual needs in any care setting
Knowledge	Evidence-based guidelines
	Knowledge of the care setting
	Indications for CGA
	Components of a CGA
	Professionals involved in a CGA
	Standardised assessment tools
Skills	Thorough history directly from the patient
Skiiis	Collection of collateral history when required
	Conducting a comprehensive physical examination
	Performing physical, cognitive, and functional assessments
	Carrying out a psychosocial evaluation
	Synthesising and prioritising findings
	Creating a personalised care plan
	Consulting with other specialists as appropriate
	Accurate documentation
	Effective presentation
Attitudes and behaviours	<ul> <li>Collaboration: Working effectively with multidisciplinary teams to conduct assessments and develop coordinated care plans</li> <li>Clearly and empathetically sharing assessment findings and care</li> </ul>
	plans with patients and their caregivers
	Professionalism: Providing ethical, patient-centred care that
	upholds the values, preferences, confidentiality, and dignity of older adults
Information to assess progress (examples)	Real-Time Performance Evaluation: Direct observation during CGA activities
	Focused Clinical Assessment: Mini-Clinical Evaluation Exercise     (Mini-CEX) for evaluating specific skills and decision-making
	Clinical Reasoning Review: Case-based discussions to assess
	application of CGA principles
	Team-Based Feedback: Input from multidisciplinary teams on
	collaboration and contributions
	Outcome Monitoring: Evaluation of patient outcomes resulting
	from CGA-informed care plans
When is unsupervised	Unsupervised practice is expected at competency <b>Level 4</b>
practice expected?	(see Competencies section)
Basis for formal entrustment	Entrustment is based on satisfactory completion of a variety of
decisions	assessment tools (see Assessment Tools section)



# **EPA Example 2: Comprehensive Medication Review and Optimisation**

Description	Conducting a comprehensive medication review to ensure
	appropriateness, safety, and effectiveness, aiming to optimise
	outcomes and minimise adverse effects
Knowledge	<ul> <li>Understanding pharmacotherapy principles, including drug mechanisms, interactions, and therapeutic uses</li> <li>Knowledge of pharmacokinetics and pharmacodynamics in the</li> </ul>
	context of multimorbidity and frailty
	Clinical guidelines on polypharmacy and evidence-based medication management
	Evidence-based tools for appropriate prescribing
	<ul> <li>Regulatory standards for prescribing and dispensing medications</li> </ul>
Skills	Accurately compiling a comprehensive medication history
	<ul> <li>Evaluating medication appropriateness, especially in cases of polypharmacy</li> </ul>
	Identifying drug-related problems, including adverse reactions, interactions, or non-adherence
	Making informed decisions to initiate, modify, or discontinue (deprescribing) medications
	Educating patients and caregivers to ensure understanding and
	adherence to medication regimens
	Maintaining accurate and detailed records of medication
	reviews and optimisation plans
	<ul> <li>Effectively communicating recommendations and changes to other healthcare professionals</li> </ul>
Attitudes and behaviours	Prioritising patient preferences, needs, and values
received and senations	<ul> <li>Promoting health literacy to enhance patient education and adherence</li> </ul>
	Collaborating with other specialists including clinical
	pharmacologists in cases that require their expertise
	Collaborating with other healthcare professionals (including)
	pharmacists) to develop and implement medication plans
	Upholding confidentiality, informed consent, and integrity in prescribing practices
	Committing to lifelong learning to stay current with best practices in medication management
Information to assess	Use direct observation, medication review audits, case-based
progress (examples)	discussions, reflective practice logs, and multisource feedback to
	assess progress
When is unsupervised	Unsupervised practice is expected at competency <b>Level 4</b>
practice expected?	(see Competencies section)
Basis for formal entrustment	Entrustment is based on satisfactory completion of a variety of
decisions	assessment tools (see Assessment Tools section)



# EPA Example 3: Prevention, assessment and management of delirium

Description	Preventing, identifying, assessing, and managing delirium in older adults, including recognising its symptoms, determining underlying causes, and implementing evidence-based interventions to optimise outcomes. Applicable to all care settings
Knowledge	<ul> <li>Predisposing, precipitating factors, and the pathophysiology of delirium</li> <li>Clinical presentations, including hypoactive, hyperactive, and mixed subtypes</li> <li>Identification tools such as the Confusion Assessment Method (CAM) and the 4AT</li> <li>Relevant clinical guidelines for the assessment and management of delirium</li> <li>Evidence-based non-pharmacological and pharmacological management strategies</li> <li>Ethical considerations and safeguarding principles in the care of patients with delirium</li> </ul>
Skills	<ul> <li>Conducting an environmental assessment, history-taking, examination and complementary tests to identify the underlying causes and systematically address them</li> <li>Implementing non-pharmacological interventions</li> <li>Administering and monitoring evidence-based pharmacological treatments when appropriate and following least-restrictive principles</li> <li>Documenting assessments, interventions, and outcomes</li> <li>Monitoring and evaluating intervention effectiveness</li> </ul>
Attitudes and behaviours	<ul> <li>Empathy and responsiveness in patient interactions</li> <li>Vigilance in identifying and managing delirium</li> <li>Collaboration with multidisciplinary teams</li> <li>Compassionate communication with families and caregivers</li> <li>Adherence to ethical principles and safeguarding practices</li> <li>Commitment to ongoing learning and reflective practice</li> <li>Cultural sensitivity in delivering care</li> <li>Advocacy for evidence-based approaches to delirium management</li> </ul>
Information to assess	Use case-based discussions, direct observation during patient
progress (examples)	assessments, feedback from multidisciplinary teams, and
	documentation audits to evaluate progress.
When is unsupervised	Unsupervised practice is expected at competency <b>Level 4</b>
practice expected?	(see Competencies section)
Basis for formal entrustment	Entrustment is based on satisfactory completion of a variety of
decisions	



#### **EPA Example 4: Teaching Geriatric Medicine to undergraduate medical students**

Description	Planning, delivering, and evaluating educational activities on key
	topics in geriatric medicine for undergraduate medical students.
	This includes fostering understanding of geriatric principles,
	promoting critical thinking, and inspiring interest in the care of older
	adults. Applicable to all educational settings
Knowledge	European undergraduate curriculum in Geriatric Medicine <sup>58</sup>
	Entrustable professional activities in undergraduate medical curricula <sup>59</sup>
	Teaching methodologies appropriate for undergraduate medical education <sup>60</sup>
	<ul><li>Curriculum design and adaptation for diverse learning needs</li><li>Ethical and professional principles in teaching</li></ul>
Skills	Designing and delivering interactive, engaging teaching sessions
	Facilitating small group discussions and problem-based learning
	Using evidence-based teaching tools and techniques
	Providing constructive feedback and assessing student
	understanding
Attitudes and behaviours	Enthusiasm and passion for geriatric medicine to inspire students
	Empathy and patience in addressing students' questions and needs
	Commitment to inclusivity and professionalism in teaching
	Willingness to adapt teaching strategies based on feedback
Information to assess	Progress is assessed through direct observation of teaching sessions,
progress (examples)	feedback from students and peers, evaluation of prepared
	materials, and self-reflection. Teaching portfolios and documented
	examples of educational activities may also be used.
When is unsupervised	Unsupervised practice is expected at competency Level 4
practice expected?	(see Competencies section)
Basis for formal entrustment	Entrustment is based on satisfactory completion of a variety of
decisions	assessment tools (see Assessment Tools section)

<sup>&</sup>lt;sup>58</sup> Masud T, Blundell A, Gordon AL, Mulpeter K, Roller R, Singler K, Goeldlin A, Stuck A. European undergraduate curriculum in geriatric medicine developed using an international modified Delphi technique. Age Ageing. 2014 Sep;43(5):695-702

<sup>&</sup>lt;sup>59</sup> von Streng Paats T, Masud T, Huwendiek S, Blundell A, Vassallo M, Stuck AE. Geriatric medicine learning objectives and entrustable professional activities in undergraduate medical curricula: a scoping review. Age Ageing. 2022 May 1;51(5):afac100

<sup>&</sup>lt;sup>60</sup> Masud T, Ogliari G, Lunt E, Blundell A, Gordon AL, Roller-Wirnsberger R, Vassallo M, Mari D, Kotsani M, Singler K, Romero-Ortuno R, Cruz-Jentoft AJ, Stuck AE. A scoping review of the changing landscape of geriatric medicine in undergraduate medical education: curricula, topics and teaching methods. Eur Geriatr Med. 2022 Jun;13(3):513-528

#### Assessment tools

EPAs are not assessment methods themselves but are evaluated using various tools to determine a trainee's readiness for independent practice. In Geriatric Medicine, commonly used assessment tools include:

- **Direct observation**: Tools like the Mini-Clinical Evaluation Exercise (Mini-CEX) and Direct Observation of Procedural Skills (DOPS) assess trainees' clinical skills in real-time.
- **Case-based discussions (CBD)**: In-depth reviews of clinical cases to evaluate reasoning and decision-making abilities.
- Multi-source feedback (MSF): Also known as 360-degree feedback, gathers evaluations from colleagues across disciplines for a comprehensive view of performance.
- Patient feedback: Direct input from patients regarding their experiences with the trainee's care.
- Short practice assessment (SPA): Brief evaluations focused on specific clinical tasks or competencies.
- **Critically appraised topic (CAT)**: Assessments involving the appraisal and presentation of current literature on clinically relevant questions.
- Formal knowledge test: Local, national, or international written examinations to assess medical knowledge (not skills) in Geriatric Medicine. At the time of reviewing this ETR, the pilot European Geriatric Medicine Specialty Exam (EGeMSE) has been launched<sup>61</sup>, and completing this knowledge-based test is recommended as part of the broader training requirements for the specialty.
- Objective structured clinical examination (OSCE): An OSCE is a structured and standardised method
  for assessing clinical competence, encompassing knowledge, practical skills, and professionalism. It
  typically involves a series of timed stations where candidates rotate through different clinical
  scenarios. At each station, they are required to perform specific tasks—such as history taking,
  physical examination, communication, or interpretation of clinical data—under observation. Each
  station is designed to assess particular competencies, and performance is evaluated using objective
  criteria.
- Completion of specific courses: for example, in some jurisdictions training authorities expect trainees to complete specific courses as a requirement for certification (e.g., use of basic echocardiography in acute care, leadership and management).
- **Workplace-based assessments**: Ongoing evaluations in clinical settings to monitor day-to-day performance.
- **Teaching observation**: Evaluation of teaching skills and effectiveness in educational sessions.

The minimum number of assessments in each category and for each EPA should be defined at the national level. While this ETR recognises that the specifics of assessment methods will vary by country, the overarching aim is to promote consistency across systems.

<sup>61</sup> https://www.egemse.org/



#### Assessment process

Training institutions should implement a system of appraisal at key points in the training programme—such as upon entry, at an intermediate stage, and at the end of each part (or annually, if applicable). Structured goal setting for each training period, aligned with the curriculum, is recommended to facilitate progress evaluation. The purpose of assessment is to ensure continuous development in the trainee's knowledge, skills, professional conduct, and ethics, ensuring they meet the agreed standards and requirements of the programme.

Assessments should be performed annually or at the end of each rotation by the appropriate trainer/s, using formal evaluation proformas. Clinical experience will be assessed based on the patients for whom the trainee has had personal responsibility. The Logbook serves as supporting documentation, and the results of evaluations must be discussed with the trainee. Any failure to meet targets should be reported to the Training Director.

The Training Director is responsible for identifying any issues in a trainee's progress or conduct, providing appropriate guidance, and taking remedial action. Trainees should meet regularly with the Training Director or a designated substitute, ideally at least every six months, to review their progress through an appraisal. During these meetings, the trainee should present evidence of clinical engagement and learning achievements, while the assessor should gather multisource feedback from trainers, other professionals, patients, and caregivers to evaluate the trainee's professional behaviour.

#### Remedial actions

If a trainee is not progressing as expected, the following actions should be considered:

- Targeted training: Increased monitoring and supervision to address specific needs.
- Intensified supervision: Repeating parts of the programme with closer oversight, if necessary.
- Withdrawal from the programme: This last step should be reserved for those unwilling or unable to comply with earlier remedial actions.

#### End of training assessment

At the end of Geriatric Medicine training, the Training Director certifies that the trainee has attained the required competency level for each training outcome. The achievement of learning and training outcomes must be assessed at least annually by the Training Director in collaboration with the faculty. Permanent records of these evaluations must be maintained and included in the trainee's file, accessible to the trainee and other authorised personnel. The assessments must be objective and document the trainee's progressive performance improvement in line with their educational level. In particular, the final year assessment must confirm that the trainee has demonstrated sufficient competency to enter the specialty workforce without direct supervision.



#### **Governance**

Entry into the postgraduate training programme for Geriatric Medicine depends on national regulations and should be transparent. The number of trainees in each national programme should reflect the projected workforce needs in Geriatric Medicine. These needs depend on the organisation of the national healthcare system and should ensure that patients requiring geriatric specialist care have timely access to it.

A trainer at a given location will supervise a trainee's clinical work, providing regular feedback on their performance and offering guidance related to the clinical care they deliver. Additionally, it is recommended that each trainee be linked to a mentor or supervisor who will oversee their progress throughout an entire training period, using a continuing portfolio to monitor development and adjust the programme as necessary. All training programmes in Geriatric Medicine will be led by a Training Director (or Directors) based at a nationally approved institution.

The governance of an individual's training programme will be the responsibility of the Training Director and the institution(s) where the training programme is delivered. A trainer will be accountable to the Training Director for providing the required training within their area of practice.



# II. TRAINING REQUIREMENTS FOR TRAINERS

# 1. Process for recognition as trainer

# Requested qualification and experience

A trainer in Geriatric Medicine must be a registered medical practitioner and certified as a specialist in Geriatric Medicine within their own country, having fulfilled all relevant national requirements for accreditation, appraisal, or training to qualify as a trainer. Trainers should be committed to residency training and demonstrate a strong interest in education and teaching to support the professional development of trainees.

A Training Director is typically someone who has been or is still serving as a trainer and possesses substantial experience and knowledge in training doctors. In some countries, the Training Director is also a Professor of Geriatric Medicine. Both trainers and Training Directors should be actively involved in clinical practice and training within their institution or network.

The Training Director should have ample experience practicing Geriatric Medicine after achieving specialist accreditation. They must possess a broad and practical understanding of the field and be recognised by the national authority.

#### Core competencies for trainers

Trainers should hold special qualifications in accordance with national regulations, unless these are already addressed by the EU Directive on Professional Qualifications.

#### A trainer should be:

- Familiar with all aspects of the overall Geriatric Medicine curriculum as it applies to practice within their country.
- Experienced in teaching and supporting learners, ensuring they acquire the necessary skills and knowledge.
- Skilled in identifying the learning needs of trainees and guiding them toward achieving their educational and clinical goals.
- Able to recognise when a trainee's professional behaviour is unsatisfactory and initiate supportive interventions as needed.
- Trained in the principles and practices of medical education, and committed to regular updates in educational methods and team leadership skills.



#### 2. Quality management for trainers

Trainers and Training Directors should have a clearly defined job description agreed upon with their employer, ensuring sufficient time is allocated for the support of trainees. For Training Directors, adequate time should also be allocated for their collaboration with trainers. The number of trainees will influence the amount of time dedicated to their support.

Trainers are expected to collaborate with trainees, the Training Director, and their institutions to ensure optimal delivery of training. Trainers should meet with each trainee regularly, ideally at least twice a year, to openly discuss all aspects of training, including the evaluation and approval of their Logbooks and portfolios.

It would be unacceptable for a trainee to have only one trainer throughout their entire training period. It is more common for a trainee to work with several named trainers on a day-to-day basis, each providing training in different aspects of clinical practice. However, no single trainer should be the sole provider of educational support, as a well-rounded training experience requires exposure to a variety of teaching styles and expertise across multiple trainers.

Additionally, it is generally advised that a trainer should not have more than four trainees assigned to them at any given time. If a trainee rotates between different centres during their training, it is recommended that, whenever possible, the Training Director remains consistent, even if the trainers change.

The educational work of trainers and Training Directors should be appraised annually within their departments or institutions. Additionally, they should receive educational support from their departments and institutions, in collaboration with the relevant national societies.



# III. TRAINING REQUIREMENTS FOR TRAINING INSTITUTIONS

(if not covered by EU Directive on Professional Qualifications)

## 1. Process for recognition as training centre

The education of trainees in Geriatric Medicine, aimed at preparing them for independent practice, is experiential and must be integrated within each healthcare delivery system. Training should take place in dedicated centres with qualified personnel and adequate resources. Geriatric Medicine training may occur in a single institution or within a network of institutions collaborating to offer comprehensive training across the full spectrum of clinical conditions and skills specified in the curriculum. Ideally, this network should include hospitals or institutions that engage in academic activities related to Geriatric Medicine. Each participating institution in the network must be individually recognised at the national level as a provider of defined sections of the curriculum.

#### Requirement on staff and clinical activities

To be recognised as a Geriatric Medicine training unit at the European level, an institution or department should:

- Be recognised as a training facility in Geriatric Medicine by the responsible national authority in its country.
- Have a Training Director who meets the required qualifications and experience (refer to section II).
- Have the facilities necessary to perform activities relevant to the Geriatric Medicine training curriculum.
- Employ Geriatric Medicine specialists. While there is no specific trainee-to-trainer ratio required, it would be uncommon for a training centre or clinical network to have fewer than three specialists.
- Maintain a network of contacts with clinical colleagues and professionals allied to medicine in hospital and community settings.
- Demonstrate active training in:
  - Clinical domains through case presentations, staff meetings, workshops, symposia, or congresses.
  - Research work, by involving trainees in the research activities of the unit.

It is essential that, as part of their training, trainees take responsibility for patient care in both urgent and planned care situations. This may require involvement across multiple training sites and settings to help trainees develop the necessary clinical and organisational skills. Trainees should actively participate in managing new patients, follow-up care for outpatients, and inpatient care. Exposure to a variety of clinical scenarios in different settings ensures comprehensive training and the development of well-rounded skills. Throughout the training period, the trainee should progressively increase their personal responsibility for patient care, moving towards greater independence in decision-making and management.

The staff of a training centre will work collaboratively in regular reviews of the centre's clinical activity and performance. Regular multidisciplinary meetings will be held to determine optimal care for patients, involving both medical and other healthcare staff. Furthermore, clinical engagement will extend beyond the centre, focusing on collaboration with other clinical teams, particularly through consultations or liaison services, to ensure comprehensive care and exposure to a range of specialties.

Within a Geriatric Medicine training centre, a wide range of clinical services should be available to ensure that trainees can observe and contribute to the care of a diverse range of older patients. Additionally, the number of patients and specialists should be sufficient to allow trainees to receive instruction and supervision in the clinical procedures required of a specialist.

It is expected that the balance between in-patient and out-patient activities will be dynamic and vary across European countries based on the care pathways adopted in each healthcare system. However, the primary focus remains on ensuring trainees receive a comprehensive range of clinical experiences that meet the training objectives.

Although it is not mandatory for a training centre to be an academic institution, it is desirable for the centre to have strong academic links and contribute to research in the field of Geriatric Medicine. This ensures that trainees are exposed to a robust clinical and academic environment, enriching their learning experience.

## Supports to trainees

While maintaining traditional teaching methods such as regular grand rounds and weekly structured teaching sessions, training institutions should proactively introduce new training methods in line with modern principles of adult learning. A formal programme of bleep-free (i.e., uninterrupted) teaching sessions for cohorts of trainees could include the following:

- Case presentations
- Lectures and small group teaching
- Grand Rounds
- Clinical skills demonstrations and teaching
- Critical appraisal, evidence-based medicine, and journal clubs
- Research and audit projects
- Joint specialty meetings

#### Requirement on equipment, accommodation

A training centre must have adequate equipment and support to facilitate the expected clinical practice, thereby providing the necessary educational opportunities for trainees. This includes ensuring that trainees have access to suitable accommodation for their work, as well as access to computing, information technology, and library resources. Additionally, it is essential for all trainees to participate in clinical audits and service evaluations and be given opportunities to engage in research, ensuring a comprehensive educational experience that combines both practical and academic elements of Geriatric Medicine.



#### 2. Quality management within training institutions

#### Accreditation

Training centres must be recognised as official training facilities in Geriatric Medicine by the relevant national authority. These centres are expected to undergo regular audits within their country, covering their clinical, scientific, and educational activities. The audit process should include data regarding the progress of trainees, particularly focusing on their acquisition of specialist accreditation. This ensures that the training centre meets national standards and provides a high-quality educational environment that supports the development of future Geriatric Medicine specialists.

#### Clinical governance

Training centres should conduct internal audits of their performance as part of the requirements for continuing national recognition or accreditation. Any national evaluation of a training centre's performance is expected to demonstrate that it:

- Provides care for patients with a wide range of geriatric conditions.
- Offers educational and training support for trainees and other healthcare professionals.
- Operates within a healthcare system that provides immediate access to relevant laboratory and diagnostic investigations, as well as access to other clinical specialties when required by patient care.

Additionally, training centres must keep records of the progress of their trainees, including matters related to Fitness to Practice or any issues that may affect a trainee's registration with the relevant national body. The Training Director holds specific responsibilities in this area, ensuring that all trainee data is monitored and any concerns are addressed promptly.

#### Workforce planning

Among the tasks of the UEMS is to support national authorities by providing guidelines for the planning of the medical workforce within specific specialties. Each country should train only the number of Geriatric Medicine specialists needed to meet its own specialist workforce requirements. Recruitment of trainees into training centres must align with these workforce planning outcomes. Moreover, the number of trainees in any training institution must not exceed the centre's clinical capacity to ensure each trainee is exposed to the minimum number of procedures and experiences detailed in the curriculum.

#### Regular report

The training institution must implement an internal quality assurance system, incorporating key features such as mortality and morbidity reviews and structured incident-reporting procedures. Additionally, various hospital activities aimed at quality control, such as infection control and drugs and therapeutic committees, should be in place. These activities ensure continuous monitoring and improvement of patient care standards. Furthermore, training centres should be visited and evaluated by the national monitoring authority in a structured manner to ensure compliance with standards and maintain the quality of the training programme.



## External auditing

External auditing of training centres is not mandatory unless specifically required by the national authority. In such instances, at the expense of the national authority, representatives from the UEMS Geriatrics Section and Board may conduct a formal Visitation of the training centre. This Visitation process would involve a thorough review of the centre's operations, clinical activities, and training programmes, after which a report would be issued to the relevant parties, including national bodies and training institutions.

# Transparency of training programmes

It is expected that a training centre would publicly provide detailed information about the training opportunities available. This should include an overview of the clinical services offered, the specialist and other staff involved, and specifics about the training programme itself. The published details should describe the types of clinical experiences trainees will engage in, the level of support and interaction they will receive from trainers and the Training Director, and the structure of the educational programme. Furthermore, there should be a designated contact person, whom prospective trainees can approach to discuss the programme and clarify any questions or concerns. This transparency is essential for ensuring that potential trainees have a clear understanding of the training opportunities available and can make informed decisions about their professional development.

#### Structure for coordination of training

Training institutions must establish a structured and transparent system for coordinating training programmes, ensuring alignment with national and international standards. This structure should include a designated training coordinator or committee responsible for overseeing the implementation of the curriculum, facilitating communication between trainers and trainees, and ensuring that training objectives are met. Regular meetings, clear documentation of responsibilities, and mechanisms for monitoring trainee progress and providing feedback should be integral components of this system to promote consistency and quality across the programme.

#### Framework of approval - how are they approved

Approval of training institutions should follow a robust framework set by national accrediting bodies or professional organisations. This process involves evaluating the institution against predefined standards, including the quality of facilities, qualifications of trainers, adherence to curriculum guidelines, and availability of trainee support systems. The approval process may include site inspections, review of training outcomes, and regular audits to ensure compliance with accreditation requirements. Institutions should undergo periodic re-evaluation to maintain their accreditation status and ensure alignment with evolving standards and best practices in training.



# **Appendices**

- 1. European Academy for Medicine of Ageing (EAMA). Endorsement of ETR Revision, 8 May 2025.
- 2. European Geriatric Medicine Society (EuGMS). Endorsement of ETR Revision, 9 May 2025.
- 3. International Association of Gerontology and Geriatrics (IAGG). Endorsement of ETR Revision, 30 May 2025.
- 4. European Interdisciplinary Council on Ageing (EICA). Endorsement of the 2025 update of the European Training Requirements in Geriatric Medicine, 15 September 2025.



# **Glossary of Terms**

Comprehensive Geriatric Assessment: see introductory section (Specialty of Geriatric Medicine).

**Competency:** desired combination of knowledge, skills, and professionalism that enables a learner to perform effectively in real-world scenarios, with learning outcomes serving as measurable steps toward achieving this broader goal.

**Curriculum:** comprehensive framework for a training programme, detailing the intended learning outcomes, content, teaching methods, assessment strategies, and educational goals. It defines what should be taught, how it should be delivered, and how progress and achievement will be evaluated to ensure that trainees acquire the required competencies.

**Entrustable Professional Activity (EPA):** a key task or responsibility of professional practice that can be delegated to a trainee once they have demonstrated sufficient competence, reliability, and professional judgment. EPAs are used in competency-based medical education to bridge the gap between individual theoretical competencies and real-world clinical performance. They represent integrated units of professional work that require the application of multiple competencies and form the basis for formal entrustment decisions by supervisors. EPAs constitute both an expression of competency (reflecting the abilities demonstrated by the trainee) and a practical unit of clinical responsibility. They should be an integral part of the training Logbook and serve as a comprehensive, holistic tool for competency-based assessment. EPAs provide a vital link between the syllabus or curriculum and the eligibility assessment for summative evaluation, helping to align training with clinical practice.

**Evaluation:** involves interpreting (providing value judgments of) assessment data to make informed decisions about a given situation, such as determining the effectiveness of a training programme or the competency of a trainee.

**Formative assessment:** conducted during the learning or training period, focuses on monitoring progress and providing feedback to guide the learner in identifying strengths, weaknesses, and areas for improvement, with examples including supervisor feedback, reflective practice reviews, and progress discussions.

Geriatrician: see introductory section (Specialty of Geriatric Medicine).

Geriatric Medicine: see introductory section (Specialty of Geriatric Medicine).

**Learning outcomes:** clear statements outlining what a learner knows, understands, and is capable of doing upon successfully completing a learning process.

**Specialty medical trainee**: doctor who has completed primary medical education and is enrolled in an accredited programme to become a recognised medical specialist.

**Summative assessment:** occurs at the end of a learning period to evaluate whether required competencies or objectives have been achieved, often serving high-stakes purposes such as certification, progression, or completion of training, with examples including formal annual reviews, competency-based assessments, and certification tests.

**Syllabus:** structured outline of the topics, subjects, and areas of knowledge that will be covered during a training programme. It describes the content to be taught and provides a framework for what trainees are expected to learn, but does not include the methods of delivery or assessment strategies.



# **List of Abbreviations**

Abbreviation	Definition
ADL	Activities of Daily Living (basic or personal)
AEMH	Association Européenne des Médecins Hospitaliers, or European Association of
	Senior Hospital Doctors
CAM	Confusion Assessment Method
CAT	Critically Appraised Topic
CBD	Case-Based Discussion
CESMA	Council of European Specialist Medical Assessment
CGA	Comprehensive Geriatric Assessment
CPME	Comité Permanent des Médecins Européens, or Standing Committee of European
	Doctors
СТ	Computerised Tomography
CTF	Common Training Framework
DNR	Do Not Resuscitate
DOPS	Direct Observation of Procedural Skills
DWI	Diffusion Weighted Imaging
EAMA	European Academy for Medicine of Ageing
EEA	European Economic Area
EGeMSE	European Geriatric Medicine Specialty Exam
EICA	European Interdisciplinary Council on Ageing
EJD	European Junior Doctors
EPA	Entrustable Professional Activity
ETR	European Training Requirements
EuGMS	European Geriatric Medicine Society
FEMS	Federation of European Salaried Doctors
FLAIR	Fluid-Attenuated Inversion Recovery
IADL	Instrumental (or extended) Activities of Daily Living
IAGG	International Association of Gerontology and Geriatrics
ICF	International Classification of Functioning, Disability and Health
ICU	Intensive Care Unit
ICOPE	Integrated Care for Older PEople approach (WHO)
MCI	Mild Cognitive Impairment
MJC	Multidisciplinary Joint Committee
Mini-CEX	Mini-Clinical Evaluation Exercise
MRI	Magnetic Resonance Imaging
MRSA	Methicillin-resistant Staphylococcus aureus
MSF	Multi-Source Feedback
NMCA	National Medical Competent Authority
OSCE	Objective Structured Clinical Examination
PET	Positron Emission Tomography  Retartially Incorporate Medication
PIM	Potentially Inappropriate Medication
POPS	Perioperative medicine for Older People undergoing Surgery  Physical and Rehabilitation Medicine
PRM	Physical and Rehabilitation Medicine
SPA (	Short Practice Assessment
STOPP /	Screening Tool of Older Persons' Prescriptions / Screening Tool to Alert to Right
START	Treatment
STOPPFall	Screening Tool of Older Persons Prescriptions in older adults with high Fall risk

Screening Tool of Older Persons Prescriptions in Frail adults with limited life
expectancy
Transient Ischaemic Attack
Union Européenne des Médecins Omnipraticiens, or European Union of General
Practitioners
Union Européenne des Médecins Spécialistes, or European Union of Medical
Specialists
UEMS Geriatric Medicine Section
United Nations
World Health Organization
World Medical Association



#### **Executive Board**

President: Assoc Prof T **Münzer** St. Gallen Switzerland

Past president: Prof N Van Den Noortgate Ghent Belgium

<u>Vice-president:</u> Prof S **Bonin-Guillaume** Marseille France

Treasurer:
Prof. B Van Munster
Groningen
The Netherlands

#### **Professorial Board**

Prof S **De Breucker** Brussels Belgium

> Prof A **Gordon** Nottingham United Kingdom

> > Prof F **Landi** Rome Italy

Prof. N **Martinez-Velilla**Pamplona
Spain

Prof. S **Rostoft** Oslo Norway

Prof K **Singler** Erlangen-Nuremberg Germany

Assoc. Prof. D **Vetrano** Stockholm Sweden

#### **Founding Members**

Prof S **Duursma**, NL Prof J **Grimley Evans**, GB Prof J-P **Michel**, CH Prof HB **Stähelin**, CH

#### **Administration**

Mieke **Laforce**, BE mieke.laforce@eama.eu

Luca Mariotti, IT Luca.mariotti@eama.eu

Subject: Endorsement of the Revised European Training Requirements (ETR) for the Specialty of Geriatric Medicine

Thursday 8 May 2025

Dear Dr. Romero-Ortuno,

On behalf of the European Academy for Medicine of Ageing (EAMA), I would like to thank you for your communication regarding the revised draft of the European Training Requirements (ETR) for the Specialty of Geriatric Medicine, formally approved by the UEMS Geriatric Medicine Board on 9 April 2025.

We have carefully reviewed the document and are pleased to note the significant advances it reflects in the field of postgraduate education. The integration of competency-based frameworks and Entrustable Professional Activities (EPAs) represents a forward-looking approach that will contribute meaningfully to the harmonisation and improvement of specialist training in geriatric medicine across Europe.

EAMA strongly supports initiatives that uphold and promote excellence in geriatric education and training. In line with our mission and commitment to high standards in ageing medicine, we are pleased to formally **endorse** the revised ETR for the Specialty of Geriatric Medicine.

Please consider this letter as EAMA's formal confirmation of endorsement. We would also be honoured to be acknowledged as an endorsing organisation in the final published version of the ETR document.

We commend the UEMS Geriatric Medicine Section for its leadership in this important work and look forward to continued collaboration in strengthening geriatric medicine education across Europe.

With warm regards,

Assoc. Prof. Thomas Münzer

President

European Academy for Medicine of Ageing (EAMA)

www.eama.eu



Genoa, May 9th, 2025

To: Prof Román Romero Ortuño
ETR Review Coordinator, UEMS Geriatric Medicine Section

Subject: <u>Endorsement of the European Training Requirement (ETR) in Geriatric Medicine</u>

Dear Professor Romero-Ortuño,

Dear Roman,

I am pleased to hereby confirm that the Executive Board of the European Geriatric Medicine Society (EuGMS), at its meeting on 6 May 2025, has formally endorsed the European Training Requirement (ETR) in Geriatric Medicine, as approved by the UEMS Geriatric Medicine Section.

The EuGMS recognises the considerable effort, expertise, and collaboration that have gone into the development of this important document. We particularly commend the inclusion of modern educational principles such as competency-based training and the use of Entrustable Professional Activities (EPAs), which together provide a robust framework for postgraduate education and specialist development in geriatric medicine across Europe.

This initiative represents a major step forward in the harmonisation and advancement of geriatric medicine training. It aligns closely with the EuGMS's strategic goals to promote excellence in the care of older people through high-quality education and professional development.

Please consider this message as formal confirmation of endorsement by the EuGMS. We would also welcome the opportunity to be acknowledged as an endorsing organisation in the final published version of the ETR document.

We extend our sincere congratulations to the UEMS Geriatric Medicine Section for its leadership in this essential work and look forward to ongoing collaboration to enhance geriatric medicine education and practice across Europe.

Kind regards,

Mirko Petrovic

President, European Geriatric Medicine Society (EuGMS)



José R. Jauregui MD, PhD

PRESIDENT

Argentina

Miguel Acanfora, MD, PhD

VICE PRESIDENT, SECRETARY GENERAL

Argentina

Matías Manzzoti, PhD

TREASURER

Argentina

Graciana Nallim, PsvD

TREASURER Argentina

John W. Rowe, MD

IMMEDIATE PAST PRESIDENT

Bianca Buurman, PhD, Mds

PRESIDENT- ELECT Netherlands

**Prof Cheng Chieh Lin** 

Chair, Asia/Oceania

Thailand

Mario Barbagallo, MD

Chair, Europe

Italy

Robinson Cuadros, MD

Chair, Latin America/Caribbean

Colombia

Brad Meisner, PhD

Chair, North America

Canada

Radhouane Gouiaa . PhD

Chair, Africa

OFFICE

1352, Córdoba Ave, 6th floor. C1055AAQ

Cuidad Autónoma de Buenos Aires, Argentina

Tel: (54 11) 4371 8861 / 4372 1689

E-mail: iagg.secretariat@gmail.com

# INTERNATIONAL ASSOCIATION OF **GERONTOLOGY AND GERIATRICS**

Argentina, May 30th

European Union of Medical Specialists (UEMS).

Dear Srs,

On behalf of the International Association of Gerontology and Geriatrics (IAGG), We are pleased to formally endorse the revised European Training Requirements (ETR) for the Specialty of Geriatric Medicine, developed under the auspices of the European Union of Medical Specialists (UEMS).

IAGG recognizes the critical importance of standardized, high-quality training in geriatric medicine to meet the evolving needs of an aging population representing a comprehensive, evidence-based, and forward-looking framework that promotes excellence in clinical competencies, interdisciplinary collaboration, and person-centered care for older adults.

We look forward to continued collaboration to strengthen geriatric care and education globally.

Kindest regards.

José R. Jauregui Md. PhD IAGG PRESIDENT

Miguel A. Acanfora PhD IAGG VP/SECRETARY GENERAL



Venice, September 15, 2025

Prof. Roman Romero-Ortuno Coordinator, ETR Review Committee 2025 UEMS - Geriatric Medicine Section romeroor@tcd.ie

Prof. Jūratė Macijauskienė President, UEMS -Geriatric Medicine Section jurate.macijauskiene@lsmu.lt

EICA Endorsement – the 2025 update of the European Training Requirements in Geriatric Medicine

Dear Sirs,

On behalf of the European Interdisciplinary Council on Ageing, I am pleased to convey the formal granting of EICA Endorsement for the above-mentioned project.

Please accept my warmest regards and best wishes for the successful outcome of the initiative.

European Interdisciplinary Council on Ageing duly represented by

Stefania Maggi and Cornel Sieber