

# Postgraduate training and continuous medical education in endocrinology in Europe

Hans Perrild,<sup>1,\*</sup> Anton Luger,<sup>2</sup> Jerome Bertherat,<sup>3</sup> Richard Quinton,<sup>4</sup> Mirjam Christ-Crain,<sup>5</sup> Teri Brouwer,<sup>6</sup> and Maeve Durkan<sup>7</sup>

<sup>1</sup>Department of Internal Medicine and Endocrinology, Bispebjerg University Hospital, Copenhagen 2400, Denmark

<sup>2</sup>Department of Medicine III, Medical University of Vienna, A 1090 Vienna, Austria

<sup>3</sup>Service d'Endocrinologie, Hôpital Cochin & Université Paris Cité, F 75014 Paris, France

<sup>4</sup>Department of Metabolism, Digestion & Reproduction, Imperial College London, London SW7 2AZ, United Kingdom

<sup>5</sup>Department of Endocrinology, Diabetes and Metabolism, University Hospital Basel, University of Basel, CH 4031 Basel, Switzerland

<sup>6</sup>Department of Internal Medicine, OLVG Hospital, 1090 Amsterdam, The Netherlands

<sup>7</sup>Bon Secours Hospital, UCC School of Medicine, T12TF70 Cork, Ireland

\*Corresponding author: Department of Internal Medicine and Endocrinology, Bispebjerg University Hospital, Nielsine Nielsens Vej 13, Copenhagen 2400, Denmark. Email: [hans.joergen.duckert.perrild@regionh.dk](mailto:hans.joergen.duckert.perrild@regionh.dk)

**Keywords:** postgraduate training, endocrinology, diabetes, continuous medical education, continuous professional development

## Introduction

The Education Committee of the European Society of Endocrinology (ESE) together with the Section and Board of Endocrinology of the European Union of Medical Specialists (UEMS) has recently produced a new ESE Curriculum and Training Recommendation in Endocrinology.<sup>1</sup> While the responsibility to define the duration, content, organization of the curriculum, and the formality of an exit exam remains within the national authorities, recommendations based on the actual situation and experience of the individual countries provide guidance for potential adaptations.

The UEMS S/B of Endocrinology represents all specialists in the field of endocrinology in hospitals and independent practice in Europe. The major focus of the UEMS S/B of Endocrinology is to study, promote, and harmonize the training of the medical specialists and health care in Endocrinology within Europe. The quality of training and continuous medical education (CME) and continuous professional development (CPD) upon completion of postgraduate training represent the basis toward this aim. The UEMS S/B of Endocrinology through the European Accreditation Council for Continuing Medical Education (EACCME) provides accreditation for all CME activities.<sup>2</sup>

The ESE represents a community of over 20 000 European endocrinologists. It has more than 5000 individual members and 48 national societies that are part of the ESE Council of Affiliated Societies. The mission of ESE is to advance science, education, and clinical care in endocrinology. Endocrine education is at the core of the efforts of ESE, organized by the education committee.

Several surveys on postgraduate training, CME and CPD in other specialties, have shown a wide variability of regulations in European countries.<sup>3–7</sup> This survey on postgraduate training in endocrinology outlines clearly the heterogeneity of training within Europe.

## Methods

All delegates of the 35 countries represented in the UEMS S/B of Endocrinology, each representing both their National Medical Associations and respective Endocrine Societies, were asked to answer a detailed questionnaire describing their postgraduate training programs. In addition, information on CME/CPD activities was requested. The data were re-affirmed during the general assembly in Vilnius, June 2023, sent to the national delegates for a “re-check” in September 2023 and circulated again to all delegates for final approval in May 2024.

## Results

PGT data from all 35 countries represented in the UEMS S/B of Endocrinology are presented in Table 1. These include data from 31 full members and 4 out of 5 associate members (Serbia, Turkey, Israel, and Ukraine). Cyprus, Iceland, and Luxembourg do not have national PGT programs, and trainees are sent abroad for specialization. The duration of PGT varies from 2 years and 3 months (one country) to 8 years (two countries). The majority of countries mandate 5, 6, or 6.5 years (8, 10, and 2 countries, respectively). Endocrinology is a recognized independent specialty in 30 countries.

In Austria and Germany, the specialty is named “internal medicine, endocrinology, and diabetology,” and in three countries, Belgium, Slovenia, and The Netherlands, endocrinology is recognized as a subspecialty of internal medicine. In all countries recognizing endocrinology as a separate specialty, the specialty specifically includes diabetes; in some, it includes metabolism and in a smaller number nutrition. There are four countries, Poland, Romania, Greece, and Slovakia, where one may train solely in diabetes as an independent specialty.

Received: December 2, 2024. Editorial Decision: December 4, 2024. Accepted: December 29, 2024

© The Author(s) 2025. Published by Oxford University Press on behalf of European Society of Endocrinology. All rights reserved. For commercial re-use, please contact [reprints@oup.com](mailto:reprints@oup.com) for reprints and translation rights for reprints. All other permissions can be obtained through our RightsLink service via the Permissions link on the article page on our site—for further information please contact [journals.permissions@oup.com](mailto:journals.permissions@oup.com).

**Table 1.** Years in training in int. med., endocrinology, and DM.

Number of years in	Common trunk		Specialist training		DM alone	Total
	Int. med. and/or other specialty	Int. med.	Endocrinology	Endocrinology and int. med.		
Malta	2	2		4		8
Ireland	1	2	4	1		8
United Kingdom <sup>a</sup>		3	1	3		7
Turkey		4	3			7
Denmark	1	1	2.5	2.5		7
Hungary	2	3	2			7
Belgium		4	1	1		6
Greece		2	4			6
Greece (diabetology)		5	0		2	7
Norway	1.5 <sup>b</sup>	3	2			6.5
Sweden	1-1.5	2	3			6-6.5
The Netherlands		4	2			6
Switzerland		3	3			6
Slovenia		4		2		6
Austria	0.75	2.25	3			6
Serbia		5 (0.5 endo)	1			6
Finland	0.75	2.25	3			6
Lithuania		2	4			6
Israel	4			2		6
Germany		2	3			5
Latvia		2	3			5
Portugal		1	3	1 pediat./lab.		5
Czech Republic		2	3			5
Slovakia		2	3			5
Poland		2	3			5
Poland (diabetology)		2	0.20	0.30	1.50	4
Croatia		2	3			5
Romania	1.20		2.80		1	5
France			3	1		4
Italy			2	2		4
Spain			3.75	0.25		4
Bulgaria		1	3			4
Estonia			3	1		4
Ukraine		2	0.25			2.25
Cyprus	Postgraduate training abroad					
Iceland	Postgraduate training abroad					
Luxembourg	Postgraduate training abroad					

Abbreviations: int. med., internal medicine; DM, diabetes.

<sup>a</sup>In United Kingdom, they have 2 years of foundation training after medical school. <sup>b</sup>In Norway, 1.5 years internship is part of the postgraduate specialist training.

### Pre-specialization internal medicine/common trunk and endocrinology training requirements (Table 1)

Internal medicine/common trunk represents a mandatory part of training prior to specialization in endocrinology in 28 of the 32 countries, and its duration varies from 3 months (one country) to 5 years (two countries). Some countries have a variable period of combined training in “internal medicine and endocrinology” in addition to training in “internal medicine” and/or “endocrinology”. In four countries (Hungary, France, Italy, and Estonia), internal medicine is not a mandatory pre-requisite to endocrinology specialization. In 24 countries, 3 or more years of training in endocrinology is required. A number of countries have a mixture of endocrinology/diabetes and internal medicine as part of the overall specialist training program in endocrinology.

### Curriculum and Training recommendations

All 32 countries with a national training program have an established curriculum (Table 2). Most of these countries have accredited training centers, only three do not. Twenty-seven countries have a formal “summative” exit exam, only five

do not. In 12 countries, it is a two-part exam that includes an oral and written format, and in 2, only a written format. Eleven countries conduct a one-part oral exam either with a practical part<sup>5</sup> or without<sup>4</sup> or a logbook<sup>1</sup> or a scientific study.<sup>2</sup> In Italy, the trainees must pass an exam every year during training. In Denmark, there is a structured and formative competence evaluation throughout the whole training program. In Norway and Sweden, the principle of competence-based education of defined learning objectives is established by continuous learning promotion feedback and assessment of acquired competences. In the Netherlands and Poland, competence is monitored by regular evaluation by teachers and colleagues as well as the participation in training courses and symposia. In Spain, residents are evaluated on an on-going basis.

### CME and CPD

Over the years 2003 to 2024, the number of countries with a voluntary approach to CME/CPD has been quite stable, but in parallel to the gradual expansion of the UEMS S/B of Endocrinology, the number of countries where CME/CPD is

**Table 2.** Postgraduate training in endocrinology in Europe, curriculum, accredited training centers, and exit exam.

	Curriculum Yes/no	Accredited training centers Yes/no	Exit exam Yes/no	Exit exam Written/oral
Malta	Yes	Yes	Yes	On the job assessment in rotations
Ireland	Yes	Yes	Yes	Oral exam or logbook
United Kingdom	Yes	No	Yes	Written
Turkey	Yes	Yes	Yes	Oral (partly written)
Denmark	Yes	Yes	No	
Hungary	Yes	Yes	Yes	Oral and a practical part
Belgium	Yes	Yes	No	
Greece	Yes	Yes	Yes	Written and oral
Greece (diabetology)	Yes	Yes	Yes	Oral
Norway	Yes	Yes	No	
Sweden	Yes	Yes	No	
The Netherlands	Yes	Yes	No	
Switzerland	Yes	Yes	Yes	Written and oral
Slovenia	Yes (int. med.)	Yes	Yes	Oral-practical and theoretical part
Austria	Yes	Yes	Yes	Written after 3 years, oral after 6 years
Serbia	Yes	Yes	Yes	Written and oral, submission of a thesis
Finland	Yes	No	Yes	Written
Lithuania	Yes	Yes	Yes	Oral and scientific study presentation
Israel	Yes	Yes	Yes	Written and oral
Germany	Yes	Yes	Yes	Oral and a practical part
Latvia	Yes	Yes	Yes	Oral
Portugal	Yes	Yes	Yes	Written and oral
Czech Republic	Yes	Yes	Yes	Oral and a practical part
Slovakia	Yes	Yes	Yes	Written and oral
Poland	Yes	Yes	Yes	Written and oral
Poland (diabetology)	Yes	Yes	Yes	Written and oral
Croatia	Yes	Yes	Yes	Oral
Romania	Yes	Yes	Yes	Written and oral
France	Yes	Yes	Yes	Oral presenting scientific study or a clinical case
Italy	Yes	Yes	Yes, every year	Written and oral, submission of a thesis
Spain	Yes	Yes	No	
Bulgaria	Yes	Yes	Yes	Oral and a practical part
Estonia	Yes	No	Yes	Written and oral
Ukraine	Yes	Yes	Yes	Written and oral
Cyprus				
Iceland				
Luxembourg				

mandatory has increased considerably: 4/17 countries in 2003 and 20/35 countries in 2024 (Table S1). Seventeen of these 20 countries use CME/CPD points as a means of collecting information on progress.

Most countries request the collection of 50 CME points/year and acknowledge EACCME credit points. One point is obtained by attending a 45 min lecture of an accredited event or studying approved educational material. Even though CME and CPD are mandatory in many countries, it must be acknowledged that only few countries penalize clinicians if their documentation is not completed (Table S2). Only two European countries have introduced a CME/CPD examination.

### European Accreditation Council for Continuing Medical Education

Table S3 provides an overview of the number of CME/CPD activities that have been approved by EACCME, both for all specialties and for endocrinology only (51 live educational events and 15 e-learning materials for endocrinology in 2023).

### Discussion

The UEMS S/B of Endocrinology in collaboration with ESE has developed several tools to support the pan-European efforts to ensure and harmonize the highest level of patient care in patients

with endocrine diseases. The recent development of a common Curriculum and Training recommendation in Endocrinology is one good example that sets out a pan-European standard for the best possible postgraduate training.<sup>1</sup> The European Board Examination in Endocrinology and Diabetes Mellitus which was introduced in 2018 is another example that might represent a quality mark and offer an alternative to national assessments. In fact, Switzerland has already adopted the European Certificate in Nephrology which has been established jointly by the UEMS Section of Nephrology and the European Dialysis and Transplant Association in 2017 as their national training assessment.<sup>7</sup>

To harmonize PGT in Europe, it is important to compile the actual status and understand the different approaches. This survey demonstrates the wide variation of duration of required years of training from 2.25 to 8 years, but 5 or 6 years in most countries. Common trunk and/or general internal medicine is mandatory in most but not all countries. Also, differences in the required training content are large. This is in line with the previous surveys on the required duration of 4-7 years of postgraduate training in internal medicine and subspecialties such as rheumatology, nephrology, gastroenterology, and infectious diseases.<sup>3-7</sup> Training in diabetology is separated from endocrinology in four countries. This along with the trend toward shorter education periods is worrying.

The UEMS S/B of Endocrinology and ESE strongly feel that it should be a standard to keep endocrinology, metabolism, and diabetes together in the training for the specialty of endocrinology.

From this survey, we consider a 6-year training program with a solid basis in general internal medicine as best suited, and it is reassuring that this is required in the majority of countries. This is also recommended in the ESE Curriculum and Training Recommendation in Endocrinology.<sup>1</sup>

All countries assess the progress of knowledge and skills throughout the PGT, and almost all countries have an exit exam, some as stand-alone oral or written, some as both oral and written, and some examining skills. The CME/CPD is still voluntary in many countries, and even when it is mandatory, there are only limited consequences for those who do not fulfill their obligations. An increasing number of e-learning tools and platforms are becoming available, thus facilitating CME/CPD for doctors who may be restricted by the economical challenge of attending international meetings.

Strengths of this survey include that the information was obtained from official representatives appointed by the National Medical Associations of all 27 EU countries plus 8 non-EU countries represented in the UEMS S/B of Endocrinology and double-checked several times. This survey includes also data on CME and CPD which are lacking in most previous surveys. A possible weakness is the lack of information from many non-EU countries which could have demonstrated even greater disparities.

In conclusion, this survey demonstrates variations of postgraduate training and requirement of CME/CPD across Europe. Together with the new ESE Curriculum and Training Recommendation in Endocrinology, the offer of certified educational events and the European Board Examination in Endocrinology and Diabetes might form the basis for harmonizing and attaining the highest standard of postgraduate training to ensure optimal care of patients with endocrine diseases across Europe.

## Acknowledgments

The authors wish to thank all delegates of the UEMS S/B of Endocrinology who have provided the data of this survey: Josanne Vassallo, Malta; James Ahlquist, United Kingdom; Göksun Yvaz and Mustafa Cesur, Turkey; Endre V. Nagy and Miklos Toth, Hungary; Stelios Tsagarakis, Greece; Trine Elisabeth Finnes and Anders Palmstrøm Jørgensen, Norway; Charlotte Höybye, Sweden; Bastiaan Havekes, The Netherlands; Michel Hochuli, Switzerland; Tomaž Kocjan, Slovenia; Marko Stojanovic, Serbia; Saara Metso, Finland; Birute Zilaitiene and Lina Zabuliene, Lithuania; Liana Tripto Shkolnik, Israel; Jan P. Tuckermann, Germany; Kristīne Geldnere, Latvia; Ana Barbosa, Portugal; Jan Skrha and Vaclav Hana, Czech Republic; Jana Kollerová, Slovakia; Magdalena Stasiak and Marek Bolanowski, Poland; Tina Dusek and Darko Kastelan, Croatia; Ioana Zosin, Romania;

Claude Colas and Sophie Christin-Maitre, France; Bruno Lapauw, Belgium; Enrico Papini and Roberto Attanasio, Italy; Juan Carlos Galofre and Guillermo Martinez, Spain; Zdravko Kamenov, Bulgaria; Vallo Volke, Estonia; Nicos Skordis and Stelia Kadis, Cyprus; Boris Mankovskyy, Ukraine.

## Supplementary material

Supplementary material is available at *European Journal of Endocrinology* online.

## Funding

None declared.

## Authors' contributions

Hans Perrild (Conceptualization [equal], Data curation [equal], Formal analysis [equal], Methodology [equal], Writing—original draft [equal], Writing—review & editing [equal]), Jérôme Bertherat (Validation [equal], Writing—review & editing [equal]), Teri Brouwer (Writing—review & editing [equal]), Mirjam Christ-Crain (Writing—review & editing [equal]), Maeve Durkan (Writing—review & editing [equal]), and Anton Luger (Data curation [equal], Formal analysis [equal], Validation [equal], Writing—original draft [equal], Writing—review & editing [equal])

*Conflict of interest:* None declared.

## References

- Luger A, Durkan M, Christ-Crain M, Marques P. European Society of Endocrinology Curriculum and Training Recommendation in Endocrinology. *Eur J Endocrinol.* 2024;191(5):R71-R77. <https://doi.org/10.1093/ejendo/lvae141>
- European Accreditation Council for Continuing Medical Education (EACCME). An Institution of U.E.M.S. <https://eaccme.uems.eu/>
- Cranston M, Slee-Valentijn M, Davidson C, Lindgren S, Semple C, Palsson R. Postgraduate education in internal medicine in Europe. *Eur J Int Med.* 2013;24(7):633-638. <https://doi.org/10.1016/j.ejim.2013.08.006>
- Sivera F, Ramiro S, Cikes N, *et al.* Differences and similarities in rheumatology specialty training programmes across European countries. *Ann Rheum Dis.* 2015;74(6):1183-1187. <https://doi.org/10.1136/annrheumdis-2014-206791>
- Maida M, Alrubaiy L, Bokun T, *et al.* Current challenges and future needs of clinical and endoscopic training in gastroenterology: a European survey. *Endosc Int Open.* 2020;8(4):E525-E533. <https://doi.org/10.1055/a-1093-0877>
- Brockhoff RA, Hicks SR, Salmanton-Garcia J, *et al.* Training in infectious diseases across Europe in 2021—a survey on training delivery, content and assessment. *Clin Microbiol Inf.* 2021;27(11):1693.e1-1693.e8. <https://doi.org/10.1016/j.cmi.2021.07.033>
- Cannata-Andía JB, Weinstein T, Slotki I, Ferreira A, Zoccali C, Lappin D. The European Certificate in Nephrology: towards harmonization and excellence in training. *Clin Kidney J.* 2019;12(2): 167-171. <https://doi.org/10.1093/ckj/sfy106>