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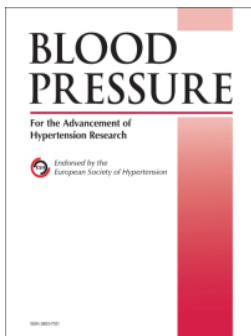
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The Hypertension Excellence Centre programme of the European Society of Hypertension – current status, activities and reshaping for the future

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ABSTRACT

Purpose: To describe the history of the Excellence Centre (EC) programme of the European Society of Hypertension (ESH) since the beginning in 2006, its achievements, and its future developments.

Materials and Methods: We list the number of ECs per country, the research projects performed so far, and the organisational steps needed to reshape the EC programme for the future.

Results: In August 2023, the ESH EC programme includes 118 registered ECs in 21 European and 7 non-European countries. Updates about the formal steps for application, re-application, transfer of EC and retirement of EC heads are given.

Conclusions: The EC programme of the ESH has been a success from the beginning. Further refinements will make it fit for the next decades.

ARTICLE HISTORY

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European Society of Hypertension; Excellence centre; Hypertension; Research

Plain Language Summary

The Excellence Centre (EC) Programme of the European Society of Hypertension (ESH) has been initiated roughly 20 years ago with the aim to identify and certify dedicated clinical institutions providing the highest level of care for patients with high blood pressure. ECs have all diagnostic and therapeutic options for routine and for complex cases. In addition, and closely linked to clinical care, educational activities and research related to hypertension are typical attributes of ESH ECs. In August 2023, the EC programme comprises 118 registered ECs in 21 European and 7 non-European countries. So far, 12 clinical studies and surveys have been conducted under the umbrella of the ESH EC programme. To continue the successful journey, several refinements regarding the formal steps for application,

re-application, transfer of EC and retirement of EC heads are needed and detailed in the current article.

1. Where we started

In 2006, Csaba Farsang, Margus Viigimaa, Krzysztof Narkiewicz, Wolfgang Kiowski, and Ettore Ambrosioni, appointed by the European Society of Hypertension (ESH), initiated a programme to identify and certify dedicated institutions providing the highest level of both inpatient and outpatient hypertension care, including surgical and vascular interventions, and assessment of global cardiovascular risk. Excellence Centres (ECs) needed to have all diagnostic and therapeutic options for highest level of care for hypertensive patients, all options for continuing medical education including internet access, provide educational activities, and should be active in hypertension-

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related research (experimental/clinical/epidemiology), evidenced by publication of research papers in national and international journals¹. To facilitate the development of the programme, standards and application criteria were developed and implemented.

The EC programme was well received from the beginning, and in 2007, 65 ECs from 13 European countries had already been approved².

2. Where we stand

In August 2023, we have 118 registered ECs in 21 European and 7 non-European countries (Table 1). The current list can be found on the ESH website, and is updated in regular time intervals (<https://www.eshonline.org/communities/excellence-centres/>). The application and its approval are performed online through the ESH website. In order to facilitate the application, an outline of the application form, highlighting the requirements, is also available online.

3. What we have done in the last years

It became clear in recent years that the EC network provides a unique opportunity for hypertension-related research. The first project was the *European Society of Hypertension ESH-Stroke survey* (PI Cifkova)³⁻⁵, followed by the *Management of arterial hypertension in*

patients with high blood pressure and atrial fibrillation-ESH research project (PIs Agabiti Rosei, Jelaković)^{6,7}. The largest project was the *European Society of Hypertension blood pressure control study- BP CON ESH* (PI Jelaković)⁸, an observational study investigating the level of BP control in the ECs.

Consecutively, a series of online surveys (PI Weber, Wojciechowska, Burnier) among the ECs was initiated. Due to active participation of our ECs, the surveys evolved into a regular series, with roughly 2-3 surveys released every year. This initiative started under the impression of the Covid-19 pandemic with studies into the impact of the pandemic and the pandemic-related governmental restrictions (“lock downs”) on blood pressure and management of hypertension. Subsequently several ESH Working Groups took advantage of the initiative and initiated surveys related to their agenda (Table 2).

4. How we will reshape the Excellence Centre programme

20 years after the foundation of the EC programme, there is a need to adapt some aspects of the programme. As an example, some of the leaders of our ECs have moved or retired, and clear rules for these situations must be developed and implemented. Moreover, some requirements in the application form such as internet access are ubiquitous now and do not need to be documented.

Table 1. Number of Excellence Centres of the European Society of Hypertension in August 2023.

European countries	
Austria	3
Belgium	9
Croatia	1
Czech Republic	8
Estonia	1
Finland	2
France	13
Germany	11
Greece	11
Hungary	3
Italy	14
Netherlands	5
Poland	1
Portugal	3
Romania	1
Slovenia	1
Spain	6
Sweden	2
Switzerland	7
Ukraine	1
United Kingdom	4
Non-European countries	
Argentina	1
Brazil	3
China	1
Israel	2
Jordan	1
Lebanon	1
Turkey	2

Table 2. Excellence Centres ESH initiatives and research projects in recent years.

- ESH Stroke survey
- Management of arterial hypertension in patients with high blood pressure and atrial fibrillation
- ESH Blood Pressure control study
- EC surveys on Covid-19
 - The corona-virus disease 2019 pandemic compromised routine care for hypertension: a survey conducted among Excellence Centres of the European Society of Hypertension⁹
 - Covid-19 associated reduction in hypertension-related diagnostic and therapeutic procedures in Excellence Centres of the European Society of Hypertension¹⁰
 - ESH ABPM Covid-19 study Ambulatory blood pressure monitoring in treated patients with hypertension in the COVID-19 pandemic - The study of European society of hypertension (ESH ABPM COVID-19 study)¹¹
- Hypertension healthcare professional beliefs and behaviour regarding patient medication adherence: a survey conducted among European Society of Hypertension Centres of Excellence¹²
- ESH registry of hypertensive URgencies and EMergencies (ESH-URGEM)
- EC study on transition from paediatric to adult hypertension care units
- EC survey on lifestyle modifications
- EC survey on awareness of kidney diseases
- EC on the current medical practice of diagnosis and management of hypertension in older adults ≥ 75 years among different specialties including general practitioners (GPs) across Europe.

4.1. Application

In order to clarify and simplify the application, several aspects are important:

- an EC is clinical institution, providing excellent clinical care, and serving as a reference standard for hypertensive patients with complex clinical courses in the region;
- an EC provides educational activities regarding hypertension for local and regional physicians and non-physicians;
- an EC shall be engaged in research related to the field of hypertension; participation in the research program of the ESH ECs is a good opportunity, and highly recommended;
- we strongly support teamwork and cooperation between different clinical specialties in one clinical institution (for instance, a university hospital); thus, we support only one EC per clinical institution, which could be a joint EC between several clinical departments;
- to document clinical excellence, at least one of the leading colleagues of the EC has to be an approved ESH Hypertension Specialist;
- to document national recognition of clinical excellence, the EC application has to be accompanied by a letter of support from the national hypertension society;
- the leader of the EC, and contact person for EC activities, does not necessarily have to be the head of the clinical department or institution, but should have a leading role in hypertension-related activities of the department or institution. A letter of support from the appropriate lead of the clinical department or institution must be provided though;
- we strongly recommend that leading colleagues of the EC participate in scientific and educational activities of the ESH, specifically in the annual meeting, hypertension-related meetings endorsed by the ESH, and ESH webinars;
- we strongly support active participation in the annual meeting, in ESH Working Groups and in the Young Investigators programme;
- it is obvious that at least the responsible person of the ESH EC has to be ESH member in good standing.

4.2 Transfer of the Excellence Centre

In case of movement of the head of an EC to another institution, we can ideally keep the “old” and include

the “new” institution in our EC program. However, both institutions have to document both their interest and their qualifications. Because both the previous head of the “old” EC and the “old” EC itself have already proven their qualification, a simplified application form will be available for this situation. The focus will be (1) for the moving head of the “old” EC to document the requirements of the “new” institution in terms of personnel and technical equipment, and (2) for the “old” EC the personal qualification of its designated new EC leader. In any case, in both situations, a letter of support from the national hypertension society will be required.

4.3 Retirement of Excellence Centre leader

In case of retirement of the head on an EC, we will be delighted if the new leadership of the clinical institution would be interested to continue the status as EC. However, and similar to the situation outlined above, a new but simplified application focusing on the personal qualification of the designated EC head, and a letter of support from the national hypertension society will be mandatory.

4.4 Reapplication for Excellence Centre status

Considering the profound changes that can happen after several years, the EC status will be valid for a period of 7 years. This practically means that all ECs need to undergo a simplified reapplication process after this period. Key aspects of the reapplication will be (1) continued clinical, educational and scientific expertise in the field of hypertension; (2) engagement in the planned educational EC activities (regular case presentations, see below); (3) participation in ESH research projects, for instance EC surveys; (4) participation in ESH meetings, for instance the annual conference, but also Working Group and Young Investigator meetings as well as webinars, of at least 1 EC leading person, on a regular basis; and (5) continuing ESH membership in good standing.

5. The role of Blood Pressure Clinics

An EC can be the centre of a network of associated Blood Pressure clinics, providing specialized care for complex patients, and educational activities, ideally in cooperation with physicians working in the BP clinic. Registration can be done through the ESH website and needs to include a statement of interest both by the BP clinic (including a responsible contact person

at the BP clinic) and by the leader of the EC. A formal approval by ESH EC coordinators is not necessary.

6. What we plan for our Excellence Centres

Our dedicated goal is to strengthen the relationship among our ECs and between the ECs and the Scientific Council as well as other programs (e.g. the Young Investigator initiative and Working Groups) of the ESH, in order to improve clinical, educational and scientific activities related to the field of hypertension. Next steps on this pathway are (1) the start of regular teleconferences to present and discuss interesting and noteworthy clinical cases; (2) the implementation of an EC advisory group, open to all EC representatives, with the aim to develop new EC initiatives; (3) continuation of the successful EC survey programme; (4) offering more active roles in the annual ESH conference for active EC representatives.

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