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TRAPP PROJECT

VET CURRICULUM FOR PHLEBOLOGISTS

2018

INTELLECTUAL OUTPUT1

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TRAINING PATH FOR EUROPEAN PHLEBOLOGISTS

EUROPEAN REGISTER PHLEBOLOGISTS

Disclaimer

TABLE OF CONTENTS

SUMMARY

Phlebology is the branch of medicine which studies and treat venous disease. Despite the extremely large number of patients affected by venous diseases (it is estimated that more than 50% than adult population in western countries are affected by a venous problem), phlebology as an academic specialization has never been established.

For many years phlebology has been practiced by general surgeons, vascular surgeons, internal medicine doctors, dermatologist and many other different professional medical figures. Recently in many countries also radiologists, aesthetic doctors and many other kind of doctors (even dentists) are practicing phlebology.

A many other field of medicine, phlebology has dramatically changed as recently new advanced treatment have been introduced.

These advanced treatments require special skills and knowledge that can be achieved only after a specific training and special interest in this field.

For those doctors practicing phlebology as a minor part of their practice advanced treatments are not available as they need knowledge and special skills not always part of their training.

As result of this situation medical care in phlebology is often offered to European patient in an old and more invasive manner, with higher cost and poor quality of life.

The need for an “European professional phlebologist” is then felt by those who are practicing phlebology as the main field of their practice. Moreover, even patient’s organization are asking the same advancement to the medical world.

The European professional phlebologist would be the answer to those requests, a professional medical operator that would be able to deliver professional, up to date, less invasive and cheaper treatments to patients with a venous disease.

The TRAPP project wants to describe the path for evaluation and formation of the medical doctor leading to the definition of the skills and the knowledge of the European professional phlebologist. Moreover, we believe that the creation of an European Register of Phlebologist would also be able to control and rule this process in different European countries.

1. EPIDEMIOLOGY OF VENOUS DISEASE

Several studies are available on the incidence and the prevalence of venous diseases in the adult population and, besides differences among different papers, all agree on the high frequency of this affection.

Vuylsteke et al. in 2015 performed a study in which 406 general practitioner in Belgium and Luxemburg recruited 6009 patients older than 18 years.

Patient characteristics, prevalence of risk factors, symptomatology, and C-classification were noted. The GPs diagnosed chronic venous disease (CVD) and measured the need for treatment. Patients with diagnosed CVD completed a questionnaire about their history of leg problems and a quality of life score (CIVIQ-14). These data were converted into a CIVIQ Global Index Score (GIS).

The mean age of the patients was 53.4 years, and they were predominantly female (67.5%). Among the 3889 symptomatic patients, heavy legs, pain, and sensation of leg swelling were the most common complaints. Among the included patients, 61.3% of patients were classified within C1-C6; however, only 45.9% of these patients were considered by the GPs to be suffering CVD. Treatment was offered to 49.5% of patients. Moreover it is to underline that not always CVD is symptomatic and to this figures should be added those patients with varicose veins and no symptoms.

The study conclusion are that chronic venous disease is a very common disease, which is underestimated. The prevalence increases with age, generates incapacity to work, and worsens the patients' quality of life.
In a similar study performed in Italy in 2006 a 40% prevalence of chronic venous insufficiency was registered in adults with high increase with age. In fact in the C2 subgroup (varicose veins) the prevalence in the group < 45 years old was 15,3 in females and 4,4 in males but raised to 31,6 and 9,1 respectively in females and males over 45 years old. Moreover significant worsening of Quality of Life (QoL) indexes was noted in presence of varicose veins.
Another study performed by Sudoł-Szopińska et al in 2011 demonstrated evidence of *CVD was found in 59.4% of individuals working in a sitting posture and in 83.4% of those working in a standing posture and was significantly higher in employees working in a standing posture (*p *= .015). Incompetent perforating veins and vena saphena magna valves, and bilateral changes were the more frequent signs of CVD. The investigation showed that prolonged standing and sitting at work increases risk of developing CVD.*
An Italian study published by Andreozzi in September 2005 concluded that QoL is progressively impaired in CVI, involving primarily the physical items and the emotional role, with worsening of mental items only in advanced stages. This early involvement of physical items underlines how CVI is not an esthetic problem, but, a disease. Its impact on the lifestyle and QoL is similar to that of other chronic diseases (diabetes, cancer, chronic pulmonary disease), reaching in the class C5-6 the poorest level, similar to heart failure.
This table put on comparison several studies and refers only to the C2 stage:

First author	Year	Country	Study sample size	Men	Women
Mekky	1969	Egypt	467	–	5.8
Mekky	1969	England	504	–	32.1
Coon	1973	USA	6389	12.9	25.9
Abramson	1981	Israel	4802	10.4	29.5
Maffei	1986	Brazil	1755	37.9	50.9
Franks	1992	England	1338	17.4	31.6
Komsuoglu	1994	Turkey	850	34.5	38.3
Sisto	1995	Finland	8000	6.8	24.6
Evans	1999	Scotland	1566	39.7	32.2
Criqui	2003	USA	2211	15	27.7

Then it is quite clear that adding the other stages of disease the final prevalence of the disease should be extremely high (A cross-sectional study of a random sample of 1566 subjects 18 to 64 years of age from the general population in Edinburgh, Scotland, found that telangiectasias and reticular veins were each present in approximately 80% of men and 85% of women).

The prevalence of varicose veins in men aged 30 to 40 years old is about 3%, while in the age group over 70 years old, it increases up to about 40%. Similar results were also found in women: a prevalence of 20% at the age of 30 to 40 years old increases gradually with age and by 70 years of age, it exceeds 50%. The prevalence of trunk varices rose from 11.5% in persons aged 18 to 24 years old to 55.7% in the population between 55 to 64 years of age. The occurrence of skin changes in CVI depends on the patient's age as well. In the Tecumseh Health Study, the prevalence of skin changes in women aged

30 to 39 years old was 1.8%, whereas in patients aged over 70 years old a prevalence of 20.7% was reported.

Considering the literature on the epidemiology of Chronic Venous Disease we can conclude that nearly 50% of the European adult population is affected with different severity grade. Due the longer life expectancy in European citizens we can assume that the prevalence of the venous disease is increasing.

2. SOCIAL COST OF VENOUS DISEASE

The financial burden on the health-care system is enormous, with recent estimates placing the cost of CVD treatment at $3 billion per year in the United States, or up to 2% of the total health-care budget of all Western countries.

The prevalence of CVD is still underestimated by both patients and health-care professionals. This underestimation comes from the fact that chronic venous insufficiency (CVI) in most cases is not a lethal condition and that the consequences of this chronic disorder are often overlooked. However, the impact of CVD on patients' quality of life (QOL) and health-care budgets, especially in the more severe stages, is considerably high.

Socioeconomic burden of chronic venous insufficiency The high prevalence of CVI, cost of investigation and treatment, and loss of working days mean that CVD has a considerable socioeconomic impact. The problem is compounded by the fact that CVI is progressive and has a propensity to recur. In France, 2.24 billion Euros are spent for the treatment of CVI, of which 41% was for drugs, 34% for hospital care, and 13% for medical fees. In France in 1991, there were 200 000 hospitalizations for CVI (50%were for varicose veins), which was the eighth most common cause of hospitalization. The cost of treatment represented 2.6% of the total healthcare

budget for that year. In Germany, in-patient direct costs were 250 million Euros, out-patient costs were 234 million Euros, and drug costs were 207 million Euros.

In Sweden, the average weekly cost of treating venous leg ulcers in 2002 was 101 Euros, with an estimated annual cost of 73 million Euros.

Indirect costs of venous disease in terms of working days lost were the most important cost factor in 1990 in Germany, amounting to 270 million Euros. In the USA, venous ulcers cause the loss of 2 million workdays per year, while in France 6.4 million workdays were lost in 1991 due to venous disease. The socioeconomic impact of venous ulceration is dramatic, resulting in an impaired ability to engage in social and occupational activities, a reduction in patients' QOL, and the imposition of financial constraints. In a population study in the United Kingdom, the median duration of ulceration was nine months, but 20% of ulcers had not healed within two years, and ulcer recurrence meant that 66% of patients had episodes of ulceration lasting longer than five years. Published data show that venous ulcers may cause the early retirement of a substantial portion, up to 12.5%, of workers with this condition. (D. J. Milic Medicographia)

According to Allegra in Italy the total direct cost of Chronic Venous Insufficiency in 1999 was €384 million (288 millions of euro for hospitalization, €13 millions for GP consultations and €83 millions for prescriptions).

According to Guest et al. for the British NHS the cost of wound care over 12 months was an estimated £7600 per venous leg ulcers VVLU). However, the cost of managing an unhealed VLU was 4·5 times more than that of managing a healed VLU (£3000 per healed VLU and £13 500 per unhealed VLU).

In the first six months of 2014 in Italy 41.005 hospitalization have been done for removal of an insufficient vein with a cost of more than €97 millions (this data does not consider the cost of private treatments).

We can then conclude that the venous disease is one of the most frequent affection in the adult European population and responsible for a significant part of the budget allocated in the western countries for health care.

The implementation of new low cost treatments from specifically trained personnel would result in a significant reduction of the total cost for health care.

3. CURRENT TREATMENTS FOR CHRONIC VENOUS INSUFFICIENCY

Chronic venous disease treatment goals are the improvement of symptoms, reduction of edema, treatment of lipodermatosclerosis and healing of ulcers.

Treatment improve oxygen transport to the skin, enhancing venous flow and reduce inflammation.

For many years the treatment of CVD has been based mostly on:

a. General measures
b. Compression therapy
c. Drugs
d. Visual liquid sclerotherapy
e. Surgery

A: GENERAL MEASURES

— Leg elevation : Leg elavation (30 min. three or four times per day) may be sufficient to relieve mild venous disease symptoms but is not adequate in more severe cases.

— Exercise: Several studies have shown improvement in hemodynamic parameters with simple calf muscle (plantar flexion) exercises. However physical activity in patients with the signs of chronic venous

insufficiency tends to be very limited.

— Skin care: Stasis dermatitis is often seen with advance disease (CEAP * Category 4 or higher). Skin care includes emollients and barrier creams or a midpotency topical corticosteroid if needed . Contact dermatits occurs very often by stasis dermatitis and may also be a trigger to development of an ulcer in patients with CVI.

B: COMPRESSION THERAPY

The cornerstone of treatment for patient with chronic vein disease is the Compression therapy .

With the term compression therapy it is intended both bandages and medical stockings use.

The use of such treatment it is not only symptomatic but also have a a specific hemodynamic effect significantly reducing venous reflux which is the main pathogenic element of CVD.

Patients with edema or eczema benefit from compression therapy and is also associated with high rates of ulcer healing .

Surprisingly medical stockings are not reimbursed in some European countries even if has been demonstrated that their use is related to lower incidence of complications and best QoL.

C: DRUGS

Drugs have been often used in order to relieve symptoms or to reduce the risk of a complications.

These are venoactive agenst such as the flavonoids and rheologic agents such as aspirin, pentoxifylline, prostacyclin analogs, stanazol, sulodexide, and defibrotide.

Most studies evaluating these agents provide only low-quality evidence of benefit.

Flavonoid have been used to relieve edema and symptoms but this is clearly a symptomatic approach as this treatment cannot significantly change the progression of the disease.

Despite some drugs may have a limited effect on some complications of CVD and the use of anti-coagulants in order to reduce the risk for potentially life-threatening complications like pulmonary embolism, nowadays drug treatment in CVD has only a very limited role.

D: VISUAL LIQUID SCLEROTHERAPY

As the most frequent defect in CVD is venous insufficiency (vein dilatation with incompetence of veins) many techniques have been developed in order to ablate those insufficient vein segments. Sclerotherapy is the chemical ablation of a vein by injection of a liquid irritating agent. This agent (osmotic or detergent agents) cause endothelial damage. Detergent agents damage the endothelium by interfering with cell membrane lipids and the osmotic agents by dehydrating endothelial cells through osmosis (1)

(1) *Treatment of varicose and telangiectatic leg veins: double-blind prospective comparative trial between aethoxyskerol and sotradecol.*
Goldman MP
Dermatol Surg. 2002;28(1):52.

Many substances have been used in the past but from the past mid century mainly polidocanol, iodinate solutions, sodium tetra decyl sulphate and glycerin have been used for clinic purposes.

Besides excellent results in smaller veins, liquid visual sclerotherapy has shown several limitations in larger veins where the recurrence rate has

been higher than surgical stripping. Notwithstanding this, a significant group of patient was able to get permanent good results with sclerotherapy alone suggesting that an improved sclerotherapy could be a suitable tool in order to properly treat venous insufficiency.

E: SURGERY

Surgical removal of insufficient veins has been the most used treatment for ablation of large segments for many years. This can be achieved with the so called "stripping" or performing a "phlebectomy".
In a surgical stripping the affected vein is accessed and a special probe (stripper) is inserted in the vein. The tip of the stripper is then conducted outside of the vein at some length. The stripper will be retrieved extracting the diseased vein. This is a true surgical intervention which requires an operating room and an anesthesia.
Phlebectomy is the surgical extraction of short segments of vein. This is achieved with multiple incisions.

In the last 20 years the treatment of venous insufficiency has been dramatically changed and in centers with special interest in vein disease, new non invasive treatments have been developed aiming to improve results while reducing invasiveness and costs.
The new treatments for CVD are:

F: ULTRASOUND-GUIDED SCLEROTHERAPY (UGS)

Candidates for Ultrasound-guide sclerotherpy (UGS) are patients with persistent symptoms (eg, pain, aching, swelling) and signs (eg, varicose

veins, pigmentary changes, and ulceration) of venous disease after six months of medical therapy.

Ultrasound-guided sclerotherapy (UGS) is used primarily for Saphena ablation and Perforator ablation . It is a minimally invasion percutaneous technique using chemical agents. This technique has been used with good long-term results and without significant complications but requires an experienced practitioner [2].

[2]. Labas P, Ohradka B, Cambal M, et al. Long term results of compression sclerotherapy. Bratisl Lek Listy 2003; 104:78.

G: FOAM SCLEROTHERAPY

Foam sclerotherpy was developed from the detergent sclerosant agents (Polidocanol and Sodium tetradecyl sulfate) to increase the surface area of exposure. Generally all insufficient veins are suitable for foam sclerotherpy.

VANISH-1 and VANISH-2 (Phase III trials) have confirmed the safety and efficacy of polidocanol endovenous microfoam for improving symptoms and leading to approval in United States in 2013 [3].

[3] Todd KL 3rd, Wright DI, VANISH-2 Investigator Group. The VANISH-2 study: a randomized, blinded, multicenter study to evaluate the efficacy and safety of polidocanol endovenous microfoam 0.5% and 1.0% compared with placebo for the treatment of saphenofemoral junction incompetence. Phlebology 2014; 29:608.

H: THERMAL ABLATION OF SAPHENOUS VEIN

Thermal ablation heat the vein, leading to thrombotic occlusion and finally fibrosis of the vein wall.

This can be through a light energy to the skin (surface laser) for treatment of smaller dilated veins like telangiectasias and reticular veins.

Furthermore Radiofrequency techniques and endovenous laser are applied to incompetent saphenous veins (great and small).

I: CONSERVATIVE VENOUS LIGATION OR CONSERVATRICE ET HÉMODYNAMIQUE DE L'INSUFFISANCE VEINEUSE EN AMBULATOIRE (C.H.I.V.A)

C.H.I.V.A is a minimally invasive surgical procedure guided by ultrasound and performed under local anesthesia for the treatment of patients with varicose vein disease.

C.H.I.V.A is a surgical strategy which preserves veins and restores the hemodynamics for insufficient veins on an outpatient basis (described by Dr. C.Franceschi in 1988).

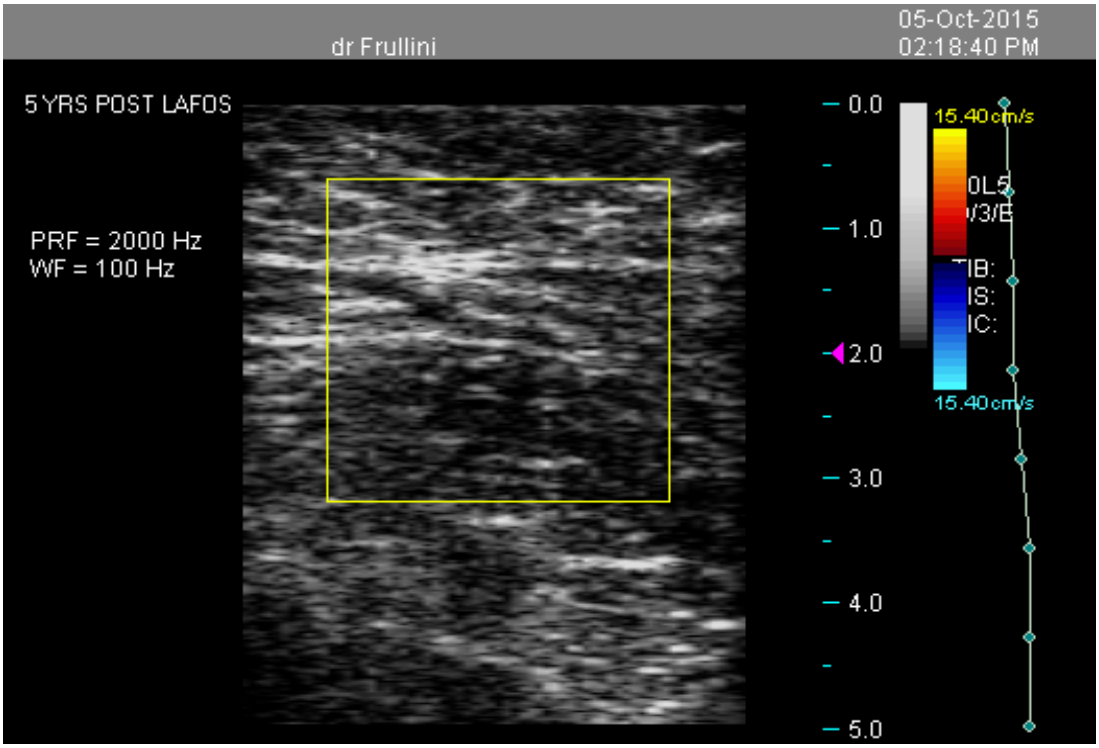
It is a method that aims to disrupt the column of hydrostatic pressure by disconnecting points of venous reflux while preserving venous drainage [4].

[4] Parés JO, Juan J, Tellez R, et al. Varicose vein surgery: stripping versus the CHIVA method: a randomized controlled trial. Ann Surg 2010; 251:624.

J: GLUE OBLITERATION

Cyanoacrylate glue ablates the insufficient vein, the agent is injected through a catheter followed by compression along the length of the vein. VenaSeal method was described for treatment of saphenous incompetence and has been approved for use in the United States in 2013 [5].

[5] http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm435082.htm (Accessed on March 19, 2015).



4. WHO IS PRESENTLY TREATING VENOUS PATIENTS?

Due to the lack of a specific professional figure, presently such patients are often treated by GP, general surgeons, dermatologist and many other kind of doctor without specific interest in venous insufficiency.
This heterogeneity of approaches brings to poor quality treatment and increase cost for health care because:

a) abuse of surgical treatment when more noninvasive techniques could be used
b) late referral to a phlebologist with aggravation of the clinical picture
c) poor quality management of venous ulcer with high social cost
d) use of techniques that doesn't allow fast recovery with lack of working time

5. THE EUROPEAN PROFESSIONAL PHLEBOLOGIST AND THE TRAPP PROJECT

OPERATOR EXPERT IN PHLEBOLOGY – ESCO AND EQF REFERENCES

It is crucial to raise the awareness of the expert in phlebology in the health field. The TRAPP project analyzes the VET skills in different countries (Romania – Greece – Portugal – Italy) to create a unique and defined European competence for phlebologist.

There are various definitions given for phlebologist in different countries and through the same country. This heterogeneity is the first problem. During the interviews with the experts of the project, many profiles of the phlebologist were given. This report will propose a type of phlebologist and for this kind of profile a Vocational and educational training path will be created.

ABOUT THE ESCO AND EQF REFERENCES[1]

ESCO is a common classification language designed to connect people to jobs. It's created from the European Commission DG EMPL. The EQF system is the matrix in which there will be coded the competences and skills for every type of job.

In a standard way the matrix is:

	Knowledge	Skills	Responsibility and Autonomy
	In the context of EQF, knowledge is described as theoretical and/or factual.	In the context of EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical	In the context of the EQF responsibility and autonomy is described as the ability of the learner to apply knowledge and

		(involving manual dexterity and the use of methods, materials, tools and instruments).	skills autonomously and with responsibility
Level 1 **The learning outcomes relevant to Level 1 are**	Basic general knowledge	Basic skills required to carry out simple tasks	Work or study under direct supervision in a structured context
Level 2 **The learning outcomes** **relevant to Level 2 are**	Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy
Level 3 **The learning outcomes** **relevant to Level 3 are**	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems
Level 4 **The learning outcomes** **relevant to Level 4 are**	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement

			of work or study activities
Level 5 **The learning outcomes** **relevant to Level 5 are**	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others
Level 6 **The learning outcomes** **relevant to Level 6 are**	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups
Level 7 **The learning outcomes** **relevant to Level 7 are**	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research Critical awareness of knowledge issues in a field and at the interface between different fields	Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams

Level 8 **The learning outcomes** **relevant to Level 8 are**	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

The learning outcomes relevant to Level 8 are:

For example in the field of Medicine the Cardiologist is classified as:

Country Latvia

EQF Level 6

Description

Learning outcomes for study programme are formulated in accordance with (1) the state standard of second level professional higher education and (2) the relevant occupational standard.

State education standard

Register of occupational standards

Learning outcomes:

Professional continuing education (residency) aims at ensuring the acquisition of theoretical knowledge and practical skills for certification

in the specialty in compliance with the laws and regulations of the Republic of Latvia.

The planned outcomes are defined according to Cycle Descriptors in Latvian NQF, i.e., relevant to the 7th level of EQF.

Knowledge and skills:

Upon successful completion of the programme:

— graduates will be able to demonstrate deep and wide knowledge and comprehension of medical theory and knowledge in particular medical specialty meeting the requirements of the particular specialty and being able to apply creative thinking during clinical placement and to a certain extent research and demonstrate interdisciplinary competence.

Ability to apply knowledge:

Upon successful completion of the programme, graduates will be able to independently apply problem-solving skills in solving of medical problems for the execution of professional functions of highly qualified specialist in prevention of diseases, diagnostics, treatment, health care. Graduates will be able to execute practical manipulations, work in the health care organization, education and research.

Analysis, synthesis, assessment:

Upon successful completion of the programme, graduates will be able to perform the following actions:

— independently formulate and critically analyze difficult clinical medicine problems, critically evaluate researches carried out in the field of medical science, execute the necessary additional analysis, if necessary, justify decisions;

— integrate the knowledge of different medical fields, summarise the experience, contribute to the formation of new knowledge and development of the research or professional work methodology;
— demonstrate the understanding and ethical responsibility about the outcomes of professional work, possible impact of clinical or scientific research on patient and society in general.

Communication:

Upon successful completion of the programme:

— graduates will be able to deliver reasoned opinion and discuss about complex or systemic aspects of particular medical speciality and medical science aspects with both specialists and non-specialists, patients, society a.o. and to maintain collegiate relations and work in team.

General skills:

Upon successful completion of the programme:

— graduates will be able to independently plan and organize the development of own professional competences;
— take responsibility for the results of the teamwork and their analysis, engage in business and innovations in particular specialty;
— provide emergency medical service, carry out duties, further education or research subjected to unpredictable and difficult circumstances and, if necessary, apply new approach to overcome them.

For this project, the main criticize is the codification of the competence in every country partners in the project and the not unique vision of this kind of competence.

WHO IS THE PHLEBOLOGIST AFTER THE INTERVIEWS AND THE LINKS ANALYSIS?

For the EQF system, we propose the level 6/7, as the cardiologist level in Europe (6) and in Latvia (7).

Definition:

The phlebologist is a doctor who deals with phlebological diagnosis and treatment, regardless of the specialization he has achieved, with skills and experience in:

1. surgery
2. sclerotherapy
3. endovascular methods
4. laser (transdermal)
5. dermatology

Main competences: Diagnostic and Therapy Expertise

The main goal of phlebologist is to prevent, diagnose and treat a full array of venous conditions that affect the lower limbs. from minor aesthetic to a complicated case of venous ulcers, from young adults to elder people. besides it, give the best training to the new phlebologists.

The phlebologist must be able to understand all signs and symptoms and correlate subjective complains with objective signs gathered through a detailed interview, physical examination and using several devices (like echo- doppler, photopletysmography, new infrared laser technology) to elaborate a diagnosis and offer the proper treatment which fits the wishes (aesthetic) and needs (functionality) of the patient. Also act with

public authorities to stimulate the proper management of venous disease to provide less complications and all consequences.

No National Qualification in every country of the project, and there are only private master to upgrade the competence of doctor in phlebologist.
Every exper disagrees with this formulation of the outcome in master for doctors. Our suggestion is to define the title of the training and to create a unique definition for the phlebologist.

Last remark is about the main request in hospitals:
It is essential to always have a phlebologist in the hospital. The request is always informal and the primary knows that it is necessary but not having references to formal skills, the research is activated through informal methods. A very unprofessional method, but unique method in the 2018.

QUESTIONNAIRE FOR THE CODING OF THE PHLEBOLOGIST IN VIEW OF THE INTERVIEW

TRAPP Project

Introduction

Below is a series of questions, as per agreements, which w invite you to implement. The questions will be the subject of the interview that will be carried out from the week of 05/03. It is suggested to set the answers before the interview.

Basic questionnaire for structured interview

1. Brief description of the phlebologist. Activities it develops.

2. Types of formal skills required for phlebologist activities - Degree / Master's degree

3. Coding of jurisdiction in accordance with the law in force. Please also insert the references to standards

4. Examples of certification courses for phlebologist competence. If the programs are online, insert links.

5. Examples of masters and refresher courses for phlebologists. If the programs are online, insert links.

6. State of the art at 2018. The phlebologist as placed in the medicine (Ex. Expertise required; Branch of reference). Types of recognition based on current regulations. Reference associations and activities developed (e. g. Training Seminars/Technical Meetings/Publications/Publicity Seminars). Enter any links and/or send specific material.

6. PATH FOR QUALIFICATION AND OBJECTIVE EVALUATION CRITERIAS FOR DOCTORS ALREADY PRACTICING PHLEBOLOGY

Area of origin:

Level A. Vascular surgery / angiology

Level B. General surgery / cardiovascular medicine

Level C. Radiology / dermatology

Level D other specialization

Level E no specialization

Curriculum: maximum 20 points (in the CV all previous congresses, courses, master etc are included)

Skills:

TYPE 1 MANDATORY

1. anatomy
   (e-learning test:5/ course:5 previous publications:10)

2. pathophysiology, hemodynamics
   (e-learning test:5/ course:5 /previous publiications:10)

3. venous pathology
   (e-learning test:5 /course:5 /previous publications:10

4. noninvasive diagnostics

(course 10/ personal casistique :10 if more than 300 venous exams performed 20 if more than 500 exams performed)

5. sclerotherapy
   (e-learning test:5/course:10/ previous publications:5 personal series:10 if more than 300 minor and 100 major sclerotherapy cases performed- 20 if more than 500 minor and 300 major sclerotherapy cases

TYPE 2 OPTIONAL

6. non-surgical saphenous ablation (excluding sclerotherapy)
   (e-learning test:5/course:10 previous publications:5 personal series:10 if more than 100 procedures performed - 20 if more than 300 procedures performed)

7. varicose veins surgery
   (e-learning test:5. Course:5 /previous publications:5 personal series:10 if more than 100 procedures performed- 20 if more than 300 procedures performed)

8. vulnology
   (e-learning test:5. Course 10/previous publications:5 personal series:10 if more than 50 ulcers treated)

9. elastocompression
   (e-learning test:5 /course:10/previous publications:5 personal series:10 if more than 300 treatment performed)

10. Lymphology
    (e-learning test:5/previous publications:5 personal series:10 if more than 20 cases per years followed)

11. placement of fibers or intravenous devices

(e-learning test:5. /Course:5/previous publications:5 personal series:10 if more than 50 procedures performed)

TYPE 3

12. deep venous surgery
(e-learning test:5 / previous publications:5 / Course:5 / personal series : 10 if more than 10 procedures performed)

13. Interventional radiology
(e-learning test:5 /Course:5 / previous publications:5 personal series) : 10 if more than 100 procedures performed)

14. competence and experience demonstrated in the treatment of vascular anomalies
(e-learning test:5/Course:5/previous publications:5 personal series :10 if more than 10 procedures performed)

Casistique must be certificated

Score multiplicated by

Level A x1

Level B x0,9

Level C x0,85

Level D x 0,8

Level E x 0,75

Minimum score 130 in total and 10 or 12 for fundamental KSU

7. THE TRAINING COURSE (13 MODULES)

A. BASIC PHLEBOLOGICAL SCIENCE

1. **ANATOMY**

   Superficial and deep normal venous system anatomy; superficial venous anatomy in superficial insufficiency; the concept of saphenous compartment and saphenous eye; in vivo anatomy with non invasive diagnostic.

2. **PRINCIPLES OF HAEMODINAMICS**

   Venous haemodynamics; venous shunt; concept of private circulation; venous pump;

B. VENOUS PATHOLOGY

1. **VENOUS INSUFFICIENCY**

   Etiology and pathogenesis of venous insufficiency; the concept of ambulatory venous hypertension

2. **VENOUS THROMBOSIS**

   etiology and pathogenesis of venous thrombosis

3. **VASCULAR ANOMALIES**

   Classification of vascular anomalies; principles of treatment

4. **LYMPHATIC PATHOLOGY**

   Etiopathogenesis of lymphatic insufficiency; classification of lymphedema; principles of treatment of lymphedema

C. NON INVASIVE IMAGING

1. **DOPPLER CW**

Performing of the exam, interpretation of results

2. COLOR DUPLEX

Performing of the exam, interpretation of results

D. SCLEROTHERAPY

1. LIQUID SCLEROTHERAPY

Pharmacology; indications and contra-indications for liquid sclerotherapy; injection techniques; evaluation of outcomes; complications of liquid sclerotherapy; post-injection measures.

2. ECHOGUIDED SCLEROTHERAPY

Pharmacology; indications and contra-indications for echoguided sclerotherapy; injection techniques; evaluation of outcomes; complications of echoguided sclerotherapy; post-injection measures.

3. FOAM SCLEROTHERAPY

Pharmacology; indications and contra-indications for foam sclerotherapy; injection techniques; evaluation of outcomes; complications of foam sclerotherapy; post-injection measures.

4. AESTHETIC SCLEROTHERAPY

Pharmacology; indications and contra-indications for aesthetic sclerotherapy; injection techniques; evaluation of outcomes; complications of aesthetic sclerotherapy; post-injection measures.

E. COMPRESSION THERAPY

1. BASIC SCIENCE OF MEDICAL COMPRESSION

Rest pressure and working pressure; physic basis of medical compression; indication and contra-indications

2. **BANDAGES**

   The use of bandages; how to choose the right bandage; application techniques

3. **MEDICAL STOCKINGS**

   The use of stockings; how to choose the right stockings; application techniques

F. SURGICAL TREATMENTS IN PHLEBOLOGY

4. **SURGERY FOR VENOUS INSUFFICIENCY**
   - Saphenous stripping
   - Phlebectomies
   - Conservative surgery
   - miscellaneous
5. **HAEMODYNAMIC SURGERY**
   - CHIVA
   - ASVAL
6. **SURGERY FOR SPECIAL CONDITIONS**

G. THERMAL ABLATION

1. **EVLT**

   Principles of laser effect; indications and contra-indications; techniques; complications and their management; post-treatment management.

2. **RADIOFREQUENCY**

   Principles of RF effect; indications and contra-indications; techniques; complications and their management; post-treatment management.

3. **STEAM ABLATION**

Principles of steam ablation; indications and contra-indications; techniques; complications and their management; post-treatment management.

4. HYBRID TREATMENTS (LAFOS)

Principles of LAFOS; indications and contra-indications; techniques; complications and their management; post-treatment management.

H. GLUE OBLITERATION IN VENOUS INSUFFICIENCY

indications and contra-indications; techniques; complications and their management; post-treatment management.

I. INVASIVE TREATMENTS FOR VENOUS STENOSIS OR THROMBOSIS

indications and contra-indications; techniques; complications and their management; post-treatment management.

J. TREATMENT OF VENOUS ULCER

pathophysiology of venous ulcer; differential diagnosis; advanced medications; techniques of ulcer management; compression therapy in vulnology

K. TREATMENT OF LYMPHOEDEMA

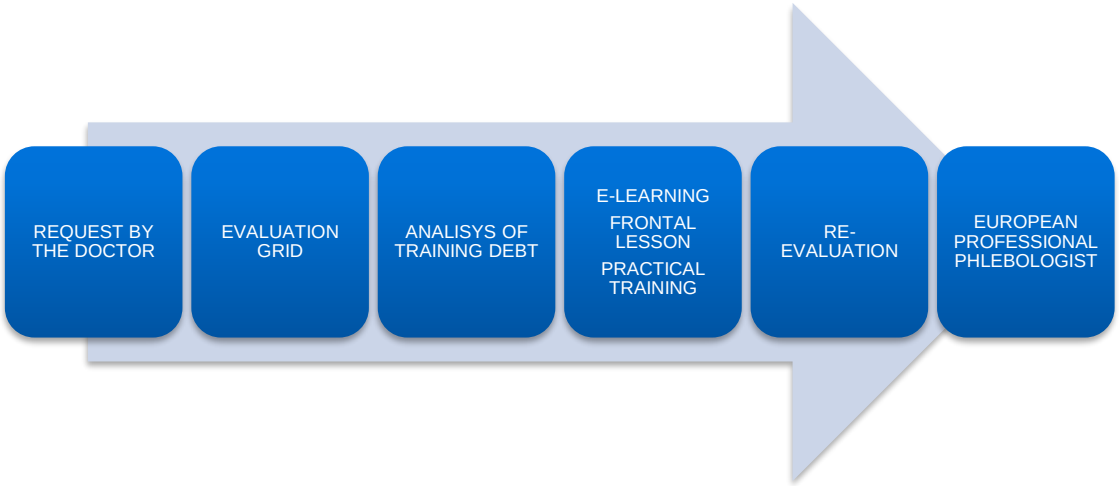
— CONSERVATIVE TREATMENT
— PHYSICAL TREATMENTS
— SURGICAL TREATMENTS

L. DRUG TREATMENTS IN PHLEBOLOGY

M. MISCELLANEOUS

The course will be performed as a whole or modules can be held separately and can be performed as frontal lessons or by e-learning (or both). Each module will be held in 1-5 days according to the complexity of the topics

After the objective evaluation of the doctor (evaluation grid) one or more modules will be requested to comply with the standard knowledge.



8. THE EUROPEAN REGISTRY OF PHLEBOLOGIST AND PARTNERS IN DEVELOPMENT OF THE TRAPP PROJECT

ROMANIAN SOCIETY OF PHLEBOLOGY

Romanian Society of Phlebology has a continuity of 35 years, founded in 1979, was affiliated to Union International of Phlebology in 1983, and now counts 384 members.

It is a medical association involving different medical specialties: general surgeons, vascular surgeons, dermatologists, imagists, internists, cardiologists, general practitioners, interested in diagnosis and treatment of venous diseases. In the last 10 years has developed national and international projects: « Prevalence of chronic venous insufficiency in the ambulance » acronym SEPIA held between 2002- 2004, « Prevalence ambulatory-leg edema » acronym PEGASUS, held between 2004- 2006, international project « Vein consult ».

The main objective of the Romanian Society of Phlebology- it promotes knowledge in all areas of fundamental research, applied to Phlebology. RSP also promotes relations with universities of medicine and the persons responsible in the Ministry of Health of Romania. It encourages good relations and exchange of ideas and scientific partnership with European, American and Afro-American Society of Phlebology. RSP society has and will organize courses, workshops, training and conferences endorsed by the Romanian College of Physicians. Our

manifestations and training courses are also credited with CME points (Continuing Medical Education points).

REGISTRO EUROPEO DEI FLEBOLOGI

The Registro Europeo dei Flebologi is a non-profit organization that operates at national and European level. Its mission is the following:

- to organize, implement and supervise training of physicians working in venous diseases field (better defined as "Phlebologists");
- make sure that the training quality standard recommended at national and European level are achieved by the VET courses on the field;
- to teach methods and techniques aimed to reduce healthcare costs and treatments times, to prevent diseases, to increase the percentage of positive outcomes of care with the power to implement a Regulation with value of "Training Protocol";
- to manage, upgrade and sponsor re-training courses for phlebologists;
- to organize specific training paths with interdisciplinary collaboration and integrated treatments;
- to organize specialization, VET courses and masters in collaboration with Inter- University Centers for Research and Training in Phlebology and other Universities;
- to collaborate with associations, institutions and public and private schools to carry out continuous training an re-training courses for Phlebologist.

To achieve this mission, REF collaborates with the major national entities specialized in phlebology, such the Inter-university Centre for Research and Training in Phlebology of the University of Perugia, the Italian Association of Phlebology and Associazione Italiana Flebopatici. The

members of the associations are individuals, such as university professors, doctors specialized in phlebology and other practitioners in the area.

HELLENIC DERMATOLOGIC SURGERY COMPANY

The Hellenic Dermatologic Surgery Company was founded in January 1991 to promote high quality in the surgical field of dermatology and improve the level of patient care. The Company represents a large and growing number of dermatologists. It aims to promote and support scientific research in the field of aesthetic and skin surgery. HSDS offers continuing education-training of dermatologists, promotes institutional questions and provide information to the public (seminars, conferences, publications etc). HSDS collaborates with the Greek Dermatology and Venereology Company, Companies with related specialties as well as International Associates.

EUROPE VEIN CENTER

The Europe Vein Center® was founded by Dr Augusto Sampaio, a registered Doctor in Brazil and Portugal, with 30 years of experience in Phlebology, private practice. Trained on General Surgery, Vascular Surgery and Vascular Ultrasound ran a Vein Center (AngioClin) in Brazil since 1988 to 2013 and in Portugal (Europe Vein Center®) since 2010. The Europe Vein Center® is an Organization dedicated to Phlebology: prevention, diagnose, ambulatory treatments and training doctors. Having a partnership with many clinics like Malo

Clinics® one of the most important health player around the globe and Bonfante Clinic we have training centers ready to offer courses and hands-on with collaboration of the best doctors in Portugal. In 2017 EVC is involved in creating the Portuguese Association of Phlebology in order to involve as many doctors as possible.

ASSOCIAZIONE FLEBOLOGICA ITALIANA

AFI is a member of Union Internationale de Phlebologie (UIP). Our Society is one of the most representative in Italy in the Phlebological field. Our members are directly involved in the treatment of Venous disease using UFGS, Endothermal techniques (both Laser and Radiofrequency), conservative surgery (CHIVA), surgery and they also have expertise in the treatment of venous ulcers. The aim of the Society is the diffusion of a high quality Phlebological knowledge between our members and to promote a continuous education through Regional, National and International meetings. In addition we stimulate research. Our group has proposed and studied a new Hypothesis to explain Sclerosing Foam related neurological problems (based on the release of endothelin). Our training workshops and courses are also credited with CME (Continuing Medical Education) points. AFI collaborates with the training company Valet, specialized in medical training, with which it organizes joint courses also recognized and certified by CME system.

PR.A.IT Soc.Coop.

PR.A.IT Soc.Coop/EcoNet is an IT SME whose mission is to offer the best service to communicate effectively through the Web. It offer expertise and know-how as regards the network configuration, the programming of graphical user interfaces, software and e-learning developments, until the inclusion of websites in the databases of search engines. EcoNet offers also support in planning business strategy, marketing plan and project management. The experience gained over time, combined with an ongoing research activities, allows us to customize our services according to the customers real needs, in order to achieve planned objectives in the short, medium and long term.

PR.A.IT. is one of the first companies to offer Umbrian Hosting services and advice for everything that covers the Internet and Intranet to customers; in 2000 he joined group of companies specialized in the design, safety and quality. The aim of this partnership and to operate through a synergistic action that ensures complete and optimal customer. In 2012 the group is credited as a training organization with the Umbria Region.

PR.A.IT. participates to the project with its information technology division, called EcoNet. EcoNet has set the goal to become a leading regional and national level company for the design, development and implementation of solutions covering the IT industry. In detail EcoNet is involved in research and development in the field of computer products such as web applications and applications for mobile devices (IOS, Android, Windows). Graphic and structural design of the web portal complies with current technological developments and responsive to the

needs of users. Following are the areas of information technology in which PR.A.IT has extensive experience:

- Internet Service Provider:
- Web design;
- Web development and web application;
- E-learning;
- Strategis Search Engine Optimisation (SEO);
- Privacy and Security.

EUROPARTNERS S.r.l.

Europartners S.r.l. is an SME specialized in consultancy in different areas. EP provides research, programming, strategic planning tailored for the enterprise, government, local authorities and non-profit organizations through its professional team. We are senior policy experts. Our expertise is in five Policy Areas: Labour Market Policy, Social Policy, Education Policy and SME Management. There are 15 senior experts in the Europartners Team who offer consultancy services in the 5 Policy Areas.

The team is divided under three main pillars:

1. Experts from University who provide an academic overview to our consultancy work–tools and publications,
2. Experts from consultancy bodies working for Local and Central Governments who offer a procedural /technocratic overview to our consultancy work – tools and publications, and
3. Experts from companies that managing projects in the field, who can evaluate good and bad practice and bring this to our consultancy work–tools and publications.

From the perspective of change management, Europartners Srl is in a phase of change resulting from experiments carried out from October 2011 to date. In particular, the expert team of Europartners, through the structuring of a network specifically designed to increase the added value of the services provided to the market, is creating its own specific approach to consulting. In the Labour Market Policy Area, Europartners S.r.l. has a recognized competence on the European Qualification Framework system and on the certification of VET competences and learning outcomes.

EUROPEAN HEALT CHAMBER

The European Health Chamber aims at representing European entrepreneurs in the field of health, at European level. The Chamber represents different Health fields: public health, pharmaceutical sector, medical devices, industries, hospitals, academics and health physicians. EHC cooperates with the European Institutions to improve the national health systems, with the knowledge of all our members directly involved in health policies in their own countries on a daily basis. Therefore, the European Health Chamber's Internal Committees give the opportunity to its members to actively follow and work with the EU legislations and policies. The European Health Chamber supports its member associations by being constantly updated, by monitoring and by following the EU legislation related to health and social care. The European Health Chamber is also an opportunity to directly network and exchange ideas, projects, beyond the different health sectors. All members are in contact and participate in different dossiers.

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TRAPP PROJECT

INTELLECTUAL OUTPUT1

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TRAINING PATH FOR EUROPEAN PHLEBOLOGISTS

VET CURRICULUM FOR PHLEBOLOGISTS