



*'EP Working Group of the Moment': A joint initiative between the EHRA National Cardiac Societies Committee, the EHRA Young EP Committee and the EHRA E-Communications Committee*

### **Presentation of the Croatian Working Group on Arrhythmias and Cardiac Pacing (CWG) of the Croatian Cardiac Society**



Croatian  
Cardiac  
Society



Working Group  
on Arrhythmias  
and Cardiac  
Pacing

Croatian Working Group on Arrhythmias and Cardiac Pacing (CWG) is a working group within the Croatian Cardiac Society (CCS):

- Link to CWG: <http://aritmije.kardio.hr>
- Link to CCS: [www.kardio.hr](http://www.kardio.hr)
- Link to Journal of the CCS: <https://www.kardio.hr/category/cardiologia-croatica>
- Link to biennial Congress: <http://aritmije.kardio.hr/crorhythm/>

#### **CWG consists of:**

- **President - the actual president is Šime Manola, 2015-present**
- Nucleus - 6 representatives from EP centers (Rijeka; Zadar; Split; Magdalena; KBC Zagreb; KB Merkur)
- The total number of cardiologists in Croatia is around 300. Members – 44 physicians with special interest for arrhythmias, about 13% of total members of cardiac society.
- **Croatia has 7 EP centers and an additional 11 centers which just implant devices.**
- Total population in Croatia is about 4 000 000.





### The main goals of CWG are

- To **improve and standardize the quality of care** for patients
- To **provide education** for fellows, cardiologists and other specialists in the field of arrhythmology
- To **promote research and collaboration** between centers
- To **develop national plans and strategies for treatment of arrhythmias** at the national level (in collaboration with Cardiac Society and National health insurance)
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### Education

Education is one of the most important activities of CWG. The CWG organizes education for general practitioners, internal medicine specialists, cardiologists and electrophysiologists and allied professionals.

#### Educational events:

- [Biennial National congress](#) with 400-500 participants and 10-15 speakers from established EP centres in Europe and US
- [Biennial regional EP symposia called EP failures](#) (participation of about 40-50 electrophysiologists from neighbouring countries. This year we will invite some young EP representatives from west Europe)
- [Biennial GP symposia](#) for about 1000 participants (50% of all GPs in the state)
- **Annual Symposia for Cardiology and Emergency fellows**

Throughout the year ECG courses are organized for cardiology fellows, GPs and other specialties as anesthesiologists, emergency medicine specialists etc. ECG courses are also organized for nurses in different cities in Croatia by our Association of cardiac nursing in cardiology.

Since 2017, [EHRA Collaborative Course in Clinical cardiac electrophysiology and interventional treatment of tachyarrhythmias](#) with around 40 participants from more than 10 countries. The course mainly focusses on training in basic electrophysiology with interpretation of intracardiac tracings and cardiac anatomy course.



## Certification

There is no special national accreditation or certification in electrophysiology or cardiac pacing in Croatia.

However, **EHRA certification is highly endorsed by the Working Group and this has led to an increase in EHRA Certified physicians and allied professionals (total 8 physicians and 1 AP).**

In the last 3 years, the CWG has decided to cover all costs of EHRA exams for all its members taking the exam for the first time.

## Young EP Community

- ✓ Majority of Croatian electrophysiologists could be considered young EP as defined by EHRA Young EP criteria. Therefore, high representation of young electrophysiologists is present in the WG as well as on national congress and all the organized workshops. **During the congress and EP failures symposium, dedicated sessions for Young EP community are organized.** In the recent years better collaboration with EHRA YEP community started.
- ✓ **Croatia's EHRA Young Ambassador is Doctor Nikola Pavlovic.**  
Additional effort is still needed though to encourage more EPs to join [EHRA YEP community](#) as currently only 5 Croatian Young EP Members are part of the EHRA Young EP Network.

## Main recent achievements

- The efforts in education and certification as well as development of new centers in Croatia have led to an increase in numbers of ablation procedures and device implantations in the last few years. In 2018, in total 480 ablation per million inhabitants were performed, reaching the numbers of our neighbors and some western European countries (data from the EHRA white book). Apart from total number of ablations and implants, quality has increased significantly as well as the proportion of complex procedures (180 AFib ablation /million and 25 structural VT ablation/million).



- ✓ After 3 years of planning and negotiation with national health insurance, from mid-2019 the CWG created a special reimbursement program for complex ablations on a national level for all hospitals performing ablations, which is a good basis for further increase in quality and the number of complex ablations.
  - ✓ We are trying to define the number of EP centers in agreement with the insurance company, defining the requirements and condition (number of procedures) to perform implants and ablations.
  - ✓ During the last few years, the CWG has started covering the [EHRA membership](#) fee for all its members so the **number of members increased from 2 in 2013 to 44 in 2018.**
  - ✓
  - ✓ With education and endorsement of certification **the number of EHRA certified physicians also increased.** With systematic education (in the country as well as abroad with the help of EHRA Training Fellowships), endorsement of certification by the CWG has enabled to increase the number of EHRA certified cardiologists. Currently, 8/14 electrophysiologists are EHRA certified in EP or CP and 1 allied professional.
  - ✓ One center in Croatia has been recognized as European centers for training in electrophysiology and cardiac pacing, being awarded with EHRA recognized training center (ERTC). The ERTC Sestre Milosrdnice University Hospital Center provides education in EP and cardiac pacing for national and international fellows. All fellows trained are encouraged to take the EHRA exam after their training. Today, almost all centers have at least one EHRA certified physician performing electrophysiology or ablation.
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- The Croatian WGA is actively participating in ESC-EHRA EORP Registries (Atrial Fibrillation General Long-term Registry: 7 centres)
  - We created a prospective Southeast and Central European Pulmonary Vein Isolation Registry SE & CE PVI SECE PVI with 10 centres from 6 countries with almost 2000 procedures currently in registry.