

## Overview of health care provision for adult congenital heart disease (ACHD) in Central and South-eastern European countries: current status, provision gaps and investments needed

M. Brida<sup>1</sup>, I.S. Simkova<sup>2</sup>, L.J.J. Jovicic<sup>3</sup>, K.P. Prokselj<sup>4</sup>, H.O.B. Balint<sup>5</sup>, M.K. Komar<sup>6</sup>, L.B. Gumbiene<sup>7</sup>, P.K. Kratunkov<sup>8</sup>, P.A. Antonova<sup>9</sup>,  
T.K.P. Kovacevic Preradovic<sup>10</sup>, R.E. Ermel<sup>11</sup>, A.S. Strenge<sup>12</sup>, I.M.C. Coman<sup>13</sup>, V.V. Vukomanovic<sup>3</sup>, I.H.L. Lebid<sup>14</sup>

<sup>1</sup>University Hospital Centre Zagreb, Zagreb, Croatia; <sup>2</sup>Slovak Medical University, Bratislava, Slovakia; <sup>3</sup>University of Belgrade, Belgrade, Serbia;  
<sup>4</sup>University of Ljubljana, Ljubljana, Slovenia; <sup>5</sup>Hungarian Academy of Sciences, Budapest, Hungary; <sup>6</sup>John Paul II Hospital, Krakow, Poland;  
<sup>7</sup>Vilnius University, Vilnius, Lithuania; <sup>8</sup>St. Ekaterina Hospital, Sofia, Bulgaria; <sup>9</sup>Motol University Hospital, Prague, Czechia; <sup>10</sup>Clinical Center Banja  
Luka, Banja Luka, Bosnia and Herzegovina; <sup>11</sup>University of Tartu, Tartu, Estonia; <sup>12</sup>University of Latvia, Riga, Latvia; <sup>13</sup>Carol Davila University of  
Medicine and Pharm, Bucharest, Romania; <sup>14</sup>Ukrainian Children's Cardiac Center, Kiev, Ukraine

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**Background:** Most of North and Western European countries recognized long ago the importance of specialized ACHD programmes and have today well-established Centre of excellence for management of ACHD patients. In contrast, even though Central and South-eastern (CESE) European region geographically comprise almost half of the European continent, little is known about ACHD status in vast majority of its countries.

**Purpose:** We aim to provide for the first time contemporary comprehensive overview of ACHD situation in CESE Europe.

**Methods:** We obtained data regarding current national ACHD status from 19 CESE European countries. Over the country national cardiac society, the ESC Working Group on ACHD has identified physician/s actively involved in ACHD care in these countries. Country's representative/s filled out an extensive survey regarding the provision of care for the year 2017 or/and 2018 comprised from five main questionnaires: country and hospital ACHD information, clinical activity information, interventional, and surgical cardiac procedures, infrastructure and staffing, health care system including funding, and education.

**Results:** The majority of countries have specialized ACHD centre; 13 out of 19 countries have a national tertiary centre. The median number of adult cardiologists and cardiologists specifically involved in ACHD care per country is 400 and 3, respectively. The median number of ACHD centres per country was one; year of establishment was 2007. Six countries have no

dedicated centre. With the exception of Albania, these countries were relatively young, all have significantly lower GDP/capita in comparison with other CESE countries with an established service ( $p=0.005$ ).

The median number of outpatient visits and hospital admission per year was 900 and 135, respectively; cardiac catheter interventions and cardiac operations yearly were 49 and 40. Thirteen countries have a public health care system funded by their government, while six have also a small portion of private reimbursement. However, all countries have a financial cap imposed on ACHD care per hospital, leading to a patient waiting list and a restriction in the number of procedures.

**Conclusion:** In the past decades, the CESE European region has made significant progress in the state-of-the art ACHD care. The majority of countries nowadays have established ACHD services with a substantial patient workload comparable to the rest of Europe. Moreover, most centres are equipped with the necessary infrastructure. Contemporary provisions of ACHD care in the CESE European region is nevertheless challenged by generally lower financial resources, lower staffing levels and de-facto caps on the possibility to perform certain necessary procedures in comparison with Western European countries. These government healthcare financial constraints also restrict the required expansion in terms of numbers and complexity of surgical and interventional procedures locally.