Cast, in the order of appearance

- Prof. Arne Björnberg, Chairman HCP Ltd., Marseillan, France
- Dr. Beatriz Cebolla, Project Director, Euro Heart Index 2016, Cologne, Germany
- Prof. Ian Graham, Cardiovascular Medicine, Trinity College, Dublin, Secretary/Treasurer of the European Society of Cardiology
- Prof. Dan Gaita, FESC, Timisoara, Romania, President of CardioPrevent Foundation, Board Member of European Heart Network
### Health Consumer Powerhouse

- Comparing healthcare system performance in 35 countries from a consumer/patient view.
- Since 2004, ~50 index editions, available for free.
- Index projects financed through unconditional development grants, similar to medical faculty sponsored research.

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<tr>
<td>Euro Diabetes Care Index</td>
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<td>COPD Index</td>
<td>Sweden 2009, Nordic 2010</td>
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<td>Advanced Home Care Index</td>
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<td>Euro-Canada Health Consumer Index</td>
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The Euro **Heart Index** is....

A tool to empower patients and physicians by reviewing and comparing health care provision and policies for heart care in all EU member states, Switzerland and Norway.

| Increase transparency and comparability of healthcare systems | Increase public awareness, create discussion and indicate strong and weak aspects of each national healthcare system (pointing successful examples) | Helping European citizens to improve the services they receive. |
### Content and construction of the EHI 2016

#### 1. Indicator selection

<table>
<thead>
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<th>Sub-discipline</th>
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<td>3. Access to treatment/care</td>
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#### 2. Data Collection

(Soft data and hard data)

#### 3. Scoring

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#### 4. Validation

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## Euro Heart Index 2016

| Sub-discipline | Indicator                                                                 | Score | Denmark | Poland | Greece | Italy | Germany | Portugal | France | Spain | England | Hungary | Ireland | Netherlands |
|----------------|---------------------------------------------------------------------------|-------|---------|--------|--------|-------|---------|----------|--------|-------|---------|---------|---------|
| 1. Prevention  | 1.1 Prevalence of obesity in adults                                       |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.2 Prevalence of child obesity                                           |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.3 Exerciser in compulsory school                                        |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.4 Consumption of softdrinks                                             |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.5 Fresh fruit/vegetable consumption                                     |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.6 Sugar consumption                                                     |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.7 Tobacco consumption                                                   |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.8 Alcohol consumption                                                   |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.9 Prevalence of raised blood pressure                                   |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 1.10 Familial Hypercholesterolemia (FH) screening                         |       |         |        |        |       |         |          |        |       |         |         |         |            |
| Sub-discipline weighted score | 200 | 220 | 150 | 150 | 150 | 140 | 200 | 170 | 200 | 230 | 190 | 210 | 190 | 180 | 240 |
| 2. Procedures  | 2.1 Door to balloon delay                                                 |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.2 Health care personnel certified for CPM                              |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.3 Pre-hospital thrombolyis plan                                         |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.4 Defibrillators available in public places                            |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.5 Rehabilitation programme                                              |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.6 Home care available for cardiac patients                             |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.8 PCI CABG                                                              |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.9 Stent deployment                                                       |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.10 Explanted deployment                                                  |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 2.11 PCI St.8 inhibitor deployment                                        |       |         |        |        |       |         |          |        |       |         |         |         |            |
| Sub-discipline weighted score | 205 | 205 | 80 | 130 | 121 | 152 | 102 | 129 | 129 | 227 | 129 | 169 | 189 | 189 | 197 |
| 3. Access to care | 3.1 Waiting time to echocardiography and diagnostics                    |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 3.2 Waiting time for non-acute review diagnosis (CABG, PCI)              |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 3.3 "Waiting time" for heart transplant                                   |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 3.4 Family support for children with Congenital Heart Disease           |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 3.5 Access to free FH genetic testing?                                   |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 3.6 Access to combination therapy to treat FH                           |       |         |        |        |       |         |          |        |       |         |         |         |            |
| Sub-discipline weighted score | 167 | 144 | 86 | 123 | 87 | 144 | 166 | 142 | 144 | 178 | 146 | 133 | 122 | 147 | 133 |
| 4. Outcomes    | 4.1 30-day in-hospital mortality rate after admission for AMI             |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 4.2 Standardized death rates from CVD                                    |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 4.3 Hospital readmission rates for heart failure                         |       |         |        |        |       |         |          |        |       |         |         |         |            |
|                | 4.4 Surgical mortality for isolated transection of the iliac arteries     |       |         |        |        |       |         |          |        |       |         |         |         |            |
| Sub-discipline weighted score | 188 | 229 | 126 | 83 | 104 | 144 | 146 | 125 | 220 | 229 | 187 | 146 | 184 | 708 | 146 |
| Total score    | 759 | 808 | 447 | 492 | 522 | 592 | 707 | 649 | 755 | 804 | 739 | 918 | 676 | 744 | 686 |
| Rank           | 10 | 7 | 29 | 27 | 30 | 21 | 8 | 24 | 11 | 1 | 14 | 19 | 22 | 13 | 16 |
## Euro Heart Index 2016

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Globally, an estimated 17.5 million people died from CVDs in 2012, representing 31% of all deaths, over 80% of which take place in low- and middle-income countries. Today, CVDs is the largest single contributor to global mortality.

In Europe, CVD causes more than 2 million deaths every year.

CVD remains the main cause of death in most countries but has already been overtaken by cancer in 12 countries.

CVD is a big threat economically and socially.

CVD has become an important focus of the European Union and the national health bodies in the last decade. A high number of programmes and initiatives have been funded and implemented all over the region to improve the situation. European and national organisations have been creating guidelines, education, programmes and policy recommendations to promote standards and pathways.

CVD can be prevented.

Most risk factors associated with CVD are modifiable.
Primary Prevention

- Obesity
- Sedentary lifestyle/Physical activity
- Vegetables and fruit consumption
- Sugar consumption
- Tobacco
- Alcohol
Screening of CVD risk factors (Risk population)

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GPs and primary care health workers are key players for detection and primary prevention.
Awareness campaigns and education about healthy lifestyle (promoting healthy habits)

General population

Population at risk

Primary care physicians, community workers, teachers and educators.
Structural/regulatory

- Limit marketing of unhealthy food for children
- Tobacco control laws and tobacco control interventions
- Addressing food composition
- Alcohol control laws, taxation etc.
Coordination and integration between services (Primary and secondary care)

In emergency situations, good coordination and efficient communication process after an emergency call with emergency services and ambulances.

Enough resources depending on national situation, such as sufficiently trained cardiologists and cardiothoracic surgeons per capita, PCI centres, Catheterization labs.....

Data Collection.
Access to Medication

**Statin deployment**

Lipid control medication (ATC C10A), SU per capita 50+ (prev. adjusted)
Source: IMS MIDAS database, 150701 - 160630

**Clopidogrel deployment**

Anti-platelet medication (ATC B1C), SU per capita 50+ (prev. adjusted)
Source: IMS MIDAS database
Secondary prevention

- Access
- Funding
- Data for primary vs. secondary prevention
Public data missing on important indicators (Procedures and outcomes). Important data only on hospital level.

Data on prevention difficult to separate (general population, CVD patients)

Not comparable data

Some data is collected with slightly different definitions by different organisations.

Difficulties to access data
Familial hypercholesterolemia care in Europe

- Hereditary, metabolic, autosomal (affecting both sexes the same) dominant disorder.

- Characterized by abnormally high total cholesterol (TC) and low-density lipoprotein cholesterol (LDL-C) levels. FH is a common genetic cause of premature coronary heart disease.

- There is a large number of Europeans suffering from FH. Many of them do not know, as they are still undiagnosed and therefore left untreated.

- FH is a disease that is rather easy and cheap to treat.
### FH case finding

**Screening of family members of FH patients**

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### Genetic testing for FH subsidised

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Official recommendations or guidelines, approved by the government, in place in regarding treatment and/or screening of FH

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Any activities or campaigns with public funding during the last two years to increase awareness

<table>
<thead>
<tr>
<th>Austria</th>
<th>Belgium</th>
<th>Bulgaria</th>
<th>Croatia</th>
<th>Cyprus</th>
<th>Czech Rep.</th>
<th>Denmark</th>
<th>Estonia</th>
<th>Finland</th>
<th>France</th>
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Access to FH treatment

Subsidized/reimbursement of combination therapy (statin plus ezetimibe)

Source: IMS MIDAS database
Euro Heart Index 2016, total scores

Country
- Cyprus
- Bulgaria
- Lithuania
- Croatia
- Latvia
- Slovakia
- Estonia
- Romania
- Hungary
- Czech Republic
- Malta
- Greece
- Poland
- Portugal
- Italy
- United Kingdom
- Germany
- Ireland
- Spain
- Finland
- Austria
- Denmark
- Switzerland
- Belgium
- Netherlands
- Slovenia
- Luxembourg
- Sweden
- Norway
- France

Scores:
- Cyprus: 442
- Bulgaria: 447
- Lithuania: 460
- Croatia: 492
- Latvia: 505
- Slovakia: 506
- Estonia: 546
- Romania: 566
- Hungary: 575
- Czech Republic: 582
- Malta: 615
- Greece: 618
- Poland: 627
- Portugal: 655
- Italy: 686
- United Kingdom: 711
- Germany: 739
- Ireland: 744
- Spain: 750
- Finland: 755
- Austria: 759
- Denmark: 767
- Switzerland: 767
- Belgium: 808
- Netherlands: 813
- Slovenia: 814
- Luxembourg: 825
- Sweden: 835
- Norway: 849
- France: 864
Top performers in the Index. What are they doing well?

<table>
<thead>
<tr>
<th>Sub-discipline</th>
<th>Top country/countries</th>
<th>Top Scores</th>
<th>Maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prevention</td>
<td>Italy, Luxembourg</td>
<td>240</td>
<td>300</td>
</tr>
<tr>
<td>2. Procedures</td>
<td>Germany, Netherlands</td>
<td>227</td>
<td>250</td>
</tr>
<tr>
<td>3. Access to treatment/care</td>
<td>France, Luxembourg, Netherlands, Norway, Sweden</td>
<td>178</td>
<td>200</td>
</tr>
<tr>
<td>4. Outcomes</td>
<td>Slovenia, Sweden</td>
<td>250</td>
<td>250</td>
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</tbody>
</table>
THANK YOU -

SEE IT ALL ON

www.healthpowerhouse.com
MORE SLIDES
Money does buy better Treatment Results

Outcomes scores EHCI 2015 vs. Healthcare Spend (PPP$ per capita)

R² = 0.7288
An example of a LAP Indicator; “Level of Attention to the Problem”. Wealthy countries can afford admitting patients on weaker indications, but there are deviations!

Greek hospitals have press gangs roaming city streets?
Money does not necessarily buy better access to healthcare …

for the rather fundamental reason that it is cheaper to operate a healthcare system without waiting lists!
The large number of Green scores is because cut-offs were kept from 2014, when several countries were below the Green cut-off.
"Structural Antiquity" Index for healthcare systems

In-patient care costs as % of total HC costs

Source: WHO HfA database, September 2015
Accessibility not really related to number of doctors!
Sometimes money buys worse healthcare

% of dialysis treatments being performed where and when it suits the patient (PD, home-HD)
Source: European Renal Association-EDTA Annual Report 2013

Clinic dialysis is over-remunerated, and home dialysis is under-remunerated?
Sometimes money buys even worse healthcare!

Are there other reasons for the low German transplant rate than the profitability of clinic dialysis?
“Bismarck Beats Beveridge”

- Bismarck systems dominate the top of EHCI ranking
  - Beveridge systems offer conflicts between loyalty to citizens and loyalty to healthcare system/organisation (“politician home town job preservation”)
  - Lack of business acumen in Beveridge systems; efficiency gains and cutbacks frequently not differentiated!
  - Small Beveridge systems (the Nordic countries) can compete

- “Chaos” systems do better than centrally planned
  - 100’s of thousands of professionals take better decisions and drive development better than central bodies
  - Incentives driving quality and productivity are essential!
Poland not too corrupt!