

Supplemental Table 1- Cardiac Rehabilitation Availability, Volume, Capacity, Density (including Rank) by European Country, Geoscheme Region, and versus other High-Income Countries*

| Region | IHD incidence[†] | Year 1st CR program opened | Media n annual volume / program | Media n annual capacity / program | National CR capacity[‡] | CR density § | CR density ranking |
|------------------------|----------------------------------|-----------------------------------|--|--|---|---------------------|------------------------------|
| Northern Europe | | | | | | | |
| Denmark | 23,455 | 1990 | 200 | 250 | 8,750 | 3 | 10 |
| England | 318,284 | 1978 | 490 | 500 | 133,000 | 2 | 8 |
| Estonia | 10,938 | 1994 | 150 | 150 | 300 | 37 | 31 |
| Finland | 25,677 | 1978 | 55 | 98 | 2,450 | 11 | 21 |
| Iceland | 1,570 | 1983 | 168 | 185 | 740 | 2 | 4 |
| Ireland | 16,000 | 1985 | 256 | 300 | 11,100 | 1 | 3 |
| Latvia | 14,743 | 1997 | 150 | 400 | 800 | 18 | 27 |
| Lithuania | 23,421 | 1977 | 950 | 1,000 | 25,000 | 1 | 2 |
| Northern Ireland | 8,811 | 1980 | 255 | 215 | 2,795 | 3 | 11 |
| Norway | 15,197 | - | - | - | - | - | - |

| | | | | | | | |
|-----------------------------------|------------------------------|----------------------|----------------------|----------------------|-----------------------------|--------------|---------------|
| Scotland | 30,185 | 1985 | 1,025 | 850 | 58,650 | 1 | 1 |
| Sweden | 50,475 | NA | 150 | 150 | 10,350 | 5 | 17 |
| Wales | 15,432 | 1986 | 490 | 375 | 6,375 | 2 | 9 |
| <i>Mean ± SD</i> | 42,630±83,6 85 | 1985±7 | 362±32 1 | 373±28 5 | 21,693± 38,694 | 7±11 | 12±10 |
| <i>Median</i> <i>(Q25-Q75)</i> | 16,000 (12,841- 27931) | 1985 (1978- 1990) | 228 (150- 490) | 275 (159- 475) | 7,563 (1,213- 21,525) | 3 (1- 10) | 10 (3- 20) |
| Eastern Europe | | | | | | | |
| Belarus | 88,874 | 1981 | 300 | 300 | 1,500 | 59 | 34 |
| Bulgaria | 55,871 | 1958 | 2,200 | 3,000 | 3,000 | 19 | 28 |
| Czech Republic | 66,012 | 1993 | 65 | 200 | 3,000 | 22 | 30 |
| Hungary | 69,698 | 1970 | 440 | 580 | 19,140 | 4 | 12 |
| Poland | 237,460 | 1973 | 350 | 375 | 21,000 | 11 | 22 |
| Moldova | 21,376 | 2016 | 200 | 400 | 400 | 53 | 33 |
| Romania | 126,835 | 1978 | 1,400 | 2,500 | 7,500 | 17 | 26 |
| Russia | 1,223,642 | 2010 | 400 | 500 | 1,500 | 816 | 36 |
| Slovak Republic | 29,436 | 2015 | 50 | 200 | 1,400 | 21 | 29 |
| <i>Mean ± SD</i> | 213,245 ± 384,394 | 1988 ± 21 | 601 ± 722 | 895 ± 1,066 | 6,493 ± 7,974 | 114 ± 264 | 28±7 |
| <i>Median</i> | 69,698(42,6 | 1981 (1972- | 350 | 400 | 3,000 | 21 (14- | 29 (24- |

| | | | | | | | |
|--------------------------------|------------------|-------------|-----------|-------------|-----------------|---------|---------|
| (Q25-Q75) | 54-182,148) | 2013) | (133-920) | (250-1,540) | (1,450-13,320) | 56) | 34) |
| Southern Europe | | | | | | | |
| Bosnia and Herzegovina | 19,068 | 1959 | 800 | 2,000 | 2,000 | 10 | 20 |
| Croatia | 26,066 | 1957 | 940 | 940 | 2,820 | 9 | 19 |
| Greece | 61,036 | 1993 | 20 | 100 | 400 | 153 | 35 |
| Italy | 359,226 | 1974 | 350 | 355 | 78,455 | 5 | 15 |
| Republic of Northern Macedonia | 8,285 | - | - | - | - | - | - |
| Malta | 1,958 | 2012 | 300 | 900 | 900 | 2 | 5 |
| Montenegro | 3,049 | - | - | - | - | - | - |
| Portugal | 35,884 | 1988 | 75 | 100 | 2,300 | 16 | 24 |
| Serbia | 40,265 | 1968 | 1,345 | 1,570 | 3,140 | 13 | 23 |
| Slovenia | 11,135 | 1995 | 100 | 150 | 300 | 37 | 32 |
| Spain | 175,537 | 1993 | 120 | 120 | 10,440 | 17 | 25 |
| <i>Mean ± SD</i> | 67,410 ± 108,515 | 1982 ± 19 | 450 ± 468 | 693 ± 709 | 11,195 ± 25,408 | 29 ± 48 | 22 ± 9 |
| <i>Median</i> | 26,066 | 1988 (1964- | 300 | 355 | 2,300 | 13 (7- | 23 (17- |

| | | | | | | | |
|-----------------------------|--------------------------------|----------------------|----------------------|----------------------|-------------------------------|--------------|---------------|
| (Q25-Q75) | (8,285- 61,036) | 1994) | (88- 870) | (110- 1,255) | (650- 6,790) | 27) | 29) |
| Western Europe | | | | | | | |
| Austria | 32,901 | 1962 | 750 | 200 | 5,200 | 6 | 18 |
| Belgium | 66,985 | 1977 | 275 | 300 | 14,400 | 5 | 16 |
| France | 259,251 | 1984 | 475 | 485 | 63,050 | 4 | 14 |
| Germany | 385,474 | 1950 | 800 | 825 | 99,000 | 4 | 13 |
| Luxembourg | 1,683 | - | - | - | - | - | - |
| Netherlands | 88,550 | 1974 | 555 | 450 | 40,500 | 2 | 6 |
| Switzerland | 29,546 | 1997 | 255 | 255 | 13,005 | 2 | 7 |
| <i>Mean ± SD</i> | 123,484 ± 143,381 | 1974 ± 16 | 518 ± 230 | 419 ± 228 | 39,193 ± 36,342 | 4 ± 2 | 12±5 |
| <i>Median (Q25-Q75)</i> | 66,985 (29,546- 259,251) | 1976 (1959- 1987) | 515 (270- 763) | 375 (241- 570) | 27,450 (11,054- 72,038) | 4 (2-5) | 14 (7- 17) |
| <i>Europe Mean ± SD</i> | 101,982 ± 207,600 | 1983 ± 17 | 470 ± 224 | 591 ± 224 | 18,185 ± 36,115 | 39 ± 1 | - |
| <i>Europe Median</i> | 29,866 (15,256- | 1983 (1974- 1993) | 300 (150- | 365 (200- | 4,170 (1,500- | 7 (2- 19) | - |

| | | | | | | | |
|--------------------|---------|------|------|------|---------|---|----|
| (Q25-Q75) | 83,837) | | 701) | 764) | 17,955) | | |
| Other HICs* | 381,571 | 1967 | 213 | 214 | 166,884 | 2 | -- |

†Incidence of IHD was obtained from Global Burden of Disease study(45)

‡National CR capacity calculated using median number of patients a program could serve per year (from survey) multiplied by the number of programs in the country (ascertained from national champions). Value represents the number of patients who could receive CR in a year (i.e., CR spots).

§CR density refers to the number of incident IHD cases per year per CR spot (i.e, national CR capacity).

||Ranking based on density, or ratio of need (i.e., IHD incidence) to supply (i.e., national CR capacity). Lower numbers reflect more CR spots per IHD patient (i.e., of 37 European countries where CR and sufficient information are available such that 1 represents the most spots per IHD patient and 36 is the least spots per patient).

*United States, Canada, Australia and New Zealand. Mean values reported per country (except year first program). Country-level values shown in Turk-Adawi et al.⁴⁴ (under review)

CR= Cardiac Rehabilitation

HIC=High-Income Country

IHD= Ischaemic Heart Disease

-not applicable