factors, diabetes, hypertension and obesity. E/e’ was significantly lower in patients who performed >150 min/week of physical exercise (n=220) compared to <150 min/week (8.6±2.7 vs 10.3±3.5, 95% CI 1.1–2.4, p<0.001). For every increase of 10 min of physical activity per week, E/e’ decreased by 4%.

Conclusions: CAD-patients who perform regular physical exercise >150 min/week have significantly better left ventricular diastolic function measured by E/e’. Higher VO2 peak as well as higher weekly physical exercise outweighed the other modifiable cardiovascular risk factors obesity, diabetes and hypertension in this high-risk patient population.

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P6037 | BEDSIDE
Beta-blocker dose is associated with mortality after myocardial infarction - a nationwide study
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Background: Beta-blocker (BB) treatment reduces mortality after myocardial infarction (MI). The BB dose entailing the largest mortality reduction is unknown.

Purpose: To examine the association between BB dose and mortality after MI.

Methods: All patients admitted for first-time MI in Denmark between 1 July 2004 and 31 December 2014 were identified in the Danish National Patient Registry. Using the Danish Civil Person Registry, patients alive on day 15 after MI admission were followed until first occurrence of death, emigration, or 31 December 2014. The daily BB dose consumption following MI was estimated for each patient according to daily BB dose as a percentage of the target dose (TD) recommended in international guidelines: 0%, >0–12.5%, >12.5–25%, >25–50%, >50–100%, >100% TD, at the start of follow-up and at each prescription redemption. Cox proportional hazards regression was used to compute mortality rates as deaths per 1,000 person-years for year 1, year 2, and year 3 after MI, respectively. Mortality rate ratios (MRRs) were computed for each BB dose group, using 0% TD as the reference, and adjusted for gender, age (<60, 60–64, 65–69, 70–74, 75–79, or >80 years), type of MI (ST-elevation MI, non-ST-elevation MI, or unspecified MI), BB use prior to MI (use or no use), cardiac interventions (percutaneous coronary intervention and/or coronary artery bypass grafting, or no intervention), comorbidity category (Charlson Comorbidity Index [CCI] score = 0, CCI score = 2, CCI score >3), and use of co-medication (statins, platelet inhibitors, and/or angiotensin-converting enzyme inhibitors/renin-angiotensin inhibitors, or no medication).

Results: Of 71,359 patients admitted with first-time MI during the study period, 65,125 patients survived to begin follow-up on day 15 after admission. The median follow-up time was 3.6 (interquartile range: 1.4–6.5) years and 18,913 (29.0%) patients died during follow-up. During year 1 after MI, MRRs were significantly lower for patients taking any BB dose than for patients taking no BB (Figure 1A). Patients taking doses ≥50–100% TD had the lowest MRR, which was significantly lower than that for patients taking >0–12.5% TD (Figure 1A). During year 2 (Figure 1B) and year 3 (Figure 1C) after MI, doses >12.5% TD were associated with significantly lower MRRs than no BB use and the lowest MRRs were observed for doses >25–50% TD. Doses >50% TD were associated with the lowest mortality beyond the first year.

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P6038 | BEDSIDE
Treatment gaps and potential cardiovascular risk reduction from expanded statin use in the US and England
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Background: Updated national guidelines in the US and UK expand the indications for statin therapy in primary prevention of cardiovascular disease (CVD) to adults with moderate CVD risk but many adults at high risk still remain untreated.

Objectives: To identify treatment gaps in US and English adults at moderate (≥7.5% to <20% 10-year risk of CVD in the US and ≥10% to <20% risk in England) and high risk (≥20% risk), and to estimate the number of CVD events that would be prevented from expanding statin therapy to those who are currently untreated.

Methods: Simulation study using nationally representative samples of CVD-free adults aged 40–75 years from the National Health and Nutrition Examination Survey 2007–2012 (n=7,687) for the US, and the Health Survey for England 2009-2013 (n=10,375), and risk algorithms from each country’s guidelines.

Results: Close to half of adults at high CVD risk in the US (49.7%) and England (46.0%) were not receiving statins. Expanding statin use to ≤2.7 million untreated high-risk adults in the US would save 384,000 (305,000–461,000) CVD events in the next 10 years compared with 616,000 (493,000–738,000) CVD events that would have been treated from preventing 17.6% (15.4%–20.2%) of CVD events. In England, treating 1.45 million high-risk adults would save 101,000 (95% CI 81,000–120,000) CVD events compared with 128,000 (103,000–154,000) CVD events prevented from treating 3.64 million moderate-risk adults.

Conclusions and relevance: In both the US and England, expanding statin therapy to untreated moderate-risk adults would prevent a comparable number of events as expanding statin use to a much smaller number of currently untreated high-risk adults. A large potential for CVD prevention remains from improving coverage of statin therapy among high-risk adults.

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Abstract P6038 | Table 1. CVD events (95% confidence intervals)

<table>
<thead>
<tr>
<th>Risk group</th>
<th>Total</th>
<th>Under no treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Moderate</td>
<td>27,945 (26,629–28,903)</td>
<td>20,293 (19,817–20,953)</td>
</tr>
<tr>
<td>蔬 US High</td>
<td>10,600 (9,849–11,580)</td>
<td>5,271 (4,791–5,688)</td>
</tr>
<tr>
<td>US England High</td>
<td>3,157 (2,964–3,370)</td>
<td>1,653 (1,535–1,855)</td>
</tr>
<tr>
<td>Population</td>
<td>4,287 (3,736–4,609)</td>
<td>240 (187–288)</td>
</tr>
<tr>
<td>Number of CVD events over 10 years</td>
<td>201,676 (200,373–202,980)</td>
<td>115,679 (114,253–117,105)</td>
</tr>
</tbody>
</table>

CVD events over 10 years (in thousands) in adults aged 40–75 years without existing CVD in the US and England. 10 years CVD risk was estimated using the QRISK2 algorithm in England, and the Pooled Cohorts Equations in the US. Based on a meta-analysis of primary prevention trials (Mhaweh B, et al. Lancet (2012)), we assumed a 25% (95% CI 20–30%) CVD risk reduction following statin therapy.