

# CONSTRUCTION AND USE OF COMPOSITE INDICATORS FOR RKKP DATABASES



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## EXECUTIVE SUMMARY

Use of quality indicators to monitor, evaluate and compare the quality of healthcare services is widespread. However, the increasing number of quality indicators can make use of indicators for such purposes challenging and time consuming.

In this report we investigate composite measures which combines multiple individual indicators into a single indicator. These measures have the advantage of being easier to interpret overall quality and facilitate comparisons between healthcare providers or regions.

We investigate two most used approaches: opportunity scoring and all-or-none scoring. We obtained composite quality scores based on process indicators for several levels: national level, regional level and healthcare provider level. We investigated six RKKP databases and constructed composite indicators to interpret the overall quality of care provided to patients and to facilitate comparisons between regions and healthcare providers.

This report explores the construction, interpretation and actionability of composite indicators and provides an overview of composite indicators for six RKKP databases. Construction of composite indicators of process quality using complementary, well-established and transparent methods is feasible and may potentially facilitate more active use of data from the RKKP databases.

## BACKGROUND

The Danish National Quality Programme for health care was launched in 2015. The programme includes eight specific national quality goals, which are each assessed by multiple indicators. One of the eight goals is high quality of care, which is partly assessed using indicators of quality of care from the national Danish clinical quality registries. Until 2019 a composite measure of quality of care was used to assess the quality of care across the approximately 85 registries managed by the Danish Clinical Quality Program– National Clinical Registries (RKKP). The composite measure was constructed using a complex method (the so-called King indicator method) integrating all available indicators with defined performance targets for all clinical registries. Although the method has some appealing features, it was considered problematic for routine use primarily due to the inconsistent principles used for defining performance targets in the individual clinical registries. In addition, the method was applied in a way so all relevant clinical registries were included with the consequence that the measure could reflect information from +50 clinical registries at a university hospital but only a few registries at a small regional hospital. Hence, the interpretability of the measure was questioned. As a consequence, the method was suspended in 2019 and a decision was made by RKKP to look for alternatives.

This report was prepared by the Danish Center for Clinical Health Services Research in collaboration with RKKP. The aim was:

- To provide an overview over existing methods for construction of composite indicators of quality of health care.

- To identify methods for constructing composite indicators that are informative, transparent and feasible for routine use in the Danish health care system.
- To apply these methods to a sample of Danish clinical registries.

## INTRODUCTION AND RATIONALE

### Definition

Quality indicators are widespread in health care with an increasing number. There is consequently an increasing interest for use of composite measures based on a combination of multiple indicators. A composite measure can be defined as a combination of multiple individual indicators. Whereas using individual indicators are useful for measuring specific aspects of quality and examine where the weaknesses and strengths are, using an overall measure that reflects multiple aspects and dimensions of quality can have some considerable advantages over individual indicators.

### Advantages and limitations

Composite indicators summarize the quality of care as a single value. Therefore, they can be useful when comparing, rating, ranking and selecting healthcare providers rather than assessing providers' performance according to many individual indicators. Composite indicators can make the interpretation of improvements in overall quality of care easier instead of trying to find a similar trend in multiple indicators. By using composite indicators, the amount of data in quality reports is reduced.[1] Using composite indicators rather than individual indicators may result in increased reliability since the combination of multiple individual indicators will imply that the underlying number of observations is larger.[2]

Despite these substantial advantages, composite indicators have some limitations. Hence, differences and relationships between individual indicators may be masked and information regarding specific aspect(s) of performance can be lost.[3] Using different approaches regarding construction of the composite measures may give different results. In other words, composite measures can be sensitive to the methodology that has been used.[4] Therefore,

if the construction process for the composite measures is not transparent, composite indicators may be misused and if not constructed in a methodologically sound way, the results obtained by using these indicators may not be reliable.

To construct reliable composite indicators, several steps are recommended including; developing a theoretical framework, selection of indicators, multivariable assessment of indicators, weighting and aggregation of indicators and validation of the final composite indicator. Details regarding these steps can be found elsewhere. [3, 5]

### Methods to construct composite indicators and an overview of the literature

There are different methods to construct composite indicators and these methods mostly differ in terms of weighting and aggregation of individual indicators.

**Table 1.** Scoring approaches

Method	Definition
<b>Overall percentage (Opportunity-based scoring)</b>	<p><i>Opportunity scoring</i> counts the number of times that necessary care components are given to the patients. [6] It presents the percentage of the care that patients “should” receive was actually given. It is calculated as;</p> $\frac{\text{Total number of care components provided to patients}}{\text{Total number of care components that should be provided to patients}}$
<b>Patient average (Opportunity-based scoring)</b>	Composite scores are calculated for each patient (number of care indicators delivered divided by number of patient specific eligible care indicators) and then can be averaged across all patients to calculate provider-level composite scores.[6]
<b>Indicator average</b>	For each indicator the percentage of times that indicator is fulfilled is calculated and then averaged across all indicators.[6]
<b>All-or-none (defect-free scoring)</b>	It is calculated at patient level and requires patient-level information. In this approach complete care is rewarded. <i>All-or-none</i> approach rewards only complete care and calculates what percentage of patients received “full care”. In all-or-none approach each patient get a score of 0 (at least one care

component that should be provided is not given) or 1 (all care components that patient is eligible is provided). This approach can be preferred especially (1) when process indicators interact or partial achievement of a series of steps is insufficient to obtain the desired result, (2) when adherence rates for individual indicators are very high so using methods that award partial performance will neither be helpful in order to distinguish between providers' quality of care nor motivates providers to improve the quality of care.[7] It is calculated as;

$$\text{AON} = \frac{\text{Number of patients that recieved all eligible care components}}{\text{Total number of patients}}$$

**70% standard** Composite score is similar to all-or-none scoring but using 70% treshold. [6]

Weights can be introduced into composite measures by weighting individual indicators before aggregating them and some examples regarding weighting approaches are given in Table 2.

**Table 2.** Weighting approaches

Weighting approach	Definition
<b>Equal weights</b>	All indicators receive the same weight. This approach generally indicates that all indicators are equally important in the composite. One possible limitation with this approach is that some aspects of quality may be accounted more than once, if a particular quality aspect is measured by multiple correlated indicators.
<b>Expert weights</b>	An expert panel assigns weights to individual indicators depending on the panel's criteria, such as indicators' importance, impact, evidence score, feasibility and reliability.
<b>Regression weights</b>	Each indicator is weighted according to the degree of its association with outcome. Using regression weights, the indicator most associated with outcome receives the highest weight.[8] This approach may be preferred if there is a gold standard end point.
<b>Principle component analysis (PCA) based weights</b>	PCA-based weights may be preferred when individual indicators are highly correlated. In this approach, highly correlated indicators are grouped, since



they may share same underlying characteristics. In this approach, each indicator is weighted according to its proportional factor loading.[9]

A recent systematic review done by the authors and presented at the ISQUA International Conference in October 2019. Authors searched PubMed and EMBASE databases to identify relevant studies that used composite indicators to assess process quality of care. A total of 2099 publications was identified of which 110 were included after a screening process.

Opportunity scoring was the most used scoring method, 65 out of 110 papers included opportunity scoring. Of these, 48 publications had applied the overall percentage approach and 18 publications applied patient average. The second most used method was all-or-none scoring with 40 out of 110 studies used this approach to obtain overall process quality of care. Out of 110 studies, seven papers considered 70% standard and other thresholds approach. Indicator average approach was present in 15 publications. Other approaches included; two papers using mixture models and one paper with 70% standard approach on indicator level rather than patient-level.

In terms of weighting of individual indicators before aggregation, using weights were not relevant in 23 papers using all or none scoring approach. Out of remaining 87 papers, in 77 studies equal weights were present. Unequal weights were present in nine studies: four studies considered weights obtained by expert opinion/subjective assessment, one study used regression weights, one study used weights obtained by item response theory, one study used weights obtained by Bayesian approach, one study used benefit of doubt approach (assigning hospital specific weights in order to maximize performance) and two studies applied PCA-based weights.

While 89 out of 110 publications used a single method to construct the composite measure, multiple approaches were present in 21 papers. Of those, 13 publications included opportunity scoring and all-or-none approaches together.

In short, we found that opportunity scoring and all-or-none scoring were by far the most frequently used methods in peer-reviewed publications.

## METHODS

We focused on two approaches in this report; (overall percentage) opportunity-based composite scoring (OBCS) and all-or-none (AON) scoring methods. These two complementary approaches emphasize different aspects regarding quality of care. While OBCS rewards partial performance, AON scoring only rewards complete care and promotes excellence. Therefore, these two measures have different interpretations and it can be beneficial to use both of them to get more insight regarding the quality of care.

OBCS and AON scores were calculated for each database and combined, as a “mental health care composite” which included depression and schizophrenia and a “cardiovascular care composite” that included four areas, including heart failure, atrial fibrillation, in-hospital cardiac arrest and finally rehabilitation among patients with coronary heart disease.

To construct composite indicators to evaluate overall quality of care provided to patients, only process indicators were considered for this report. Even though outcome indicators also carry important information, they can be affected by various factors that are not under control of healthcare providers and systems (e.g., patient characteristics).[15] Construction of composite measures of individual outcome indicators is possible, but careful attention to the risk of unaccounted or residual confounding is required and the interpretation of the findings is often challenging making it difficult to choose in routine

clinical practice as previously demonstrated with the monitoring of Hospital Standardized Mortality Ratios (HSMR) in Danish hospitals and as described in a previous report from RKKP. [16]

The process indicators included in the composite measures presented in the current report were all selected by the respective steering groups for each registry. The steering groups were requested to identify the individual indicators, which they found most accurate and relevant among all currently available indicators. The selected indicators are presented in (Table 3).

### Data sources

In this report, we investigated use of composite indicators for six RKKP clinical quality registries; four registries regarding cardiovascular care (heart failure, cardiac rehabilitation, atrial fibrillation and in-hospital cardiac arrest) and two registries regarding mental care (depression and schizophrenia). These registries were selected based on various reasons; (1) they are major disease areas and these registries are well-established databases that contain many individual process indicators and data from many healthcare providers, therefore, use of composite indicators may be especially beneficial for these registries and (2) to cover both somatic and mental health care in Denmark.

### Danish Depression Registry (DDD)

DDD was established in 2008 and launched in 2011 in order to monitor, assess and improve the quality of care provided to patients with depression in psychiatric hospitals in Denmark. DDD includes patients who are admitted to psychiatric hospital wards or outpatient clinics in Denmark.

DDD includes 13 indicators. Of these, 10 indicators are process indicators and 3 of them are outcome indicators.[10]

### Danish Schizophrenia Registry (DRS)

DRS was founded in 2003. Patients diagnosed with schizophrenia and receiving mental health care in psychiatric hospitals or outpatient clinics. The registry contains 21 indicators.[11]

### Danish Heart Failure Registry (DHD)

DHD was established in 2003 and achieved complete coverage in 2005. DHD contains data on inpatients and outpatients for incident patients. The registry contains 7 indicators; 5 process and 2 outcome indicators. Coverage and completeness of indicators are relatively high and are checked regularly.[12]

### The Danish Cardiac Rehabilitation Database (DHRD)

DHRD aims to improve the quality of cardiac rehabilitation to the benefit of patients with coronary heart disease and implemented in 2013. [13]

### DANARREST – Danish Registry for in-hospital Cardiac Arrest (DANA)

DANARREST was established in 2013 in order to monitor quality and quality improvement initiatives for patients with in-hospital cardiac arrest. The registry includes 7 quality of care indicators; 4 process and 3 outcome indicators.[14]

### Atrial fibrillation in Denmark (AFDK)

AFDK is a clinical quality registry which contains data for patients with atrial fibrillation from all hospitals and general practices in Denmark. The purpose of AFDK is to ensure a high quality of treatment and care. AFDK was launched in November 2016.

**Table 3.** Selected process indicators from the individual clinical registries

Registry	Included indicators
<b>Dansk Depressionsdatabase (DDD)</b>	<p><b>1a:</b> Andelen af indlagte patientforløb, der vurderes ved speciallæge i psykiatri inden for 7 dage fra indlæggelsesdato på psykiatrisk afdeling.</p> <p><b>1b:</b> Andelen af ambulante patientforløb, der vurderes ved speciallæge i psykiatri senest 30 dage efter 1. ambulante besøg.</p> <p><b>4a:</b> Andelen af indlagte patientforløb, der har fået vurderet sværhedsgrad af depression ved Hamiltons Depressionsskala (HAM-D17) inden for 7 dage fra indlæggelsesdato på psykiatrisk afdeling.</p> <p><b>4b:</b> Andelen af ambulante patientforløb, der har fået vurderet sværhedsgrad af depression ved Hamiltons Depressionsskala (HAM-D17) senest 30 dage efter 1. ambulante besøg.</p> <p><b>5a:</b> Andelen af indlagte patientforløb, der har fået vurderet sværhedsgrad af depression ved Hamiltons Depressionsskala (HAM-D17) ved udskrivning fra psykiatrisk afdeling.</p> <p><b>5b:</b> Andelen af ambulante patientforløb, der har fået vurderet sværhedsgrad af depression ved Hamiltons Depressionsskala (HAM-D17) ved afslutning af ambulant forløb.</p> <p><b>6a:</b> Andelen af indlagte patientforløb, hvor patienten er undersøgt for selvmordsrisiko i forbindelse med indlæggelse på psykiatrisk afdeling.</p> <p><b>6b:</b> Andelen af ambulante patientforløb, hvor patienten er undersøgt for selvmordsrisiko i forbindelse med 1. ambulante besøg.</p> <p><b>7:</b> Andelen af indlagte patientforløb, hvor patienten er undersøgt for selvmordsrisiko ved udskrivning fra psykiatrisk afdeling.</p>
<b>Den Nationale Schizophrenia Database (DRS)</b>	<p><b>1a_I:</b> Andelen af incidente patienter, som udredes for psykopatologi ved specialpsykolog/speciallæge i psykiatri.</p> <p><b>1a_II:</b> Andelen af incidente patienter, som udredes for psykopatologi og interviewes med diagnostisk instrument (SCAN, PSE, OPCRIT, KIDDI-SADS for børn og unge).</p> <p><b>1b:</b> Andelen af incidente patienter, som inden for 2 år udredes for kognitiv funktion ved psykolog.</p> <p><b>1c:</b> Andelen af incidente patienter, som udredes for sociale støttebehov.</p>

**2b:** Andelen af patienter, som får mere end ét antipsykotikum.

**4a:** Andelen af patienter, som får målt BMI.

**4e:** Andelen af patienter, som får målt blodtryk.

**5a:** Andelen af incidente patienter, hvor pårørende tager imod tilbuddet om kontakt.

**6:** Andelen af incidente patienter, der inden for 2 år modtager psykoedukation i manualiserede forløb.

**7a:** Andelen af patienter, der modtager psykiatrisk efterbehandling ved udskrivelsen.

**7b:** Andelen af patienter, der inden for ½ år efter udskrivelsen følges i ambulant regi (kun ptt. der udskrives til ambulant behandling i sekundærsektoren).

**8:** Andelen af indlagte patienter, som får vurderet selvmordsrisiko, dokumenteret i journalen, ved udskrivelsen.

**1:** Andelen af patienter, der tidligst 6 måneder inden og senest 7 x hverdage efter indlæggelse/første ambulante kontakt, får foretaget ekkokardiograf.

**3a:** Andelen af patienter med nedsat venstre ventrikel funktion (LVEF $\leq$  40%), der er i, opstartes i/forsøges opstartet i, behandling med: ACE-hæmmer/ATII-receptor antagonist senest 8 uger efter indlæggelse/første ambulante kontakt.

**3b:** Andelen af patienter med nedsat venstre ventrikel funktion (LVEF=40%), der er opstartes i/forsøges opstartet i, behandling med Betablokker senest 12 uger efter indlæggelse/første ambulante kontakt.

**3c:** Andelen af symptomatiske patienter, med nedsat venstre ventrikel funktion (LVEF=35 %) der er i/opstartes i, forsøges opstartet i, behandling med aldosteron antagonist senest 12 uger efter indlæggelse/første ambulante kontakt.

**5:** Andel af patienter med nedsat venstre ventrikel funktion (LVEF $\leq$  40%), der under opfølgning i hjertesvigtklinik/under indlæggelse påbegynder et individualiseret undervisningsprogram som kan indeholde følgende temaer: (ernæring, fysisk træning, symptom-, medicin- og sygdomsforståelse, risikofaktorer) indenfor 12 uger efter indlæggelse/første ambulante kontakt.

**Dansk Hjertesvigt  
Database  
(DHD)**

<p><b>Dansk Hjerterehabiliterings-database (DHRD)</b></p>	<p><b>1b:</b> Andel af patienter med iskæmisk hjertesygdom som er vedholdende, blandt deltagere i hjerterehabilitering.</p> <p><b>2:</b> Andel af patienter med iskæmisk hjertesygdom som gennemfører mindst 80 % af de planlagte træningssessioner.</p> <p><b>4:</b> Andel af patienter med iskæmisk hjertesygdom, som har modtaget diætbehandling v. klinisk diætist/cand.scient. klinisk ernæring, ved afslutning af hjerterehabiliteringsforløbet.</p> <p><b>7:</b> Andel af patienter med iskæmisk hjertesygdom og uden kendt diabetes ved indlæggelsen, som ved afslutningen af hjerterehabiliteringsforløbet er screenet for diabetes.</p> <p><b>8:</b> Andel af patienter med akut koronart syndrom, der er screenet for depression ved afslutningen af hjerterehabiliteringsforløbet.</p> <p><b>9:</b> Andel af patienter med iskæmisk hjertesygdom i blodfortyndende behandling ved afslutning af hjerterehabiliteringsforløbet.</p> <p><b>10:</b> Andel af patienter med iskæmisk hjertesygdom, der er i statin-behandling ved afslutning af hjerterehabiliteringsforløbet.</p> <p><b>11:</b> Andel af patienter med akut koronart syndrom, der er i betablokade-behandling ved afslutning af hjerterehabiliteringsforløbet</p>
<p><b>DANARREST – Registrering af hjertestop på hospital (DANA)</b></p>	<p><b>1:</b> Andel af patienter med bevidnet hjertestop</p> <p><b>3:</b> Andel af patienter, hvor tid fra erkendelsen af hjertestop til start af hjertelungeredning var <math>\leq</math> 1 minut.</p> <p><b>4:</b> Andel af patienter, hvor tid fra erkendelsen af hjertestop til påbegyndt hjerterytmearalyse var <math>\leq</math> 2 minutter.</p>
<p><b>Atrieflimren i Danmark (AFDK)</b></p>	<p><b>1:</b> Andel af nydiagnosticerede patienter med atrieflimren, der har ventetid på max. 14 dage fra diagnosticering til opstart i antikoagulationsbehandling (hvor antikoagulationsbehandling er indiceret).</p> <p><b>2:</b> Andel af nydiagnosticerede patienter med atrieflimren, der har fået udført ekkokardiografi fra 6 måneder før, til 3 måneder efter 1. diagnosedato.</p> <p><b>9:</b> Andel af nydiagnosticerede patienter med atrieflimren som får et struktureret undervisningsprogram indenfor det 1. år efter at diagnosen er stillet.</p>

## Data analysis

For databases, observations which indicates the quality indicator is not eligible for the specific patient (denominator = 0) were dropped from the analysis, since we are only interested in care components that are appropriate for patients' care.

We summed numerator and denominator for each patient pathway. We did not do this in patient-level, because when a patient got multiple patient pathways, the required care components can be different/independent for each patient pathway. Therefore, all numbers and interpretations in this report are for patient pathways and not for patients.

When constructing composite indicators, all indicators should be coded in a similar way (e.g., 0 indicates undesired situation and 1 indicates desired situation for all indicators). Therefore, for Schizophrenia database, while all other process indicators in the composite are coded as 0 for undesired and 1 for desired result, indicator 2b (Proportion of patients receiving more than one antipsychotic drug) was coded in the opposite way as 0 indicates desired result (patient does not use more than one antipsychotic drug) and the standard for this indicator is  $\leq 20\%$ . We recoded this indicator as 0=1 and 1=0 in order to include in the composite indicator, therefore 1 indicates the patient does not take more than one antipsychotic drug and therefore standard for the indicator changes to  $\geq 80$ .

For cardiovascular databases, we preferred to use hospitals as provider level. For schizophrenia and depression databases, we used 6-digit departments as provider level, because using 4-digit provider level would result in only one or two providers for each region for those two databases.

Scores for individual indicator achievement, OBCS and AON for national level, regional level and for each provider were obtained using Stata.



## RESULTS

### Quality of care for patients with heart failure in Denmark (DHD)

There were 3,254 patients and 3,254 patient pathways between 01.07.2018 and 30.06.2019 in the DHD database. Of those, 690 were from Capital Region, 747 from Zealand, 804 from South Denmark, 753 from Central Denmark and 260 from North Denmark. OBCS and AON were constructed for Denmark, each region and each hospital (table 4).

In Denmark, between July 2018 and June 2019, 84% of the necessary care components are provided to patients with heart failure, indicated by OBCS. However, only 48% of the patients/patient pathways received complete set of care that they were eligible. This gap between OBCS and AON implies that even though “partial care” of the patients were high, less than half of the patients received the full care and there may be some indicator(s) with very low achievement. In DHD database, it can be seen that this difference can be caused by indicator 3c.

Partial performance was high for each region (81.7 – 85.0) and there was not a big variation between regions. However, AON scores were varied between regions (39.2% – 56.0%). Even though South Denmark and North Denmark Region performed better than Central Denmark on OBCS, Central Denmark had a higher percentage of patients, who received complete care without any missing components.

At hospital-level, Hospitalsenhed Midt was the best performing hospital, both on OBCS and AON score. For all of the hospitals OBCSs were quite high, whereas AON scores were more distinctive. For example, while Glostrup hospital (n=115) provided complete set of care for the 30% of the patients, Aarhus University Hospital (n=123) provided defect-free care to 62.3% of its patients.

### Quality of care for patients with in-hospital cardiac arrest in Denmark (DANA)

There were 2,041 patients and 2,090 patient pathways between 01.01.2018 and 31.12.2018 for the DANA database. Of those, 697 were from Capital Region, 356 from Zealand, 421 from South Denmark, 430 from Central Denmark and 192 from North Denmark Region.

For 2090 patient pathways in Denmark for the specified time period, 80% of the necessary care was given to the patients, which was indicated by OBCS (Table 5). For all patient pathways for in-hospital cardiac arrest in Denmark, 55% of those received complete-care which is shown by all-or-none score. The performance of the individual regions ranged between 77 and 83%. Central Denmark region was the highest performing region, both according to OBCS and AON score. Patients in Central Denmark received 83% of the care components that they were eligible whereas 63% of those received defect-free care.

At hospital-level, Vejle Hospital was the highest performing hospital (94% for OBCS and 86% for AON), however for this provider, the number of patients and patient pathways was relatively low (n=29) which may affect the reliability of the results. Similarly, Aalborg University Hospital in Thisted had the lowest scores for both OBCS and AON scores, however, the study population was also very small (n=10).

The second highest performing hospital was Aarhus University Hospital with a relatively high number of patient pathways (n=166). In Aarhus University Hospital, 88% of necessary care components were provided to patients in this provider whereas 126 out of 166 (76%) patient pathways received all care components that were required.

### Quality of care for cardiac rehabilitation in Denmark (DHRD)

There were 7,821 patients and 7,881 patient pathways between 01.06.2017 and 31.05.2018 for the DHRD database. Of those, 1,420 patient pathways were from Capital region, 1,315

from Zealand, 2,744 from South Denmark, 1,778 from Central Denmark and 625 from North Denmark.

For 7,881 patient pathways in Denmark for DHRD, 72% of necessary care components were provided. The AON scores for DHRD was lower than previously discussed two registries, 24% in country level, which indicates that only 24% of patient pathways received all the care they were eligible (Table 6).

The best performing regions were Zealand and South Denmark according both to the OBCS and the AON score.

At provider-level, Sydvestjysk Hospital (n=556) performed significantly better than other providers. In Sydvestjysk Hospital, patients received 92% of care components they were eligible and 368 out of 556 patients (66%) received defect-free care.

In Hospitalsenheden Vest (n=474), even though partial performance was 67%, only 58 patients (12.3%) received full care that they were eligible.

#### Quality of care for patients with atrial fibrillation in Denmark (AFDK)

We investigated quality of care provided to patients with atrial fibrillation between 01.06.2016 and 31.05.2017 in Denmark. The results are presented in Table 7.

There were 21,599 patients and patient pathways. Of those, 6426 patients/patient pathways were from the Capital, 3685 from Zealand, 4705 from South Denmark, 4393 from Central Denmark and 2390 from North Denmark.

For all patients with AF in Denmark for this time period, it can be seen that 52% of necessary care components were provided, whereas 13% of these patients received all the care that they were eligible.

Region-level scores shows that Central Denmark scored highest both at OBCS and AON score, whereas Capital Region was the lowest performing region for OBCS.

In each level and provider, there were substantial differences between OBCS and AON score. For example, for patients with AF in Sjællands University Hospital 50% of necessary care was provided, however, only 9% of the patients received complete care. The situation was similar for all providers; suggesting that there can be at least one individual indicator with very low achievement rates, which was indicator number 9 in this database.

### Overall quality of cardiovascular care in Denmark

Overall cardiovascular care composite measures were constructed using the selected process indicators from all four registries (Table 8).

For patient pathways for any of these four conditions (n=34,824), 63% of the necessary care was provided whereas 21% of the patient pathways received complete set of care.

It is important to emphasize that the individual composite scores for DHD, DHRD and DANA databases were higher, however, because AFDK had lower scores and a much higher number of observations, the overall composite score is highly influenced by the performance on AFDK. When there is imbalanced number of observations for individual indicators or different databases, the interpretations should be done carefully.

### Quality of care for patients with depression in Denmark (DDD)

There were 14,295 patients and 17,046 patient pathways between 01.01.2018 and 31.12.2018 in the DDD database. Of those, 5,300 patient pathways were from Capital Region, 1,698 from Zealand, 4,342 from South Denmark, 4,061 from Central Denmark and 1,645 from North Denmark.

In Denmark-level, patients with depression received 38% of required care components and for 18% of patient pathways, all required care components were provided to patients (Table 9).

At regional level, Capital Region had the lowest scores. However, in Capital region there were providers with high number of observations and all “0” numerators, which may indicate either complete lack of care or data registration problems. Composite scores are vulnerable to underlying data quality problems. Therefore, the results for especially this region should be interpreted carefully. South Denmark Region was the best performing region for both OBCS and AON scores.

At provider-level, PHO Regionspsykiatri Horsens was the best performing provider for patients with schizophrenia. In PHO Regionspsykiatri Horsens (n=430), 74% of the necessary care components were provided.

### Quality of care for patients with schizophrenia in Denmark (DRS)

There were 16,704 patients/patient pathways between 01.01.2018 and 31.12.2018. A total of 6,483 of those were from the Capital Region, 2,461 from Zealand, 3,767 from South Denmark, 2,930 from Central Denmark and 1,452 from North Denmark Region.

In Denmark-level, patients with depression received 58% of required care components and for 28% of the patients/patient pathways, all required care components were provided (table 10).

At region-level, Capital Region had the lowest scores. In Capital region, 31% of the necessary care components were provided to patients and only 3% of the patients / patient pathways received complete care. South Denmark and Central Jutland were the best performing regions.

At department level, Børne- og Ungdomspsykiatrisk Afdeling and Afdeling for Depression og Angst at Aarhus University Hospital had the highest scores, however, the number of patients registered by these providers were relatively low, 34 and 26 respectively. One of the best performing providers with a relatively high number of patients (n=369) was PSY Psykiatrisk

afdeling (Svendborg). In PSY Psykiatrisk afdeling (Svendborg), 87% of the necessary care components were provided to patients and 67% of the patients/patient pathways received defect-free care.

### Overall mental health care quality in Denmark

Overall mental health care composite measures were constructed by combining DDD and Schizophrenia databases and results were given (Table 11).

Unlike cardiovascular composite measure, in mental healthcare composite the number of patient pathways for depression (n= 17,046) and schizophrenia (n=17,093) were very comparable. Therefore, overall mental healthcare score was affected by performance on depression and schizophrenia equally.

For patient pathways for any of these two conditions (n=34,139), 50% of the necessary care components were provided, whereas 23% of the patient pathways received complete set of care.

South Denmark was the best performing region for overall mental healthcare composite measure, both on OBCS and AON score, whereas Capital Region had the lowest scores among all.

In provider level, PSY Psykiatrisk afdeling (Svendborg) and PHO Regionspsykiatri Horsens were the best performing providers for this overall measure. In both providers, patients received 80% of the required care, while defect-free care were given to 50% of the patient pathways.

**Table 4. Results for DHD**

	Individual Indicator Achievement					Composite Indicators	
	1	3a	3b	3c	5	OBCS	AON
<b>National level</b>							
Denmark	96.2 (95.6 – 96.8)	92.8 (91.7 – 93.7)	86.7 (85.3 – 88.0)	43.0 (40.9 – 45.2)	91.0 (90.0 – 91.9)	84.1 (83.5 – 84.7)	48.0 (46.3 – 49.7)
<b>Regional level</b>							
Capital Region	94.2 (92.1 – 95.8)	93.3 (90.9 – 95.1)	85.3 (82.5 – 87.8)	42.6 (38.5 – 46.8)	92.4 (90.0 – 94.3)	83.6 (82.4 – 84.7)	45.4 (41.6 – 49.1)
Zealand Region	97.3 (95.8 – 98.3)	94.3 (92.2 – 95.8)	82.4 (79.3 – 85.1)	30.1 (26.2 – 34.3)	90.4 (87.7 – 92.5)	81.7 (80.6 – 82.8)	39.2 (35.7 – 42.7)
South Denmark Region	97.5 (95.9 – 98.5)	93.3 (91.0 – 95.0)	90.0 (87.7 – 92.0)	43.6 (39.3 – 48.0)	95.5 (93.4 – 96.9)	85.8 (84.6 – 86.9)	49.4 (45.9 – 52.8)
Central Jutland Region	96.4 (94.6 – 97.6)	89.7 (87.4 – 91.7)	88.6 (85.6 – 91.1)	54.0 (49.1 – 58.8)	85.2 (82.4 – 87.7)	84.7 (83.1 – 86.1)	56.0 (52.5 – 59.6)
North Denmark Region	94.4 (90.2 – 96.8)	93.8 (89.9 – 96.2)	87.2 (81.2 – 91.4)	48.5 (41.0 – 56.1)	90.6 (86.0 – 93.8)	85.0 (82.7 – 87.1)	53.1 (47.0 – 59.2)
<b>Provider-level</b>							
<b>Capital Region</b>							
Amager Hospital	86.1 (65.5 – 95.3)	95.6 (89.9 – 98.2)	65.2 (44.9 – 81.2)	36.4 (17.5 – 60.7)	95.6 (90.6 – 98.0)	77.2 (71.0 – 82.3)	36.1 (19.6 – 52.6)
Bispebjerg og Frederiksberg	88.5 (81.0 – 93.3)	93.5 (84.7 – 97.4)	94.6 (86.5 – 97.9)	49.4 (38.7 – 60.1)	91.3 (80.0 – 96.5)	84.6 (81.2 – 87.5)	46.9 (37.6 – 56.2)
Bornholms Hospital	100 (NA)	84.0 (60.7 – 94.7)	80.0 (57.5 – 92.2)	40.9 (22.4 – 62.4)	84.0 (61.0 – 94.6)	79.0 (68.4 – 86.8)	44.4 (24.4 – 64.5)
Glostrup Hospital	89.6 (80.9 – 94.6)	86.6 (77.2 – 92.5)	71.1 (60.1 – 80.1)	41.2 (30.8 – 52.6)	89.6 (80.9 – 94.6)	77.3 (73.2 – 81.0)	30.4 (21.9 – 39.0)
Herlev og Gentofte Hospital	97.9 (94.9 – 99.2)	96.1 (92.0 – 98.1)	92.1 (87.5 – 95.1)	39.9 (32.9 – 47.3)	98.2 (95.1 – 99.4)	87.3 (85.4 – 88.9)	50.4 (44.1 – 56.7)
Hvidovre Hospital	95.2 (86.7 – 98.3)	91.5 (77.6 – 97.1)	80.8 (67.3 – 89.7)	48.6 (32.2 – 65.3)	83.0 (65.9 – 92.5)	82.1 (76.9 – 86.3)	51.6 (38.8 – 64.4)
Nordsjællands Hospital	97.8 (94.2 – 99.2)	96.5 (89.8 – 98.9)	82.8 (74.4 – 88.8)	42.9 (30.2 – 56.5)	88.5 (78.5 – 94.2)	84.2 (80.3 – 87.4)	48.4 (38.0 – 58.7)
<b>Zealand Region</b>							
Holbæk Sygehus	96.2 (91.3 – 98.4)	94.6 (89.2 – 97.4)	89.7 (84.4 – 93.4)	25.9 (19.7 – 33.3)	87.4 (81.8 – 91.4)	82.2 (79.7 – 84.4)	39.8 (33.1 – 46.5)
Nykøbing Falster Sygehus	92.3 (81.3 – 97.1)	90.2 (77.1 – 96.2)	90.2 (78.9 – 95.8)	52.5 (39.3 – 65.4)	97.9 (95.0 – 99.1)	86.3 (81.5 – 90.0)	52.3 (39.8 – 64.8)
Næstved	98.3 (95.1 – 99.4)	98.1 (95.1 – 99.3)	76.0 (65.5 – 84.0)	22.2 (14.0 – 33.5)	88.5 (79.1 – 93.9)	80.5 (77.9 – 82.9)	32.5 (23.7 – 41.2)
Slagelse	98.0 (95.3 – 99.2)	92.4 (87.6 – 95.5)	74.7 (68.2 – 80.2)	25.4 (18.7 – 33.6)	90.1 (85.9 – 93.2)	79.1 (77.0 – 81.1)	36.2 (30.3 – 42.1)
Sjællands Universitetshospital	100 (NA)	95.6 (88.0 – 98.4)	88.9 (80.0 – 94.1)	41.0 (31.5 – 51.3)	95.6 (86.7 – 98.6)	85.4 (81.8 – 88.4)	44.0 (33.6 – 54.3)
<b>South Denmark Region</b>							
Kolding Sygehus	100 (NA)	92.7 (78.9 – 97.7)	85.4 (69.2 – 93.8)	28.6 (14.7 – 48.1)	95.0 (84.8 – 98.3)	82.3 (76.7 – 86.7)	37.0 (22.5 – 51.4)
Odense Universitetshospital, Odense	96.6 (92.8 – 98.5)	92.4 (87.0 – 95.7)	84.9 (77.2 – 90.3)	37.0 (29.8 – 44.7)	94.2 (87.3 – 97.5)	82.5 (79.8 – 84.9)	38.5 (31.3 – 45.7)
Odense Universitetshospital, Svendborg	96.4 (92.8 – 98.3)	94.0 (89.2 – 96.8)	96.7 (92.2 – 98.6)	48.1 (38.7 – 57.7)	97.9 (94.0 – 99.3)	87.8 (85.3 – 89.9)	52.4 (44.7 – 60.0)
Sydvestjysk Sygehus	100 (NA)	95.6 (88.9 – 98.3)	85.1 (77.6 – 90.4)	50.6 (40.0 – 61.1)	100	88.1 (85.6 – 90.3)	57.9 (49.6 – 66.1)
Sygehus Sønderjylland, Haderslev	96.3 (91.2 – 98.5)	89.3 (81.1 – 94.1)	91.7 (84.2 – 95.8)	31.6 (22.4 – 42.6)	90.9 (83.2 – 95.3)	82.2 (78.7 – 85.2)	38.8 (30.4 – 47.2)

	Individual Indicator Achievement					Composite Indicators	
	1	3a	3b	3c	5	OBCS	AON
Sygehus Sønderjylland, Sønderborg	97.6 (95.1 – 98.6)	97.1 (92.8 – 98.9)	94.3 (84.5 – 98.0)	46.4 (29.5 – 64.2)	85.7 (65.4 – 95.0)	86.3 (81.4 – 90.0)	50.0 (34.2 – 65.8)
Vejle Sygehus	97.9 (94.0 – 99.3)	97.4 (93.0 – 99.1)	93.6 (83.9 – 97.7)	66.1 (52.9 – 77.2)	98.6 (96.7 – 99.4)	92.2 (88.6 – 94.7)	72.6 (63.1 – 81.2)
<b>Central Jutland Region</b>							
Aarhus							
Universitetshospital Hospitalsenhed Midt, Silkeborg	100 (NA)	95.1 (87.2 – 98.2)	90.2 (82.5 – 94.7)	56.8 (47.7 – 65.5)	89.2 (81.8 – 93.8)	87.6 (84.1 – 90.4)	59.3 (50.5 – 68.1)
Regionshospitalet Randers	100 (NA)	100 (NA)	98.2 (95.9 – 99.3)	72.9 (59.3 – 83.3)	100 (NA)	95.0 (91.3 – 97.2)	79.0 (68.6 – 89.4)
Regionshospitalet Horsens	100 (NA)	88.1 (77.4 – 94.1)	88.1 (77.6 – 94.0)	46.4 (33.6 – 59.8)	54.5 (42.1 – 66.4)	76.8 (71.9 – 81.1)	33.3 (22.2 – 44.5)
Hospitalsenheden Vest	92.7 (87.7 – 95.8)	77.8 (70.5 – 83.8)	76.0 (68.4 – 82.3)	36.1 (28.4 – 44.6)	84.7 (78.6 – 89.3)	76.5 (73.2 – 79.5)	40.3 (33.5 – 47.0)
Hospitalsenhed Midt, Viborg/Skive	95.2 (90.5 – 97.6)	89.5 (82.0 – 94.1)	91.4 (84.3 – 95.5)	56.4 (43.9 – 68.2)	79.0 (69.7 – 86.0)	84.6 (80.6 – 88.0)	60.3 (52.2 – 68.3)
	96.5 (92.4 – 98.5)	97.4 (93.0 – 99.1)	98.3 (94.9 – 99.4)	67.4 (56.8 – 76.5)	98.2 (94.9 – 99.4)	92.9 (90.7 – 94.6)	72.9 (65.6 – 80.3)
<b>North Denmark Region</b>							
Aalborg							
Universitetshospital Aalborg	96.2 (89.6 – 98.7)	96.9 (90.3 – 99.1)	93.8 (86.1 – 97.4)	67.1 (56.7 – 76.0)	90.6 (81.6 – 95.5)	89.9 (86.7 – 92.4)	62.3 (52.9 – 71.6)
Universitetshospital, Hobro	100 (NA)	87.5 (69.5 – 95.5)	79.2 (57.2 – 91.5)	19.0 (7.1 – 42.0)	70.8 (52.1 – 84.4)	72.6 (63.8 – 80.0)	16.7 (0.6 – 32.7)
Universitetshospital, Thisted	93.7 (86.1 – 97.2)	86.7 (72.7 – 94.1)	81.7 (69.9 – 90.0)	38.5 (24.7 – 54.3)	95.0 (85.7 – 98.4)	82.9 (77.6 – 87.1)	55.7 (44.5 – 66.9)
Regionshospitalet Nordjylland Ven	88.2 (72.3 – 94.9)	100 (NA)	84.6 (71.1 – 92.8)	37.0 (19.3 – 59.1)	94.6 (84.0 – 98.0)	83.9 (79.2 – 87.8)	47.1 (32.9 – 61.2)



**Table 5.** Results for DANA database

	Individual Indicator Achievement			Composite indicators	
	1	3	4	OBCS	AON
<b>National level</b>					
Denmark	82.0 (80.3 – 83.7)	95.7 (94.8 – 96.5)	62.4 (60.2 – 64.5)	80.0 (79.1 – 81.0)	55.3 (53.1 – 57.4)
<b>Regional level</b>					
Capital Region	81.0 (77.9 – 83.7)	95.7 (93.7 – 97.0)	58.3 (54.3 – 62.1)	78.2 (76.2 – 80.1)	49.9 (46.2 – 53.7)
Zealand Region	81.5 (76.9 – 85.4)	95.7 (92.5 – 97.6)	62.2 (57.2 – 67.1)	79.7 (76.8 – 82.4)	53.9 (48.7 – 59.2)
South Denmark Region	85.2 (81.7 – 88.2)	94.8 (91.7 – 96.8)	65.1 (60.1 – 69.7)	81.5 (79.2 – 83.7)	59.1 (54.4 – 63.9)
Central Jutland Region	83.3 (79.9 – 86.3)	98.1 (95.9 – 99.1)	67.1 (62.4 – 71.5)	83.2 (80.9 – 85.2)	62.6 (58.0 – 67.1)
North Denmark Region	77.2 (70.4 – 82.8)	92.6 (87.1 – 95.9)	62.7 (55.8 – 69.1)	77.4 (73.9 – 80.6)	52.1 (44.9 – 59.2)
<b>Provider-level</b>					
<b>Capital Region</b>					
Rigshospitalet	90.2 (85.0 – 93.8)	93.5 (89.2 – 96.1)	64.7 (57.4 – 71.3)	82.7 (79.2 – 85.7)	60.3 (53.7 – 66.8)
Bispebjerg og Frederiksberg	75.0 (62.7 – 84.2)	94.8 (88.3 – 97.8)	60.0 (50.7 – 68.6)	76.4 (69.8 – 82.0)	49.0 (38.8 – 59.1)
Amager og Hvidovre Hospital	80.5 (70.5 – 87.7)	95.0 (88.6 – 97.9)	47.6 (37.3 – 58.0)	74.2 (67.8 – 79.6)	41.0 (30.2 – 51.8)
Herlev og Gentofte Hospital	75.0 (69.3 – 80.0)	99.5 (98.6 – 99.8)	64.4 (56.8 – 71.3)	79.6 (75.6 – 83.0)	52.8 (45.4 – 60.1)
Hospitalerne i Nordsjælland	77.6 (68.7 – 84.5)	95.3 (88.0 – 98.3)	40.6 (31.6 – 50.1)	71.2 (66.7 – 75.4)	34.0 (24.8 – 43.1)
Bornholms Hospital	76.9 (46.8 – 92.7)	92.3 (79.9 – 97.3)	53.8 (28.3 – 77.5)	74.4 (52.9 – 88.2)	46.1 (14.8 – 77.5)
<b>Zealand Region</b>					
Holbæk Sygehus	71.2 (58.4 – 81.4)	95.9 (87.4 – 98.7)	61.6 (50.3 – 71.8)	76.3 (69.3 – 82.0)	49.3 (37.6 – 61.0)
Nykøbing Falster Sygehus	92.5 (81.7 – 97.1)	96.2 (89.6 – 98.7)	72.5 (61.6 – 81.2)	87.1 (81.1 – 91.4)	68.7 (58.4 – 79.1)
Slagelse Sygehus	80.9 (68.7 – 89.2)	90.2 (77.6 – 96.0)	52.5 (39.3 – 65.3)	74.6 (67.6 – 80.5)	48.4 (35.8 – 61.0)
Sjællands Universitetshospital	80.8 (73.6 – 86.5)	97.8 (93.8 – 99.2)	61.0 (52.9 – 68.5)	79.7 (76.0 – 82.9)	51.1 (42.7 – 59.5)
<b>South Denmark Region</b>					
Odense Universitetshospital	88.3 (84.2 – 91.4)	94.5 (91.8 – 96.3)	66.1 (60.8 – 71.1)	82.8 (79.6 – 85.5)	61.3 (55.7 – 66.8)
Sygehus Sønderjylland	72.5 (57.1 – 83.9)	91.9 (77.7 – 97.3)	34.2 (19.8 – 52.3)	66.1 (57.1 – 74.0)	30.0 (15.2 – 44.8)
Sydvestjysk Sygehus	71.4 (36.7 – 91.5)	85.7 (67.1 – 94.6)	57.1 (19.4 – 88.1)	71.4 (47.3 – 87.4)	42.9 (0 – 93.0)
Kolding Sygehus	72.1 (56.1 – 83.9)	100 (NA)	67.4 (52.2 – 79.7)	79.8 (71.4 – 86.3)	55.8 (40.3 – 71.3)
Vejle Sygehus	93.1 (82.1 – 97.5)	96.5 (92.1 – 98.5)	93.1 (81.2 – 97.7)	94.2 (83.3 – 98.2)	86.2 (72.9 – 99.5)
<b>Central Jutland Region</b>					
Regionshospitalet Horsens	78.7 (64.3 – 88.4)	100 (NA)	78.7 (64.3 – 88.3)	85.8 (77.6 – 91.4)	61.4 (46.4 – 76.3)
Aarhus Universitetshospital	86.1 (80.0 – 90.6)	96.5 (90.7 – 98.8)	79.2 (70.4 – 85.8)	87.7 (83.5 – 90.9)	75.9 (69.3 – 82.5)
Hospitalsenhed Midt	80.2 (68.4 – 88.4)	100 (NA)	61.8 (51.0 – 71.6)	80.7 (74.2 – 85.8)	55.1 (43.8 – 66.4)
Hospitalsenheden Vest	81.5 (71.8 – 88.4)	96.2 (88.2 – 98.8)	50.0 (38.1 – 61.9)	76.0 (70.2 – 81.0)	44.9 (33.6 – 56.2)
Regionshospitalet Randers	85.5 (74.2 – 92.3)	100 (NA)	63.1 (49.5 – 74.8)	83.1 (76.1 – 88.4)	59.4 (47.0 – 71.7)
<b>North Denmark Region</b>					
Aalborg Universitetshospital, Thisted	70.0 (40.3 – 89.0)	80.0 (54.8 – 92.9)	20.0 (6.3 – 48.2)	56.7 (38.7 – 73.0)	20.0 (0 – 50.1)

	Individual Indicator Achievement			Composite indicators	
	1	3	4	OBCS	AON
Aalborg Universitetshospital	79.6 (72.6 – 85.2)	96.1 (90.2 – 98.5)	70.7 (63.2 – 77.2)	82.0 (78.1 – 85.4)	58.3 (50.5 – 66.2)
Regionshospital Nordjylland Ven	65.4 (45.8 – 80.8)	76.9 (55.5 – 89.9)	30.8 (14.4 – 54.1)	57.7 (44.4 – 69.9)	26.9 (8.6 – 45.2)

**Table 6.** Results for DHRD database

	Individual Indicator achievement								Composite Indicators	
	1b	2a	4	7	8	9	10	11	OBCS	AON
<b>National level</b>										
Denmark	59.6 (58.3 – 60.9)	67.4 (65.5 – 69.2)	28.4 (27.1 – 29.6)	96.8 (96.1 – 97.4)	68.7 (67.1 – 70.3)	96.8 (96.2 – 97.3)	95.7 (95.0 – 96.3)	67.5 (66.0 – 68.9)	72.4 (71.9 – 72.8)	23.6 (22.6 – 24.6)
<b>Regional level</b>										
Capital Region	50.9 (48.2 – 53.6)	70.0 (65.1 – 74.5)	12.7 (10.5 – 15.3)	96.6 (94.7 – 97.8)	92.3 (89.3 – 94.4)	97.3 (95.8 – 98.3)	94.7 (92.6 – 96.2)	58.8 (54.8 – 62.8)	68.9 (67.9 – 69.9)	16.5 (14.6 – 18.5)
Zealand Region	73.9 (70.9 – 76.8)	59.4 (55.1 – 63.5)	41.6 (38.1 – 45.2)	98.8 (97.5 – 99.5)	70.2 (66.2 – 73.9)	96.4 (95.1 – 97.4)	95.1 (93.3 – 96.5)	66.4 (61.8 – 70.7)	76.5 (75.4 – 77.5)	30.1 (27.6 – 32.6)
South Denmark Region	53.9 (51.8 – 56.0)	70.5 (67.7 – 73.2)	48.3 (45.9 – 50.8)	96.4 (95.4 – 97.2)	69.4 (66.3 – 72.3)	97.0 (95.9 – 97.7)	96.5 (95.4 – 97.3)	70.8 (68.2 – 73.2)	74.6 (73.8 – 75.4)	30.0 (28.3 – 31.8)
Central Jutland Region	68.3 (65.6 – 70.9)	61.8 (48.6 – 73.4)	4.9 (3.8 – 6.2)	95.9 (94.3 – 97.1)	40.6 (36.6 – 44.9)	96.3 (95.1 – 97.2)	95.4 (94.0 – 96.4)	72.4 (69.0 – 75.5)	68.4 (67.6 – 69.1)	16.5 (14.7 – 18.2)
North Denmark Region	53.0 (48.5 – 57.4)	65.3 (56.5 – 73.2)	21.1 (17.0 – 25.8)	97.0 (93.5 – 98.6)	96.6 (93.8 – 98.2)	97.8 (95.6 – 98.9)	96.7 (94.2 – 98.1)	59.8 (52.9 – 66.3)	72.2 (70.6 – 73.6)	17.8 (14.8 – 20.8)
<b>Provider-level</b>										
<b>Capital Region</b>										
Amager	1.3 (0.5 – 3.1)	#	#	#	#	#	#	#	1.3 (0.6 – 2.9)	1.3 (0 – 3.8)
Bispebjerg og Frederiksberg	75.0 (46.7 – 91.1)	#	#	#	#	#	#	#	75.0 (46.7 – 91.1)	75.0 (46.3 – 100)
Gentofte Hospital	36.4 (30.4 – 42.7)	85.7 (64.4 – 95.2)	0 (NA)	100 (NA)	92.6 (80.5 – 97.5)	93.0 (85.2 – 96.8)	88.0 (80.1 – 93.0)	54.3 (50.4 – 66.3)	61.6 (58.4 – 64.8)	7.5 (4.1 – 10.9)
Glostrup Hospital	65.2 (58.0 – 71.7)	52.2 (40.4 – 63.8)	0 (NA)	100 (NA)	100 (NA)	100 (NA)	99.0 (97.6 – 99.6)	73.0 (60.4 – 82.7)	72.1 (69.6 – 74.4)	23.6 (17.7 – 29.6)
Herlev og Gentofte	16.1 (6.0 – 36.7)		#	#	#	#	#	#	41.5 (20.7 – 65.8)	3.2 (0 – 9.8)
Nordsjællands Hospital, Frederikssund	62.3 (56.3 – 68.1)	71.4 (61.1 – 79.9)	0 (NA)	87.5 (79.0 – 92.8)	89.5 (81.6 – 94.3)	94.7 (89.3 – 97.4)	93.2 (86.6 – 96.7)	53.4 (44.3 – 62.3)	67.5 (64.9 – 70.0)	18.2 (13.7 – 22.7)
Nordsjællands Hospital, Hillerød	52.3 (44.7 – 59.8)	67.5 (56.0 – 77.2)	10.8 (6.3 – 17.8)	99.1 (98.0 – 99.6)	97.7 (93.8 – 99.2)	100 (NA)	93.8 (87.1 – 97.2)	52.5 (42.9 – 61.9)	69.7 (67.3 – 72.0)	12.4 (8.3 – 16.5)
Hvidovre	60.3 (53.9 – 66.3)	77.0 (69.6 – 83.1)	34.3 (27.7 – 41.6)	97.5 (92.7 – 99.2)	86.4 (79.0 – 91.4)	98.1 (95.2 – 99.2)	97.1 (93.0 – 98.9)	62.4 (54.8 – 69.4)	76.1 (74.1 – 78.0)	24.9 (20.1 – 29.7)
<b>Zealand Region</b>										
Holbæk Sygehus	58.0 (51.4 – 64.4)	69.7 (60.4 – 77.7)	51.9 (44.6 – 59.2)	100 (NA)	74.0 (64.5 – 81.7)	98.3 (95.8 – 99.3)	96.6 (92.5 – 98.5)	78.8 (69.8 – 85.6)	77.9 (75.3 – 80.3)	30.5 (25.3 – 35.7)
Nykøbing F. Sygehus	81.8 (72.7 – 88.4)	100 (NA)	0 (NA)	98.1 (94.7 – 99.4)	4.2 (1.5 – 11.3)	96.0 (89.8 – 98.5)	96.8 (90.4 – 99.0)	64.6 (54.1 – 73.9)	66.0 (64.0 – 67.9)	13.0 (7.7 – 18.2)

	Individual Indicator achievement								Composite Indicators	
	1b	2a	4	7	8	9	10	11	OBCS	AON
Næstved Sygehus	82.8 (74.2 – 89.0)	100 (NA)	26.5 (19.3 – 35.2)	97.5 (92.4 – 99.2)	98.3 (95.8 – 99.3)	98.0 (95.1 – 99.2)	96.1 (89.7 – 98.6)	72.7 (60.4 – 82.4)	80.8 (78.5 – 82.9)	24.2 (16.5 – 31.8)
Sjællands Universitetshospital	77.2 (72.2 – 81.4)	55.2 (49.0 – 61.2)	60.8 (55.0 – 66.2)	98.7 (96.2 – 99.6)	96.4 (91.9 – 98.5)	93.4 (90.0 – 95.7)	92.4 (88.6 – 95.0)	54.4 (47.3 – 61.4)	78.5 (76.8 – 80.2)	37.7 (33.4 – 41.9)
Slagelse Sygehus	79.2 (71.5 – 85.3)	48.3 (35.2 – 61.5)	37.2 (29.2 – 45.9)	99.1 (98.0 – 99.6)	53.5 (44.8 – 61.9)	99.3 (98.4 – 99.7)	96.6 (91.0 – 98.8)	71.0 (62.0 – 78.6)	75.6 (73.2 – 77.8)	28.3 (22.3 – 34.3)
<b>South Denmark Region</b>										
Kolding Sygehus	24.9 (20.3 – 30.2)	71.7 (64.6 – 77.8)	90.4 (84.0 – 94.4)	100 (NA)	60.8 (50.8 – 70.0)	93.6 (88.3 – 96.6)	94.6 (90.1 – 97.2)	81.4 (73.7 – 87.3)	72.7 (70.2 – 75.1)	30.4 (26.2 – 34.7)
Odense Universitetshospital , Odense	49.4 (43.5 – 55.4)	72.6 (62.2 – 81.0)	3.2 (1.3 – 7.5)	100 (NA)	100 (NA)	96.3 (91.6 – 98.4)	97.3 (92.7 – 99.0)	53.3 (44.1 – 62.2)	68.7 (66.6 – 70.7)	14.6 (11.0 – 18.2)
Odense Universitetshospital, Svendborg	53.5 (48.0 – 58.9)	71.9 (64.3 – 78.3)	0 (NA)	89.6 (83.2 – 93.7)	71.1 (63.7 – 77.6)	96.1 (91.5 – 98.2)	98.0 (94.3 – 99.3)	67.7 (60.8 – 73.9)	66.8 (64.9 – 68.6)	15.6 (12.1 – 19.1)
Sydvestjysk Sygehus	89.7 (86.9 – 92.0)	68.6 (61.4 – 75.0)	93.4 (90.6 – 95.5)	100 (NA)	99.2 (97.6 – 99.7)	99.7 (99.4 – 99.9)	96.5 (94.3 – 97.8)	73.5 (68.0 – 78.4)	91.6 (90.5 – 92.6)	66.2 (62.3 – 70.2)
Sygehus Sønderjylland, Aabenraa	17.9 (14.1 – 22.6)	80.7 (73.5 – 86.3)	28.5 (23.0 – 34.7)	100 (NA)	100 (NA)	99.4 (98.6 – 99.8)	97.8 (93.8 – 99.2)	82.0 (72.3 – 88.8)	67.3 (64.7 – 69.7)	18.4 (14.7 – 22.1)
Sygehus Sønderjylland, Sønderborg	77.1 (69.9 – 83.0)	78.3 (64.6 – 87.7)	18.5 (12.3 – 26.8)	100 (NA)	0 (NA)	97.5 (93.3 – 99.1)	93.3 (86.6 – 96.8)	73.2 (61.6 – 82.3)	69.1 (66.4 – 71.6)	29.0 (22.7 – 35.3)
Vejle Sygehus	70.0 (63.1 – 76.2)	58.7 (50.8 – 66.1)	46.1 (39.4 – 53.1)	85.3 (79.9 – 89.5)	2.6 (0.8 – 8.2)	93.7 (85.5 – 96.7)	96.6 (93.3 – 98.3)	64.8 (55.7 – 72.9)	68.7 (66.5 – 70.9)	24.8 (20.1 – 29.4)
<b>Central Jutland Region</b>										
Aarhus Universitetshospital	86.9 (82.7 – 90.2)	66.0 (50.9 – 78.4)	14.7 (11.0 – 19.4)	97.6 (94.4 – 99.0)	5.1 (2.8 – 9.3)	98.5 (95.7 – 99.5)	95.2 (92.0 – 97.2)	64.1 (57.4 – 70.3)	68.5 (67.2 – 69.8)	18.9 (14.8 – 23.0)
Hospitalsenhed Midt, Silkeborg	72.6 (65.7 – 78.5)	#	0 (NA)	88.7 (80.4 – 93.8)	100 (NA)	90.7 (84.1 – 94.8)	95.4 (90.4 – 97.8)	72.6 (60.7 – 82.0)	71.6 (69.8 – 73.4)	15.4 (10.7 – 20.1)
Hospitalsenhed Midt, Viborg	58.7 (51.9 – 65.2)		0 (NA)	98.1 (95.3 – 99.2)	84.7 (78.3 – 89.4)	97.6 (93.1 – 99.2)	95.1 (91.6 – 97.2)	81.4 (74.1 – 86.9)	71.9 (70.3 – 73.3)	12.3 (8.8 – 15.8)
Hospitalsenheden Vest	58.2 (51.4 – 64.7)	40.0 (10.8 – 78.5)	5.1 (3.2 – 8.1)	99.6 (99.1 – 99.8)	21.3 (16.0 – 27.8)	98.8 (96.5 – 99.6)	96.7 (93.2 – 98.4)	73.2 (66.5 – 78.9)	66.7 (65.2 – 68.0)	12.3 (9.3 – 15.3)
Regionshospitalet Horsens	82.1 (77.4 – 86.0)	66.7 (33.2 – 88.9)	0 (NA)	89.0 (81.3 – 93.7)	33.0 (24.5 – 42.9)	91.0 (84.9 – 94.8)	93.4 (87.2 – 96.7)	73.5 (64.6 – 80.9)	68.2 (66.1 – 70.2)	29.4 (24.2 – 34.6)
Regionshospitalet Randers	1.4 (0.5 – 3.6)	#	#	#		#	#		6.5 (1.5 – 23.5)	1.4 (0 – 4.1)
<b>North Denmark Region</b>										
Aalborg Universitetshospital	61.3 (52.8 – 69.2)	64.6 (54.4 – 73.7)	52.0 (42.5 – 61.2)	90.8 (80.2 – 96.0)	100 (NA)	98.0 (94.7 – 99.3)	95.1 (88.1 – 98.1)	58.1 (46.6 – 68.9)	76.3 (73.3 – 79.1)	33.7 (26.9 – 40.5)

	Individual Indicator achievement								Composite Indicators	
	1b	2a	4	7	8	9	10	11	OBCS	AON
Aalborg Universitetshospital, Hjørring	47.2 (41.0 – 53.6)		0 (NA)	100 (NA)	97.1 (91.2 – 99.1)	97.2 (92.4 – 99.0)	97.8 (93.7 – 99.2)	56.2 (47.2 – 64.9)	67.3 (65.4 – 69.1)	7.4 (4.5 – 10.3)
Aalborg Universitetshospital, Hobro	64.1 (48.0 – 77.5)	63.9 (46.5 – 78.2)	67.7 (50.6 – 81.2)	96.0 (90.2 – 98.4)	78.3 (54.5 – 91.5)	96.8 (92.5 – 98.6)	96.8 (92.7 – 98.6)	75.0 (55.1 – 88.0)	78.7 (71.3 – 84.7)	32.6 (19.0 – 46.3)
Aalborg Universitetshospital, Thisted	50.0 (13.6 – 86.4)	75.0 (45.7 – 91.4)	5.9 (2.0 – 16.1)	100 (NA)	100 (NA)	100 (NA)	96.1 (89.0 – 98.7)	64.7 (49.3 – 77.6)	75.4 (71.8 – 78.6)	11.9 (3.4 – 20.4)

**Table 7.** Results for AFDK database

	Individual Indicator Achievement			Composite indicators	
	1	2	9	OBCS	AON
<b>National level</b>					
Denmark	75.3 (74.7 – 75.9)	65.7 (65.0 – 66.4)	19.5 (19.0 – 20.0)	51.6 (51.3 – 51.9)	12.9 (12.5 – 13.4)
<b>Regional level</b>					
Capital Region	70.8 (69.6 – 72.0)	49.0 (47.9 – 50.1)	19.0 (18.1 – 20.0)	44.0 (43.1 – 44.8)	9.9 (9.1 – 10.6)
Zealand Region	70.1 (68.3 – 71.8)	62.1 (60.4 – 63.7)	20.3 (18.9 – 21.7)	49.2 (48.3 – 50.3)	13.2 (12.1 – 14.3)
South Denmark Region	79.3 (77.9 – 80.8)	76.9 (75.6 – 78.2)	20.5 (19.5 – 21.6)	57.2 (56.5 – 57.9)	15.5 (14.4 – 16.5)
Central Jutland Region	78.4 (76.8 – 79.9)	80.5 (79.3 – 81.7)	22.4 (21.2 – 23.7)	58.8 (58.1 – 59.7)	17.5 (16.4 – 18.6)
North Denmark Region	81.8 (80.3 – 83.3)	66.8 (65.0 – 68.5)	12.1 (10.8 – 13.5)	51.1 (50.0 – 52.2)	7.4 (6.4 – 8.5)
<b>Provider-level</b>					
<b>Capital Region</b>					
Rigshospitalet	66.3 (62.9 – 69.5)	55.2 (51.9 – 58.4)	32.1 (29.3 – 35.1)	50.0 (47.8 – 52.1)	17.8 (15.3 – 20.3)
Bispebjerg og Frederiksberg Amager og Hvidovre Hospital	71.6 (68.7 – 74.4)	32.9 (30.4 – 35.4)	16.2 (14.4 – 18.1)	37.5 (36.0 – 39.1)	5.8 (4.5 – 7.1)
Herlev og Gentofte Hospital	69.3 (65.6 – 72.7)	50.7 (47.7 – 53.8)	20.1 (17.8 – 22.6)	44.6 (42.4 – 46.8)	11.6 (9.6 – 13.6)
Hospitalerne i Nordsjælland	72.1 (69.5 – 74.6)	50.9 (48.7 – 53.2)	14.2 (13.0 – 15.5)	43.2 (41.8 – 44.6)	7.7 (6.4 – 8.9)
Bornholms Hospital	71.5 (68.8 – 73.9)	52.2 (49.6 – 54.8)	19.7 (17.6 – 22.0)	45.3 (43.7 – 46.8)	10.3 (8.7 – 11.9)
	78.3 (70.9 – 84.2)	71.1 (64.5 – 77.0)	6.5 (3.7 – 11.2)	49.6 (45.8 – 53.5)	5.5 (2.3 – 8.6)
<b>Zealand Region</b>					
Garantikliniken	77.8 (51.2 – 92.1)	100 (NA)	16.7 (5.6 – 40.4)	62.2 (52.5 – 71.0)	16.7 (0 – 35.7)
Holbæk Sygehus	74.7 (71.0 – 78.1)	63.5 (60.0 – 66.9)	23.5 (20.8 – 26.5)	52.1 (50.0 – 54.2)	17.5 (14.7 – 20.3)
Nykøbing Falster Sygehus	67.5 (63.5 – 71.2)	52.1 (48.1 – 56.0)	4.6 (3.3 – 6.4)	39.8 (37.7 – 42.0)	2.1 (1.0 – 3.3)
Næstved Sygehus	82.8 (72.6 – 89.7)	75.4 (67.8 – 81.7)	18.4 (12.2 – 26.8)	56.8 (52.0 – 61.5)	14.9 (8.3 – 21.5)
Slagelse Sygehus	63.0 (59.9 – 65.9)	61.7 (58.5 – 64.7)	34.0 (30.9 – 37.2)	52.1 (50.1 – 54.1)	21.4 (18.9 – 23.9)
Sjællands Universitetshospital	74.1 (71.3 – 76.8)	65.4 (62.3 – 68.5)	14.8 (12.8 – 16.9)	49.6 (48.0 – 51.3)	9.0 (7.3 – 10.7)
<b>South Denmark Region</b>					
Odense Universitetshospital	79.4 (77.2 – 81.4)	75.0 (73.2 – 76.8)	20.7 (18.9 – 22.6)	56.5 (55.2 – 57.9)	14.2 (12.6 – 15.8)
Sygehus Sønderjylland	81.1 (77.7 – 84.2)	76.5 (73.7 – 79.1)	2.7 (1.8 – 4.1)	51.1 (49.6 – 52.6)	1.8 (0.9 – 2.7)
Sydvestjysk Sygehus	80.2 (77.2 – 82.9)	69.8 (66.3 – 73.0)	18.5 (16.0 – 21.3)	54.4 (52.4 – 56.3)	13.2 (10.9 – 15.6)
Kolding Sygehus	61.7 (53.7 – 69.0)	55.7 (47.9 – 63.3)	21.3 (15.5 – 28.5)	45.6 (41.0 – 50.3)	13.8 (8.6 – 19.0)
Vejle Sygehus	79.4 (76.1 – 82.3)	89.1 (86.9 – 91.0)	39.6 (36.5 – 42.8)	68.4 (66.5 – 70.3)	33.8 (30.7 – 36.8)
Frikliniken Region Syddanmark	91.5 (79.3 – 96.8)	100 (NA)	15.8 (9.4 – 25.2)	67.0 (63.8 – 70.1)	14.7 (7.5 – 22.0)
<b>Central Jutland Region</b>					
Regionshospitalet Horsens	83.4 (79.6 – 86.7)	87.6 (84.9 – 89.8)	41.1 (37.6 – 44.8)	69.4 (67.2 – 71.5)	35.3 (31.7 – 39.0)
Aarhus Universitetshospital	73.3 (70.0 – 76.4)	75.7 (72.5 – 78.7)	17.9 (15.8 – 20.2)	54.3 (52.6 – 56.0)	13.1 (11.0 – 15.3)

Hospitalsenhed Midt	82.4 (79.6 – 84.9)	86.3 (84.0 – 88.3)	30.6 (27.8 – 33.6)	64.9 (63.5 – 66.3)	24.3 (21.7 – 26.9)
Hospitalsenheden Vest	71.9 (68.2 – 75.3)	76.7 (73.8 – 79.3)	13.6 (11.4 – 16.1)	52.5 (50.9 – 54.2)	9.1 (7.3 – 10.9)
Regionshospitalet Randers	83.7 (80.4 – 86.4)	76.9 (74.3 – 79.3)	10.8 (9.0 – 12.9)	54.7 (52.8 – 56.6)	7.7 (5.8 – 9.7)
<b>North Denmark Region</b>					
Aalborg Universitetshospital, Thisted	85.8 (79.9 – 90.2)	62.2 (56.3 – 67.8)	15.2 (11.8 – 19.4)	52.0 (49.2 – 54.8)	8.5 (5.2 – 11.9)
Aalborg Universitetshospital	80.0 (77.8 – 82.1)	65.4 (62.9 – 67.8)	14.1 (12.4 – 16.0)	50.8 (49.6 – 52.0)	8.1 (6.6 – 9.5)
Regionshospitalet Nordjylland Ven	83.6 (80.5 – 86.4)	71.0 (67.4 – 74.4)	7.2 (5.6 – 9.2)	51.4 (49.8 – 53.0)	5.9 (4.2 – 7.6)

**Table 8.** Results for overall cardiovascular care

	DHD		DHRD		DANA		AFDK		Overall cardiovascular care	
	OBCS	AON	OBCS	AON	OBCS	AON	OBCS	AON	OBCS	AON
<b>National level</b>										
Denmark	84.1 (83.5 – 84.7)	48.0 (46.3 – 49.7)	72.4 (71.9 – 72.8)	23.6 (22.6 – 24.5)	80.0 (79.1 – 81.0)	55.3 (53.1 – 57.4)	51.6 (51.3 – 51.9)	12.9 (12.5 – 13.4)	63.1 (62.8– 63.4)	21.2 (20.7 – 21.6)
<b>Regional level</b>										
Capital Region	83.6 (82.4 – 84.7)	45.4 (41.6 – 49.1)	68.9 (67.9 – 69.9)	16.5 (14.6 – 18.5)	78.2 (76.2 – 80.1)	49.9 (46.2 – 53.7)	44.0 (43.1 – 44.8)	9.9 (9.1 – 10.6)	55.4 (54.8 – 56.0)	16.6 (15.8 – 17.3)
Zealand Region	81.7 (80.6 – 82.8)	39.2 (35.7 – 42.7)	76.5 (75.4 – 77.5)	30.1 (27.6 – 32.6)	79.7 (76.8 – 82.4)	53.9 (48.7 – 59.2)	49.2 (48.3 – 50.3)	13.2 (12.1 – 14.3)	63.7 (63.0 – 64.3)	22.4 (21.3 – 23.4)
South Denmark Region	85.8 (84.6 – 86.9)	49.4 (45.9 – 52.8)	74.6 (73.8 – 75.4)	30.0 (28.3 – 31.8)	81.5 (79.2 – 83.7)	59.1 (54.4 – 63.9)	57.2 (56.5 – 57.9)	15.5 (14.4 – 16.5)	68.3 (67.8 – 68.8)	25.4 (24.5 – 26.3)
Central Jutland Region	84.7 (83.1 – 86.1)	56.0 (52.5 – 59.6)	68.4 (67.6 – 69.1)	16.5 (14.7 – 18.2)	83.2 (80.9 – 85.2)	62.6 (58.0 – 67.1)	58.8 (58.1 – 59.7)	17.5 (16.4 – 18.6)	66.4 (65.8 – 67.0)	23.8 (22.8 – 24.8)
North Denmark Region	85.0 (82.7 – 87.1)	53.1 (47.0 – 59.2)	72.2 (70.6 – 73.6)	17.8 (14.8 – 20.8)	77.4 (73.9 – 80.6)	52.1 (44.9 – 59.2)	51.1 (50.0 – 52.2)	7.4 (6.4 – 8.5)	60.8 (59.8 – 61.8)	15.2 (14.0 – 16.4)
<b>Provider-level</b>										
<b>Capital Region</b>										
Amager og Hvidovre	82.1 (76.9 – 86.3)	51.6 (38.8 – 64.4)	76.1 (74.1 – 78.0)	24.9 (20.1 – 29.7)	74.2 (67.8 – 79.6)	41.0 (30.2 – 51.8)	44.6 (42.4 – 46.8)	11.6 (9.6 – 13.6)	56.9 (55.4 – 58.3)	16.6 (14.6 – 18.6)
Bispebjerg og Frederiksberg	84.6 (81.2 – 87.5)	46.9 (37.6 – 56.2)	-	-	76.4 (69.8 – 82.0)	49.0 (38.8 – 59.1)	37.5 (36.0 – 39.1)	5.8 (4.5 – 7.1)	45.7 (43.9 – 47.4)	12.4 (10.7 – 14.1)
Glostrup Hospital	77.3 (73.2 – 81.0)	30.4 (21.9 – 39.0)	72.1 (69.6 – 74.4)	23.6 (17.7 – 29.6)	-	-	-	-	74.1 (72.2 – 76.0)	25.9 (21.0 – 30.7)
Herlev og Gentofte Hospital	87.3 (85.4 – 88.9)	50.4 (44.1 – 56.7)	41.5 (20.7 – 65.8)	3.2 (0 – 9.8)	79.6 (75.6 – 83.0)	52.8 (45.4 – 60.1)	43.2 (41.8 – 44.6)	7.7 (6.4 – 8.9)	54.1 (52.6 – 55.6)	16.3 (14.7 – 17.8)
Nordsjællands Hospital	84.2 (80.3 – 87.4)	48.4 (38.0 – 58.7)	68.6 (66.8 – 70.3)	14.9 (11.9 – 17.9)	71.2 (66.7 – 75.4)	34.0 (24.8 – 43.1)	45.3 (43.7 – 46.8)	10.3 (8.7 – 11.9)	56.2 (54.8 – 57.5)	14.3 (12.8 – 15.8)
Rigshospitalet	-	-	-	-	82.7 (79.2 – 85.7)	60.3 (53.7 – 66.8)	50.0 (47.8 – 52.1)	17.8 (15.3 – 20.3)	57.0 (55.3 – 58.7)	26.0 (23.4 – 28.5)
Bornholms Hospital	79.0 (68.4 – 86.8)	44.4 (24.4 – 64.5)	-	-	74.4 (52.9 – 88.2)	46.1 (14.8 – 77.5)	49.6 (45.8 – 53.5)	5.5 (2.3 – 8.6)	56.1 (52.2 – 59.9)	12.0 (7.9 – 16.2)
<b>Zealand Region</b>										
Holbæk Sygehus	82.2 (79.7 – 84.4)	39.8 (33.1 – 46.5)	77.9 (75.3 – 80.3)	30.5 (25.3 – 35.7)	76.3 (69.3 – 82.0)	49.3 (37.6 – 61.0)	52.1 (50.0 – 54.2)	17.5 (14.7 – 20.3)	66.8 (65.1 – 68.5)	25.8 (23.5 – 28.2)
Næstved Sygehus	80.5 (77.9 – 82.9)	32.5 (23.7 – 41.2)	80.8 (78.5 – 82.9)	24.2 (16.5 – 31.8)	-	-	56.8 (52.0 – 61.5)	14.9 (8.3 – 21.5)	75.4 (73.2 – 77.4)	23.9 (19.4 – 28.3)
Slagelse Sygehus	79.1 (77.0 – 81.1)	36.2 (30.3 – 42.1)	75.6 (73.2 – 77.8)	28.3 (22.3 – 34.3)	74.6 (67.6 – 80.5)	48.4 (35.8 – 61.0)	52.1 (50.1 – 54.1)	21.4 (18.9 – 23.9)	63.1 (61.6 – 64.5)	25.8 (23.7 – 28.0)



	DHD		DHRD		DANA		AFDK		Overall cardiovascular care	
Nykøbing Falster Sygehus	86.3 (81.5 – 90.0)	52.3 (39.8 – 64.8)	66.0 (64.0 – 67.9)	13.0 (7.7 – 18.2)	87.1 (81.1 – 91.4)	68.7 (58.4 – 79.1)	39.8 (37.7 – 42.0)	2.1 (1.0 – 3.3)	53.6 (51.7 – 55.5) n960	12.9 (10.8 – 15.0)
Sjællands Universitetshospital	85.4 (81.8 – 88.4)	44.0 (33.6 – 54.3)	78.5 (76.8 – 80.2)	37.7 (33.4 – 41.9)	79.7 (76.0 – 82.9)	51.1 (42.7 – 59.5)	49.6 (48.0 – 51.3)	9.0 (7.3 – 10.7)	64.4 (62.8 – 65.8) n1869	21.8 (19.9 – 23.7)
<b>South Denmark Region</b>										
Odense Universitetshospital	85.1 (83.4 – 86.6)	45.2 (40.0 – 50.5)	67.6 (66.2 – 69.0)	14.6 (12.1 – 17.1)	82.8 (79.6 – 85.5)	61.3 (55.7 – 66.8)	56.5 (55.2 – 57.9)	14.2 (12.6 – 15.8)	66.1 (65.2 – 67.0)	21.9 (20.5 – 23.3)
Kolding Sygehus	82.3 (76.7 – 86.7)	37.0 (22.5 – 51.4)	72.7 (70.2 – 75.1)	30.4 (26.2 – 34.7)	79.8 (71.4 – 86.3)	55.8 (40.3 – 71.3)	45.6 (41.0 – 50.3)	13.8 (8.6 – 19.0)	68.1 (65.9 – 70.2)	28.4 (25.1 – 31.7)
Vejle Sygehus	92.2 (88.6 – 94.7)	72.6 (63.1 – 81.2)	68.7 (66.5 – 70.9)	24.8 (20.1 – 29.4)	94.2 (83.3 – 98.2)	86.2 (72.9 – 99.5)	68.4 (66.5 – 70.3)	33.8 (30.7 – 36.8)	71.1 (69.7 – 72.5)	35.4 (32.9 – 38.0)
Sygehus Sønderjylland	83.1 (80.6 – 85.3)	41.5 (34.1 – 48.8)	68.0 (66.1 – 69.8)	20.8 (17.6 – 24.0)	66.1 (57.1 – 74.0)	30.0 (15.2 – 44.8)	51.1 (49.6 – 52.6)	1.8 (0.9 – 2.7)	62.5 (61.1 – 63.9)	13.4 (11.7 – 15.0)
Sydvestjysk Sygehus	88.1 (85.6 – 90.3)	57.9 (49.6 – 66.1)	91.6 (90.5 – 92.6)	66.2 (62.3 – 70.2)	71.4 (47.3 – 87.4)	42.9 (0 – 93.0)	54.4 (52.4 – 56.3)	13.2 (10.9 – 15.6)	76.2 (74.7 – 77.5)	37.3 (34.8 – 39.7)
<b>Central Jutland Region</b>										
Aarhus Universitetshospital	87.6 (84.1 – 90.4)	59.3 (50.5 – 68.1)	68.5 (67.2 – 69.8)	18.9 (14.8 – 23.0)	87.7 (83.5 – 90.9)	75.9 (69.3 – 82.5)	54.3 (52.6 – 56.0)	13.1 (11.0 – 15.3)	65.1 (63.9 – 66.3)	24.5 (22.4 – 26.6)
Hospitalsenheden Vest	84.6 (80.6 – 88.0)	60.3 (52.2 – 68.3)	66.7 (65.2 – 68.0)	12.3 (9.3 – 15.3)	76.0 (70.2 – 81.0)	44.9 (33.6 – 56.2)	52.5 (50.9 – 54.2)	9.1 (7.3 – 10.9)	61.8 (60.6 – 63.0) n1654	16.2 (14.4 – 18.0)
Hospitalsenhed Midt	93.6 (91.9 – 94.9)	74.7 (68.8 – 80.7)	71.7 (70.6 – 72.9)	13.6 (10.8 – 16.4)	80.7 (74.2 – 85.8)	55.1 (43.8 – 66.4)	64.9 (63.5 – 66.3)	24.3 (21.7 – 26.9)		
Regionshospitalet Horsens	76.5 (73.2 – 79.5)	40.3 (33.5 – 47.0)	68.2 (66.1 – 70.2)	29.4 (24.2 – 34.6)	85.8 (77.6 – 91.4)	61.4 (46.4 – 76.3)	69.4 (67.2 – 71.5)	35.3 (31.7 – 39.0)	71.1 (69.8 – 72.4) n1226	35.6 (33.0 – 38.3)
Regionshospitalet Randers	76.8 (71.9 – 81.1)	33.3 (22.2 – 44.5)	-	-	83.1 (76.1 – 88.4)	59.4 (47.0 – 71.7)	54.7 (52.8 – 56.6)	7.7 (5.8 – 9.7)	58.2 (56.7 – 59.7) n958	12.6 (10.5 – 14.7)
<b>North Denmark Region</b>										
Aalborg Universitetshospital	86.5 (83.2 – 89.2)	53.8 (45.2 – 62.5)	76.9 (74.0 – 79.6)	33.2 (27.2 – 39.2)	82.0 (78.1 – 85.4)	58.3 (50.5 – 66.2)	50.8 (49.6 – 52.0)	8.1 (6.6 – 9.5)	61.4 (60.2 – 62.7)	18.5 (16.8 – 20.2)
Aalborg Universitetshospital, Thisted	82.9 (77.6 – 87.1)	55.7 (44.5 – 66.9)	75.4 (71.8 – 78.6)	11.9 (3.4 – 20.4)	20.0 (6.3 – 48.2)	56.7 (38.7 – 73.0)	52.0 (49.2 – 54.8)	8.5 (5.2 – 11.9)	63.6 (61.1 – 66.1) n418	18.2 (14.5 – 21.9)
Regionshospital Nordjylland Ven	83.9 (79.2 – 87.8)	47.1 (32.9 – 61.2)	67.3 (65.4 – 69.1)	7.4 (4.5 – 10.2)	30.8 (14.4 – 54.1)	57.7 (44.4 – 69.9)	51.4 (49.8 – 53.0)	5.9 (4.2 – 7.6)	58.7 (57.2 – 60.1)	8.6 (7.0 – 10.3)

**Table 9.** Results for DDD database

	Individual Indicator Achievement									Composite indicators	
	1a	1b	4a	4b	5a	5b	6a	6b	7	OBCS	AON
<b>National level</b>											
Denmark	42.2 (40.8-43.6)	27.2 (26.2-28.2)	28.0 (26.8-29.2)	37.1 (36.2-38.0)	35.4 (33.5-37.3)	19.2 (18.4-20.1)	62.1 (60.7-63.5)	48.5 (47.4-49.5)	59.9 (58.4-61.3)	38.3 (37.7-38.9)	17.7 (17.1-18.3)
<b>Regional level</b>											
Capital Region	8.9 (7.4-10.7)	9.6 (8.5-10.8)	3.0 (2.2-4.2)	9.4 (8.4-10.6)	4.9 (3.6-6.6)	2.1 (1.6-2.7)	13.8 (12.1-15.7)	13.8 (12.5-15.1)	13.9 (12.2-15.8)	9.1 (8.5-9.9)	4.0 (3.5-4.5)
Zealand Region	55.2 (51.2-59.2)	47.3 (43.2-51.5)	26.8 (23.7-30.1)	49.5 (45.9-53.1)	31.5 (27.3-36.1)	30.9 (27.0-35.1)	64.8 (61.3-68.2)	65.1 (62.0-68.0)	64.8 (60.9-68.4)	49.9 (48.2-51.7)	25.4 (23.4-27.5)
South Denmark Region	64.2 (61.1-67.3)	41.9 (39.8-44.1)	41.8 (38.9-44.7)	51.7 (49.8-53.7)	53.6 (50.0-57.2)	25.3 (23.1-27.6)	86.7 (84.7-88.5)	68.1 (66.1-70.1)	84.8 (82.4-87.0)	54.8 (53.7-56.0)	26.9 (25.6-28.2)
Central Jutland Region	45.2 (41.5-49.0)	21.8 (20.3-23.5)	47.3 (43.8-50.8)	56.2 (54.1-58.4)	58.4 (54.2-62.5)	30.0 (28.0-32.1)	97.0 (95.5-98.0)	65.7 (63.8-67.6)	93.6 (91.6-95.2)	51.7 (50.7-52.7)	20.0 (18.8-21.2)
North Denmark Region	85.3 (81.1-88.8)	46.7 (43.5-49.9)	45.6 (40.9-50.4)	30.5 (27.7-33.5)	47.5 (42.1-53.0)	15.8 (13.2-18.8)	93.0 (89.4-95.5)	52.1 (48.9-55.2)	79.6 (75.2-83.4)	49.0 (47.0-51.0)	24.1 (22.1-26.2)
<b>Provider-level</b>											
<b>Capital Region</b>											
Psyk. Center Amager, overafd	0 (NA)	20.0 (16.2-24.5)	0 (NA)	19.9 (15.6-25.0)	0 (NA)	6.5 (4.1-10.0)	0 (NA)	28.7 (24.0-34.0)	6.7 (3.7-11.9)	12.3 (10.5-14.3)	6.1 (4.3-8.0)
Psyk. Center København, Overafd.	8.8 (6.1-12.5)	4.6 (3.4-6.1)	6.4 (4.3-9.3)	4.1 (3.0-5.5)	11.6 (8.0-16.5)	0 (NA)	12.0 (8.6-16.7)	6.8 (5.3-8.8)	13.2 (10.1-17.1)	6.2 (5.3-7.4)	2.4 (1.6-3.1)
Psyk. Center Bornholm, overafd.	12.0 (3.8-32.0)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	12.0 (4.5-28.3)	0 (NA)	20.0 (6.8-46.1)	3.6 (1.8-7.1)	0 (0-0)
Sct. Hans, Psyk. overafd. M	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Psyk. Center Ballerup, overafd.	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	1.1 (0.4-3.0)	0 (NA)	0.2 (0.1-0.4)	0 (NA)
Psyk. Center Nordsjælland, overafd.	26.6 (22.3-31.3)	40.6 (35.8-45.4)	5.8 (3.8-8.8)	39.7 (35.1-44.4)	6.3 (3.8-10.5)	9.7 (7.0-13.3)	43.1 (38.0-48.3)	38.7 (34.0-43.7)	38.2 (33.2-43.6)	29.5 (27.0-32.1)	15.1 (12.7-17.4)
Psykoterapeutisk Center Stolpegård, overafd	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Psyk. Center Glostrup, overafd.	0 (NA)	0.6 (0.2-1.9)	0 (NA)	1.1 (0.4-2.6)	0 (NA)	0 (NA)	0 (NA)	2.7 (1.5-4.6)	0 (NA)	0.7 (0.4-1.2)	0 (NA)
CVI Psykiatri, RegionH		0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	92.2 (80.9-97.1)	0 (NA)	21.8 (19.9-23.7)	0 (NA)
<b>Zealand Region</b>											
Psykiatri ØST Overafd. 01		29.1 (21.8-37.6)		42.9 (34.6-51.6)		23.7 (16.6-32.6)		43.4 (35.1-52.0)		35.3 (28.5-42.7)	23.4 (17.0-29.8)

	Individual Indicator Achievement									Composite indicators	
	1a	1b	4a	4b	5a	5b	6a	6b	7	OBCS	AON
Psykiatri ØST Overafd. 05	42.3 (34.3-50.8)	58.1 (48.4-67.3)	17.8 (11.9-25.7)	45.7 (36.2-55.6)	18.2 (10.4-29.7)	18.2 (10.8-28.9)	72.9 (63.7-80.4)	74.7 (64.8-82.6)	55.0 (45.5-64.1)	46.8 (42.9-50.6)	22.4 (17.0-29.8)
Psykiatri VEST Overafd. 10		59.8 (50.8-68.2)		40.8 (33.0-49.1)		19.1 (12.3-28.5)		80.9 (74.0-86.4)		52.2 (46.4-57.8)	24.4 (18.1-30.8)
Psykiatri VEST Overafd. 15	44.4 (35.0-54.3)	34.1 (25.6-43.7)	4.6 (1.7-12.0)	32.6 (23.4-43.4)	5.1 (1.8-13.7)	19.3 (9.6-34.9)	75.7 (66.0-83.3)	35.8 (26.7-46.0)	70.9 (62.0-78.4)	38.2 (34.0-42.6)	13.4 (9.1-17.8)
Psykiatri SYD Overafd. 25	57.4 (49.8-64.6)	48.1 (40.6-55.6)	32.3 (25.9-39.4)	44.4 (38.1-50.9)	35.5 (27.5-44.4)	24.2 (17.5-32.3)	43.5 (36.8-50.5)	65.8 (59.6-71.6)	51.4 (44.5-58.2)	46.4 (42.6-50.3)	21.8 (17.9-25.8)
Psykiatri f. Ældre Overafd. 37	72.2 (64.5-78.8)	52.5 (44.0-60.8)	44.8 (36.9-53.0)	80.4 (74.6-85.1)	51.9 (44.1-59.6)	69.4 (60.0-77.4)	74.3 (67.0-80.5)	78.9 (71.0-85.1)	84.9 (78.3-89.7)	68.4 (65.0-71.5)	41.1 (36.2-46.1)
<b>South Denmark Region</b>											
PSY Psykiatrisk afdeling (Odense)	71.6 (62.6-79.3)	65.3 (59.4-70.8)	62.9 (54.3-70.7)	73.1 (66.9-78.2)	77.0 (66.2-85.2)	46.4 (40.4-52.5)	91.7 (84.9-95.6)	71.7 (66.1-76.7)	79.0 (71.8-84.7)	69.4 (66.1-72.6)	47.4 (43.3-51.6)
PSY Børne- og Ungdomspsykiatrisk Afdeling (Odense)	#	40.9 (22.0-62.9)	#	38.1 (19.8-60.5)	#	37.5 (19.0-60.5)	#	45.4 (26.4-65.9)	#	39.6 (25.2-56.0)	29.0 (12.1-46.0)
PSY Telepsykiatrisk Center (Odense)		0 (NA)		0 (NA)		0 (NA)		0 (NA)		0	0
PSY Psykiatrisk afdeling (Svendborg)	58.2 (48.6-67.3)	65.5 (57.0-73.0)	60.0 (51.4-68.0)	74.1 (65.7-81.0)	73.3 (63.8-81.1)	16.2 (9.9-25.5)	92.3 (85.8-96.0)	83.3 (75.7-88.9)	90.3 (83.3-94.5)	68.4 (65.1-71.5)	37.0 (31.7-42.3)
PSY Psykiatrisk Afdeling (Middelfart)	70.0 (49.8-84.6)	66.1 (54.0-76.5)	39.3 (24.2-56.7)	50.0 (38.2-61.8)	75.0 (56.6-87.3)	39.8 (29.7-50.7)	93.3 (82.8-97.6)	63.8 (50.5-75.2)	96.7 (91.9-98.7)	61.1 (55.2-66.6)	36.6 (29.1-44.0)
PSY Gerontopsykiatrisk afdeling (Augustenborg/Haderslev)		96.2 (89.1-98.8)		59.5 (49.3-69.0)		42.9 (29.3-57.6)		94.7 (84.4-98.3)		76.9 (71.2-81.8)	53.4 (44.8-62.0)
PSY Børne og Ungdomspsykiatrisk Afd. (Aabenraa)	66.7 (33.6-88.7)	30.8 (11.4-57.5)	30.0 (8.9-65.3)	40.0 (18.1-66.7)	12.5 (4.4-30.7)	8.3 (3.0-20.8)	66.7 (33.8-88.7)	26.7 (10.3-53.4)	41.7 (16.4-72.3)	36.7 (23.2-52.6)	8.3 (0-17.8)
PSY Psykiatrisk afdeling (Haderslev)		39.0 (24.7-55.5)		44.4 (31.0-58.7)		17.3 (8.7-31.5)		82.2 (67.3-91.2)		44.8 (37.8-52.0)*	16.9 (8.6-25.1)
PSY Psykiatrisk afdeling (Aabenraa)	93.4 (88.4-96.3)	25.5 (19.9-32.0)	27.3 (21.7-33.7)	43.4 (36.9-50.3)	35.9 (28.2-44.3)	18.2 (13.1-24.7)	95.9 (92.0-97.9)	81.2 (76.5-85.1)	97.7 (94.1-99.1)	59.4 (56.9-61.9)	19.8 (16.6-23.0)
Psykiatriske afdeling, Ribe		54.7 (47.1-62.1)		49.3 (40.8-57.9)		24.3 (18.3-31.6)		51.7 (43.2-60.1)		44.9 (39.0-51.0)	32.4 (26.6-38.2)
PSY Psykiatrisk afdeling (Esbjerg)	85.9 (79.5-90.6)	33.4 (29.0-38.1)	56.1 (48.4-63.5)	35.0 (29.7-40.8)	53.8 (45.7-61.7)	19.0 (15.0-23.7)	95.7 (90.7-98.0)	45.4 (40.3-50.6)	94.6 (89.2-97.4)	50.2 (47.3-53.1)	21.1 (18.3-24.0)
PSY Børne- og Ungdomspsykiatrisk Afdeling (Esbjerg)	42.9 (13.5-78.2)	15.8 (5.9-35.4)	14.3 (5.6-31.9)	15.8 (5.5-37.7)	33.3 (9.9-69.6)	12.5 (3.8-33.9)	57.1 (24.7-84.4)	15.8 (5.0-39.8)	71.4 (34.3-92.3)	23.5 (13.7-37.3)	9.1 (0.2-17.9)

	Individual Indicator Achievement									Composite indicators	
	1a	1b	4a	4b	5a	5b	6a	6b	7	OBCS	AON
Geronto- /neuropsykiatrisk klinik		55.4 (43.4- 66.9)		71.9 (63.0- 79.4)		31.6 (19.6- 46.6)		69.0 (58.6- 77.8)		61.0 (53.5- 68.0)	43.9 (34.4- 53.5)
PSY Psykiatrisk Afdeling (Kolding)		33.0 (27.5- 39.0)		55.2 (49.9- 60.3)		19.9 (16.3- 24.0)		85.0 (81.2- 88.1)		49.6 (46.7- 52.4)	21.6 (18.3- 25.0)
PSY Psykiatrisk Afdeling (Vejle)	29.3 (24.3- 34.9)	11.2 (7.3- 16.4)	28.5 (23.9- 33.5)	53.8 (47.1- 60.3)	51.9 (46.0- 57.8)	28.5 (22.3- 35.7)	71.2 (66.1- 75.8)	68.1 (61.7- 73.9)	71.6 (65.7- 76.8)	47.1 (44.8- 49.3)	13.9 (11.1- 16.6)
<b>Central Jutland Region</b>											
PVE Regionspsykiatri Vest	30.2 (22.5- 39.4)	8.8 (6.5- 11.8)	43.4 (34.3- 52.9)	38.1 (33.5- 43.0)	40.2 (29.9- 51.5)	20.9 (16.9- 25.5)	89.1 (81.2- 93.9)	77.1 (72.1- 81.4)	89.9 (83.0- 94.2)	42.9 (40.6- 45.3)	13.4 (10.9- 16.0)
PVS Regionspsykiatri Midt	44.1 (35.8- 52.7)	35.0 (30.9- 39.3)	65.1 (56.3- 73.0)	69.2 (64.9- 73.2)	74.1 (64.4- 81.9)	39.7 (35.3- 44.3)	99.3 (98.3- 99.7)	74.2 (69.6- 78.3)	97.8 (93.8- 99.3)	60.7 (58.6- 62.7)	28.6 (25.5- 31.7)
PHO Regionspsykiatri Horsens	72.6 (61.2- 81.7)	59.3 (52.9- 65.4)	56.3 (46.6- 65.6)	74.7 (69.5- 79.3)	56.0 (44.0- 67.3)	62.3 (54.7- 69.3)	97.9 (94.4- 99.2)	88.9 (83.6- 92.7)	97.9 (94.5- 99.2)	74.0 (71.2- 76.6)	47.4 (42.7- 52.2)
PRA Regionspsykiatri Randers	51.6 (34.6- 68.1)	37.5 (31.6- 43.8)	33.3 (19.4- 50.9)	49.0 (42.7- 55.3)	37.0 (21.4- 56.0)	24.3 (19.1- 30.1)	100 (NA)	69.0 (63.9- 73.7)	93.5 (81.9- 97.6)	48.6 (44.8- 52.3)	24.4 (20.3- 28.6)
PRP Afdeling for psykoser	56.5 (46.6- 65.8)	50.0 (21.5- 78.5)	2.3 (0.8- 7.0)	0 (NA)	4.5 (1.9- 10.2)	0 (NA)	98.8 (97.4- 99.5)	50.0 (25.2- 74.7)	95.3 (85.6- 98.6)	53.6 (50.2- 57.1)	0.9 (0-2.7)
PRQ Afdeling for depression og angst – Risskov	40.6 (35.8- 45.6)	6.2 (4.5- 8.5)	52.0 (46.3- 57.7)	76.8 (72.5- 80.6)	65.2 (59.9- 70.1)	26.3 (23.2- 29.7)	98.2 (96.1- 99.2)	76.0 (72.1- 79.5)	91.9 (88.1- 94.5)	54.6 (52.9- 56.3)	14.9 (12.8- 17.0)
Afdeling for Depression og Angst - AUH	36.7 (22.1- 54.2)	3.1 (1.8- 5.3)	53.3 (36.2- 69.7)	31.0 (26.5- 35.9)	55.6 (37.8- 72.0)	12.5 (4.2- 31.6)	93.3 (82.2- 97.7)	17.6 (14.2- 21.6)	90.0 (76.3- 96.2)	22.3 (19.9- 25.0)	1.6 (0.4- 2.9)
<b>North Denmark Region</b>											
PS Klinik Nord	82.2 (75.2- 87.5)	22.0 (17.7- 27.1)	35.0 (28.3- 42.4)	23.0 (18.7- 27.9)	24.3 (17.7- 32.4)	4.2 (2.4- 7.3)	94.9 (89.9- 97.5)	33.4 (28.7- 38.5)	77.1 (69.7- 83.1)	37.0 (33.8- 40.4)	9.2 (7.0- 11.4)
PS Klinik Nord Ældrepsykiatri	95.2 (86.5- 98.4)	40.8 (32.2- 49.9)	15.2 (7.2- 28.4)	34.0 (25.5- 43.6)	10.7 (4.3- 24.2)	34.5 (23.2- 48.0)	83.9 (72.4- 91.1)	43.5 (34.1- 53.4)	54.8 (41.2- 67.8)	45.2 (40.9- 49.5)	22.4 (16.7- 28.2)
PS Klinik Syd	84.4 (76.7- 89.9)	65.4 (60.4- 70.1)	73.0 (65.4- 79.5)	35.3 (31.3- 39.5)	94.1 (89.0- 97.0)	24.1 (19.2- 29.8)	95.0 (89.6- 97.6)	67.7 (63.4- 71.6)	93.5 (86.9- 96.9)	60.9 (57.9- 63.8)	38.0 (34.5- 41.4)

**Table 10.** Results for Schizophrenia database

		Individual indicator achievement											Composites		
		1a_I	1a_II	1b	1c	2b*	4a	4e	5i	6	7a	7b	8	OBCS	AON
<b>National level</b>															
Denmark		49.5 (46.2-52.8)	45.2 (42.7-47.8)	36.9 (34.9-39.1)	35.3 (32.8-37.9)	85.4 (84.7-86.1)	45.9 (45.2-46.5)	46.7 (45.9-47.4)	70.5 (68.1-72.8)	36.5 (33.5-39.6)	77.3 (76.5-78.1)	80.6 (79.1-82.0)	57.1 (56.3-57.9)	58.5 (58.1-58.9)	27.7 (27.0-28.4)
<b>Regional level</b>															
Capital Region		18.6 (15.8-21.8)	23.8 (20.6-27.3)	26.6 (23.3-30.1)	15.5 (13.0-18.4)	93.1 (92.0-94.0)	6.3 (5.7-7.0)	5.6 (5.1-6.2)	53.8 (50.4-57.1)	21.3 (18.3-24.7)	72.7 (71.5-73.9)	74.7 (70.9-78.2)	15.5 (14.3-16.6)	31.2 (30.6-31.7)	3.3 (2.9-3.8)
Zealand Region		68.0 (61.3-74.1)	37.0 (30.9-43.4)	31.2 (25.5-37.7)	19.6 (14.8-25.5)	79.6 (77.3-81.7)	65.4 (63.4-67.3)	66.9 (64.8-68.9)	80.1 (73.3-85.5)	38.3 (31.8-45.3)	77.4 (75.0-79.5)	77.0 (72.8-80.7)	70.6 (68.1-72.9)	68.0 (67.0-69.0)	36.7 (34.8-38.6)
South	Denmark Region	67.2 (61.7-72.3)	63.9 (58.3-69.2)	53.6 (47.6-59.5)	49.3 (43.5-55.2)	84.2 (82.7-85.6)	73.3 (71.9-74.6)	73.0 (71.5-74.5)	81.4 (76.5-85.4)	38.2 (33.3-43.4)	87.5 (86.3-88.6)	87.4 (84.5-89.8)	86.8 (85.5-88.0)	78.1 (77.4-78.8)	48.9 (47.3-50.5)
Central	Jutland Region	89.3 (84.5-92.8)	81.8 (76.3-86.3)	49.3 (44.1-54.5)	75.5 (69.8-80.4)	79.8 (77.9-81.6)	76.0 (74.3-77.6)	80.3 (78.7-81.7)	95.5 (91.5-97.7)	60.3 (55.2-65.1)	78.0 (76.1-79.8)	83.6 (80.2-86.6)	93.8 (92.7-94.8)	80.1 (79.3-80.9)	47.0 (45.2-48.8)
North	Denmark Region	77.3 (68.3-84.3)	68.9 (59.4-77.1)	35.8 (27.2-45.4)	66.4 (58.7-73.3)	87.2 (85.2-89.0)	54.8 (52.2-57.3)	56.6 (53.9-59.2)	80.3 (72.9-86.1)	51.3 (42.6-60.0)	66.8 (63.8-69.6)	81.7 (75.9-86.4)	66.5 (63.4-69.5)	65.1 (63.7-66.6)	31.5 (29.1-33.9)
<b>Provider-level</b>															
<b>Capital Region</b>															
Psyk.	Center Amager, overafd	30.3 (22.6-39.3)	29.5 (21.7-38.7)	25.8 (19.4-33.6)	18.0 (12.4-25.4)	91.1 (87.9-93.5)	8.7 (7.0-10.6)	7.9 (6.3-9.7)	61.2 (51.2-70.2)	20.8 (14.2-29.5)	80.8 (77.3-83.9)	81.0 (73.7-86.7)	8.5 (6.5-11.0)	33.6 (32.2-35.1)	5.8 (4.4-7.1)
Psyk.	Center København, Overafd.	12.0 (7.9-17.8)	23.6 (18.3-29.8)	13.4 (8.6-20.1)	16.2 (11.6-22.2)	95.3 (93.5-96.6)	2.8 (2.1-3.8)	2.3 (1.7-3.2)	49.5 (43.3-55.7)	8.1 (4.9-13.2)	79.8 (77.2-82.1)	83.1 (76.7-88.1)	1.6 (1.0-2.5)	27.3 (26.5-28.0)	2.2 (1.6-2.9)
PC	København, Overafd. A - Akutafdelingen	#	#	#	#	#	#	#	#	#	#	#	#	#	#
Psyk.	Center Bornholm, overafd.	20.0 (6.4-47.8)	0 (NA)	#	30.0 (8.7-65.8)	85.7 (70.7-93.7)	12.7 (6.3-23.8)	11.4 (5.6-21.7)	22.2 (7.4-50.6)	#	94.9 (85.7-98.3)	85.7 (66.3-94.8)	41.0 (26.7-57.0)	35.9 (30.2-42.0)	5.7 (0.7-10.6)

PC Frederiksberg, overafd.	#	#	20.7 (10.0-37.9)	#	#	#	#	#	6.90 (2.4-17.9)		100 (NA)		22.5 (12.8-36.6)	13.4 (2.0 – 25.7)	
PC Hvidovre, overafd.			41.7 (27.8-57.0)						33.3 (20.5-49.3)				37.5 (27.2-49.0)	20.8 (8.9-32.7)	
Sct. Hans, Retspsykiatrisk overafd. R	0 (NA)	22.2 (6.6-53.5)	#	44.4 (15.7-77.5)	83.3 (63.5-93.5)	39.1 (31.6-47.1)	32.8 (24.4-42.5)	44.4 (14.8-78.4)	#	68.7 (40.5-87.7)	8.6 (3.2-21.4)	6.2 (2.3-15.9)	31.8 (26.2-37.9)	13.1 (7.5 – 18.7)	
Sct. Hans, Psyk. overafd. M	9.1 (3.2-22.9)	18.2 (6.5-41.6)	17.9 (7.4-37.0)	22.7 (9.1-46.2)	87.0 (72.1-94.5)	3.7 (1.3-10.2)	3.7 (1.2-10.8)	54.5 (32.3-75.1)	25.0 (12.8-43.1)	53.1 (45.1-61.0)	88.9 (72.0-96.1)	0.9 (0.3-2.4)	24.1 (21.0-27.5)	7.2 (3.6 – 10.9)	
Psyk. Center Ballerup, overafd. Ballerup	19.7 (13.6-27.5)	22.2 (16.0-30.0)	25.4 (17.6-35.3)	14.5 (9.3-22.0)	90.7 (87.8-93.0)	7.5 (5.9-9.4)	6.0 (4.6-7.7)	53.1 (44.6-61.4)	10.5 (5.7-18.6)	39.3 (35.6-43.2)	77.5 (66.6-85.6)	0.4 (0.2-1.2)	23.8 (22.6-25.0)	4.2 (3.0 – 5.4)	
Psyk. Center Nordsjælland, overafd.	20.7 (13.7-30.2)	31.1 (22.4-41.5)	34.2 (23.7-46.6)	16.0 (10.7-23.3)	94.3 (91.6-96.2)	9.4 (7.5-11.7)	10.4 (8.2-13.0)	64.1 (54.1-73.0)	46.0 (35.3-57.2)	93.1 (91.3-94.6)	77.2 (69.2-83.6)	67.3 (63.8-70.5)	49.8 (48.0-51.5)	6.8 (5.2 – 8.4)	
PCN, Særlige Psykiatriske sengepladser, Nordsjælland Psykoterapeutisk Center			#		75.0 (43.9-92.0)	21.4 (6.7-50.8)	28.6 (10.6-57.5)		#	100 (NA)		0 (NA)	37.5 (25.5-51.3)	7.1 (0 – 22.6)	
Stolpegård, overafd.			#						#				#	#	
Psyk. Center Glostrup, overafd.	12.2 (8.1-18.2)	18.4 (12.4-26.4)	37.1 (30.5-44.3)	10.2 (6.5-15.6)	93.1 (90.1-95.2)	2.6 (1.8-3.6)	1.7 (1.1-2.6)	50.0 (42.4-57.6)	29.3 (23.2-36.3)	65.6 (62.4-68.6)	77.4 (68.8-84.2)	0.7 (0.3-1.6)	25.4 (24.4-26.5)	2.4 (1.6 – 3.2)	
CVI Psykiatri, RegionH	73.3 (45.8-90.0)	13.3 (3.7-37.9)	#	0 (NA)				40.0 (17.7-67.4)	#				30.3 (21.3-41.1)	0 (NA)	
<b>Zealand Region</b>															
Psykiatri Overafd. 01	ØST	62.8 (47.7-75.7)	39.5 (24.4-57.0)	39.0 (23.7-56.8)	18.6 (9.1-34.3)	80.8 (76.7-84.3)	71.2 (67.4-74.7)	67.3 (62.7-71.7)	76.9 (60.4-87.9)	48.8 (32.9-65.0)			68.2 (65.2-71.0)	45.2 (40.7 – 49.7)	
Psykiatri Overafd. 05	ØST	76.7 (54.3-90.1)	34.9 (22.1-50.3)	26.1 (16.7-38.2)	18.6 (7.9-38.0)	74.3 (68.2-79.7)	54.0 (48.4-59.4)	55.2 (50.1-60.1)	71.4 (54.8-83.8)	44.9 (33.3-57.1)	81.0 (77.4-84.1)	85.7 (79.3-90.4)	65.9 (61.0-70.5)	64.8 (62.8-66.9)	29.7 (25.8 – 33.5)

Psykiatri Overafd. 10	VEST	68.2 (47.1-83.8)	36.4 (20.8-55.4)	35.0 (16.1-60.2)	18.2 (7.6-37.4)	84.6 (79.4-88.7)	80.7 (76.4-84.4)	82.5 (78.2-86.1)	90.5 (75.1-96.8)	50.0 (28.0-71.9)				78.4 (75.1-81.4)	60.2 (55.0-65.4)
Psykiatri Overafd. 15	VEST	49.0 (35.9-62.2)	40.8 (28.0-55.0)	34.1 (21.6-49.4)	16.3 (8.0-30.4)	90.6 (86.4-93.6)	59.9 (55.2-64.4)	68.0 (63.9-71.9)	83.0 (68.1-91.7)	26.8 (14.1-45.1)	85.5 (82.3-88.2)	84.1 (76.6-89.6)	86.5 (83.3-89.2)	74.1 (72.3-75.8)	47.4 (43.6-51.2)
Psykiatri Overafd. 25	SYD	79.7 (67.0-88.3)	33.9 (23.4-46.3)	30.0 (18.9-44.0)	22.0 (13.2-34.4)	73.2 (68.1-77.7)	58.7 (54.1-63.1)	60.5 (56.1-64.7)	81.5 (69.1-89.6)	28.3 (18.9-40.1)	63.2 (58.2-67.9)	78.5 (67.9-86.3)	60.8 (56.1-65.3)	60.8 (58.7-62.9)	27.4 (23.9-31.0)
Psykiatri Overafd. 27	SYD			#		#	#	#		#	#		#	#	#
PSL Retspsykiatr		#	#	16.7 (5.8-39.3)	#	39.1 (26.3-53.6)	80.2 (70.8-87.2)	70.9 (61.0-79.2)	#	33.3 (8.3-73.3)	87.7 (71.0-95.4)	55.0 (30.6-77.2)	44.9 (32.2-58.3)	65.2 (61.4-68.7)	27.9 (19.4-36.4)
PSL Sikringsafdelingen				#			96.4 (91.7-98.5)	96.4 (91.3-98.6)		#	#	0 (NA)	#	65.9 (52.8-76.9)	12.5 (0.4-24.6)
Psykiatri f. Ældre Overafd. 37		#	#	#	#	87.5 (71.0-95.2)	36.4 (13.1-68.5)	36.4 (14.4-65.9)	#	#	50.0 (20.0-79.9)	#	80.0 (51.1-93.9)	58.6 (43.6-72.2)	30.0 (8.0-52.0)
<b>South Denmark</b>															
PSY Psykiatrisk afdeling (Odense)		63.1 (52.9-72.2)	63.1 (51.0-73.7)	47.8 (35.5-60.3)	44.0 (33.5-55.2)	89.1 (86.1-91.5)	76.9 (73.6-80.0)	75.9 (72.3-79.1)	91.9 (81.6-96.7)	56.7 (44.3-68.3)	82.4 (79.3-85.1)	86.5 (78.2-91.9)	79.3 (76.0-82.2)	78.1 (76.5-79.6)	51.7 (48.4-55.0)
PSY Psykiatrisk afdeling (Svendborg)		71.0 (51.8-84.8)	80.6 (61.5-91.6)	47.2 (32.6-62.3)	51.6 (36.0-66.9)	89.8 (84.6-93.3)	85.0 (80.0-89.0)	85.4 (81.1-88.9)	75.9 (56.2-88.5)	52.8 (36.4-68.5)	95.0 (91.6-97.1)	87.3 (74.0-94.3)	98.5 (94.9-99.5)	86.9 (84.8-88.8)	67.2 (62.4-72.0)
PSY Psykiatrisk Afdeling (Middelfart)		61.1 (37.5-80.5)	50.0 (26.8-73.2)	56.5 (34.4-76.3)	50.0 (27.5-72.5)	63.4 (57.4-69.0)	68.2 (63.9-72.2)	61.9 (57.8-65.9)	76.5 (48.6-91.8)	17.4 (6.6-38.5)	93.6 (87.4-96.8)	86.7 (74.7-93.5)	81.4 (74.7-86.7)	68.0 (65.1-70.7)	40.1 (35.8-44.3)
PSY Retspsykiatrisk Afdeling (Middelfart)											97.0 (90.4-99.1)	62.5 (34.8-83.9)	73.7 (64.3-81.4)	83.6 (78.3-87.9)	60.5 (49.9-71.0)
PSY Psykiatrisk afdeling (Aabenraa)		78.9 (66.5-87.5)	63.4 (49.6-75.3)	56.9 (43.5-69.3)	52.1 (40.6-63.4)	89.5 (86.9-91.7)	66.6 (63.2-69.9)	68.7 (65.2-72.0)	85.9 (73.8-93.0)	39.6 (27.5-53.2)	88.7 (85.3-91.3)	87.7 (80.1-92.7)	95.2 (92.4-97.0)	77.9 (76.0-79.6)	51.0 (47.4-54.5)
PSY Psykiatrisk afdeling (Esbjerg)		67.4 (53.1-79.1)	76.7 (59.4-88.1)	65.3 (50.0-78.0)	51.2 (35.6-66.5)	90.0 (87.4-92.2)	74.9 (72.0-77.5)	76.6 (73.2-79.6)	80.0 (60.7-91.2)	34.7 (23.2-48.3)	89.6 (86.6-91.9)	90.6 (82.9-95.1)	89.7 (86.6-92.2)	82.1 (80.6-83.6)	57.2 (53.9-60.5)

PSY Psykiatrisk Afdeling (Kolding)											100 (NA)		*	*	
PSY Psykiatrisk Afdeling (Vejle)	58.2 (44.8-70.4)	50.9 (37.4-64.3)	50.7 (40.5-60.8)	50.9 (36.6-65.0)	77.7 (73.2-81.7)	73.1 (69.3-76.5)	72.9 (69.2-76.3)	66.0 (50.4-78.8)	21.9 (13.0-34.4)	81.9 (77.9-85.3)	87.2 (79.0-92.5)	82.3 (77.8-86.1)	73.9 (71.9-75.8)	43.3 (39.6-47.0)	
<b>Central Jutland</b>															
PVE	94.4 (87.6-97.6)	94.4 (86.9-97.7)	52.9 (35.0-70.2)	83.3 (59.3-94.5)	78.0 (72.7-82.5)	70.8 (65.4-75.7)	77.5 (72.9-81.6)	100 (NA)	47.1 (31.6-63.1)	61.1 (53.9-67.9)	73.3 (58.7-84.2)	90.7 (86.0-93.9)	75.0 (72.5-77.4)	41.7 (36.8-46.5)	
Regionspsykiatri Vest	80.8 (64.3-90.8)	80.8 (65.3-90.4)	61.7 (50.6-71.7)	74.5 (61.1-84.4)	76.3 (72.0-80.1)	83.5 (79.9-86.5)	86.3 (83.6-88.6)	86.4 (68.1-94.9)	50.6 (40.2-60.9)	82.1 (78.1-85.5)	80.5 (70.1-87.9)	96.9 (93.9-98.5)	82.6 (81.2-84.0)	54.0 (50.1-57.8)	
PHO	72.7 (49.1-88.0)	72.7 (48.7-88.2)	62.0 (49.1-73.4)	63.6 (40.9-81.6)	83.7 (79.1-87.4)	87.6 (83.2-91.0)	90.7 (87.2-93.2)	100 (NA)	60.0 (45.0-73.3)	71.0 (65.5-76.0)	87.5 (74.2-94.4)	99.0 (96.9-99.7)	84.7 (82.9-86.4)	55.4 (50.4-60.3)	
PRA	76.5 (45.9-92.6)	76.5 (50.5-91.2)	48.3 (31.5-65.4)	70.6 (40.3-89.5)	70.5 (64.0-76.2)	74.8 (70.2-78.9)	76.7 (72.7-80.3)	100 (NA)	44.8 (27.5-63.5)	66.8 (59.7-73.2)	92.1 (79.0-97.3)	91.6 (86.2-95.0)	75.2 (72.8-77.4)	39.5 (34.6-44.3)	
Regionspsykiatri Randers	95.4 (88.5-98.2)	84.4 (77.3-89.6)	39.6 (31.6-48.3)	77.1 (68.8-83.7)	89.3 (85.2-92.4)	68.5 (64.3-72.4)	74.0 (69.7-77.9)	96.2 (90.2-98.6)	73.3 (63.7-81.1)	83.7 (80.6-86.3)	85.4 (79.9-89.6)	93.7 (92.1-95.1)	82.1 (80.6-83.5)	54.6 (51.3-58.0)	
PRQ Afdeling for depression og angst - Risskov	93.1 (81.9-97.6)	72.4 (51.8-86.5)	33.3 (17.9-53.4)	82.8 (63.9-92.8)	100 (NA)	82.3 (55.6-94.6)	76.5 (48.7-91.8)	96.5 (91.2-98.7)	66.7 (43.3-83.9)	90.5 (75.6-96.7)	75.0 (42.4-92.4)	100 (NA)	82.1 (75.6-87.2)	62.1 (52.6-71.7)	
PRR Afdeling for retspsykiatri - Risskov	#	#	37.5 (16.4-64.7)	#	#	77.8 (45.0-93.7)	77.8 (44.8-93.8)	#	50.0 (27.8-72.2)	88.7 (77.4-94.8)	66.7 (32.2-89.4)	64.8 (53.9-74.3)	71.6 (65.2-77.3)	44.4 (34.0-54.9)	
Børne- og Ungdomspsykiatriske Afdeling	#	#	#	#	81.1 (57.9-93.6)	93.5 (82.6-97.8)	93.5 (82.3-97.8)	#	83.3 (62.0-93.9)	#	#	100 (NA)	91.3 (82.0-96.1)	79.4 (65.1-93.7)	
Retspsykiatrisk Afdeling - AUH			#	#	48.7 (33.4-64.2)	77.5 (68.4-84.5)	81.2 (69.9-89.0)	#	#	#	#	#	73.4 (66.1-79.6)	51.8 (40.8-62.8)	
Afdeling for Psykoser - AUH	100 (NA)	100 (NA)	50.0 (16.3-83.7)	50.0 (15.7-84.3)	85.6 (80.5-89.6)	68.1 (64.3-71.7)	73.7 (69.8-77.2)	100 (NA)	100 (NA)	89.1 (78.3-94.8)	95.3 (86.8-98.4)	76.5 (73.6-79.1)	55.9 (51.5-60.3)		
Afdeling for Depression og Angst - AUH					78.8 (53.1-92.2)	84.2 (61.8-94.6)	100 (NA)			76.9 (46.1-92.8)		100 (NA)	88.5 (74.0-95.4)	73.1 (54.8-91.3)	





**Table 11.** Results for overall mental health care

	Depression composite		Schizophrenia composite		Overall mental health care	
	OBCS Depression	AON Depression	OBCS Schizophrenia	AON Schizophrenia	OBCS Overall	AON Overall
<b>National level</b>						
Denmark	38.3 (37.7 – 39.0)	17.7 (17.1 – 18.3)	58.5 (58.1 – 58.9)	27.7 (27.0 – 28.4)	50.1 (49.7 – 50.6)	22.7 (22.2 – 23.1)
<b>Regional level</b>						
Capital Region	9.1 (8.5 – 9.8)	4.0 (3.5 – 4.5)	31.2 (30.6 – 31.7)	3.3 (2.9 – 3.8)	22.8 (22.1 – 23.5)	3.6 (3.3 – 4.0)
Zealand Region	49.9 (48.0 – 51.9)	25.4 (23.4 – 27.5)	68.0 (67.0 – 69.0)	36.7 (34.8 – 38.6)	61.7 (60.6 – 62.8)	32.1 (30.7 – 33.5)
South Denmark Region	54.8 (53.6 – 56.1)	26.9 (25.6 – 28.2)	78.1 (77.4 – 78.8)	48.9 (47.3 – 50.5)	68.2 (67.3 – 69.0)	37.1 (36.0 – 38.2)
Central Jutland Region	51.7 (50.7 – 52.7)	20.0 (18.8 – 21.2)	80.1 (79.3-80.9)	47.0 (45.2 – 48.8)	66.3 (65.4 – 67.2)	31.3 (30.2 – 32.4)
North Denmark Region	49.0 (47.2-50.9)	24.1 (22.1-26.2)	65.1 (63.7-66.6)	31.5 (29.1 – 33.9)	57.8 (56.5 – 59.1)	27.6 (26.0 – 29.1)
<b>Provider-level</b>						
<b>Capital Region</b>						
Psyk. Center Amager, overafd	12.3 (10.2-14.7)	6.1 (4.3-8.0)	33.6 (32.2-35.1)	5.8 (4.4 – 7.1)	27.0 (25.5 – 28.6)	5.9 (4.8 – 7.0)
Psyk. Center København, Overafd.	6.2 (5.1-7.7)	2.4 (1.6-3.1)	27.3 (26.5-28.0)	2.2 (1.6 – 2.9)	18.8 (17.9 – 19.6)	2.3 (1.8 – 2.8)
Psyk. Center Bornholm, overafd.	3.6 (1.9-6.9)	0 (NA)	35.9 (30.2-42.0)	5.7 (0.7 – 10.6)	20.3 (15.4 – 26.3)	2.6 (0.3 – 4.9)
Sct. Hans, Psyk. overafd. M	0 (NA)	0 (NA)	24.1 (21.0-27.5)	7.2 (3.6 – 10.9)	14.5 (11.8 – 17.8)	4.5 (2.2 – 6.8)
Psyk. Center Ballerup, overafd. Ballerup	0.2 (0.1-0.5)	0 (NA)	23.8 (22.6-25.0)	4.2 (3.0 – 5.4)	14.1 (13.1 – 15.1)	2.3 (1.6 – 2.9)
Psyk. Center Nordsjælland, overafd.	29.5 (27.2-31.9)	15.1 (12.7-17.4)	49.8 (48.0-51.5)	6.8 (5.2 – 8.4)	41.6 (39.3 – 43.8)	10.7 (9.3 – 12.2)
Psyk. Center Glostrup, overafd.	0.7 (0.4-1.2)	0 (NA)	25.4 (24.4-26.5)	2.4 (1.6 – 3.2)	17.2 (16.3 – 18.1)	1.5 (1.0 – 2.0)
<b>Zealand Region</b>						
Psykiatri ØST Overafd. 01	35.3 (29.1-41.9)	23.4 (17.0-29.8)	68.2 (65.2-71.0)	45.2 (40.7 – 49.7)	60.8 (58.0 – 63.5)	39.4 (35.6 – 43.2)
Psykiatri ØST Overafd. 05	46.8 (42.9-50.6)	22.4 (17.4-27.3)	64.8 (62.8-66.9)	29.7 (25.8 – 33.5)	59.4 (56.9 – 61.9)	27.2 (24.1 – 30.2)
Psykiatri VEST Overafd. 10	52.2 (45.6-58.7)	24.4 (18.1-30.8)	78.4 (75.1-81.4)	60.2 (55.0 – 65.4)	70.4 (67.4 – 73.2)	48.0 (43.7 – 52.3)
Psykiatri VEST Overafd. 15	38.2 (34.1-42.4)	13.4 (9.1-17.8)	74.1 (72.3-75.8)	47.4 (43.6 – 51.2)	65.3 (63.2 – 67.4)	38.4 (35.2 – 41.6)
Psykiatri SYD Overafd. 25	46.4 (42.0-50.9)	21.8 (17.9-25.8)	60.8 (58.7-62.9)	27.4 (23.9 – 31.0)	55.6 (53.6 – 57.5)	25.1 (22.5 – 27.8)
<b>South Denmark Region</b>						
PSY Psykiatrisk afdeling (Odense)	69.4 (66.4-72.3)	47.4 (43.3-51.6)	78.1 (76.5-79.6)	51.7 (48.4 – 55.0)	75.6 (73.8 – 77.3)	50.0 (47.4 – 52.6)

PSY Psykiatrisk afdeling (Svendborg)	68.4 (64.7-71.8)	37.0 (31.7-42.3)	86.9 (84.8-88.8)	67.2 (62.4 – 72.0)	79.5 (77.1 – 81.8)	53.1 (49.4 – 56.8)
PSY Psykiatrisk Afdeling (Middelfart)	61.1 (55.0-66.8)	36.6 (29.1-44.0)	68.0 (65.1-70.7)	40.1 (35.8 – 44.3)	66.6 (63.6 – 69.4)	39.2 (35.6 – 42.9)
PSY Psykiatrisk afdeling (Aabenraa)	59.4 (56.9-61.9)	19.8 (16.6-23.0)	77.9 (76.0-79.6)	51.0 (47.4 – 54.5)	71.0 (69.3 – 72.7)	37.4 (34.9 – 40.0)
PSY Psykiatrisk afdeling (Esbjerg)	50.2 (47.6-52.8)	21.1 (18.3-24.0)	82.1 (80.6-83.6)	57.2 (53.9 – 60.5)	69.7 (67.5 – 71.8)	40.1 (37.8 – 42.5)
PSY Psykiatrisk Afdeling (Vejle)	47.1 (44.6-49.5)	13.9 (11.1-16.6)	73.9 (71.9-75.8)	43.3 (39.6 – 47.0)	62.3 (60.6 – 64.0)	29.5 (27.1 – 32.0)
<b>Central Jutland Region</b>						
PVE Regionspsykiatri Vest	42.9 (40.7-45.2)	13.4 (10.9-16.0)	75.0 (72.5-77.4)	41.7 (36.8 – 46.5)	56.7 (54.3 – 59.0)	23.9 (21.3 – 26.4)
PVS Regionspsykiatri Midt	60.7 (58.6-62.7)	28.6 (25.5-31.7)	82.6 (81.2-84.0)	54.0 (50.1 – 57.8)	71.9 (70.3 – 73.5)	39.8 (37.3 – 42.2)
PHO Regionspsykiatri Horsens	74.0 (71.1-76.8)	47.4 (42.7-52.2)	84.7 (82.9-86.4)	55.4 (50.4 – 60.3)	80.2 (78.3 – 81.9)	51.2 (47.8 – 54.6)
PRA Regionspsykiatri Randers	48.6 (44.7-52.5)	24.4 (20.3-28.6)	75.2 (72.8-77.4)	39.5 (34.6 – 44.3)	64.0 (61.6 – 66.3)	31.8 (28.6 – 35.1)
<b>North Denmark Region</b>						
PS Klinik Nord	37.0 (34.1-40.0)	9.2 (7.0-11.4)	64.7 (62.3-67.0)	33.5 (29.7 – 37.2)	52.0 (50.0 – 54.0)	20.8 (18.6 – 23.0)
PS Klinik Syd	60.9 (57.9-63.8)	38.0 (34.5-41.4)	64.4 (62.5-66.3)	31.4 (28.2 – 34.5)	63.0 (61.3 – 64.7)	34.5 (32.2 – 36.8)

## DISCUSSION

In this report we investigated use of composite indicators for several RKKP databases.

Composite indicators provide valuable insights regarding overall quality of care. Comparing quality of care using multiple individual indicators for multiple health care providers can be time consuming, difficult and cumbersome. For example, for schizophrenia, 12 process indicators were included in the report and there were more than 40 providers, resulting in more than 480 numbers to consider in order to make comparisons. Composite indicators can be very valuable in such circumstances; providing an overall picture of quality and summarizing the quality of care with a single number for each region or provider.

Another potential use of composite indicators for RKKP databases would be constructing composite indicators for consecutive years to investigate improvements or declines in overall quality of care over time in Denmark or each region/provider.

However, composite indicators are not perfect and requires careful evaluation and consideration when constructing and interpreting the results. One of the main concerns regarding these measures is that they may mask important information regarding individual indicators and some important aspects may be overlooked or lost. To overcome this potential problem, individual indicators can be also provided along with composite indicators. For example, for AFDK database (table 7) it can be seen that OBCSs for Denmark, for each region and provider are around 50%, whereas AON scores are much lower, suggesting that there may be at least one indicator with low achievement. When we investigate individual indicators, it can be seen that 2 out of 3 indicators have high level of achievement whereas one indicator with poor achievement, indicating that there is room for improvement especially for this indicator. Therefore, while composite indicators are valuable to assess overall picture of quality,

individual indicators carry important information to investigate where the weakness and strengths are in a healthcare system/provider.

The reliability of composite scores are highly dependent on the quality of the data. When there are problems regarding completeness, accuracy and quality of data, this will result in unreliable composite scores. It is consequently strongly advised only to include indicators which are considered accurate and valid by the steering groups.

When constructing composite scores for multiple clinical registries (e.g., mental health care composite including schizophrenia and depression), the level of reporting should be considered. For example, a department (afdeling) or section (afsnit) that provides care for one disease may not provide care for the other diseases in the composite. The study population for each condition should also be considered. For example, the study population for AFDK was much larger than other three cardiovascular databases we used in this report. The 62.0% of the patient pathways in the overall cardiovascular care composite were from AFDK, indicating that the score for overall composite is highly influenced by the performance on atrial fibrillation.

#### Limitations of the study

(1) We only focused two most used approaches which are quite different than each other in terms of calculation and interpretation. Nevertheless, other approaches to aggregate the individual indicators as well as assigning different weights to individual indicators (e.g., according to evidence-based differences regarding the importance of each indicator) can be considered.

(2) In this report, we used time periods for each database according to recommendations from steering groups and availability of annual data. Therefore, we did not use same time interval for each registry. This may not be a preferable approach when constructing overall

measures by combining multiple registries, since we cannot interpret the results as the overall quality of care for a specific time period if registries represent quality in different time intervals.

## Conclusion

Composite indicators are overall measures that can be highly beneficial in order to evaluate quality of care, especially when there are many indicators and many healthcare providers in the database, which makes interpretation of high number of individual indicators very challenging and time consuming. Even though these measures also have limitations and requires careful evaluation both during the construction of these measures and interpretation of results obtained by these measures, they are useful tools to facilitate comparisons, to investigate changes in quality over time, and to interpret the overall quality of care with a single value.

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