

**Documentation of statistics for  
Labour Usage in Social Care 2017**

## 1 Introduction

The purpose of the statistics are to describes the staff working with nursing and care in the municipal and regional sectors and the staff working in municipal dental care and health care. The statistics are used to describe the number of employees by budget accounts from the authorized budget plan for municipalities and regions and the use of different kinds of personnel over time in the mentioned areas. The statistics have been compiled since 2008, but are revised in 2016.

## 2 Statistical presentation

The statistics are a yearly measurement of municipal and regional staff working with nursing and care and the staff working in municipal dental care and health care. The statistics are based on information covering February only and measure the number of fulltime employees working with municipal and regional nursing and care and municipal dental care and health care. The number of fulltime employees are grouped by municipalities, regions, occupation and the budget account used by municipalities and regions.

### 2.1 Data description

The statistics are a yearly measurement of municipal and regional staff working with nursing and care and the staff working in municipal dental care and health care. The statistics measure the number of fulltime employees working with municipal and regional nursing and care and municipal dental care and health care. The statistics are used to describe the use of different kinds of personnel over time in the mentioned areas. The statistics are based on the monthly data reported to the statistics of earnings for the municipal sector and are calculated on basis of the reported data for February only. The number of fulltime employees are grouped by municipalities and regions and selected occupations from DISCO-08 in Structure of Earnings. Furthermore the fulltime employees are grouped by selected budget accounts used by municipalities and regions. The statistics have been compiled since 2008, but is revised in 2016. Consequently data for 2016 are not comparable to data published in previous years.

### 2.2 Classification system

The statistics use two kinds of classifications. The first is DISCO codes, which are used to classify the occupation of the employees such as doctor or nurse. The second classification is the authorized budget plan for municipalities and regions, which is used to classify the expenses. The individual employee is placed in a certain part of the budget and a specific DISCO code.

### 2.3 Sector coverage

The statistics cover municipal and regional nursing and care and municipal dental care and health care.

### 2.4 Statistical concepts and definitions

Fulltime employee: A person who is employed 37 hours all of February. A person who is employed for 20 hours a week the whole month and another person who is employed 17 hours the whole month amounts to one fulltime employee when combined.

## **2.5 Statistical unit**

The statistics measure the number of fulltime employees. The number of fulltime employees are calculated on basis of the number of hours worked during February.

## **2.6 Statistical population**

Employees in municipal and regional care and nursing and employees in municipal dental care and health care.

## **2.7 Reference area**

The statistics cover Denmark.

## **2.8 Time coverage**

These statistics cover the years 2016 and 2017. Cf. 7.2 Comparability over time for a description of earlier data.

## **2.9 Base period**

Not relevant for these statistics.

## **2.10 Unit of measure**

The unit of measure is number of fulltime employees.

## **2.11 Reference period**

01-02-2017 - 28-02-2017

## **2.12 Frequency of dissemination**

The statistics are published on a yearly basis.

## **2.13 Legal acts and other agreements**

The information is collected in accordance with the Act on Statistics Denmark § 6. The statistics are not based on EU regulation.

## **2.14 Cost and burden**

There is no respondent burden estimate for these statistics. Data is extracted from the public pay transfer systems. Consequently, the respondents (institutions, municipalities and counties) are not directly involved in reporting data, apart from being responsible for maintaining a few statistical variables in the pay systems.

## **2.15 Comment**

Further information can be found at the [Subject page](#) for these statistics, or by contacting Statistics Denmark directly.

## **3 Statistical processing**

The statistics are based on data for February reported to the statistics of earnings for the municipal sector. Based on the authorized budget plan for municipalities and regions, institutions from the selected budget accounts, are selected. The number of fulltime employees are calculated on basis of the employees actual hours worked. The number of fulltime employees are summarized and grouped by municipalities, regions, budget accounts and selected occupations. A certain check is made concerning whether the institutions are connected to the right budget accounts and whether the occupation of the employees are considered to be correct. Furthermore the data are controlled for large variances over time.

### **3.1 Source data**

The statistics are based on the data for February reported to the statistics of earnings for the municipal sector and are calculated on basis of the reported data for February only. Data are collected by the office for municipal and regional wage data (KRL) and are transmitted to Statistics Denmark.

### **3.2 Frequency of data collection**

Data are collected monthly and the statistics are calculated on basis of data covering all of February.

### **3.3 Data collection**

All data is collected using wage data which the municipalities and regions enter about their employees in their own pay transfer systems. Data are complemented by a few extra variables that are collected for statistical use only. Data are collected by the office for municipal and regional wage data (KRL).

### **3.4 Data validation**

The municipalities and regions connect institutions and employees to budget accounts in the authorized budget plan for municipalities and regions. The municipalities do not always use the budget plan homogeneously. The office for municipal and regional wage data (KRL) has validated the budget accounts in detail and these validated budget accounts are used in the statistics. However, some institutions are not included in the statistics of KRL and the budget accounts of these institutions are not validated by KRL. In these cases the budget accounts reported by the municipalities are used instead. In some cases Statistics Denmark validate institutions connection to the budget accounts. To some extent it is validated whether the right institutions are selected and whether relevant institutions are connected to budget accounts that are not included in the statistics.

Furthermore the occupation of the employees are to some extent validated.

Data are checked for variances in fulltime employees over time, across municipalities, budget accounts and occupation. Big fluctuations over time are investigated. It is checked whether institutions have been reclassified to other budget accounts and whether the municipalities have changed the DISCO code of the employees. Reclassifications between budget accounts and changes in occupation are difficult to validate.

### **3.5 Data compilation**

Data that are not considered to be the actual wage payment are excluded from the wage data for February. Data without hours paid and without gross pay are among others excluded. From the authorized budget plan of municipalities and regions, institutions are selected. These are institutions that are connected to budget accounts that are included in the statistics. The actual hours worked by the employees are recalculated to fulltime employees. If the work hours of an employee account to more than one fulltime employee the number of fulltime employee is reduced to one. The number of fulltime employees are summarized and grouped by municipalities, regions, budget accounts and selected occupations (DISCO-codes). Institutions are primarily connected to the municipality that is the responsible authority. In some cases where this is not possible the institution is connected to the municipality where the institution is situated geographically.

### **3.6 Adjustment**

No adjustments are made other than what is already described under 3.4 Data validation and 3.5 Data compilation.

## **4 Relevance**

These statistics are relevant for ministries, organizations and the public in general for planning and analysis purposes.

### **4.1 User Needs**

The most common users of this statistic are ministries, organizations and the public in general. The released tables measure staff working with in nursing and care. The tables give the relevant ministries an opportunity to track the resource consumption across sectors. This is consistent with the overall user needs.

## **4.2 User Satisfaction**

On the basis of an ongoing dialog the users are estimated to be satisfied with the published tables. The tables gives the relevant ministries an opportunity to track the resource consumption across sectors. It is planned to shorten the publishing time which will increase the user satisfaction in the future.

## **4.3 Data completeness rate**

The statistics cover fulltime employees in February within the selected municipal and regional budget accounts and within the selected groups of occupation (DISCO-codes).

## **5 Accuracy and reliability**

The data are associated with some uncertainty. This is primarily due some uncertainty concerning connection of institutions and employees to budget accounts and connection of occupations to employees. This might cause variations over time in number of fulltime employees within municipalities, both for the municipality as a whole and when data are grouped by budget accounts and occupations. Data for the country as a whole are expected to be more stable over time.

### **5.1 Overall accuracy**

There are some uncertainty concerning connecting institutions and employees to budget accounts as the budget plan is not always used completely homogeneously within and between municipalities and regions. The occupation of the employees is also to a certain extent associated with some uncertainty as the municipalities and regions do not use the DISCO-codes in their administration. Furthermore the DISCO-codes are in some cases connected to the employees by keys between wage classes and the DISCO-nomenclature. In some cases it is only possible to connect a DISCO-code to the employees at the highest level. The uncertainty is expected to have the greatest impact at the municipality level where as the data are considered to be more accurate for the country as a whole. If the work hours of an employee account to more than one fulltime employee the number of fulltime employee is reduced to one. The first data that was published for February 2016 are revised in connection with the publication of data for February 20017 where the definition of the population was validated.

### **5.2 Sampling error**

Not relevant for these statistics.

### **5.3 Non-sampling error**

The statistics are based on the monthly data reported to the statistics of earnings for the municipal sector and is based on February. Data are delivered from the pay transfer systems that most municipalities use. Institutions that use other pay transfer systems will not be included in the statistics. Coverage errors might occur if employees are misclassified under a wrong budget account. This means that employees that should not be included might be included in the statistics by mistake. On the other hand, employees that ought to be included might be missing from the statistics by mistake.

The occupation of the employees is also to a certain extent associated with some uncertainty as the DISCO-codes in some cases are connected to the employees by keys between wage classes and the disco-nomenclature. In some cases it is not possible to identify a six digit disco code (the most detailed level) on basis of the wage class. Instead the employee will get at DISCO-code at a lower level which might be only at the level of one digit. The municipalities has recently gotten increased access to connect DISCO-codes to their employees. This might improve the quality of the DISCO-codes but might also in some cases cause errors if the municipalities misinterpret the DISCO-nomenclature. The municipalities and regions do not use the DISCO-codes in their administration and are registered for statistical purposes only. The increased access for the municipalities to connect DISCO-codes to their employee might in any case cause variations in the DISCO-codes of the employees over time.

Measurement errors are considered to be limited. The number of fulltime employees are reduced to one fulltime employee if the summarized work hours of the employee exceed one employee.

### **5.4 Quality management**

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

### **5.5 Quality assurance**

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

## 5.6 Quality assessment

The statistics are based on the monthly data reported to the statistics of earnings for the municipal sector and is based on February. The data are associated with some uncertainty. This is primarily due some uncertainty concerning connection of institutions and employees to budget accounts. This might happen if the municipalities misplace employees at budget accounts that do not reflect their real occupation. Consequently some employees might be included in the statistics by error and some employees that ought to be included are missing. The occupation of the employees is also to a certain extent associated with some uncertainty as the DISCO-codes in some cases are connected to the employees by keys between wage classes and the disco-nomenclature. In some cases it is not possible to identify a six digit disco code (the most detailed level) on basis of the wage class. Instead the employee will get at DISCO-code at a lower level which might be only at the level of one digit. The municipalities has recently gotten increased access to connect DISCO-codes to their employees. This might improve the quality of the DISCO-codes but might also in some cases cause errors if the municipalities misinterpret the DISCO-nomenclature. This might cause variations over time in number of fulltime employees within municipalities, both for the municipality as a whole and when data are grouped by budget accounts and occupations. Data for the country as a whole are expected to be more stable over time. The statistics are revised in 2016. Consequently data for 2016 and forward are not directly comparable to data published in previous years.

## 5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the [Revision Policy for Statistics Denmark](#). The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

## 5.8 Data revision practice

Only final figures are published.

## 6 Timeliness and punctuality

The statistics for 2017 are published around 11 months after the end of the reference period. The statistics for 2018 are expected to be released August 2018.

### 6.1 Timeliness and time lag - final results

The statistics for 2017 are published around 11 months after the end of the reference period. The statistics for 2018 are expected to be released August 2018. Only final figures are released.

### 6.2 Punctuality

These statistics are usually published without delay, with reference to the announced time of publication in the release calendar.

## **7 Comparability**

The statistics have been compiled since 2008, but is revised in 2016. Consequently data for 2016 and forward are not directly comparable to data published in previous years. No comparable results from other countries are available. The authorized budget plan for municipalities and regions that is used to select the relevant employees is unique to Denmark.

### **7.1 Comparability - geographical**

No comparable results from other countries are available. It is not possible to compare internationally, because the authorized budget plan is unique to Denmark.

### **7.2 Comparability over time**

The statistics have been compiled since 2008, but is revised in 2016. Consequently data for 2016 and forward are not directly comparable to data published in previous years. Compared to the earlier data the selection of which institutions and employees that are included in the statistics have been looked through and revised. At the same time the grouping by occupation has been changed and is now in accordance with the DISCO-nomenclature DISCO-08. All employees at the selected budget accounts are included in the statistics regardless of occupation where as only selected occupations were included previously. The data for 2008 to 2015 are comparable over time. However, the new classification of occupations was introduced to the statistics between 2010 and 2011. Consequently, data grouped by occupation are not comparable between 2010 and 2011. The previous DISCO-nomenclature DISCO-earnings was replaced by DISCO-08. The DISCO-codes are not used in the administration of the municipalities and regions. Within and between municipalities and regions the budget plan is not used completely homogeneously. These two aspects imply that data are associated with some uncertainty and that comparisons between years should only be made with caution. The first data that was published for February 2016 are revised in connection with the publication of data for February 2017 where the definition of the population was validated.

### **7.3 Coherence - cross domain**

The office for regional and municipal wage data (KRL) compiles statistics that to some extent are comparable. However, They do not use the same DISCO classifications as Statistics Denmark. Furthermore the corrections made by statistics Denmark might cause further deviations. Finally, Statistics Denmark includes institutions and employees that are not included in the statistics of KRL. Furthermore Statistics of Denmark compile statistics of earnings that are based on the same data. Corrections and selection of data are, however, different and results of the two statistics are therefore not comparable.

### **7.4 Coherence - internal**

The statistics are based on one source only. Within and between municipalities and regions the budget plan is not used completely homogeneously.

## **8 Accessibility and clarity**

These statistics are published yearly in a Danish press release, at the same time as the tables are updated in the StatBank. In the StatBank, these statistics can be found under the subject [Staff working with municipal and regional nursing and care](#).

### **8.1 Release calendar**

The publication date appears in the release calendar. The date is confirmed in the weeks before.

### **8.2 Release calendar access**

The Release Calendar can be accessed on our English website: [Release Calendar](#).

### **8.3 User access**

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

### **8.4 News release**

The statistics are published once a year in a Danish press release.

### **8.5 Publications**

Not relevant for these statistics.

### **8.6 On-line database**

The statistics are published in the StatBank under the subject [Staff working with municipal and regional nursing and care](#) in the following tables:

- [RES13](#): Staff working with municipal and regional nursing and care, full-time employees by region, occupation and time
- [RES14](#): Staff working with municipal and regional nursing and care, full-time employees by region, main account and time
- [RES15](#): Staff in municipal dental care and health care, full-time employees by region, function and time

These tables replace:

- RES10 Staff working with nursing and care, full-time employees by region, occupation and main account
- RES11 Staff in municipal dental care and health care, full-time employees by region and function

### **8.7 Micro-data access**

There is no access to the underlying micro-data.

### **8.8 Other**

Not relevant for these statistics.

### **8.9 Confidentiality - policy**

The statistic follows Statistics Denmark's general [Data Confidentiality Policy](#)

### **8.10 Confidentiality - data treatment**

Results covering two or less fulltime employees are not published.

### **8.11 Documentation on methodology**

No further information are available for these statistics.

### **8.12 Quality documentation**

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

## **9 Contact**

The administrative placement of these statistics is the division of Personal Finances and Welfare. The person responsible is Birgitte Lundstrøm, tel.: +45 39 17 34 01, e-mail: [bls@dst.dk](mailto:bls@dst.dk)

### **9.1 Contact organisation**

Statistics Denmark

### **9.2 Contact organisation unit**

Personal Finances and welfare, Social Statistics.

### **9.3 Contact name**

Birgitte Lundstrøm

### **9.4 Contact person function**

Responsible for the statistics

### **9.5 Contact mail address**

Sejrøgade 11, 2100 Copenhagen

### **9.6 Contact email address**

[bls@dst.dk](mailto:bls@dst.dk)

### **9.7 Contact phone number**

39 17 34 01

### **9.8 Contact fax number**

+45 39 17 39 99