

Documentation of statistics for Health among young people not in employment, education or training (NEET) (experimental statistics) 2022

Communication report

Placement in Statistics Denmarks subject level hierachy:

1 Introduction

The purpose of Health among young people not in employment, education or training (NEET) is to shed light on hospital utilisation, consultations with physicians and purchases of prescription medicine among 16-24-year-olds, distinguishing between the inactive NEETs (Not in Employment, Education or Training) and the remaining group of active young people. The statistics are used to compare the state of health among NEETs and the remaining group of active young people. These statistics have been compiled since 2019 and are in their current form comparable from 2019 and onwards.

2 Statistical presentation

Health among young people not in employment, education or training (NEET) are a yearly measurement of hospital utilisation, consultations with physicians and purchases of prescription medicine among 16-24-year-olds stated in number and proportion of people, as well as number of contacts with the hospital system and selected health professionals/redeemed prescriptions per person. The statistics are grouped by NEET status (the NEET group vs. the remaining group of active young people), sex and by geography.

2.1 Data description

The statistics contain information on hospital utilisation, consultations with physicians and purchases of prescription medicine among young people aged 16-24. The tables are stated in number and proportion of people, as well as average number of contacts with the hospital system and selected health professionals/redeemed prescriptions per person. Besides NEET status – i.e. whether the young people are active or not active (NEET) in the labour market and the education system – the tables also contain information on sex and geography.

In the two tables relating to hospital utilisation, it is possible to discriminate between different types of contacts (inpatient contacts, outpatient contacts, and accidents and emergencies) and primary diagnosis groups (e.g. infectious and parasitic diseases, malignant tumours, mental disorders etc.), while in the table relating to consultations with physicians, it is possible to discriminate between contacts with different types of health professionals (e.g. general practitioners, specialists, dentists etc.), and in the table relating to purchases of prescription medicine, it is possible to discriminate between different types of medicine (e.g. medicine for digestion and metabolism, medicine for the heart and circulation etc.).

2.2 Classification system

The statistics use the following groupings and classifications:

- NEET status groups young people according to whether they are active or inactive (NEET) in the labour market and the education system.
- Type of contact is grouped according to whether a hospital contact includes an inpatient contact, an outpatient contact, or an accident or emergency.
- Primary diagnosis is grouped according to whether the primary diagnosis in connection with a hospital contact includes one of the following primary diagnosis groups (with associated ICD-10 codes indicated in the following brackets): Infectious and parasitic diseases (Aoo-B99), malignant tumours (Coo-Do9), benign tumours (D10-D48), endocrine, nutritional and metabolic diseases (Eoo-E90), diseases of the blood and blood-forming organs (D50-D89), mental disorders (Foo-F99), diseases of the nervous system and sensory organs (Goo-H95), diseases of the circulatory system (Ioo-I99), diseases of the respiratory system (Joo-J99), diseases of the digestive system (Koo-K93), diseases of the urinary and genital organs (Noo-N95, N97-N99), pregnancy, childbirth, and the puerperium (Ooo-O99, N96), diseases of the skin and subcutaneous tissue (Loo-L99), diseases of the musculoskeletal system and connective tissue (Moo-M99), congenital malformations (Qoo-Q99), conditions originating in the perinatal period (Poo-P96), symptoms, signs and ill-defined conditions (Roo-R99, N994, Zoo-Z13), trauma, poisoning, and certain other consequences of external causes (Soo-T98), preventive measures (Z2o-Z99), cf. the Danish Health Authority's classification.
- Health professional is grouped according to whether a primary health care contact is aimed at a general practitioner, specialist, dentist/dental hygienist, chiropractor, physiotherapist, podiatrist, psychologist or other health professional.
- Type of medicine is grouped according to whether a redeemed prescription includes a medicine aimed at one of the following main anatomical groups: A: Alimentary tract and metabolism, B: Blood and blood forming organs, C: Cardiovascular system, D: Dermatologicals, G: Genito urinary system and sex hormones, H: Systemic hormonal preparations, J: Antiinfectives for systemic use, L: Antineoplastic and immunomodulating agents, M: Musculo-skeletal system, N: Nervous system, P: Antiparasitic products, insecticides and repellents, R: Respiratory system, S: Sensory organs, V: Various, cf. level 1 in the ATC system (Anatomical Therapeutic Chemical Classification System). A more detailed description of this can be found on the website of the Danish Health Data Authority.
- Geography is stated in regions and provinces, cf. the standard classification <u>NUTS</u>.
- Sex is stated in males and females.

2.3 Sector coverage

The statistics cover the health sector.

2.4 Statistical concepts and definitions

Young people not in employment, education or training (NEET): NEET is an acronym for Not in Employment, Education or Training and is an indicator that estimates the proportion of young people in a given age group who are neither in employment nor in education. The indicator is traditionally calculated as an annual average for every week in Eurostat and OECD, both of which use data from the international interview-based Labor Force Survey (LFS). In contrast to Eurostat and the OECD, Statistics Denmark calculates the indicator as a status ultimo November based on register data from the Labor market accounts. This means that Statistics Denmark's indicator covers all 16-24-year-olds in the Danish population, whereas Eurostat's and OECD's indicators are based on a sample of young people. Despite the widespread acceptance of the NEET indicator, there is no consensus on which specific age group the indicator refers to.

2.5 Statistical unit

The statistics are observed for persons.

2.6 Statistical population

The population includes all 16-24-year-old young people resident in Denmark.

2.7 Reference area

Denmark.

2.8 Time coverage

These statistics cover the time period from 2019 and onwards.

2.9 Base period

Not relevant for these statistics.

2.10 Unit of measure

The following units of measurement are used in the publication of the statistics:

- Contacts (number per person)
- Persons with contacts (number)
- Persons with contacts (percentage)
- Persons with primary diagnosis (number)
- Persons with primary diagnosis (percentage)
- Redeemed prescriptions (number per person)
- Persons with redeemed prescriptions (number)
- Persons with redeemed prescriptions (percentage)

2.11 Reference period

The population, including the persons' NEET status, sex and place of residence, is assessed on the last weekday in November. Information on the population's hospital utilisation, consultations with physicians and purchases of prescription medicine refers to the calendar year.

2.12 Frequency of dissemination

Yearly.

2.13 Legal acts and other agreements

Collection of the information takes place pursuant to the Act on Statistics Denmark, §6 and §8. There is no EU regulation for the statistics.

2.14 Cost and burden

These statistics are based on internal statistics. There is thus no direct response burden in relation to the compilation of these statistics.

2.15 Comment

Further information can be found at the <u>subject page</u> for these statistics or by contacting Statistics Denmark directly.

3 Statistical processing

Data for these statistics are collected yearly from the Register-Based Labour Force Statistics and the three health statistics: the Hospital Utilisation Statistics, the Health Insurance Statistics and the Register of Pharmaceutical Sales. Collected data are not further validated. Instead, collected data are merged, and the detailed information about the population's hospital utilisation, consultations with physicians and purchases of prescription medicine is aggregated into the final statistical output.

3.1 Source data

Data come from internal statistics. The population, including the persons' NEET status, sex, and region, comes from the <u>Register-Based Labour Force Statistics</u>. Furthermore, information on hospital utilisation, consultations with physicians and purchases of prescription medicine comes from the three health statistics: the <u>Hospital Utilisation Statistics</u>, the <u>Health Insurance Statistics</u>, and the <u>Register of Medicinal Product Statistics</u>.

3.2 Frequency of data collection

Data are collected yearly.

3.3 Data collection

Data are collected directly from internal statistics.

3.4 Data validation

As the collected data have already been validated internally, no further data validation and error detection are carried out.

3.5 Data compilation

The population, including the persons' NEET status, sex and place of residence, is identified from the register-based labour force statistics. NEET status is measured the last week in November, and a person is categorized as inactive (NEET) if they are not in employment in the week in question and have not been in education or training in that week and the previous three weeks. These data are merged with information about hospital utilisation, consultations with physicians and purchases of prescription medicine using the population's de-identified personal identification numbers.

The population is grouped according to NEET status, i.e. whether the persons are active or inactive (NEET) in the labour market and the education system. The population is also grouped according to sex and place of residence (region and province, cf. the NUTS classification). In the two tables on hospital utilisation, the population is grouped according to the type of hospital contact (inpatient contacts, and accidents and emergencies) and primary diagnosis group, while in the table on consultations with physicians, the population is grouped according to which type of health professional the primary health care contact is aimed at and in the table on purchases of prescription medicine according to which of the main anatomical groups of the ATC system a redeemed prescription is aimed at.

Contacts with the hospital system and health professionals in the primary health care system, respectively, as well as redeemed prescriptions are calculated as an average number per person. The number of people with a relevant main diagnosis, contact, and redeemed prescription is counted, and the proportion within a given population subgroup is calculated as a percentage. In connection with the counting and calculation of key figures for consultations with physicians, persons with a negative number of contacts are removed.

Weights are not used.

3.5.1

3.6 Adjustment

No adjustments are made beyond what is already described under Data validation and Data compilation.

3.6.1

4 Relevance

The statistics are relevant for professionals, analysts and other interested parties as a basis for elucidation and in-depth analyses of the health of the NEET group.

4.1 User Needs

Users can use the figures to gain a deeper understanding of the NEET group, including whether this group of young people is characterized by particular health challenges. This can, for example, form the basis for more detailed political and research analyses, journalistic stories, school assignments, etc.

4.2 User Satisfaction

User satisfaction is currently not elucidated, as these are newly developed experimental statistics.

4.3 Data completeness rate

Not relevant for these statistics.

5 Accuracy and reliability

The overall accuracy of these statistics is high, which means that they are a good measure of the health status among the NEET group and the remaining group of active 16-24-year-olds. However, it should be noted that the operationalization of NEET status implies a great diversity within the NEET group, for this reason far from all young people in this group should be designated vulnerable. Overall, the statistics are reliable, as both the data and methods are of good quality. As the statistics only release final figures, revisions are not expected.

5.1 Overall accuracy

The statistics are based on all 16-24-year-olds who, on the last working day in November, have been resident in the country for at least the previous four weeks. This means that persons who have either left the country before this period or immigrated afterwards are not included.

The population's NEET status is determined according to whether the persons are not in employment last week in November and have not been in education or training in that week and the previous three weeks. However, among those categorized as inactive (NEET), there is a big difference in how long they belong to the NEET group, and it is thus far from all young people in this group who should be designated vulnerable. Yet, as a result of the chosen operationalization, it is not possible to elucidate the diversity of the NEET group in these statistics.

Since the population, including the persons' NEET status, as written above, is identified last week in November, while the information on hospital utilisation, consultations with physicians and purchases of prescription medicine refers to an entire calendar year, the latter information will be misleadingly low for persons who have not been resident in the country throughout the year.

The count of contacts in the table on consultations with physicians is also associated with some uncertainty. The information on contacts comes from the internal Health Insurance Statistics, which are based on the National Health Insurance Service Registry administered by the Danish Health Data Authority. The National Health Insurance Service Registry contains information on services provided by general practitioners, specialists, dentists, physiotherapists, chiropractors, podiatrists, and psychologists who are funded by public health insurance, as the information serves as documentation for these services, so that settlement between the individual provider and the region can take place. Incorrect registrations are corrected by re-registering the relevant service with a minus sign. If an incorrect registration and its correction are not made in the same year, the count of contacts will be wrong.

For more detailed information on the accuracy of the source data, please refer to the documentation of the respective statistics.

5.2 Sampling error

Not relevant for these statistics.

5.2.1

5.3 Non-sampling error

The statistics are based on all 16-24-year-olds who, on the last working day in November, have been resident in the country for at least the previous four weeks. This means that persons who have either left the country before this period or immigrated afterwards are not included. However, this coverage error is not assumed to have any consequences for the statistics. Since the statistics' population, including the persons' NEET status, is identified at the end of November, while the information on hospital utilisation, consultations with physicians and purchases of prescription medicine refers to an entire calendar year, the latter information will be misleadingly low for persons who have not been resident in the country throughout the year.

The count of contacts in the table on consultations with physicians is also associated with some uncertainty. The information on contacts comes from the internal Health Insurance Statistics, which are based on the National Health Insurance Service Registry administered by the Danish Health Data Authority. The National Health Insurance Service Registry contains information on services provided by general practitioners, specialists, dentists, physiotherapists, chiropractors, podiatrists, and psychologists who are funded by public health insurance, as the information serves as documentation for these services, so that settlement between the individual provider and the region can take place. Incorrect registrations are corrected by re-registering the relevant service with a minus sign. If an incorrect registration and its correction are not made in the same year, the count of contacts will be wrong.

There is no non-response.

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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 relevant, accurate and reliable, topical, consistent, comparable and directly accessible.

The source data for the statistics come from the <u>Register-Based Labour Force Statistics</u>, as well as from the three health statistics: the <u>Hospital Utilisation Statistics</u>, the <u>Health Insurance Statistics</u> and the <u>Register of Medicinal Product Statistics</u>. Detailed descriptions of the quality of the source data can be found in these statistics' statistical documentation.

These statistics have been developed based on current methods.

5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the <u>Revision Policy for Statistics</u> <u>Denmark</u>. The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

5.8 Data revision practice

The statistics only publish final figures. Since these are completely new experimental statistics, no revisions have currently been made.

5.8.1

6 Timeliness and punctuality

These statistics are published within 1.5 years after the end of the reference period. Publications are released on time as stated in the release calendar.

6.1 Timeliness and time lag - final results

The statistics' average production time is 18 months, as the population is extracted from the register-based labour force statistics whose publication time is currently 15 months.

6.2 Punctuality

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

7 Comparability

These statistics have been compiled since 2019 and are in their present form comparable from 2019 and onwards.

7.1 Comparability - geographical

As far as is known, no similar international statistics exist.

7.2 Comparability over time

There have been no changes in the method of assessment or the data composition, so the time series is fully comparable during the period.

However, it is important to be aware that the information on the population's hospital utilisation is not complete in 2019 and thus cannot be compared with later years, as it is based on information from the National Patient Register (LPR3), which replaced the previous version of the National Patient Register (LPR2) at the beginning of 2019. More specifically, the public hospitals in the Capital Region of Denmark, Region Zealand, and Central Denmark Region switched from LPR2 to LPR3 reporting during the weekend of 2-3 February 2019, while the public hospitals in the North Denmark Region and the Region of Southern Denmark switched during the weekend of 2-3 March 2019. It is therefore also not possible to compare the population's hospital utilisation across the regions in 2019.

7.3 Coherence - cross domain

The statistics Not in Employment, Education or Training (NEET) are based on the same population. Those statistics list the population (16-24 years) by NEET status, sex, age, region and socioeconomic status since 2008.

7.3.1

7.3.2

7.4 Coherence - internal

The internal consistency of the statistics is ensured by first identifying the population, including the persons' NEET status, sex and place of residence, from the register-based labour force statistics and then merging the population with information about its hospital utilisation, consultations with physicians and purchases of prescription medicine from the Hospital Utilisation Statistics, the Health Insurance Statistics and the Register of Medicinal Product Statistics, respectively.

8 Accessibility and clarity

These statistics are published once 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 <u>Health of vulnerable groups</u>. For further information, go to the <u>subject page</u>.

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 Calender can be accessed on our English website: Release Calender.

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

These statistics are published once 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 in the following tables:

- <u>NEETDIAG</u>: Hospital utilisation in the population (16-24 years) by NEET status, key figures, primary diagnosis, region and sex
- <u>NEETLPR</u>: Hospital utilisation in the population (16-24 years) by NEET status, key figures, type of contact, region and sex
- <u>NEETSYG</u>: Consultations with physicians in the population (16-24 years) by NEET status, key figures, health professional, region and sex
- <u>NEETMED</u>: Purchase of prescription medicine in the population (16-24 years) by NEET status, key figures, type of medicine, region and sex

8.7 Micro-data access

Researchers and other analysts from authorized research institutions can be granted access to the underlying microdata by contacting <u>Research Services</u>.

8.8 Other

The statistics are not available elsewhere.

8.9 Confidentiality - policy

Data Confidentiality Policy for Statistics Denmark is applied.

8.10 Confidentiality - data treatment

The statistics are published on an aggregated level, which ensures that individuals cannot be identified. Furthermore, confidentiality is applied so that there are never less than three observations in data cells relating to hospital utilisation and consultations with physicians, as well as five observations in data cells relating to purchases of prescription medicine.

8.11 Documentation on methodology

There are no separate method descriptions 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 in the division of Welfare and Health. The person responsible is Emilie Rune Hegelund, tel.: + 45 3917 3246, e-mail: ehe@dst.dk.

9.1 Contact organisation

Statistics Denmark

9.2 Contact organisation unit

Welfare and Health, Social Statistics

9.3 Contact name

Emilie Rune Hegelund

9.4 Contact person function

Responsible for the statistics

9.5 Contact mail address

Sankt Kjelds Plads 11, 2100 Copenhagen

9.6 Contact email address

ehe@dst.dk

9.7 Contact phone number

+45 3917 3246

9.8 Contact fax number

N/A