

Appendix table 1. National Health Index: data content and data sources of the subindices

Subindices of morbidity

Disease groups	Data content	Data source	Quality and coverage
<p>Cancers*</p> <p>Sotkanet: Cancer index (ind. 5643 and 5644)</p>	<p>Incidence of new cancer cases diagnosed during the year under review (excluding skin cancers other than melanoma), ICD-10 codes C00–96, D06, D09.0–1, D30, D32–33, D41–43, D45–D47, D76 and N87.2 in the entire population.</p>	<ul style="list-style-type: none"> • Cancer Registry (THL) • Population structure (Statistics Finland) 	<p>The Cancer Registry is a population-based and national register. Quality description: https://cancerregistry.fi/statistics/statistical-descriptions-quality-reports/</p> <p>Skin cancers other than melanoma were excluded because their burden on public healthcare is mainly low. The removal of a skin lesion is both diagnostic and therapeutic. Furthermore, the same persons have recurring skin cancers and no diagnostic confirmation is always received for them. This means that the coverage of the registry in terms of skin cancers other than melanoma is likely to be an underestimation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The index does not take into account the recurrence of cancers or the differences between the treatability of cancers and cancer mortality related to different cancers. • A cancer index higher than average may indicate high cancer morbidity and/or the fact that the area has succeeded in early diagnosing of cancer.

Disease groups	Data content	Data source	Quality and coverage
<p>Coronary disease*</p> <p>Sotkanet: Coronary disease index (ind. 5645 and 5646)</p>	<p>Incidence of acute coronary events that have led to hospitalisation (ICD-10 codes I20.0, I21–I22) or fatal events (ICD-10 codes I20–I25, I46, R96, R98) in the age group 35–79 years during the year of the review.</p>	<ul style="list-style-type: none"> • Care Registers for Social Welfare and Health Care (THL) • Causes of death (Statistics Finland) • Population structure (Statistics Finland) 	<p>Statistics on causes of death, quality description: https://www.stat.fi/en/statistics/documentation/ksyyt</p> <p>Statistics on specialised healthcare, quality description (in Finnish): https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/esh</p>
<p>Cerebrovascular diseases*</p> <p>Sotkanet: Cerebrovascular disease index, (ind. 5647 and 5648)</p>	<p>Incidence of first attacks of cerebrovascular disease that have led to hospitalisation or fatal attacks (ICD-10 codes I60–I64 except for I63.6) in the age group 35–79 years during the year of the review.</p>	<ul style="list-style-type: none"> • Care Registers for Social Welfare and Health Care (THL) • Causes of death (Statistics Finland) • Population structure (Statistics Finland) 	<p>Statistics on causes of death, quality description: https://www.stat.fi/en/statistics/documentation/ksyyt</p> <p>Statistics on specialised healthcare, quality description (in Finnish): https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/esh</p>

Disease groups	Data content	Data source	Quality and coverage
<p>Musculoskeletal disorders*</p> <p>Sotkanet: Musculoskeletal disorder index (ind. 5649 and 5650)</p>	<p>Of recipients of disability pension (in age group 16–64), pensions based on ICD-10 diagnosis code M00–M99 are taken into account in the index. Of entitlements to special reimbursement for medicines, codes 202, 313 and 281 are taken into account, i.e. those persons in the whole population who have been entitled to special reimbursement for antirheumatic medicines during the year of the review.</p>	<ul style="list-style-type: none"> • Statistics on pensions (Finnish Centre for Pensions and Kela): Recipients of disability pension • Statistics on reimbursement entitlements in respect of medicines (Kela) • Population structure (Statistics Finland) 	<p>The index covers persons who received disability pension either from the earnings-related or national pension system or from both systems.</p> <p>Statistics on Pensioners in Finland, quality description: https://www.etk.fi/en/research-statistics-and-projections/statistics/all-pension-recipients/</p> <p>Statistics on reimbursement entitlements in respect of medicines, quality description: https://tietotarjotin.kela.fi/en/statistic/2855926/statistics-on-reimbursement-entitlements-in-respect-of-medicine#quality-description</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The index describes the prevalence of long-term musculoskeletal disorders with the heaviest disease burden only with regard to disability pensions and entitlements to special reimbursement for antirheumatic medicines. • The data in the Care Registers did not provide sufficiently comprehensive information on musculoskeletal disorders, a significant part of which are excluded from the examination of this index.

Disease groups	Data content	Data source	Quality and coverage
<p>Mental health disorders*</p> <p>Sotkanet: Mental health index (ind. 5651 and 5652)</p>	<p>A) Suicides: Persons who required medical treatment because of self-harm (ICD-10 codes X60–X84) or who committed suicide during the year of the review in the population aged 13 years and over.</p>	<ul style="list-style-type: none"> Care Registers for Social Welfare and Health Care (THL) Causes of death (Statistics Finland) Population structure (Statistics Finland) 	<p>Statistics on causes of death, quality description: https://www.stat.fi/en/statistics/documentation/ksyyt</p> <p>Statistics on specialised healthcare, quality description (in Finnish): https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/esh</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The data on attempted suicides in the Care Register should be treated with caution as regional differences may result from different practices in recording information on persons treated because of self-harm.
	<p>B) Psychoses: Holders of entitlements to special reimbursement for medicines (Kela code 112) granted because of psychosis (severe psychoses and other serious mental health disorders) in the entire population in the year of the review.</p>	<ul style="list-style-type: none"> Statistics on reimbursement entitlements in respect of medicines (Kela) Population structure (Statistics Finland) 	<p>Statistics on reimbursement entitlements in respect of medicines, quality description: https://tietotarjotin.kela.fi/en/statistic/2855926/statistics-on-reimbursement-entitlements-in-respect-of-medicine#quality-description</p>

Disease groups	Data content	Data source	Quality and coverage
	<p>C) Disability pensions: Persons who received disability pension from the earnings-related or national pension system because of mental health disorders and behavioural disorders (ICD-10 codes F03–F99, excl. F10 and F70–F79) in age group 16–64 years in the year of the review.</p>	<ul style="list-style-type: none"> • Statistics on pensions (Finnish Centre for Pensions and Kela): Recipients of disability pension • Population structure (Statistics Finland) 	<p>Disability pensions include pensions granted until further notice and fixed-term rehabilitation subsidies.</p> <p>Statistics on Pensioners in Finland, quality description: https://www.etk.fi/en/research-statistics-and-projections/statistics/all-pension-recipients/</p>

Disease groups	Data content	Data source	Quality and coverage
<p>Memory disorders*</p> <p>Sotkanet: Memory disorders index (ind. 5655 and 5656)</p>	<p>The prevalence of memory disorders in the population aged 30 years and over in the year of the review. The index takes into account the following diagnosis codes from the ICD-10 classification: F00–F03, F05.1, F10.73, F11.73, F14.73, F16.73, F18.73 and F19.73, G30.0–G30.9, G31.0–G31.8 and G91.2. With regard to doctor’s appointments in primary healthcare, ICPC-2 reason for visit code P70 is also taken into account. Of data on medicine purchases, drug code N06D in the ATC classification is taken into account.</p>	<ul style="list-style-type: none"> • Care Registers for Social Welfare and Health Care (THL) • Dispensed medicines reimbursable under the National Health Insurance scheme (Kela) • Population structure (Statistics Finland) 	<p>Statistics on specialised and primary healthcare, quality descriptions (in Finnish):</p> <p>https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/esh</p> <p>https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/perusterveydenhuolto</p> <p>Dispensed medicines reimbursable under the National Health Insurance scheme, quality description:</p> <p>https://tietotarjotin.fi/en/statistic/2857522/statistics-on-dispensed-medicines-reimbursable-under-the-national-health-insurance-scheme#quality-description</p>

Disease groups	Data content	Data source	Quality and coverage
<p>Respiratory diseases</p> <p>Sotkanet: Lung diseases index (ind. 5657 and 5658)</p>	<p>Prevalence of asthma, chronic obstructive pulmonary disease and sleep apnoea in the population aged 20 years or over in the year of the review. ICD-10 diagnosis codes J44–J45 and G47.3 are taken into account in the index. Of doctor’s appointments in primary healthcare, ICPC-2 reason for visit codes R95 and R96 are also taken into account. Of holders of entitlements to special reimbursement for medicines, entitlement codes 203, 251, 297, 344, 395 and 348 are taken into account.</p>	<ul style="list-style-type: none"> • Care Registers for Social Welfare and Health Care (THL) • Statistics on reimbursement entitlements in respect of medicines (Kela) • Population structure (Statistics Finland) 	<p>Statistics on specialised and primary healthcare, quality descriptions (in Finnish):</p> <p>https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/esh</p> <p>https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/perusterveydenhuolto</p> <p>Statistics on reimbursement entitlements in respect of medicines, quality description:</p> <p>https://tietotarjotin.kela.fi/en/statistic/2855926/statistics-on-reimbursement-entitlements-in-respect-of-medicine#quality-description</p>

Disease groups	Data content	Data source	Quality and coverage
<p>Diabetes</p> <p>Sotkanet: Diabetesindex (ind. 5661 and 5662)</p>	<p>Prevalence of diabetes in the entire population in the year under review. ICD-10 diagnosis codes E10–E14 are taken into account in the index. Of outpatient visits to primary healthcare, ICPC-2 reason for visit codes T89 and T90 are also taken into account. Of medicine purchase data, ACT drug code A10 is taken into account, and of entitlements to special reimbursement for medicines, entitlement codes 103, 215, 250, 285, 295, 346, 3011 and 3022.</p>	<ul style="list-style-type: none"> • Care Registers for Social Welfare and Health Care (THL) • Dispensed medicines reimbursable under the National Health Insurance scheme (Kela) • Statistics on reimbursement entitlements in respect of medicines (Kela) • Population structure (Statistics Finland) 	<p>Statistics on specialised and primary healthcare, quality descriptions (in Finnish): https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/esh</p> <p>https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/perusterveydenhuolto</p> <p>Dispensed medicines reimbursable under the National Health Insurance scheme, quality description: https://tietotarjotin.fi/en/statistic/2857522/statistics-on-dispensed-medicines-reimbursable-under-the-national-health-insurance-scheme#quality-description</p> <p>Statistics on reimbursement entitlements in respect of medicines, quality description: https://tietotarjotin.kela.fi/en/statistic/2855926/statistics-on-reimbursement-entitlements-in-respect-of-medicine#quality-description</p>

Disease groups	Data content	Data source	Quality and coverage
<p>Alcohol-related diseases</p> <p>Sotkanet: Alcohol morbidity index (ind. 5659 and 5660)</p>	<p>Persons who received treatment because of a disease or condition related to excessive use of alcohol in the entire population during the year under review. The following ICD-10 diagnosis codes are taken into account in the index: F10, E24.4, G40.51, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.00, K86.01, K86.08, Q86.0, Y91, T51 and X45. Of outpatient visits to primary healthcare, ICPC-2 reason for visit codes P15 and P16 are taken into account, and reason for seeking treatment code 71 from the Care Register for Social Welfare. Of data on medicine purchases, ATC drug codes N07BB01, N07BB04 and N07BB05 are taken into account.</p>	<ul style="list-style-type: none"> • Care Registers for Social Welfare and Health Care (THL) • Dispensed medicines reimbursable under the National Health Insurance scheme (Kela) • Population structure (Statistics Finland) 	<p>Statistics on specialised and primary healthcare, quality descriptions (in Finnish): https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/esh</p> <p>https://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/perusterveydenhuolto</p> <p>Dispensed medicines reimbursable under the National Health Insurance scheme, quality description: https://tietotarjotin.fi/en/statistic/2857522/statistics-on-dispensed-medicines-reimbursable-under-the-national-health-insurance-scheme#quality-description</p>

*A change in the data content and/or the definitions of the data in the Care Registers limits the comparability of the data with the previous subindex of THL's Morbidity Index.

The calculation of the population proportion and the age-standardisation of the indices of morbidity are based on the mean population obtained from Statistics Finland's statistics on population structure. The population structure of the entire country, determined using the most recent three-year period of the National Health Index statistics (2019–2021), has been used in the age-standardisation. Age-standardisation has been carried out with a dataset classified using 5-year age groups.

Statistics on population structure, quality description: https://stat.fi/til/vaerak/laa_en.html

Work disability index

Index	Data content	Data source	Quality and coverage
<p>Work disability index</p> <p>Sotkanet: Disability index (ind. 5663 and 5664)</p>	<p>Persons aged 16–64 year who have lived in Finland during the index year and received full disability pension, partial disability pension, sickness allowance for a period of at least 3 months or a positive decision on vocational rehabilitation.</p> <p>Population and age-standardisation have been carried out with data from the population statistics compiled by Kela. The population statistics includes the situation at the end of January of the year following the index year. Age-standardisation has been carried out by using five-year age groups.</p> <p>The index year consists of the average of the data for the statistical year and the previous two years. In municipal mergers,</p>	<p>Statistics on Pensioners in Finland (OSF) – Finnish Centre for Pensions (etk.fi)</p> <p>Statistics on sickness allowances Kela's Info Tray</p> <p>Statistics on the rehabilitation benefits provided by Kela Kela's Info Tray</p> <p>Kela's population information</p>	<p>Statistics on Pensioners in Finland, quality description: https://www.etk.fi/en/research-statistics-and-projections/statistics/all-pension-recipients/</p> <p>Statistics on sickness allowances, quality description: https://tietotarjotin.fi/en/statistic/2856248/statistics-on-sickness-allowances#quality-description</p> <p>Statistics on the rehabilitation benefits provided by Kela, quality description: https://tietotarjotin.fi/en/statistic/2708137/statistics-on-the-rehabilitation-benefits-provided-by-kela#quality-description</p> <p>An individual is recorded in only one part of the index, in the following order of precedence:</p> <ol style="list-style-type: none"> 1. Recipients of full disability pension 2. Recipients of partial disability pension 3. Persons who received sickness allowance for a period of at least 3 months 4. Recipient of a positive decision on rehabilitation <p>Restrictions:</p> <ul style="list-style-type: none"> • The weight given to the recipients of both partial disability pension and positive decision on vocational rehabilitation is only 0.5 in the calculation of the index.

	<p>the municipality has been taken into account in accordance with the index year.</p>		<ul style="list-style-type: none">• Does not include persons who have not lived in Finland permanently during the year under review.• As the largest group in the index is the recipients of disability pension, this group has the highest weight in the index. The number of those who have received a decision on vocational rehabilitation is clearly the lowest and their weight in the index is 0.5, so vocational rehabilitation has the least effect on the value of the index.
--	--	--	--