CIVITAS
Sustainable and smart mobility for all
2030

CIVITAS indicators

Citizen health – Version 3 (SOC_HL_HL3)

DOMAIN

Transport	Environment	Energy	**Society**	Economy

TOPIC	**Health**	
IMPACT	**Improving sleep health** *Reducing the incidence of insomnia*	**SOC_HL**

Category

Key indicator	Supplementary indicator	State indicator

CONTEXT AND RELEVANCE

Sleep quality refers to the condition of individuals' sleep, including duration, continuity, and restorative value. It is influenced by environmental, behavioral, and socio-economic factors, such as exposure to noise and light, stress levels, work schedules, lifestyle habits, housing conditions, and access to healthcare. Poor sleep quality can be exacerbated by exposure to urban stressors, including transport-related noise and other environmental disruptions.

This indicator measures the prevalence of insomnia among citizens in the pilot city. **It provides an indication of the population's sleep health and allows tracking how sleep quality evolves in response to policy interventions to address transport-related noise. A successful action is reflected in a LOWER value of the indicator.**

DESCRIPTION

This indicator is the **number of medical consultations for insomnia per inhabitant in the pilot city**. The unit of measurement of the indicator is **insomnia consultations per inhabitant**.

METHOD OF CALCULATION AND INPUTS

The indicator should be computed exogenously based on the specified inputs, and its resulting value should be coded into the supporting tool.

Method

Calculation of the indicator based on data from medical authorities	Significance: **1.00** 

INPUTS

The following information is needed to compute the indicator:

a) **The number of consultations** with respiratory specialists in the past six months by residents of the experiment city, **where the reason for referral was insomnia.**
b) **The number of residents in the experiment city.**

METHOD OF CALCULATION

The indicator should be computed **exogenously** according to the following steps:

- **Retrieval of the data on medical consultations due to insomnia from local medical authorities**. The data should include all consultations recorded for residents in the pilot city and exclude those of individuals who reside elsewhere.
- **Retrieval of the number of inhabitants within the pilot city.** This information can be obtained from census data.
- **Calculation of the sleep disorder indicator** as the ratio between the number of consultations and the population of the pilot city (see equation below).

EQUATIONS

The sleep disorder indicator is computed as:

$$SlHl = \frac{InsCons}{Pop}$$

Where:

$InsCons$ = Number of medical consultations due to insomnia

Pop = Population in the pilot city

ALTERNATIVE INDICATORS

This indicator measures the sleep health of residents of the experiment city based on data from local medical authorities. Alternative indicators for assessing transport-related health dimensions are **SOC_HL_HL1**, and **SOC_HL_HL2**, both tracking respiratory health.

SOC_HL_HL1 measures the incidence of bronchitis, pneumonia and asthma in the experiment area using data from a sample survey, while **SOC_HL_HL2** relies on records from local medical authorities.