

GENERAL CHARACTERISTICS OF THE SENTINEL GENERAL PRACTITIONERS (SGP) NETWORK IN BELGIUM: SHORT REPORT ON 2023

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Epidemiology and public health - Health services research

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In collaboration with
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THE SENTINEL GENERAL PRACTITIONERS (SGP) NETWORK IN BELGIUM

1. Background

Sentinel surveillance by general practitioners (GPs) is an accepted system of public health surveillance, i.e. the on-going collection, analysis, and interpretation of health data essential to public health practice, closely integrated with timely dissemination of information for intervention (1). In sentinel surveillance a sample of professionals or organizations such as general practices, hospitals, laboratories, clinicians are designated to collect and report data that are considered as representative for a specified population.

Networks of SGP were developed by GPs to use the wealth of the information they gathered in their daily practice for research, education or management. General practice is the first source of professional health information next to the general population and most health problems are exclusively managed by GPs (2;3). Almost all people in Belgium have a general practitioner and therefore they are a good source of information about the health of the population. In 1979 the Belgian network of SGP was developed drawing on experiences by the Weekly Returns Service in the UK and the Sentinel Stations in the Netherlands (4). In the early 1990s several networks of SGP were operating and co-operating in Europe (5;6).

All networks of SGP have in common that anonymous data from clinical practice on well-defined problems are recorded by voluntary, self-selected GPs covering a region/population and subsequently transferred to a central office for analysis and diffusion of study results. Networks of SGP may differ in their aim (surveillance of infectious/non-infectious health problems or oriented towards health services research), size (regional or national) and available methods for the estimation of populations at risk (patient lists or number of patient contacts per week) and data transmission (by paper forms or electronic data transmission) (5;6).

The **aims** of the Belgian SGP network have broadened over time. The network has a long history of routine surveillance by monitoring continuously the occurrence of influenza-like illness. The periodical surveillance of e.g. sexual transmitted infections (STIs) may be considered as an enhanced surveillance by its collection of additional data on top of age, gender and other core data. The surveillance of end-of-life care is definitely oriented towards health services research as the study aims to describe usual care by GPs (7;8). By providing epidemiological information as well as information on care provided in general practice, the SGPs support the policymakers in defining priorities and evaluating health policy. Since 2020, ad hoc only-once online surveys are also used to investigate health services research in primary health care (e.g. corona preparedness survey, Long Covid survey).

The **Belgian SGP network** is a nationwide network comprising about 100 general practices all over Belgium. The coverage of the network is estimated at 1.0% of the Belgian population. On a weekly basis, data is voluntarily reported by the sentinel GPs about different health problems (infectious and non-infectious diseases). Therefore the impact and the

characteristics of different health problems in Belgium can be monitored. Some of them are monitored continuously over time (e.g. acute respiratory infections, influenza-like illness). Other are monitored recurrently (e.g. tick bites and/or suspicion of Lyme disease, advanced care planning) to gather data at regular intervals that can be compared and support the authorities in charge of health policies.

Acute respiratory infections, influenza-like illness and acute diarrhea are covered by the network continuously by weekly reporting of aggregated data (incl. zero reporting). For each episode age group, vaccination status and hospitalization are recorded. There is also a close collaboration with the National Reference Center for Influenza (NRC Influenza) in Belgium for the virological surveillance in a subset of patients. For the other health topics, case-by-case data are recorded by the sentinel GPs through specific questionnaires in order to better describe the characteristics and risk factors. These questionnaires can be consulted or filled in directly on the website of the SGP network. The registration is done through online forms (LimeSurvey) available on the website of the SGP network. Data is automatically stored on a secured server managed by Sciensano. For more info, see:

- <https://www.sciensano.be/nl/netwerk-van-huisartsenpeilpraktijken> (Dutch)
- <https://www.sciensano.be/fr/reseau-des-medecins-vigies> (French)
- <https://www.sciensano.be/en/network-general-practitioners> (English)

An overview of the health topics monitored during 2023 by the SGP network are presented here:

- Acute respiratory infections
- Influenza-like illness
- Acute diarrhea
- SARS-CoV-2 test results (until June 2023)
- Sexual Transmitted Infections (STIs)
- Tick bites and/or suspicion of Lyme disease
- Varicella
- Zona or post herpetic neuralgia
- Psychopharmaceuticals in children, adolescents and young adults
- Advance Care Planning (ACP)
- Physical activity on prescription (PAP)
- Long Covid (since March 2023)

Ad-hoc only once questionnaire about:

- Physical activity on prescription (PAP): general survey (Early 2023)
- Profile of registering practices in the network: general survey (Summer 2023)

An overview of all publications by the SGP network published during 2023 are available in Annexes.

2. General characteristics of the Sentinel General Practitioners (SGP) network in 2023

2.1. GENERAL CHARACTERISTICS

In 2023, 64 practices corresponding to 91 SGPs of our network belong to the regular (i.e. participating at least 26 weeks per year) participating sentinel GPs (SGPs) in our SGP network.

Table 1. The distribution of the regular SGPs 2023 by region, SGP network.

REGION	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Brussels	11	17.19	11	17.19
Flanders	36	56.25	47	73.44
Wallonia	17	26.56	64	100.00

Table 2. The distribution of the regular SGPs 2023 by practice type, SGP network.

PRACTICE_TYPE	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Duo practice	6	9.38	6	9.38
Group practice >2 GPs	19	29.69	25	39.06
Multidisciplinary group practice	11	17.19	36	56.25
Solo practice	28	43.75	64	100.00

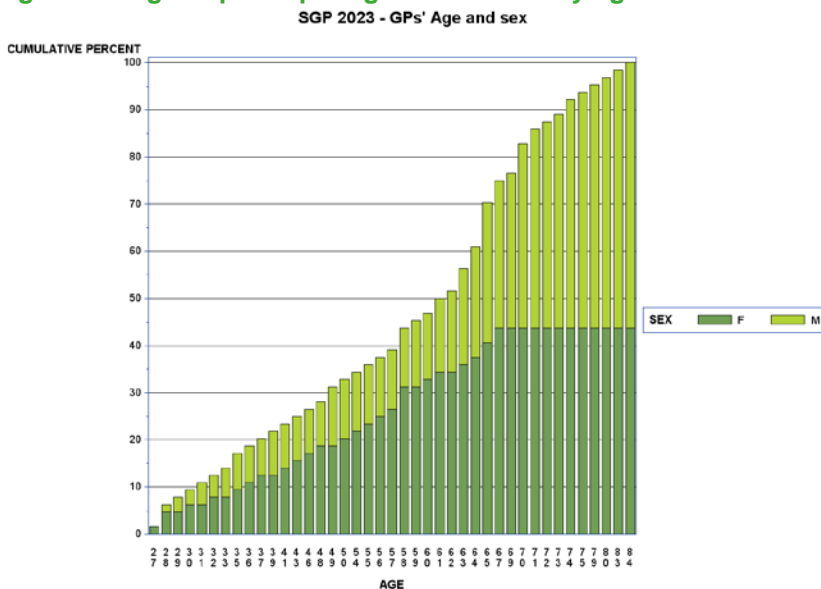
Table 3. The distribution of the regular SGPs 2023 by GP sex, SGP network.

SEX	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Female	28	43.75	28	43.75
Male	36	56.25	64	100.00

The median GP age of the regular SGPs 2023 is 62 (IQR: 45-68).

The following figure presents the distribution of the regular participating sentinel GPs by age and sex (Figure 1) in 2023.

Figure 1. Regular participating sentinel GPs by age and sex in 2023, SGP network.



The following figures present the distribution of the regular participating practices (Figure 2) and regular participating sentinel GPs (Figure 3) in 2023.

Figure 2. Regular participating practices in 2023, SGP network.
SGP network - regular participating practices in 2023

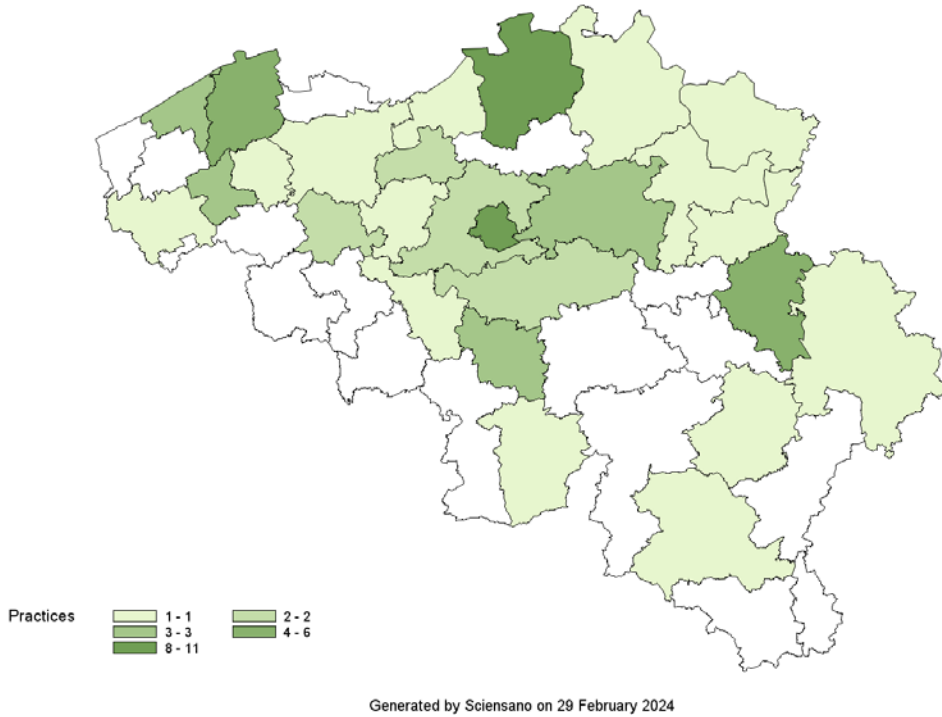
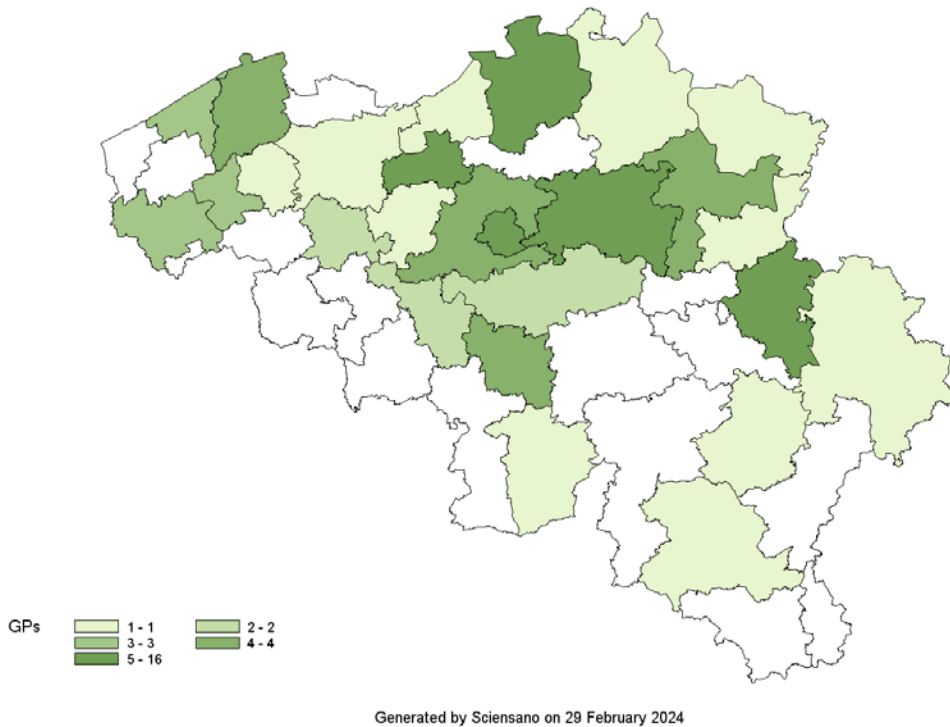


Figure 3. Regular participating sentinel GPs in 2023, SGP network.
SGP network - regular participating GPs in 2023



2.2. POPULATION COVERAGE

For each year, the population coverage is calculated by district (“arrondissement”), province and region and the total of Belgium. The aim is to reach at least 1% coverage of the Belgian population in every district. An overview of the coverage by the SGP network during 2019-2023 is presented in Table 4.

Formula used to estimate the population covered by the SGP network: the number of inhabitants per active GP (defined as having at least 500 contact patients/year based on health insurance data) was calculated in each of the 43 districts in Belgium and further multiplied by the number of sentinel practices (minimum population coverage) or the number of sentinel GPs (maximum population coverage).

Table 4. Overview of coverage by SGP network, 2019 – 2023.

COVERAGE BY YEAR	Belgium	Brussels	Flanders	Wallonia	N_PRACTICES	N_GPs
COVERAGE1_2023	0,65	1,42	0,59	0,51	64	91
COVERAGE2_2023	0,93	1,94	0,92	0,60	64	91
COVERAGE1_2022	0,74	1,54	0,73	0,59	75	103
COVERAGE2_2022	1,02	2,45	1,02	0,68	75	103
COVERAGE1_2021	0,73	1,09	0,72	0,67	73	96
COVERAGE2_2021	0,96	1,36	1,05	0,70	73	96
COVERAGE1_2020	0,95	1,21	0,94	0,93	90	141
COVERAGE2_2020	1,50	1,75	1,65	1,13	90	141
COVERAGE1_2019	0,95	1,35	0,90	0,96	90	123
COVERAGE2_2019	1,31	1,89	1,30	1,17	90	123

Coverage 1 and sentinel population 1 is calculated on the number of participating *practices*. Coverage 2 and sentinel population 2 is calculated on the number of participating *GPs*. N_Practices and N_GPs refer to the regular participating practices/GPs in our SGP network.

Note: info of 2023 is based on number of GPs in 2022, received from RIZIV/INAMI because no recent info of 2023 available (February 2024)

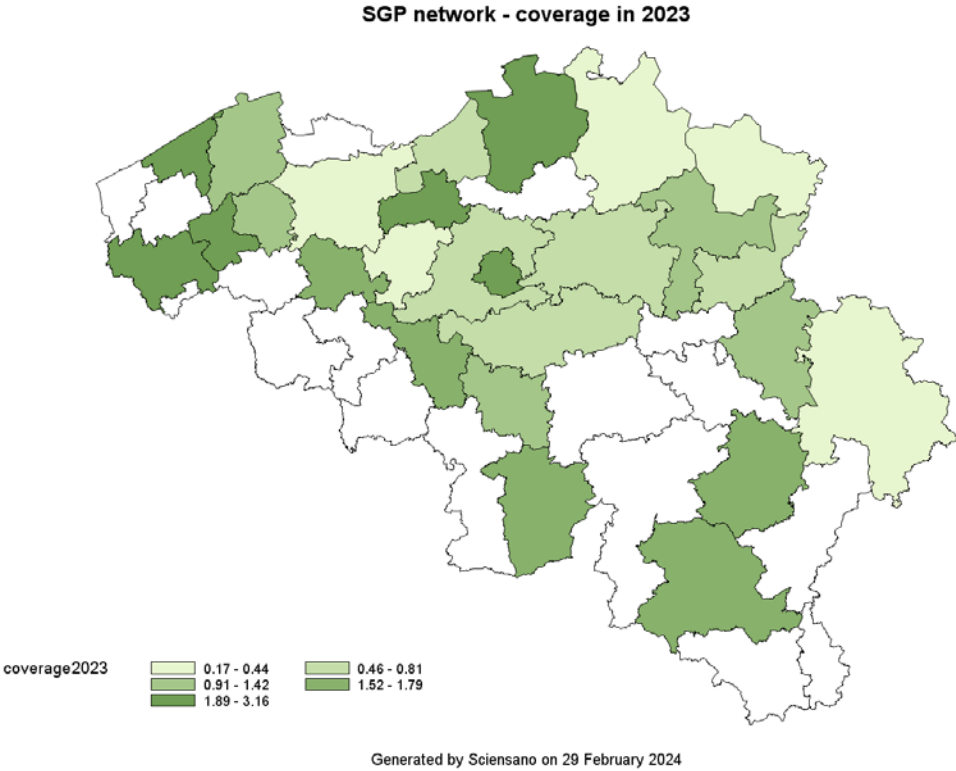
Note: info of 2022 is based on number of GP's in 2021, received from RIZIV/INAMI because no recent info of 2022 available (February 2023)

Note: info of 2021 is based on number of GP's in 2020, received from RIZIV/INAMI because no recent info of 2021 available (February 2022)

Note: info of 2020 is based on number of GP's in 2019, received from RIZIV/INAMI because no recent info of 2020 available (February 2021)

The following figure presents the distribution of the coverage (Figure 4) in 2023.

Figure 4. Coverage of the SGP network in 2023.



3. Recruitment efforts during 2023

During 2023, various recruitment efforts were made to increase the number of participating GPs in the SGP network.

A brief overview is given underneath.

- **Visibility of the SGP network:**
 - Presentation of the SGP network at national and international conferences
 - Presentation of the SGP network to national GP networks (Domus Medica, SSMG)
 - Presentation of the SGP network at LOKS-GLEMS, leaders of the circles (“kringen”), universities, etc.
 - Promotion of the network through Behive, AMUB, Fédérations des maison médicales, newsletters and website
 - Scientific webinars (with Accreditation System for participating GPs)
 - Creation and distribution of flyers
 - Sending targeted invitation letters to GPs
 - Creation of a network video, see
 - NL version: <https://www.youtube.com/watch?v=5D9UjAfle0I>
 - FR version: <https://www.youtube.com/watch?v=Ki075o7VGMw>

- **Changing the methodology of the data collection:**
 - To reduce the workload for participating GPs: automatic data extraction from the EMD for the weekly aggregated data (implementation from 2024 onwards)
 - Integration of the Barometer 2.0 participating GPs (more information available on <https://www.sciensano.be/en/projects/covid-19-barometer-general-practices-version-20>) into the SGP network (implementation from 2024 onwards)
 - Introduction of new methodologies to collect data (for example exploration of a pop-up in the EMD for case-by-case registration, ad hoc only-once online surveys on specific topics, focus groups among GPs, etc.)

- **Benefits for the participating GPs:**
 - An individual annual report of the sentinel general practices (the results are compared with those of other practices of the network (anonymously))
 - A newsletter to inform about the activities, reports and articles of the network, etc.
 - Receiving welcome package
 - Access to scientific webinars (with Accreditation System for participating GPs)
 - GPs as part of a network: events, welcome packs, etc (network benefits)
 - Financial compensation of 300€/year for regular participation
 - GPs cited in scientific publications: author group
 - Possibility to represent the network in the steering committee: participation in decisions

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ANNEXES

Publications by the SGP network during 2023


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